

**DEVELOPMENT  
RESEARCH  
ON BIHAR  
2000-2010**  
A Compendium



Editors

Alakh N Sharma  
Amrita Datta  
Joyita Ghose

**DEVELOPMENT RESEARCH  
ON BIHAR, 2000-2010**  
*A Compendium*

## **Institute for Human Development (IHD)**

The Institute for Human Development (IHD), a leading centre for studies on labour markets, livelihoods and human development, aims to contribute to the building of a society that fosters and values an inclusive social, economic and political system, free from poverty and deprivations. Towards achieving its goal, it engages in analytical and policy research, teaching and training, academic and policy debates, networking with other institutions and stakeholders, and publication and dissemination of the results of its activities. The major themes of current work of IHD are: poverty, inequality and well-being; labour markets and employment; social protection; women and children; marginalised social and economic groups and lagging regions; and governance and institutions for human development.

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*A Compendium*

*Edited by*

**Alakh N Sharma, Amrita Datta and Joyita Ghose**

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# Compendium Team and Editorial Advisory Board

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# Foreword

Bihar is in the midst of tremendous change. In recent years, there has been progress on multiple fronts, be it law and order, expansion of infrastructure, or the spread of primary education to the masses. Today, Bihar is one of the fastest growing states in the country and the Government of Bihar is committed to sustain this momentum.

The story of Bihar's turnaround is a story of both social and economic development. Indeed, this development is both a cause and effect of the deep changes which are underway in Bihar. The recent turnaround has brought about a new hope and also a firm belief that a transformation from poverty to prosperity is possible.

While the centrality of economic growth in the discourse on development cannot be negated, effective policies for balanced and equitable economic development have to be built on a foundation of scientific research into the needs and demands of people, the social and economic relationships involved, the impacts of government policies, and the different ways Bihar's potentials can best be realised.

There is a great dearth of research on socio-economic condition of Bihar. To sustain the economic growth achieved in the last few years, it is necessary to promote socio-economic researches on Bihar. Keeping this in view, a separate Directorate of Evaluation was created by Government of Bihar to facilitate the research and evaluation work in the state. Recently the State Government has come out with a policy to assist financially the research work in the state viz, **Chief Minister Research Studies and Evaluation Promotion Scheme**. Under this scheme assistance is provided to universities, research organisations, and voluntary organisations for conducting research on Bihar. The assistance is also given for conducting evaluation and workshops apart from the financial support for publication of the research and journals.

This Compendium, produced by the Institute for Human Development, New Delhi, is a valuable contribution to understand the various facets of development of the state. It covers a wide spectrum of issues such as Bihar's development in historical perspective, social and economic development in the state, caste, class, politics and conflict, public policy and governance, etc. Studies in the Compendium are from diverse disciplines such as economics, history, political science, geography, and medicine among others. The referred studies, research or articles in the Compendium are collections of research materials related to Bihar, and they reflect the views expressed by the respective researchers and authors. The Planning and Development department in no way endorses or refutes the views expressed in the papers. The Compendium, while preserving the academic freedom of expression, makes an earnest endeavour to put the researches on Bihar at one place.

The Compendium is a rich resource not just for scholars and academicians, but also for planners and policy-makers who are working on Bihar, both within and outside the state. It is an invaluable contribution to the research and policy space in the state and I am confident that it would facilitate a more informed engagement with development issues.

I express my thanks to Sri. Pramod Kumar Verma, Additional Director, Evaluation and his team of officers Sri. V.K. Jha, Sri. Prem Prakesh, Sri. Brajesh Kr. Sinha, Deputy Directors; Sri. Manoj Narayan and Ms Rupa Prasad, Senior Consultants, UNICEF and Sri. Sunil Kumar Sinha, Assistant Statistical Officer for coordinating the Compendium work at the directorate level.

**Vijoy Prakash**

Principal Secretary, Department of Planning and Development, Government of Bihar  
and  
Chairman, Editorial Advisory Board, Bihar Research Compendium



## Preface and Acknowledgements

Contemporary Bihar, despite having an abundance of natural and human resources, entered the 21st century as one of the least developed states in the nation. Why does Bihar remain one of the poorest and most backward economies of the country? What are the historical factors and processes which have contributed to its current state? What is the role of caste, and of class, in the development trajectory of the state, its social and economic institutions, and its electoral processes? Why has there been no industrialisation and why does urbanisation remain so low? What role has migration played in bringing about economic development and social change in the state? These are some fundamental questions which need to be addressed. Here, the role of research is crucial to understand the wide spectrum of development issues of the state. This Compendium summarises the various research documents that have engaged with these issues and we hope that this would contribute to knowledge development in the state.

Given the wide-ranging, long-term changes in the economy, society, and the polity in the state since 2000, it is very important at this stage to document and collate important research on these changes to assist policymakers, researchers, and the wider audience to understand these transformations which are ongoing in the state.

This Compendium summarises research conducted on various aspects of socioeconomic development in Bihar post 2000 which is relevant for analysis and policymaking processes in the state. The selection of research materials is informed by a perspective which prioritises a multi-disciplinary understanding of development – looking at research conducted in the disciplines of economics, politics, sociology, development studies, and gender studies, among others. Studies from medical sciences and geological sciences, which are closely interrelated with development issues, have also been included. The selected research materials, we hope, will provide academicians, policymakers, and all those interested in the development issues in Bihar with a ready resource on socioeconomic and other contours of development conducted since 2000 by researchers in the disciplines mentioned above. A large number of articles are also inter-disciplinary, given the demands of research and policymaking process. There has been an attempt to cover issues as diverse, yet relevant, as agricultural development, conflict, urbanisation, migration, changing gender relations in the state, caste, social development, human development, and economic development in Bihar. This Compendium covers research materials produced after the bifurcation of Bihar in 2000 until December 2010.

The process of preparation of this Compendium has been long drawn. First, a database of research materials, which consists of books and published articles on relevant research in Bihar, was created. This was enhanced by adding pertinent policy and action research reports on the state, which had been produced by multilateral organisations either unilaterally or in collaboration with other local organisations. At the same time, doctoral theses of academic institutions, both within and outside the state, were reviewed by the research team and quality dissertations have been added in the Compendium. The Institute for Human Development also listed a call for research studies on its website for the Bihar Compendium, to collate as many pertinent research studies as possible. After the summaries were prepared, we attempted to send these to the relevant authors for comments and possible changes, which further refined the quality of the summaries included in the Compendium.

This research compendium emphasises a multi-disciplinary awareness of the socio-political and economic context in contemporary Bihar. To this end, we have included research summaries on thirteen broad thematic topics drawn from relevant literature which includes research projects, published articles, books, university dissertations, working papers, and unpublished monographs, outlining the objectives, methodology, and key findings of each study.

Though much of the research material overlaps thematic sections, the broad classifications would be helpful for researchers and policymakers in accessing topical research literature. We hope the compendium provides the reader with a rich understanding of the multi-faceted nature of the challenges facing Bihar in the 21st century and is useful for researchers, policymakers, development agencies, and other stakeholders, interested and working on the development issue of Bihar.

It emerges from the studies included in the Compendium that there is a dire shortage of research on specific topics in the state. These include, among others, industrialisation and urbanisation. It is crucial to engage with these deeply relevant issues if we want to study and understand the development of the state. We also need to undertake

research on labour markets and employment on various issues in gender, including women's work. Other research gaps are discussed in detail in the introductory section of the Compendium.

I would like to draw the attention of the reader to a caveat here. While we have tried our best to include all possible research materials which are in our mandate, inadvertently, we may have missed some out. We apologise for this.

I deeply appreciate the hard work undertaken by my colleagues Ms. Amrita Datta and Ms. Joyita Ghose in putting this Compendium together. We are extremely grateful to the Government of Bihar, particularly to Shri Vijoy Prakash, Principal Secretary in the Department of Planning and Development and the Chairman of the Editorial Advisory Board of the Bihar Compendium, who supported us through the completion of this project. The former Principal Secretary of the Department of Planning and Development, Shri Rameshwar Singh, provided us the opportunity to undertake this important and timely research endeavour, and for this, we are thankful to him. A special line of acknowledgement is due for Shri Pramod Kumar Verma, Joint Director in the Department of Planning and Development. We would like to thank other members of the Editorial Advisory Board of this research project – Dr Gerry Rodgers, Dr P. P. Ghosh, Dr Janak Pande, and Ms Janine Rodgers for their keen interest in this project, and their help and support at every stage of this project. We would also like to acknowledge our gratitude to Mr R. N. Sharma and Mr B. P. Singh of Patna University for their immense help in the compilation of this Compendium.

We appreciate the meticulous work undertaken by the research team comprising of Ms Sapna Kedia, Dr Rajini Menon, and Ms Rekha Gupta. Additional help was provided by Ms Angela Nath, Ms Shivani Satija, Mr Dhruv Sood, and Mr Balendu Mangalmurthy. A special word of acknowledgement is due for Dr Harishwar Dayal who led the work at the IHD Eastern Regional Office in Ranchi. Mr Ashwani Kumar and Mr Ravi Shankar Kumar coordinated the collection of research materials in Patna and other parts of Bihar, and we are thankful to them for this. We are indebted to Mr. Dinesh Kohli, who painstakingly edited the text of the Compendium, which became rather long over a period of time.

We would also acknowledge the various journals, publishers, and authors, who have given their kind permission to summarise research documents for the Compendium. We hope that this Compendium will be a useful volume for scholars and academicians, planners, and policymakers alike.

The financial support for this Compendium, prepared under the aegis of the IHD Bihar Research Programme, has been provided by the Department of Planning and Development, Government of Bihar. The views expressed in the summaries of the research works included in the Compendium are those of the respective authors and they should not, in any way, be attributed to the Government of Bihar, Institute for Human Development, the editors or the Editorial Advisory Board.

**Alakh N Sharma**

Director  
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New Delhi



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## **Introduction and Overview**

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# Introduction and Overview

## *Background*

At the turn of the century, the state of Bihar was bifurcated and a new state, rich in natural and mineral resources was carved out from the southern part of erstwhile Bihar. With an area of 94,163 sq km, Bihar is the 12th largest state in the country, comprising about 3 per cent of the total geographical area of the country. However, the total population of the state as per the Census of 2011 was 103.8 million – about 8.5 per cent of the total population of the country, making it the third most populous state in the country. Thus, it should come as no surprise that the population density of the state stands at 1102 persons per sq km, which is the highest in the country, as against an All-India population density of 382 per sq km. From 2001 to 2011, the increase in population density for Bihar was as high as 25 per cent, whereas, it was only 18 per cent for all-India. At the same time, the rate of population growth in the state increased from 23.4 per cent in the 1980s to 25 per cent in 2011, as against an all-India decline from 23.3 per cent to 17.6 per cent in the same period. Characterised by low and stagnant economic growth, the state has high levels of poverty, second only to Orissa and the lowest levels of per capita income among major states in the country. It is also the least urbanised state in the country, after Himachal Pradesh.

Historically, Bihar has been the cradle of Indian civilisation in ancient times, and the seat of the Maurya and Gupta Empires. It was marked not just by prosperity, but was also known for its centres of education and culture in the ancient and medieval periods. Thereafter, the region went into decline, and more so in the British period. The Permanent Settlement Act of 1793 was a landmark intervention in the appropriation of land revenue that brought about fundamental changes in the nature of tenancy per se.

It led to the massive impoverishment of the peasantry and led to overall economic stagnation and decline. In particular, small industries were affected, the textiles industry declined, and artisans were distressed. The process of deindustrialisation set in, and this, along with considerably lower investment in both the public and private sectors, constituted the most important factors responsible for the economic stagnation and widespread poverty prevalent in Bihar during the two centuries of colonial rule (Das, 1987; Das, 1992). The decline of trade and industry went hand in hand with the lack of an agrarian transformation in the state.

Post independence, while the abolition of the *zamindari* system freed a large number of peasants from the clutches of an exploitative agrarian system, it also led to a mass eviction of peasants (Sengupta, 1982). While the nature of land relations changed to some extent, the system still remained 'semi-feudal' where, to a large extent, share-lease land markets interlocked with labour and credit markets and the rural landowning 'semi-feudal' class, consisting largely of upper castes along with a small section of Muslims and middle castes, controlled the social, economic, and political power in the state. Apart from being exploitative, this system hampered the process of agrarian transformation (Prasad, 1989; Prasad, et al., 1988).

The Freight Equalisation Policy of the Government of India (1948) for coal and iron deserves special mention here. The eastern region of the country, and, in particular, Bihar suffered as this policy did not allow the state to have a comparative advantage to be able to exploit its mineral resources. The richer and more advanced states of western and northern India were able to access these mineral resources at subsidised rates and, as a corollary, industrialisation could never take off in the Bihar, due to the flight of mineral resources and capital, facilitated by the Freight Equalisation Policy. The state could not take advantage of the Green Revolution which took place in the country in the mid-1960s and 1970s, as they were largely targeted to selected irrigation regions of the country. In fact, the Green Revolution further accentuated the divide between Bihar and the prosperous states.

Nevertheless, partial land reforms and a small dose of investment in irrigation led to modest agricultural growth in the state during the 1950s. But due to the vicious cycle of widespread poverty coupled with a weak socioeconomic infrastructure along with low investment, the state experienced relative economic decline vis-à-vis the rest of India, since the 1960s. This decline was checked to some extent during the 1980s but again aggravated during the 1990s, after the liberalisation of the Indian economy, up to the middle of the first decade of the 21st century (IHD, 2011).

Economic stagnation and widespread poverty, along with the existence of 'semi-feudal' production relations, had two major ramifications. First, it led to the heavy out-migration of agricultural labourers and poor peasants, mainly from north Bihar, to the developed north-west regions of the country. Second, it gave rise to the militant peasant movement in the southern plains of the state. The subsequent years witnessed the growth of migration from most parts of southern plains, as well, and also growth of the militant peasant movement in several districts of north Bihar (Sharma, 1995; Sharma, 2005). In addition, the rise in criminalisation, caste and class tensions, non-governance, and poor delivery mechanisms have given Bihar a notorious reputation of being a 'failed' state and a 'lawless' state, mired with corruption and weak institutions. However, in recent years, the image of the state has considerably improved.

Another important development in contemporary Bihar is the rise of the middle castes. Heavy out-migration, a militant peasant movement, rising real wages and declining patron-client relationships led to the weakening of 'semi-feudal' agrarian relations, and, over the years, the ascendancy of middle castes over political power was almost total. This political empowerment without economic development was somewhat disjointed, but played an important role in breaking the semi-feudal relations and changing the rural landscape.

In the last 5-6 years, the state has witnessed a turnaround in its growth rate and there has been a significant improvement in law and order. The former can be primarily attributed to the considerable rise in the growth rates of sectors such as transport and communication, trade, and construction. The higher growth rates in the secondary and tertiary sectors have led to significant shifts in the sectoral distribution of the state's output. Agriculture employs more than 60 per cent of the total workers of the state, while its contribution to the GSDP is only about 33 per cent. On the other hand, industry and services employ only 16 per cent and 22 per cent of the workforce, respectively, but contribute as much as about 12 and 54 per cent, respectively to the GSDP. These recent developments in the state are signs of positive change. The challenge of sustaining the momentum, and making economic growth more diversified, balanced, equitable, and inclusive, remains.

This introduction gives an overview of the issues related to the 13 thematic sections in the Compendium, namely Bihar's Development in Historical Perspective, Political Economy and Development Issues, Agrarian Issues and Rural Development, Irrigation, Floods and Water Management, Industrialisation and Urbanisation, Labour Markets, Employment and Migration, Caste, Class and Conflict, Politics and Electoral Processes, Poverty and Human Development, Health and Nutrition, Education and Women and Gender Issues, and Public Policy and Governance. Each section analyses recent developments and emerging issues pertaining to that theme in the state. At the same time, there is also a short introduction at the beginning of each one of these 13 sections which briefly summarises the key research undertaken therein. Given the vast thematic areas, there is bound to be an overlap among some themes and this is subsequently reflected in the analysis herein. In the concluding section, key research gaps are identified.

### ***Bihar's Development in Historical Perspective***

A sound reading of the history is crucial to understand contemporary realities of any society. To understand the trajectory of Bihar's development, an engagement with its history becomes imperative. This section briefly discusses key landmarks in the history of the state which have had a bearing on the social and economic foundations of the state and its people.

In *The Idea of India*, Sunil Khilnani (2004) writes, 'The belief that Indian nationalism had subsequently to unite and subordinate these regional identities is ... a curious misreading of the relationship between nation and region in India. In fact, a sense of region and nation emerged together, through parallel self definitions'. This certainly rings true in Bihar, which has one of the richest and most diverse histories of the states of contemporary India. Often described as the birthplace of Buddhism, ancient Bihar, a major part of which was also known as Magadh, was a centre of learning and culture for over 1,000 years, especially under the mighty Mauryan and Gupta empires. Nalanda and Vikramshila Universities, two of the oldest residential universities of India, were located in Bihar.

However, this prosperous region went into decline, especially during colonial rule. In the decisive Battle of Buxar (1764), the combined armies of the Nawabs of Bengal and Awadh as well as the Mughal emperor lost to the English East India Company, which secured it the diwani, that is the right to administer the collection and management of revenues of the province of Bengal (which included present Bihar and Orissa, as well as Bangladesh), and parts of Uttar Pradesh. This made the English East India Company the virtual ruler of the state. Bihar was an important

centre of the Revolt of 1857. Kunwar Singh successfully led the revolt in Bihar, near Arrah, and made heroic advances against the British in Awadh and Central India.

Bihar was also an important centre of the Indian freedom movement. The Champaran *satyagraha* and the Quit India Movement were two major landmarks. The former allowed Gandhiji to make inroads in Indian politics and political mobilisation by highlighting the plight of indigo farmers, while the latter was the final civil disobedience movement which ultimately led to the ousting of the British from India.

Bihar was a part of the Bengal Presidency till 1912, at which time Bihar and Orissa were carved out as separate provinces. Patna was made the capital of this new province and it grew rapidly under British patronage. Historically, Patna was an important centre of trade during the colonial rule in India. Several educational centres such as Patna College, Patna Science College, Patna College of Engineering, and Patna Veterinary College were established here by the British. In 1935, Orissa was carved out of the old state of Bihar, but Patna remained the capital of the newly bifurcated Bihar.

The Permanent Settlement Act, 1793, had a severe impact on agriculture, which in turn also had significant ramifications for the decline of trade and industry, as well as deindustrialisation in the state. It created a new system of *zamindari*, whereby there was an unprecedented rise in the number of rent-seeking intermediaries, and this led to absentee landlordism. The Act led to extreme exploitation of the peasants and had fundamental ramifications for generations to come, on land, land relations, and its interplay with class and caste in rural Bihar.

The British rule did not provide economic conditions conducive for an agrarian transformation in the state. Quite to the contrary, the *zamindari* system perpetuated caste and feudalism in myriad ways. Das (1992) has argued that the caste system was an abstraction of a real situation of agrarian stagnation.

Immediately after Independence, the state did see modest agricultural growth owing to investments in agriculture and partial land reforms. However, poverty and economic stagnation remained widespread and outmigration from the state, which has a long history,<sup>1</sup> since the 1960s, saw a large number of migrants going to the north western states of Punjab and Haryana to work as agricultural labourers.

Another issue which deserves mention here is the division of the state of Bihar at the turn of the century. A new state, Jharkhand, rich in natural and mineral and resources was carved out from the southern part of erstwhile Bihar. Most of the mineral-rich areas, accounting for nearly 85 per cent of the known and certified deposits in the region, and a large part of the forest resources, have gone to Jharkhand, leaving Bihar with an enormous resource-crunch.

However, in recent years, Bihar has charted a high growth path for itself and there seems to have been a turnaround from the economic stagnation of the past. The vision of a resurgent Bihar is gaining ground and while surging ahead, the state is also engaging with its rich history to chart a course for its future.

### ***Political Economy and Development***

Bihar is characterised as a state mired in economic stagnation, especially in the pre-2000 period. Its rate of growth of State Domestic Product was very low, especially in the decade of the 1990s. While in the 1990s, Bihar's per capita income was about 60 per cent of the all-India per capita income, in 1993-94 it declined to 40 per cent and in 2003-04, it further declined to around 30 per cent, and remained the same, even in 2009-10 (Government of India, 2010). Coupled with high population growth, this led to economic retrogression; per capita income not only stagnated in the 1990s, but also declined in some years. Post liberalisation, backward regions and states like Bihar have not been able to take advantage of the market economy and inequality between states has worsened.

While the political landscape in 2000 was one devoid of economic growth and development, the long rule of a charismatic leader, which would continue halfway through the decade for 15 years, appeared to have given *izzat* (self respect and dignity) to the poor and downtrodden castes (and people). In other words, there was social empowerment without economic development. Sharma (2005) observes that in the last three decades, 'semi-feudal' relations in agriculture have considerably broken down because of a combination of factors such as militant movements launched by poor peasants and labourers, rising trend of real wages, declining patron-client relationships, increasing casualisation of labour, commercialisation and diversification of agriculture – although limited, increasing migration, inflow of remittances, etc.

1. The earliest migration streams can be traced to the 1830s, when people migrated as indentured labour to British colonies of Mauritius, Guyana, Trinidad, and Fiji.

Ghosh and Gupta (2009) draw our attention to an interesting phenomenon; that in the context of high economic growth which has not translated into a parallel improvement in human development outcomes for the whole of India; an inter-state comparison for the HDI value of different states in 1981, 1991, and 2001 shows that of the three states with the fastest improvement in Human Development outcomes (Tamil Nadu, Madhya Pradesh, and Rajasthan), two are actually poor income states. Moreover, given Bihar's low economic growth levels, it has managed to sustain an improvement in human development outcomes compared to the all India level.

Another issue which we touched upon in the earlier section and which also emerges here is that while there was no agrarian transformation or transition of the economy, and state institutions decayed, migration became not just a means of enhancing incomes but a survival strategy for the people of Bihar. Migrant Biharis were drivers of growth elsewhere in the country and significantly in urban centres, which were undergoing massive transformations. The process of migration played a crucial role in not just in increasing incomes, but also in enhancing social mobility. Modern methods of cultivation were adopted by migrants when they returned back to their villages and contributed to technological innovations in agricultural production as well.

Last, and perhaps most important, is the complex role of the state in development issues and the political economy of development. The state, through the 1980s to past 2000, was largely predatory and conspicuous by its absence in the lives of the people of Bihar. With a change of guard halfway through this decade, there has been a resurgence of the state. People's perceptions of the government are very positive especially, first, in the restoration of law and order and, second, in the introduction and implementation of development programmes. At the same time, there is no evidence that the high economic growth witnessed by Bihar in the last few years has either been buoyant or inclusive. Supply side bottlenecks, such as inadequate infrastructure and lack of economic incentives, are generally cited as key reasons of agrarian stagnation in Bihar. However, for any kind of agrarian transformation to attain the goal of inclusive growth, and for overall economic development, we also need to pay attention to the historical context of the state, as well as social and power structures in society.

### ***Agrarian Issues and Rural Development***

Agriculture is the mainstay of Bihar's economy. Two-third of the total workers, and three-fourth of rural workers are engaged in agriculture and the contribution of the agricultural sector to Bihar's GDP is 21 per cent. There is a perception that agriculture in Bihar has remained feudal and stagnant, and had been on the decline. Quite to the contrary, the picture that emerges from Bihar is both dynamic and complex, rooted in the historical context as well as colonial policies, and interspersed in the dynamics of caste and land ownership.

Bihar is blessed with rich fertile soil and benign water resources. In 1982, the per capita agricultural NSDP in Bihar was higher than the all-India level (111 per cent). However, it slipped to 90.7 per cent in 1992 and 72.7 per cent in 2002. This can be attributed to perennial floods and institutional constraints, and a massive underinvestment in infrastructure in the state. In fact, for more than a decade, both public and private investment in agriculture declined in the state. At the same time, since the 1990s, it appears that Bihar has made a beginning in exploiting its potential in certain areas within agriculture, such as vegetable and fruit production, dairy farming, livestock rearing, and agro-industries and these sectors are expected to play an important role in the future.

While on the one hand, land reforms in the state met with dismal failure, particularly due to resistance from the landed gentry and legal obstacles, on the other hand, a high growth rate of population, coupled with fragmentation of land holdings, has led to a decline in the size of operational land holdings in the state. Sharma (2005) argues that the delay in the process of land reform led to large scale *benami* transactions and tenants were made to buy the land under their cultivation. As a result, only substantial tenants could retain ownership of land while the rest became either tenants-at-will or agricultural labourers. Thus, there emerged the new surplus-hungry landlords and big peasants as the economically dominant classes in rural Bihar. This class of landlords and big peasants also became the politically dominant class. Since the middle castes comprised the largest proportion of substantive tenants under the *zamindari* system, the inter-caste power relations started shifting in favour of the middle caste rich peasantry. This trend became increasingly dominant with the transfer of land from the upper castes to the middle castes, while it led to pauperisation and proletarianisation of a large number of peasants.

We would also like to argue that there is no 'one size fits all' solution or success stories from another part of the country (or the world) which can be easily replicated. The nature and form of state intervention will (and must) differ

in different social, economic, and institutional contexts. Many academicians and policymakers argue for a greater role of the state for agrarian transformation in Bihar on counts of both efficiency and equity. It is not surprising that the issue of tenancy reforms is revisited in most of the studies in this section of the Compendium and is perceived by many scholars to be the first step of agricultural reforms in the state. At the same time, adoption of modern technologies and specific attention to small and marginal farmers emerge as other realms for state intervention.

### ***Irrigation, Floods and Water Management***

Bihar is blessed with rich water resources. Both groundwater and surface water are in abundance and along with its fertile soil contribute to agriculture in the state. However, Bihar, and specifically north Bihar, is also struck by recurrent floods which create havoc on an annual basis and, ironically, south Bihar is prone to droughts. Given this paradox, it is imperative that water management is efficient.

Irrigation in Bihar was a purely private enterprise until the British constructed the Sone Canal system. Thereafter, the state has had a long history of legislation, starting from the Bengal Irrigation Act of 1876, which was to facilitate the management of Sone and other river systems. Two Irrigation Commission Reports (1971 and 1994), followed by the Bihar Irrigation Act, 1997, and the Bihar Irrigation, Flood Management and Drainage Rules, 2003, are the recent laws which govern irrigation in the state. The main thrust of these legislations is towards a greater responsibility of the government in the operation and maintenance of headworks and government channels in major and minor schemes, as well as the maintenance of state tube wells and small river lift schemes. It is interesting to note that the erstwhile 'Irrigation Department' of the Government of Bihar has been rechristened and is now known as the 'Water Resource Department', which is broadly responsible for 'construction, maintenance, and regulation of major and medium irrigation projects, flood control and drainage works' (Water Resource Department Website, Government of Bihar).

Old problems remain and there are some new areas of concern in water resource management in the state. Floods are a perennial problem for the people of Bihar. Over the years, the problem of flooding has intensified, and every year there is loss of lives and livelihoods. Many researchers attribute this mainly to embankments on the Kosi river – a colonial legacy (Iyer, 2008; Mishra, 2001). The ramifications of the politics of flood control at the international, national, state, and local level is as devastating as the flood itself.

While groundwater is present in abundance and the situation is among the best in the country, in recent years there have been reports of seasonal fluctuations in water availability, as well as depletion of groundwater resources. In this context, water conservation becomes crucial. Unplanned urbanisation has contributed to water pollution, especially poor sewage and drainage facilities in the capital city of Patna and other towns. A related problem is the pollution of Ganges due to the dumping of untreated sewage in the river. This water is no longer potable. There are also high levels of arsenic in groundwater in some districts of North Bihar and this is an area of concern.

In this context, efficient water management becomes crucial. New technologies such as Geographic Information Systems (GIS) and remote sensing are useful, not just for flood management but also checking water utilisation and use, ground water depletion, river basin development, water pollution, etc.

### ***Urbanisation and Industrialisation***

Bihar is one of the least urbanised states in the country, with only 11 per cent of the population living in urban areas. At the same time, the pattern of urbanisation is very lopsided in the state, with South Bihar being far more urbanised than the North. In fact, in the latter area, where around 6 per cent of the population resides in urban areas, is perhaps the least urbanised region in the world. Low urbanisation has led to the absence of pull centres of development in the state and rural-urban linkages within the state also remain weak. Research on urbanisation and urban issues in Bihar is extremely limited and this is reflected in the Compendium. It is now clear that the construction sector has seen a big boom in Bihar and has significantly contributed to the state's recent growth. However, infrastructure remains inadequate and is a major factor constraining Bihar's growth and development.

Closely related to the low levels of urbanisation is the (lack of) industrial development in the state. The bifurcation of Bihar in 2000 saw all its mineral resources and industries go to Jharkhand. In the past, the pattern of industrialisation before bifurcation in the state was essentially enclave/entrepôt led. Policies of the central and

state governments (including the Freight Equalisation Policy, 1948, which has been discussed earlier), lack of infrastructure, and resource crunch/curse are often reasons cited for the lack of industrialisation in the state. Das Gupta (2007) argues that it is crucial to understand the historical and institutional context of the state, especially the Permanent Settlement Act of 1793. This created a rank of intermediaries whose main aim was rent seeking. There was no incentive to use agricultural surplus in improving productivity or diversification. The empirical path of rural-urban and agriculture-industry did not happen as there was no agricultural transformation in the state.

### ***Labour Markets, Employment and Migration***

There is a general lacuna in research studies on labour and employment in Bihar. A majority of the studies in this section look at the phenomenon of migration which, in our opinion, has been the most defining force of change in rural Bihar in the last 3 decades. This is discussed in detail later.

The state of labour markets and employment in Bihar is characterised by deficiencies in both quantity and quality. The agricultural sector absorbs two-third of the workforce, while generating only around a fifth of the SDP. This explains high underemployment and disguised employment in the state. The unemployment rate in the state is also higher than the all-India average. Workforce participation rate for both males and females is lower than the all-India average. During the period 1994-2000, the state witnessed a casualisation of the workforce. While this trend reversed during the period 2000-05, it would be naive to assume this as a positive development as it is most likely that self employment has been created in small, petty, and low paid activities, without much improvement in the livelihoods of the people. Only two per cent of the workers in the state are absorbed by the organised sector, and 70 per cent of these are in the public sector, reflecting the minimal role of private sector in employment generation in the state. More than 40 per cent of the workers are casual wage earners and among these, majority are agricultural labourers. While the agricultural wage rate in the state has been much lower than other states, in recent years, there has been a substantial rise in rural wages.

Agricultural productivity in Bihar is one of the lowest in the country, as is the income generated from agriculture. In a rural income dominated economy, sufficient agricultural growth can reduce poverty. However, in the case of Bihar, low agricultural growth has come in the way of poverty reduction. At the same time, lack of infrastructure acted as a disincentive to private investment. Thus, the state became a laggard in growth.

In recent years, the economy of the state has been dynamic and growth indicators are moving. Income growth is a major determinant of progress. The rate of growth of SDP, which is a summary measure of income, has picked up in recent times. While India achieved a record annual GDP growth, averaging 8.45 per cent, in the five years from 2004-05 to 2008-09, during the same period Bihar averaged 11.03 per cent annual growth. It was virtually India's fastest growing state, on par with Gujarat (11.05%). This represents a sensational turnaround.

While urbanisation has remained low, rural-urban migration in the last few decades has been the main driver of economic development and growth. Bihari migrants have significantly contributed to the growth processes in other parts of the country. However, in recent times, they have also faced a backlash rooted in ethnocentric movements. In this context, the sustainability of migration as a means of development of the state and its people in the long run remains questionable.

There is a school of thought that argues that government interventions such as the MNREGA can substantively uplift the rural economy and its people, and reduce out-migration. In another section in the Compendium, this is corroborated by Pankaj (2008) and other studies, which reveal that MNREGA has the potential to directly impact out-migration from rural Bihar. However, this potential is far from being reached and outmigration from the state continues to increase (IHD, 2011). Migration has played a significant role in social and economic mobility in rural Bihar. Apart from increasing incomes, male migration has also been quite a catalyst in enhancing women's mobility, especially among some very conservative communities in rural Bihar (Datta and Mishra, 2011). At the same time, one needs to critically look at the long-term impact and the sustainability of this development model, based on migration, remains to be seen (Rodgers and Rodgers, 2011).

### ***Caste, Class and Conflict***

In Bihar, as is true of other parts of India, caste groups with varied origin tales, ideologies, and ritualised social practices exist with competing notions of superiority and, essentially, contested notions of hierarchy among the castes. Inter caste conflict has also been attributed to this phenomenon of multiple hierarchies. Major conflicts exist between castes, and these are of the nature of long term conflicts. Caste conflict manifests itself through the existence of a number of caste armies such as the Ranvir Sena, Lorik Sena, Brahmarsi Sena, Sunlight Sena, Bhumi Sena, etc. The capture of political power is another cause of inter caste conflict, but is not determined by any hierarchical caste principle. Caste alignments (and realignments) at the time of elections (at the *Panchayat*, Legislative Assembly and Parliamentary levels) are primarily influenced by the demands of the situation and less by any principles of caste hierarchy, and may differ widely from village to village.

Upper caste groups like the Brahmins, Bhumihars, Rajputs, and Kayasthas made up only 13 per cent of the population in 1931 (the last time a caste census was conducted). While this small but powerful group has traditionally dominated the social and political life of the state, in recent years there has been considerable decline. A large number of communities are categorised as Other Backward Classes (OBCs),<sup>2</sup> and dominant amongst them are the Yadavs, Koeris, and Kurmis. There has been an improvement in their socioeconomic indicators because of affirmative action and political ascendancy, and the political power of the state is in their hands. At the same time, many OBC communities remain both economically and socially deprived.

Even though contemporary Bihar speaks a language of 'development' and 'economic growth', issues around caste and class remain central to its citizens, Whether it is the caste *senas* (armies), the Naxalite movement, or the manner in which historical oppression along caste and class lines shows itself in the abject poverty of a large section of its society; caste and class, whether conceptually or as they are manifested in the lived realities of Bihar's population, must be addressed by academia, civil society, and policy makers in the state. It is also important to acknowledge the complex interconnections between the two categories of caste and class, and the manner in which they are being redefined in contemporary Bihar. Chakravarti (2001) argues that given the current context in Bihar, where the ruling parties have been consistently opposed to the ideology of the left of centre factions, the situation of the underclass, engulfed by relations of unfreedom and dependency is not likely to change, as 'the social character of the state in Bihar is heavily weighted against them' (pp. 293). In a similar vein, Beteille (2010) feels that recent development in Bihar would not put an end to the preoccupation with caste and community. What is important and challenging, and would, in essence, be a litmus test is not just development, but the (just) distribution of the fruits of development.

### ***Politics and Electoral Processes***

Bihar has been a very politically active state. It was an important centre of peasant struggle and freedom movement in the country in the pre-independence days. Historically, the Congress Party had a strong presence in the state from the time of independence until the 1980s. Prior to the 1984 elections (with the exception of 1977 elections), the Congress managed to easily secure the required number of seats in the Lok Sabha elections, usually a strong majority. From the 1989 elections, when it polled only 28 per cent of the votes, the Congress has demonstrated a steady decline in popularity and the vacuum left by it has been predominantly filled by regional parties.

Caste has been a very important factor in politics and electoral processes in Bihar. Politics was dominated by upper castes in coalition with some elite sections of Muslims and upper middle castes in the pre-independence as well as in the post-independence period until the 1980s, although the challenge to their dominance had started in late 1960s. With the advent of Rashtriya Janata Dal (RJD) government led by Shri Lalu Prasad, the dominance of the middle castes particularly the three numerous and influential among them (Yadav, Kurmi and Koeri) and subsequent decline of upper castes was almost complete. This is not to suggest that the upper castes have been completely marginalised. They are still important in tilting the balance in the electoral process as the caste politics has been further fractured with intense competition between various caste groups. The NDA Government led by Shri Nitish Kumar has further reinforced the dominance of the middle castes, although it is widely acknowledged that the development agenda has also acquired an important place along with caste in the electoral politics in the state.

2. In Bihar, the term Backward Class and Extremely Backward Class is used for OBC I and OBC II respectively. In several places, the latter has been used.

### **Poverty and Human Development**

For a state like Bihar, both poverty and employment are intertwined with agriculture. Underdeveloped agriculture has a cause and effect relationship with high levels of poverty, widespread unemployment, and disguised unemployment. Most recent government estimates show that the incidence of poverty in Bihar is 41.4 per cent, the second highest in the country, after the state of Orissa. Rural poverty is 42.1 per cent, whilst urban poverty is 36.4 per cent. Fifteen per cent of India's rural poor are located in Bihar as against the fact that only 11 per cent of the country's rural population is located in the state.

To understand the current state of poverty in Bihar, it would be useful to dwell at it from a historical perspective. Post independence, and even in the 1960s, Bihar was one of the most efficiently administered and financially managed states in the country. Its transition from a state with low poverty ratio to a state with one of the highest poverty ratio among the states requires study. In the 10 year period from 1973-74 to 1983, the poverty ratio for the country as a whole declined by 10 per cent, but it remained unchanged for Bihar at 62 per cent. However, from 1983 to 1987-88, when the national poverty ratio declined by 5.6 per cent, poverty ratio in Bihar declined by 10.1 percentage points. Similarly, from 1993-94 to 2004-05, while the former declined by 8.5 percentage points, the poverty ratio in Bihar declined by 13.9 percentage points. This decline may be attributed not to the high growth, but high out-migration from the state. While this may be considered to be a significant achievement, it was tarnished by an increase in the total number of poor in the state due to a high rate of growth of population. At the same time, it is pertinent to note that Bihar is not the only state to witness a rise in the number of poor. There are at least 5 major states in India which witnessed this phenomenon.

Closely interlinked with poverty is vulnerability. Recent NSS data on consumption patterns in Bihar reveals that the share of food in total consumer expenditure is around 61 per cent for rural Bihar. In contrast, the corresponding all-India figure is 53 per cent, and that for Kerala and Punjab is 44 per cent. It is also revealed that the incidence of poverty is much higher among the landless, scheduled castes, and Muslims. Household categories with the highest incidence of poverty are those of casual labourers in agriculture and self employed in non-agriculture sectors (NSS, 2005-06).

Poverty and human development are deeply interrelated. India's human development performance has been abysmal and it is one of the lowest in the South Asian region. Within India, Bihar fares poorly on human development outcome indicators related to education, health, and sanitation. There is a considerable gap in north and south Bihar, with the latter former being more poor and backward, with higher poverty and vulnerability, and worse human development indicators.

### **Health and Nutrition**

Bihar ranks among the lowest in the country on indicators related to primary healthcare infrastructure, and reproductive and child health care (DLHS 2002-04). Health indicators such as infant mortality rate (IMR), maternal mortality ratio (MMR) and total fertility rate (TFR), among others, are some of the worst in the country. Moreover, there is great intra-state disparity in terms of health indicators.<sup>3</sup>

Yet, certain health indicators in the state do show positive trends. For example, infant mortality and child mortality rates have shown significant improvement through the 1990s (World Bank, 2005: pp. 20). More recent NFHS (2005-06) data shows that there has been improvement in coverage of immunisation, use of contraceptives, and institutional deliveries. The MMR also dropped from 371 in 2001-03 to 312 in 2004-06 because of an increase in institutionalised deliveries. However, with declining public health investment in the state and social health insurance, out of pocket expenditure on health is one of the highest in India. Additionally, lack of adequate medical and paramedical staff, and medicines poses a serious challenge to the healthcare system in the state.

Given this context, it is not surprising that Bihar is a 'priority state' under the National Rural Health Mission (NRHM). This provides tremendous opportunities for the state to improve its health performance. Key areas where intervention is required are reductions in IMR, MMR and TFR, improvement in child sex ratio, and better nutrition.

3. Seohar, Samastipur, Kishanganj, Jahanbad, Nalanda, Khagaria, Araria, Sitamarhi, and Pashchim Champaran are the worst ranking districts on these indicators in the state.



## Education

As with other social indicators, Bihar is one of the lowest placed states, in contemporary India, in terms of education outcomes. The rise in literacy rates (between 1991 and 2001) has been slow as compared to all-India levels resulting in a wider literacy gap between India and Bihar (from 5 per cent in 1991 to 17 per cent in 2001).<sup>4</sup> It is encouraging to note that the gender gap in literacy has decreased (even though only marginally) through the 1990s from 29 per cent in 1991 to 27 per cent in 2001. As with other states, a district level analysis shows wide disparities in educational attainment with certain districts like Kishanganj, Araria, Purnea, Katihar, Madhepura, and Saharsa performing relatively poorly as compared to Bhojpur, Buxar, Rohtas, Kaimur, Gopalganj, Siwan, and Saran.

The District Information System for Education (DISE) data shows that the Gross Enrolment Ratio and Net Enrolment Ratio have shown a steady improvement reaching close to 100 per cent for primary levels in 2006–07. However, these rates drop to less than one third for upper primary levels. An analysis of the teacher-school ratio shows that it has steadily increased in the primary, upper primary, and secondary government schools but, interestingly, has declined in secondary private schools between 2003–04 and 2007–08.

The Government is implementing several schemes to improve education outcomes in the state and key amongst them are the Mid Day Meal Program and Sarva Siksha Abhiyan. The Mid Term Appraisal of the 11th Five Year Plan of Bihar shows that the MDM programme covered 72 per cent of enrolled children in 2008–09, with several districts reporting 100 per cent coverage. As has been mentioned in the public policy and governance section of this Compendium, fund utilisation is a major challenge for most programmes in the state, including the SSA. Interestingly, the fund utilisation rate for SSA went up from 15 per cent in 2005–06 to 76 per cent in 2006–07, but fell to 36 per cent in 2008–09.

## Women and Gender Issues

Bihar has around 49.6 million women and 54.2 million men. While the sex ratio of the state declined from 919 (Census of India, 2001) to 916 (Census of India, 2011), child sex ratios in the same period declined steeply from 942 to 933. The age of marriage is increasing and the fertility rate is declining – both of which are positive developments. However, high level of illiteracy coupled with a high maternal mortality rate – both indicators of low human development of women – is a cause of alarming concern.

In Bihar, strong footholds of caste and patriarchy are everyday realities in women's lives. These two institutions define and govern a woman's status, her work, and agency. Yet, there are slow and steady changes in the policy. Women's reservation in the *Panchayat* is a crucial landmark in this regard. Its ramifications are going to be far reaching in the decades to come.

The multidimensionality of gender is much debated within the various feminisms and, more largely, in social theory. We understand it as socially constructed and institutionalised differences leading to, for example, gender roles or the construction of masculinities and femininities. However, most literature selected in this section is concerned solely with the experiences of women, thus, somewhat truncating the potential of research on gender. The fact that most studies here focus only on women is not due to some selection on the part of the editors, but because of a lack of research on the manner in which gender is socially constructed for both men and women. Further, it is also important to note that while studies in this section have given primacy to gender, research in other sections of the Compendium also addresses gender in some limited manner; proof of the fact that the feminist scholarship has, in fact, had some impact on 'male stream' gender-blind theorising.

## Public Policy and Governance

David Held (1998) points out, state institutions are necessary devices for enacting legislation, formulating policies, limiting inevitable conflicts between particular interests, and ensuring that civil society remains free of new forms of inequality. Public policies, thus, refer to a gamut of government functions that attempt at coordinating activities of the State. The State, without exception, emerges as the foremost actor in the political, social, and economic lives of its citizens. This is especially true in developing societies as the State continues to play a central role in

4. Institute for Human Development (2011). *Mid Term Appraisal of the 11th Five Year Plan for Bihar*, Institute for Human Development, New Delhi.

securing economic development, social security, and justice, despite the processes of liberalisation, privatisation, and globalisation that insist on the withdrawal of the State from its traditional functions. However, in this Compendium we restrict ourselves to studies that examine the developmental functions of the state. Poor service delivery is one of the major factors contributing to the dismal socioeconomic indicators in Bihar. The Bihar Development Report (2007) finds that public subsidies in the education and health sectors favour upper economic classes. One of the key challenges to effective service delivery is the ambiguous and often fragmented nature of policy formulation. For example, both *Vidyalaya Shiksha Samitis* (VSS) and *gram panchayats* are meant to monitor teacher absenteeism, which, at 26 per cent, is one of the highest in the country. The VSS Act was passed in 2002 and outlined its role in monitoring teacher absenteeism. However, in the previous year *gram panchayats* were given responsibility for monitoring the same. Their roles and responsibilities have not been updated and there is no mention of the VSS in the *panchayat* act passed in 2001. This can lead to a situation where neither the VSS nor the *gram panchayat* take responsibility for monitoring teacher absenteeism (World Bank, 2005).

In recent years, the development discourse has shifted to good governance. Here, an examination of government policy with regard to socioeconomic development in Bihar is crucial. Programmes related to a wide range of themes – employment, public distribution of food, child development, social protection for the elderly, the socioeconomic development of marginalised sections of society, climate change, population, ICT and housing, as well as the National Rural Employment Guarantee Scheme has generated much interest in recent times, and a significant number of studies in this section critically examine its achievement and challenges. Other government policies which have raised some amount of research interest are the Integrated Child Development Scheme and the Public Distribution System. However, there is a severe lack of empirical policy research on other government schemes in Bihar.

### ***Some Concluding Remarks***

In this concluding section, we identify major research gaps in the literature on Bihar's development post 2000. While there has been valuable research conducted in the areas identified above, there are several important themes and approaches that are missing in research on the state. Further, there are several issues that have been dealt with in a cursory manner and deserve greater attention.

Key issues that deserve greater research attention include industrialisation, urbanisation, labour markets and employment, public finance – especially issues related to central transfer and assistance, gender relations and the pervasiveness of patriarchy in varied spheres (looking beyond 'women's issues' solely), and the role of civil society and non-governmental organizations in the state. Additionally, research in the state might benefit from a comparative perspective, which might facilitate a richer understanding of the issues studied here.

While there has hardly been any industrialisation in Bihar, it is imperative that this be studied in great depth in order to be adopted as a core component in the development strategy of Bihar. Similarly, while the level of urbanisation is low in Bihar, it is crucial that studies in urban development – with a focus on town planning, service delivery, slums etc., are undertaken. Other gaps in research include a dearth of in-depth studies on labour markets and employment in the state. Herein, engaging with the gendered nature of labour markets and women's employment is deeply relevant. Research is also required to study perspectives for the long-term development of the state. There is a lack of research on issues relating to public finance. Perspectives on fiscal health, including revenues and expenditure, and development outlays, are also missing from the current literature.

While there is considerable research on caste in the state, it is often not empirically informed due lack of data on caste. In this context, the current national debate on the caste census becomes pertinent. Also, given the widespread caste and gender related violence during election time, it is surprising that the issue has not been discussed in greater detail in the literature. It might also be useful for future research to examine issues in a comparative perspective. This often allows for a richer understanding of the challenges facing contemporary Bihar in almost all the themes covered above. For example, another state in India, Kerala, has an almost entirely migrant economy today, but there is very little research comparing the experiences of the two states, which are at the two opposite ends of the Human Development Index. Additionally, there is also a lack of research from key disciplines within the social sciences, especially sociology and anthropology.

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**SECTION 1**

**Bihar's Development in a Historical Perspective**

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## Overview

The literature in this section looks at the historical perspectives on Bihar's development and primarily examines the history of modern (colonial and post independence) Bihar. The 24 studies in this section examine diverse issues. Four major themes that emerge in this section include agrarian politics during the colonial period, the imposition of colonial categories on the subject population, key events in the national movement, and the mobilisation of groups during the national movement.

There has been significant research on agrarian politics in colonial Bihar which critically examines the manner in which the elite leaders of the state mobilised peasants for the wider national movement (Kumar, 2007), or the subversive language of the most marginalised peasants against the colonial state (Kumar, 2001), and the politics of land and labour in the colonial state (Poucheпадass, 2000). For example, Kumar (2001) writes that while the rhetoric of revolution, a dominant concept in Marxist analyses of peasant political consciousness, remained alien to the peasant community in Bihar, it did not make them less revolutionary than any other social class. Poucheпадass (2000) highlights three key causes of agrarian stagnation in colonial Bihar as an unequal distribution of the factors of production, severely limited access to the market (especially non food) and agricultural products, largely due to the colonial situation, and the reluctance of the members of the high caste dominant peasantry towards both productive investment, which was relatively unprofitable, and personal involvement in the process of agricultural production, which ran counter to their conception of social prestige. While Pinch (2008), an edited book, mainly focuses on peasant politics in Bihar, it includes essays on a wide range of topics in Indian history and politics. Singh (2008) explores the role of *zamindars* in the colonial state's attempts at flood control. Sharma and Singh (2001) study the changing agrarian structure and peasant movements in the state during the 20th century.

Studies in this section engage with the imposition of colonial categories of 'Hindu' and 'Muslim', and how these categories manifest themselves in the politics of contemporary Bihar (Ghosh, 2010). For example, the large scale archaeological project of the colonial government (including the excavations at Patna to unearth the site of ancient Pataliputra) contributes to a large extent to our understanding of ancient Bihar today (Mukherjee, 2009). Gottschalk (2007) throws light on the British efforts to understand Bihar through the discipline of cartography. Sharan (2003) examines the colonial classification of scheduled castes as distinct from other categories of upper caste, untouchable, tribe, or the 'criminal caste.'

The Champaran Satyagraha of 1917, launched by Gandhi to protest the plight of indigo farmers in the region, was an important landmark in the freedom movement in Bihar. Peasants were forced to cultivate indigo on 3/20th of their land and sell it at prices fixed by the European planters. A number of leaders, including Rajendra Prasad and Raj Kumar Shukla, joined hands with Gandhi to protest their miserable condition. As a result of their protests, an enquiry committee was constituted by the colonial government and the practice of forced cultivation of indigo was abandoned.

Other major landmarks in the national movement which the literature examines include the Civil Disobedience Movement and the Quit India Movement (Ghosh, 2010; Kumar, 2007; Ghosh, 2005; Rahim, 2000; Sinha, 2000). Ghosh (2005) examines the Congress strategy around the Champaran movement and finds that a difference of opinion among the Congress leaders in 1932, about strengthening the movement as well as the increasing emphasis on construction work, led to a gradual withdrawal from the mass contact through agitation. Kumar (2007) examines the relationship between the wider national movement and events in the state and argues that the combined strength of the three strata of peasantry – the rich, middle, and poor – made the Quit India Movement in Bihar extremely strong and presented a serious challenge to British rule. Moreover, the Quit India movement provided poor peasants the much needed opportunity to rise in revolt, especially in the context of scarcity of food and rising prices. Singh (2002) makes a nuanced study of the lowest rung of the police force during the Non Cooperation Movement and looks beyond dichotomous categorisations of the constabulary as either supporters of the British or the national movement.

Research has also focused on social mobilisation among other groups during the colonial rule and examining the mobilisation of *Dalits* (Upadhyay, 2007; Choudhary, 2005), the trajectory of the communist movement in the state up till 1960 (Mandal, 2003); and the influence of Bhagat Singh on the Naxalite movement (Kumar, 2009). Upadhyay (2007) explores the origins of *Dalit* consciousness during the Bhakti movement and, consequently, under British rule, and looks at the role of social reformers in particular. Studies also examine the development of the *varna* system in parts of the state (Choudhary, 2007); the development of a regional identity in Bihar (Mishra, 2002); the creation of Bihar from the Bengal province in 1912 (Varma, 2007); oral history narratives in reconstructing a communities history (Kalapura, 2008); and the decline of Mithila's economy in the post Gupta period (Jha, 2007).



## 1.1 *Muhajirs and the Nation: Bihar in the 1940s*, Papiya Ghosh, Routledge, London, 2010.

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**Key Topics:** *Muhajir, Partition, Labouring Class*

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In this book, published posthumously, the partition experiences of Muslims in provinces where they were the *aqalliat* (minority), using Bihar as an example, are discussed. In Bihar, Muslims comprise 10.1 percent of the population. The book endeavours to understand the experiences of Muslims in Bihar to add to the rich debate on the politics of nation-ness/hood, denominational homelands, and citizenship across South Asia. Very broadly, the book adds to the historiography of community-oriented 'formations and communal polities' in pre-partition India. The book points out that while the focus of research on this subject has recently shifted from Uttar Pradesh to Bengal, Punjab, and Sind, the 'intersectedness of community and nation-making in Bihar in the 1940s has remained unwritten until now' (pp. xxvii).

The book looks at the implications of the imposition of colonial categories to classify subjects of politics and, in particular, the demarcation of Hindu and Muslim communities into 'communitarian-identitarian' identities. It also questions the foundational status of religion through examining the importance of the region (in the case of the *muhajirs*) and *biradari* (in the case of the *razil* or labouring class).

The book consists of five chapters dealing with the relationship between the Congress and Muslims in colonial Bihar, the *Imarat-i-Shariah*, the Pakistan movement in Bihar, the *Momin* conference, and the consolidation of the Hindu movement in Bihar. The first chapter examines the alienation of the Muslims and the consolidation of the Muslim League in the context of the overlaps of the congress with the Hindu Mahasabha and the Kisan Sabha, and its 'unfocussed coping with the Pakistan movement, rather than in the non-forging of a coalition with the Muslim Independent Party (MIP)' (pg xxvii). The author writes that at this time, the socialists were more serious than the Congress about 'Muslim Mass Contact' but were sidelined by the Congress. She also examines the Congress' attempts at *Rabita-e-Awan* (mass contact) with the Muslims in the state. She points out that the Congress did reach out to the backward-classes among Muslims to some extent and the installation of the *Momin* Conference in Bihar was an example of that.

In the next chapter, the book discusses the career of the *Imarat-i-Shariah*, a legal-spiritual institution affiliated to the Jamiyat-al-Ulama-i-Hind (JUH) and conceptualised by Maulana Azad during his pan-Islamist and Khilafat years, to examine the political intervention of the *ulama* and Sufis in support of *muttahida qaumiyat* (broadly refers to composite nationalism). She argues that while the institution was initially ambivalent towards the Pakistan agenda, by the 1940s it was sharply critical of it. She writes, 'The JUH supported neither Pakistan nor *Akhand Bharat*, but *mukammal azadi* (complete freedom) for all the provinces within a loose federation. Pakistan implied not just confining Islam to the extremities of the subcontinent but abandoning the Muslims living in India. The argument was that only in the JUH scheme of things would the *aqalliat* provinces not get a raw deal' (pp. 37).

The third chapter of the book examines the organisational breakthrough of the Muslim League between 1938 and 1939, under a mainly landed class leadership that was alienated by the moderate agrarian reforms of the Congress. It argues that the Muslim League attempted the monolithising of the Muslims' view of the census returns and the Medinite fraternisation (of all *biradaris*) strategy of the Latifur Rahman led *Momin* Conference at this time, alongside rallying the Biharis around Pakistan and taking on the enumerative *biradari* politics of the *Momin* Conference. It won 34 out of the 40 Muslim seats in the Bihar Legislative Assembly in 1946. In this chapter, the book underscores the importance of the 1946 riots in the clinching of the Pakistan demand. Jafar Imam, the President of the Bihar Province Muslim League at the time, argued that 'this land is not for us and we have to leave the place' based on the scale of the riots (pp. 81). The chapter argues that 'Jinnah's concept of an exchange on populations would have been ignored before the riots. Even a hundred years of propaganda to migrate would have drawn a blank since migration implied a break with mosques, graveyards and heritage' (pp. 81). However, given the scale of the riots, a large number of Biharis attempted to migrate starting from 1946. The chapter outlines the chronology of their migration and the negotiations between the Congress, the Muslim League, and the Bihar Province Muslim League at the time.

In the next chapter the book examines the contestation of the Muslim League's leadership and its Pakistan movement by the *Momin* Conference. It argues that the *Momin* Conference tried to unify the *Rayeens* (vegetable

sellers and growers), *Mansoors* (cotton carders), *Idrisis* (tailors), and *Quraishes* (butchers). While initially, the *Momin* Conference started documenting the oppression of the *Momins* by the Muslim *Zamindars*, gradually its focus shifted to 'counter hegemonic deployment of biradari arithmetic' (pp. xxix). It argued that Islam was not in danger and so the demand for Pakistan could only be a deflative ploy. The book points out that the stand taken by the *Momins* and *Rayeens* against partition remains a reference point in mobilising for social justice in contemporary Bihar.

In the final chapter, the book examines the performance of the Hindu Mahasabha in Bihar and argues that as compared with the Congress, it never made an organisation or electoral breakthrough in Bihar. While the top Congress leadership had joined the organisation in the mid 1920s, the compulsions of the freedom movement pushed the earlier convergence aside. However, the overlap between the two parties emerged in the aftermath of the 1946 elections when the Muslim League alleged the involvement of congress workers and leaders of the Hindu Mahasabha. However, the Hindu Mahasabha failed to mobilise the Hindu majority in the state in the context of the plethora of caste and agrarian movements in the state.

## **1.2 Legacy of Bhagat Singh and the Naxalite Movement in India: A Study of Bihar, Manoj Kumar in Jose George, Manoj Kumar, and Avinash Khandare (eds) *Rethinking Radicalism in Indian Society: Bhagat Singh and Beyond*, Rawat Publications, New Delhi, 2009.**

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**Key Topics:** *Naxalite Movement, Bhagat Singh*

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This book chapter highlights some of Bhagat Singh's thoughts and ideas and his vision for a free independent Indian society and attempts to understand how this differed from his contemporaries. It mentions the linkages between the revolutionary legacy of Bhagat Singh and the Naxalite movement in India, in brief. Finally, it discusses the emergence and ideological formulations, including radical activities and various other aspects of the movement with special reference to Bihar, describing its major historical events and trends, causes, and principal features.

Bhagat Singh was born and brought up in a revolutionary environment and was influenced by numerous instances and stories of struggle, suffering, and sacrifices of the revolutionaries against colonial authorities. He participated actively in the Non-Cooperation Movement, but after its suspension in 1922 he became disillusioned with the non violent movement and began believing in armed struggle as the only suitable method of achieving freedom for the country. Gradually, however, he became critical of individual armed actions and emphasised the need for the mass mobilisation of peasants and workers under the leadership of the Communist Party and the development of class consciousness among them through economic struggle with the ultimate aim of capturing political power.

The chapter argues that the Naxalite movement emerged strong in central Bihar largely because of deplorable socioeconomic conditions in the state, caste and class atrocities, feudal oppression, criminalised politics, and a corrupt administrative system. The movement was stronger in central Bihar because the population was actually better off there and could manage their subsistence, without the support of the landed gentry, unlike their counterparts in north Bihar who were mostly dependent for their livelihoods on landlords.

While the movement weakened due to state repression during the national emergency in the mid 1970s, it became active again in the post emergency period. Despite the State's strategy to 'repress and reform' the movement, the movement has only expanded in the state. The analysis contends that this was perhaps because the state government treated the Naxalite movement as being a law and order problem instead of recognising it as a product of the socioeconomic conditions. Improper implementation of reform measures also added to the conflict in the state. Lack of political will and the insincerity of government officials have also been responsible, to an extent, for the spread of the Naxalite movement. The paper argues that unless the government adopts and implements a suitable socioeconomic programme with sincerity and ensures improvement in the quality of life of the poor peasantry, the mere use of repressive methods and illusory reform tactics are unlikely to check the Naxalite related problems.

The Naxalite movement is clearly a socioeconomic conflict and, therefore, should not be treated merely as a law and order problem or caste conflict. The socioeconomic objectives of land reform could not be achieved and as a result large numbers of frustrated and disappointed poor masses, mostly belonging to the lower castes, joined the Naxalite movement. The situation can, however, improve if the state government makes a sincere effort to implement land reform legislations effectively, ensures the protection of poor tenants and sharecroppers, improves the social, economic, cultural, and political conditions of the poor in an equitable manner. This includes finding out the ceiling surplus land, its acquisition and

distribution among the poor peasantry, protection of interests of poor tenants by effective implementation of tenancy laws, provision of infrastructural facilities, and supply of agricultural inputs like credit loan, high quality seeds, fertilisers, include provisions for marketing the produce, and procurement at remunerative prices from the marginal and small farmers. In addition to this, socioeconomic welfare measures like adequate provision of education, healthcare, employment, and social protection to the marginalised social groups must be undertaken. Further, development policies like the construction of roads, schools, community buildings, and houses for the poor must be implemented. Social reform measures need to be undertaken to improve the life of the untouchables and ensure their right to social dignity. The government must assert its authority and work as the true representative of poor instead of looking after the interests of the affluent sections of society.

### 1.3 *New Province, Old Capital: Making Patna Pataliputra, Sraman Mukherjee, The Indian Economic and Social History Review, Vol. No. 46 (2), pp. 241–79, 2009.*

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**Key Topics:** *Patliputra, Mauryan Empire*

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The paper describes the findings of one of the most lavishly financed archaeological excavations in colonial India—the Pataliputra excavations, conducted in 1912—funded by Ratan Tata and supervised, on behalf of the Archaeological Survey of India, by D. B. Spooner. The excavations uncovered that Patna, the recently chosen provincial capital of the newly created Bihar, was the ancient city of Pataliputra. The paper explores the politics of place, making and provincial self fashioning in the early 20th century colonial Bihar. It traces the emergence of Pataliputra through the ‘place – making labours of colonial archaeology’ (pp. 241). Through the process of outlining the different trajectories of making Patna Pataliputra, the paper reveals how nationalist identities were deeply interlinked with the same disciplinary and institutional spaces opened up by colonial archaeological and museum practices.

The separation of Bihar and Orissa from Bengal was announced in the Delhi Durbar of 1911, and the two were carved out in the subsequent year with Patna as the new capital. In the next year, 1913, one of the most elaborate excavations of colonial India was started. The paper ‘traces the making of a lost place and the consolidation of a particular field of knowledge mobilised around the apprehensions of loss’ (pp. 242).

The paper uses archival files from the Office of the Director General of Archaeology, New Delhi, relating to the Pataliputra excavations along with published reports of the ASI, and some late nineteenth and early twentieth century monographs, essays, and articles to locate the changing configurations of Pataliputra. The paper examines how the site of the excavations shaped the evolution of the discipline of Indian archaeology in its formative years.

According to the paper, early colonial cartographic literature, particularly James Rennell's *Memoirs of a Map of Hindoostan*, first established the connection between Patlibothra of the classical accounts, Pataliputra of the Sanskrit textual sources and modern Patna. Following this, early archaeologists like Alexander Cunningham and J. D. Beglar went on to make the connection between modern Patna and the site of ancient Pataliputra. The mission of the early colonial state was to “bestow a ‘gift of the past’ to the Indian subjects by redeeming their apathy and inculcating in them a new sense of loss about their own history – a history for which there were no scientific records” (pp. 245).

During the 1890s and early 1900s, L. A. Waddell and P. C. Mukharji worked to unearth the surviving material remains of ancient Pataliputra in modern Patna. However, both Waddell's *Discovery and his Report on the Excavations at Pataliputra* (1903), and Mukharji's excavations failed to throw up any grand structural remains of ancient, particularly, Mauryan Pataliputra.

A decade after the publication of Waddell's report on the Pataliputra excavations, with generous funding from Ratan Tata, the ASI was able to begin large scale excavations under the supervision of the Superintendent of the Eastern Circle of the ASI, D. B. Spooner. The paper points out that between 1903 and 1913 there were substantial changes both in the disciplinary parameters and the institutional structure of the ASI and in the provincial territorial configurations of the old Bengal Presidency.

After lengthy negotiations between Ratan Tata and ASI, the excavations finally started when conditions seemed extremely favourable with a drought like situation in Patna in 1912. After lengthy excavations at Kumrahar, his excavation site through 1913, Spooner came to the conclusion that the structure he had located at Kumrahar represented an earlier period in Indian architecture when stone was still subservient to wood as the building material. Thus, ‘Spooner's conjectures not only tried to authenticate the evidence of Archaemenian influence in Mauryan

Pataliputra but also claimed a higher antiquity on foreign influence in Indian art and empire. In fact, for him the who of Pataliputra unfolded as a conscious and active copy of Archaemenid Persepolis by the Mauryan Emperor' (pgs 261–62).

Eventually, in *The Zoroastrian Period of Indian History*, a book based on his findings in Patna, Spooner went on to argue that by the time Chandragupta ascended the throne of Magadha '...the Persian element in the Indian society had become so completely domiciled and so identified with the community that they were not looked upon as aliens in our modern sense' (pp. 266). This claim took the antiquarian circles in India and London by storm. Both Western and Indian scholars—archaeologists, Indologists, and Iranian specialists alike—set out to counter the traces of the Parsi-Zoroastrianism in the Mauryan remains of Patna. The question of Mauryan indigeneity was central to the debate. The paper argues, 'the spectre of Parsi lineage of Mauryan Pataliputra... continued to haunt Spooner even after Tata's death and never merely as an academic problem' (pp. 267).

After Ratan Tata's death there was a protracted debate over where to store the finding of the excavation. Ultimately, the Pataliputra antiquities were retained in the Patna Museum. The paper argues that the final decision of the Tatas to let the antiquities remain in Patna was not because of any concerns of scientific archaeological research or consideration of the local sentiments in Bihar and Orissa. Instead, the 'sheer absence of grand sculptural remains, of the kind Tata and his heirs were pushing for in the Pataliputra finds, ultimately saved them from being carted away to Bombay' (pp. 275).

The paper concludes while pointing out that the debate around the indigeneity of the Spooner excavations and many other excavations across India did not end with Spooner. The emerging India scholars not only indigenised things Mauryan but also pushed for a higher antiquity of an autonomous Indian civilisation.

**1.4 Community History and Ethnography: Re-constructing the Past from People's Narrative, Jose Kalapura in Anirudh Prasad, Ramkrishna Mukherjee, Beni A. Ekka (eds) *Social Research Methodologies in Action, Vol. II, Strategies of Development Research, XISS Series No. 12, Xavier Institute of Social Service, Ranchi, pp. 535–52, 2008.***

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**Key Topics:** *Bettiah Christians*

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This chapter focuses on the use of oral historical narratives in reconstructing a community's history. The community considered in the study is the Bettiah Christians of Bihar, an ethnically distinct Catholic community founded in North Bihar's Bettiah town some 260 years ago.

The paper attempts to collect data, especially oral narratives of the informants on the Bettiah community, for a reconstruction of the community's history. In the first stage, library and archival searches, comprising mainly texts on customs, prayer books, literature, and missionary writings related to Bettiah Christian community, were the mainstay of the work. In the second stage, original sources were consulted. Apart from interviews and participant observation, primary sources in the government and mission offices and archives and libraries in Patna and Bettiah were referred. Documents in the Mission offices in parishes at Bettiah, Chuhari, Chakhni, Asansol, Patna, and Calcutta, where the community members were found in large numbers, were referred. Parish diaries also tell much about the religion and community. Parish Censuses and Parish family registers which contain data on age, sex, occupation, and education of each member of the families of the entire Christian population at Bettiah and Chuhari, were consulted. The study is detailed in four main parts. It comprises of discussions on what constitutes a community, particularly a religious community, features of ethnography and community history, locating Bettiah Christians, and recounting the process of conducting community history research on Bettiah Christians.

The paper argues that ethnography literally means writing about groups of people and their culture. The content of ethnography can be anything connected with people's lives. Ethnography assumes that we must first discover what people actually do and the reasons they give for doing it, before we can assign to their actions interpretations drawn from our own personal experience or from professional academic disciplines. The paper points out that one of the strengths of ethnography is that the method used produces a picture of culture and social groups from the perspective of their members.

The study finds that the Bettiah Christian community is a small Christian community originally founded at Bettiah, capital of the former Bettiah Raj and presently the headquarters of the West Champaran district in North West Bihar. The Bettiah Christians share a sense of being a brotherhood, but also in an ethnic bond. The beginning of this community can be traced to the conversion of a few Hindus.

The study shows that the Bettiah are a distinct community in all locales. Community members were conscious of their distinctiveness through contact with Christians from other communities in urban centres. The study found that Bettiah Christians, wherever they are in big or small numbers, are known by the community's identificatory name Bettiahwalas or Bettiah Christians. According to the study, the Bettiah Christians originally belonged to the high castes, some belonged to middle castes, and some belonged to lower caste groups and Muslims. Over the past 265 years, all caste groups and the Newar group of Chuhari mingled together in marriage relations, thereby creating an ethnic community of known as the Bettiah Christians. The study explains that the Bettiah community settled in Bettiah's town Krischian Tola. As the community members emigrated to urban centres, they identified themselves as Christians from Bettiah to differentiate from other ethnic Christian communities in those centres.

### 1.5 *Speaking of Peasants: Essays on Indian History and Politics in Honor of Walter Hauser*, edited by William R. Pinch, Manohar, New Delhi, 2008.

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#### Key Topics: *Peasantry, Agrarian Studies*

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This book is written in honour of Walter Hauser, Professor Emeritus of History by those who have been connected with him in some way or the other and all of whom were deeply influenced by this scholar. Walter Hauser placed peasants and their struggles at the centre of academic debate. Six of these essays are based on Bihar while others analyse the peasantry in other states like Jharkhand, Maharashtra, Gujarat, and Kerala.

In 1997, the Centre for South Asian Studies hosted a celebration referred to as 'Hauserfest', in honour of Walter Hauser's work and contribution to academia and most of the authors of the essays in this book were present there.

The introductory chapter is written by the editor of the book William Pinch, also the author of chapter 4 entitled 'Bhakti and the British Empire'. Six of these chapters are based on Bihar. The general thrust of the chapters is to balance the notions of a generalised peasantry with the diversities existing among them, which the contributors of this book have sought to address. These range from multiple identities based on caste, class and colonial imperial epistemology by Peter Robb to religion by William Pinch and of differences within peasant struggles by Arvind Das. Walter Hauser's attempt to bring the peasants movements and their legacy along with the leader that has symbolised this process, Swami Sahajanand Saraswati, in front of the British public as well as others, has found much mention in all of these chapters on Bihar. These contributions cover the geographical, historical and political dimensions. Pinch explains that another common thread that traverses these chapters is the understanding of the power of different contexts in which the 'Peasantry and the Peasant Struggles' emerged and operated.

The chapters that focus on Bihar from one perspective or another include: *From Law to Rights: The Impact of the Colonial State on Peasant Protest in Bihar* by Peter Robb, *Swami and Friends: Sahajanand Saraswati and those who refused to let the past of the Bihar's movements become history* by Arvind Narayan Das, *A Stranger's View of Bihar: Rethinking 'Religion' and 'Production'* by Fredrik H Damon, *Success and Failure of Rural Development: Bihar, Bangladesh and Maharashtra in the Late 1980s* by Harry Blaire, *The Raw and the Simmered: Environmental Contexts of Food and Agrarian Relations in the Gangetic Plains* by James.R.Hagan, and, finally, *Bihar via 'A Virtual Village'* by Peter Gottschalk and Mathew.N. Schmalz.

Peter Robb in his chapter *From Law to Rights: The Impact of the Colonial State on Peasant Protest in Bihar* explored the relationship between state and society, and agrarian struggles within the colonial context. He stresses on what he refers to as the 'imperial state formation, production of certain kinds of discourse, systems of knowledge and rights, social categories and identities such as peasantry, and their struggles' (pp. 18). Robb analyses the role of the 'British-Indian govern-mentality' (pp. 18) to understand its intention of creating improvements and regulation but, at the same time, laying the ontological foundation for agrarian politics and struggles. He refers to these struggles and leaders like Sahajanand Saraswati as emerging within and embedded in the colonial context and products of

the colonial state. Robb explores the mutual exchange between the Indian and colonial contexts to produce new and enriching perspectives on the changes in the Indian social, political, and cultural life, while advocating against favouring either of the two world visions.

Arvind Das stressed on 'radicalisation' among peasant movements reflected in the emergence of the right and the left among peasant movements, accompanied with a rise in violence as a medium of expression in the 1970s. Although according to Das, this strengthened case divisions, it mobilised the lower rungs of the peasantry to some degree. Other issues, apart from identity, were the debate on the role of the individual agency and leadership in a movement. His argument regarding colonial policies like land reforms reflected opinions of those that considered such policies as means to 'conservatize' (pp. 18) their struggles. He stressed on different stages of struggles under different forms of agency.

This thought of the interaction of the two systems of knowledge and meaning is reflected in William Pinch's article, *Bhakti and the British Empire*, where he asserts that not only do British and European perspectives influence Indian understanding, but the latter influences the former deeply. The question then of the explanatory utility of the term colonial (pp. 19) is brought up by Pinch, in the Indian agrarian context. James R. Hagan addresses this by offering an environmental perspective to examine the relationship between peasant protests and agrarian stress as a result of agricultural intensification in the Gangetic plains, population growth, and decreasing land availability. This context of environmental exploitation, according to Hagan, also provided a context for peasant movements to and leaders like Sahajanand to emerge.

Damon offers another unique environmental perspective on shared systems of knowledge and meanings and that of botanical terms in ancient Bihar and Melanesia reflected in Buddhist beliefs and boat production. These symbiotic connections, according to him, provide varying connections between different systems of knowledge and meaning, and between religion and science.

Blaire provides a comparative study of rural development in Bihar, Bangladesh, and Maharashtra (also part of Gujarat) in order to explore why rural development could not take place successfully in the former two, while it was successful in the latter. He presents social, political and cultural reasons for these different rates of rural development in these three regions.

Finally, Gottschalk and Schmalz have examined a positive vision of rural Bihar through their 'Virtual Village' website which offers an experience of rural life and the 'richly contextualised lives of ordinary people', as they lead their lives through their multilayered identities. Through this tool, they also attempt to challenge conventional notions that describe India, such as the overwhelming role of religion and the mutual animosity between Hindus and Muslims. The exercise attempts to wrestle with assumptions and biases both of the designers as well as the visitors of 'Arampur' and understand the contexts and perspectives in the voices of village dwellers. This is what Gottschalk and Schmalz have called a 'perspectivalist teaching moment'.

Peter Robb in his chapter entitled *Law and Rights: The Impact of the Colonial State on Peasant Protest in Bihar* focuses on the relationship between state and society, in particular, the state's (colonial state's) role in shaping Indian society, politics, identities including peasantry and their struggles.

In his view and other secondary sources that he has cited in his chapter, identities in Bihar took different forms before and after colonial rule, emphasising then that colonial rule impacted this change. There did exist, in Bihar, many agricultural classes. He cites numerous secondary sources to show classes such as rural elite like *zamindars*, revenue farmers like *Mostajirs*, other cultivators such as *adhiyars* existed, and there seemed to be some fluidity and flexibility in caste, which cut across economic lines. For example, Lavana Brahmins worked in the field of commerce while *Telis* worked as traders. However some like Rajputs were reluctant to work with land, although some did so. Moreover, what the author refers to as 'pure cultivators' like *malis*, stuck to their traditional occupations (pp. 31). In this context of fluidity and such diversity, the colonial state brought in changes of a legal, administrative, and commercial nature. This led to the construction of other social identities such as peasants, their rights and their struggles. Here, the author reiterates that although changes in social categories were brought as a result of colonial context, some changes such as taking up occupations irrespective of their caste had already occurred.

Robb highlights, the emergence of peasant protest in the early 1900s, reflected in a significant increase in indigo court cases between 1913 to 1916 in villages of Champaran and North Bihar. This development he said was a transition from a system where landlords hardly kept any proper records of measurement of land or rent, to a state

of increased accuracy. These concepts of rent, tenancy, and property rights, in a way, contributed to the formation of a class of peasants, their interests, and a resultant consciousness directed by an 'anti-landlord rhetoric' (pp. 36), thus, constructing the context for peasant protests. Although peasant protests have been very much a reality in the past, the construction of peasant identity and notions of rights occurred within a colonial context, complete with the modern concepts of state, sovereignty, and rights. Robb makes it a point to note that the process of influence was a two way process and there was an interplay of British and local influences. For instance, administrative process such as defining boundaries of states were being influenced by local cultural process that involved social identities and categories, an example that Robb uses to highlight this process of engagement between the local and colonial contexts. The formation of social categories and interest groups were, according to Robb, 'politico-economic' in nature and their interests cut across caste and other categories, which leaders such as Swami Sahajanand could then employ for mobilisation.

Along with the construction of identities and social categories, language too was standardised in order to allow administrative efficiency and reduce fraud. Along with this, a standardisation of local languages for administrative purposes was also attempted. In Bihar, the process was particularly controversial with British officials pushing for Nagari which they thought was more civilised than Kaithi, which they thought to be rough and savage (pp. 41), while Muslims wanted the Persian script to be accepted for official purposes. This 'linguistic imperialism', and 'the attempt at standardisation, was a central force of the colonial civilising mission', (pp. 41) to attain efficiency and control over disparate units and peoples. Thus, the grouping of Maithli, Magadhi, and Bhojpuri as Bihari group of language was a colonial attempt at standardisation,

He then cites various texts written by Swami Sahajanand Saraswati to reiterate that the revered leader was a product of colonial context and circumstances (such as abolition of the *zamindari* system). He mobilised peasants by appealing to their shared experiences of atrocities and hardship as well as using concepts of Marxist and Socialist philosophy.

In conclusion, Robb explores the role of legal, administrative, and social categorisation which eventually led to a 'politicisation of interests of the poor and the oppressed' (pp. 50). He reiterates that his point is not to say that any process colonial or indigenous was uni-linear, but an 'engagement and negotiation' of the two processes which influenced each other and created context for new identities and processes.

Harry Blaire, in his chapter entitled *Success and Failure in Rural Development: Bihar, Bangladesh and Maharashtra in the Late 1980s* presents the last stage of his decade long comparative research from the 1970s to 1980s on rural development in eastern India such as Bihar, Bangladesh, and western India, i.e., Maharashtra. His findings show that the rate of rural development in the former two has been extremely stagnant as compared to the relatively successful rural development in Maharashtra (as well as part of Gujarat). Rural development, in his sense, includes economic growth and distributional equity among all social categories, human development indicators, institutional and political development as well as political participation (pp. 423)

In Bihar and Bangladesh (also applicable to other eastern states), Blaire lays out a diagrammatic representation of the political economies of these three regions in order to show linkages in terms of simplicity and complexity. In the case of Bihar, and more broadly Bangladesh, where the rural economy was semi-feudal and rural, he refers to three kinds of linkages namely patronage, support, and exploitation at levels of the state, rural elite, and the rural poor, with an aim to maintain order and control through rural development programmes, land reforms, and coercion. Support, in the form of funds from foreign donors as well as state, was designed to maintain status quo and contain conflict. Moreover, Blaire calls this structure 'an impressively homeostatic one, where developments and processes occurred without causing much change in the political economy structure or threatening the position of the landed class, which was a tool to maintain authority and enhance the economy. The rural poor continued their existence without much protest, barring a group of 'middle farmers', who along with the *harijans* harboured resentment and presented a group with potential of protest. Although some positive changes such as infrastructural development in Bihar, and growth of tube wells and fertilisers in Bangladesh, the structure remained stable and unchanged.

In contrast, the political economy of Maharashtra, with particular emphasis on the Ahmednagar District where most of the sugar was concentrated, was diagrammatically represented to show the complex institutional linkages in this political economy of Maharashtra. In this case, the institutional mechanisms such as rural development schemes, development projects, and, in particular, sugar cooperatives proved to be very supportive for the people

and the economy. The sugar cooperatives maintained close relations with sugar planters and provided institutional support by clearing their loans while buying raw sugar. Moreover, the state provided subsidies on inputs such as irrigation, electricity, and loans to help cooperatives function properly. The other institutional mechanism was the employment guarantee scheme in Maharashtra, which was demand driven and provided work to unskilled workers at a minimum price. Although, it had problems such as being used as a tool by the urban elite or maintaining status quo among rural poor, it was successful by and large and provided support to the rural poor and the rural economy. Although similar institutional support structures were there in Bihar as well, Blaire blames the politics of patronage and relations of exploitation for the stagnation of the eastern rural economy.

In the next section of the chapter, Blaire explains the contextual differences between the two regions in terms of history, demography, social relations, and political culture. In terms of historical differences, the revenue systems in Bihar, which was the Permanent Settlement and in Maharashtra the *Ryotwari* settlement, were very different, and, according to Blaire, impacted the pattern of rural development in both regions. While the former was highly oppressive, the latter promoted enterprise and profit making, which allowed rural development to occur more rapidly than in its eastern counterpart. Similarly, urban rural linkages were much denser in Maharashtra where Bombay, Pune, and Vadodra had mutually beneficial relations as urbanisation had begun in these areas as opposed to Bihar and Bangladesh, where the urban regional economy was not quite as well developed. The state of regional urbanisation was even more dismal in Bangladesh, which was distant from urban centres such as Calcutta. Another point that Blaire refers to, in order to understand the historical context, is the martial history of Maharashtra, which prevented subjugation to foreign rule to the extent that occurred in Bihar and Bangladesh. In terms of demography, the demographic as well as political dominance of Marathas in Maharashtra proved to be advantageous, as compared to the multitude of castes and the accompanying caste politics in the eastern region. Social and political relations were seen to be relatively equitable, accommodational and transactional (pp. 438, 439, and 442) in Maharashtra, (in terms of gender equity, reflective in high female literacy as well as spirit of social reform), as opposed to Bihar and Bangladesh. Another major difference between the two political cultures was the criterion of evaluation, performance in the west, and patronage in the east. In Bihar, the political and social relations were characterised by a less equitable, 'winner takes it all' (pp. 439) and allegiance.

Blaire sums his argument in the end by stating the different paths towards rural development that these regions took in the 1980s. Maharashtra's rural development was subsidised and supported by the state as well as other institutional mechanisms such as cooperatives and safety nets, Bihar's path to development was fraught with caste politics and politics of allegiance and corruption, whereas, Bangladesh's path was characterised by foreign institutional support.

In his chapter entitled *The Raw and the Simmered: Environmental Contexts of Food and Agrarian Relations in the Gangetic Plains* James. R. Hagan begins with a historical comparison between early agricultural practises and food production in the Gangetic plains and northern China and then continues to compare different regions within the Gangetic plains itself, namely, the lower wet region (present West Bengal and Bangladesh), the middle mixed region (Bihar and Eastern Uttar Pradesh), and the upper dry region (Western Uttar Pradesh, Haryana and Eastern Punjab).

In the former comparison, he cites prominent agrarian researchers to draw on the relationship between population densities, on the one hand, and farming techniques and the kind of food production on the other (high population densities have led to intensification of farming techniques). Hewang, the river basin in northern China, had a high population density which led to intensive farming techniques and resultant loss of biomass and forest during the 16th century. This affected the culinary style, where lack of sufficient fuel allowed only par cooking, as against the simmered cooking on slow burning fuels in the Gangetic plains where early population during the same period was less dense, biomass and forests were plenty, and accompanying agricultural techniques depended more on expansion rather than intensification. Such extensive agriculture and sufficient resources allowed flexibility in agrarian relations such as flexible rent and choice of crop production. This was the case prior to the 19th century. However, this flexibility was to change as was the negotiating capacity of the farmer which would eventually weaken, thus, altering agrarian relations.

Unlike in China where population increase was rapid and evident, the increase in population and decrease in biomass in the Gangetic plains was gradual and, hence, rendered smooth development of adaptive agricultural techniques difficult. After the 19th century farmers in India faced a situation of high population density and low resources. Changes in fuel use were seen at this time with cow dung being excessively used for household as well



as agricultural purposes. Despite the existence of sophisticated technical knowhow in agriculture in India, due to certain historical factors, the required systemic changes in agriculture could not occur. He explains these in the rest of the chapter. Hagan draws heavily from land use data collected by various authors.

During the 18th century biomass declined and many changes took place in agriculture and Hagan highlights eight of these namely:

1. Decline in use of manure which led to decrease in nutrient level of crops. In the following centuries, the use of manure was prioritised and directed towards cash crops such as tobacco and sugar leading to loss of quality in staple food crops.
2. Increased practise of intercropping which allowed renewal of nitrogen in the soil and provided security against crop failure
3. Increased use of multi-cropping, also allowing for short-term food security.
4. Increased use of marginal lands for manure and livestock feed.
5. Decline in seed production, bringing seed credit and moneylenders into agrarian relations.
6. Irrigation systems fell into disrepair as this was further exacerbated due to subdivision of existing land holdings as required under the colonial tenure system. This situation was particularly acute in Bihar where during the 20th century, when rent was transformed from produce to cash, landlords became indifferent to irrigation as their rent no longer depended on increased production.
7. Specialised cropping began to replace previous flexible options in crop production.
8. Due to increasing pressure to produce more in the face of decreasing land, the option of leaving lands fallow to allow rejuvenation and renewal became restricted.

These changes are reflective of certain broad changes in agrarian relations, crop production as well as agricultural practises.

The next section then compares the different regions within the Gangetic plain as mentioned above, to explore the variations of environmental factors within the same region to understand why adaptation in agrarian practises could not take place.

The wet region consisting of Bengal and Bangladesh was most fertile and rain fed during the 1600s, thus, allowing ample crop production through expansion along with a spurt in population. However, some historical factors affected the process of adaptation of practises. The famine of 1770 caused destruction and dissuaded crop intensification. There was much land available for cultivation, which further discouraged intensification. This situation was further exacerbated due to the beginning of colonisation under which cultivation of cash crops was encouraged. Thus, agricultural intensification and innovation was not encouraged or possible. Other reasons that contributed to this situation were import of cheap rice from Burma and escape migration of peasants into neighbouring Assam.

The dry region of western Uttar Pradesh and Punjab had the lowest population density as compared to other surrounding regions during the 17th century. However, the disadvantage of being drought prone and not having the blessing of monsoon and fertile soils was offset by rain fed rivers that traversed these areas and the drought resistant variety of vegetation and crops that could survive extreme weather conditions. These were high in nitrogen content that was not only good for the soil but also for livestock. Moreover, the cropping pattern restricted population density to the degree that occurred in the western region. The tenure system encouraged owner cultivation and had less subinfeudation and dry grain cultivation which required less labour. All of these combined together allowed the agrarian system here to adapt more easily to the changes in environmental factors such as population, biomass depletion, and the market.

The mixed region in which Bihar falls suffered from certain disadvantages and, thus, was most vulnerable to environmental factors as compared to the surrounding regions. The disadvantage stemmed from its mixed nature of wet and dry climates. Rice was one of the principal crops but due to the dryness factor, limited rains, and poor water management, the crop suffered. Hagan highlighted the disadvantages of both wet and dry regions that this mixed region suffered from. Rice production allowed higher population density (as it allows more calories per unit area available, pp. 165) and had the tenure system of the east, the permanent settlement that made agrarian relations

hierarchical and inflexible. Moreover, this region did not have the drought resistant crops and vegetation of the western region, thus, making it more vulnerable. These factors may have prevented this region from responding to the environmental changes such as change in population, change in soil fertility, and depletion of biomass and vegetation, which was particularly severe in this region.

Overall, the slow rate of response of the agrarian system in the Gangetic Plains was caused due to the availability of cultivable land, which reduced the immediate urgency to begin intensification and muted the effect of the increasing population density. Thus, when the availability of these lands ended, agrarian distress became apparent, conflict over existing marginal lands intensified among peasants and between them and landlords, particularly in the mixed region like Bihar where land scarcity was most severe. It is here that peasant discontent was most apparent. This context of resource scarcity also restricted the flexibility in terms of crop productivity and previously available to the farmers of the 17th century, thus, weakening the negotiating capacity of farmers and increasing their vulnerability, vis a vis, the landlords. Hagan considers this rural context as one of the factors that contributed to the enhancement of peasant struggle in the 1920s in these regions, leading to the formation of the all-India Kisan Sabha in Bihar.

Fredrick R. Damon in his chapter entitled *A Stranger's View of Bihar: Rethinking Religion and Production*, draws a comparison between systems of production, flora and fauna, and ideology of regions and people spanning across outer islands of MelanAsia, (the region he comes from) to the Ganges. While attending a Hauser symposium in Bihar in 1997, he decided to explore existing contrasts and connections between South Asia and the islands of the east, MelanAsia in particular, by studying concurrent origins of Buddhism, rice transplantation, Indian flora, shared techniques of livelihoods through shared waters. Influences of South Asia in the eastern islands became apparent in the 17th century, reflected in the existence of Hindu culture in Bali, rituals in Javanese islands, and words rooted in Sanskrit language in Tanimbar (pp. 251). Articles found in regular use in India such as betel nut and sandalwood may have originated in the Philippines or Malaysia. These influences could have spread through the South East Asian Diasporas that had come to study in Patna, which was the centre of Buddhism in South Asia during the 14th century. The Asian water buffalo of the rice irrigated areas of south east Asia were seen in Bihar and the boats made in Kerala and Papua New Guinea were from an identical or analogous species of the genus *Calophyllum*, which has features ideal for boat making, thus, suggesting historical connections between the two regions (pp. 252).

The spread of Buddhism in South East Asia and South Asia, also facilitated the spread of agricultural techniques such as systems of rice cultivation in Sri Lanka and also parts of South East Asia. Damon, thus, brings to focus the need to understand cultural and religious belief systems, and their nexus with production systems in order to understand these complex connections and contradictions across regions. He also attempts to understand the social as well as the material world and the symbolism inherent. For instance, by studying the properties of trees overhanging in Boagis village, which is the material aspect, and the uses and meanings associated with the trees for different people ranging from functional to ritualistic, which is the symbolic aspect, one can attain a holistic understanding.

Throughout the text, Damon cites various authors, ranging from those that attended the conference, to literary authors, ethno historians, and anthropologists. The chapter is replete with numerous examples upholding his study. He concludes with the analysis of trees and their intimate connection with Buddhism which was present in South, East and South East Asia. Each stage of Buddha's life, be it his birth, enlightenment, and death has been associated with the *Pipal*, *Plaksha*, *Ashoka* and *Sal* tree, which are found in South, East and South East Asia. He then describes the medicinal, nutritional as well as functional properties, such as building materials of these trees, again reflective of the link between the material and symbolic worlds as well as physical worlds.

In his essay entitled *Swami and Friends*, Arvind Das narrates the journey of the great agrarian leader, Navrang Rai (the name given to him as a child), exceptionally brilliant struggling with existing social norms, to taking *sanyas* and becoming a spiritual and people's leader, Swami Sahajanand Saraswati. During this journey, the leader went through major ideological transitions, from abandoning the ranks of the Mahatma, to adopting socialism and mass based politics, and then oscillating between political and apolitical agendas. By the start of the 1900s, he emerged as a powerful leader and representative of peasants. He joined hands with the socialists in the Congress to form the All India Kisan Sabha and also helped form the Anti-Compromise movement with Subhash Chandra Bose. Following these, he moved away from politics and formed his own Kisan Sabha.

His journey as a peasant leader also traversed from a moderate position, where the abolition of *zamindari* system would accompany compensation, to one which rejected compensation and demanded unconditional abolition of the oppressive tenure system. He died while fighting for this cause in 1950, failing to live its realisation in the form of its legal abolition. His unique and universal quality of understanding the pulse of the peasants combined with his spiritual and enigmatic charisma, like the use of the *lathi* which he considered as a symbol of empowerment, made him both loved by peasants and feared by landlords.

Apart from the leader, the organisation was also shrouded in definitional enigma, moving from an idea, organisation, institution, lobby and movement. Although, a Kisan Sabha had been formed, and was followed by the formation of the Bihar Kisan Sabha Parishad, its institutionalisation occurred in 1930. The membership of this body was to the strength of 250,000. The *Sabha* experienced at once, elements of organisation as well as agitation and spontaneity. Moreover, its functioning depended on devolution of power among local bodies, that proved to be its strength and kept it close to the people whose interests it was meant to represent and uphold. When the organisation was formed at a national level in 1936 as directed by N. G. Ranga, it was looked at by the *Swami* as a step that would make the body lose its local identity and strength, which was what occurred eventually. However, in Bihar, the movement increased from strength to strength, causing proposals of revision of tenancy laws to be reversed.

This was the period of the beginning of India's boldest anti-colonial resistance, the Civil Disobedience Movement, that initially created tensions between the members of the *Sabha* and the congress, prompting the *Swami* to retire from politics temporarily, only to join again in the midst of a demand to increase tenancy by landlords. Eventually, the Civil Disobedience Movement, particularly in Bihar, took on peasant issues in a big way, giving a strong platform for the *Sabha* to grow. The Civil Disobedience Movement, in particular, strengthened peasant consciousness and the Congress members, though largely pro-establishment, realised the need to include peasant issues in their agenda. However, the movement in Bihar was not radicalised as much as in Uttar Pradesh due to its Gandhian political leanings.

As mentioned above, the *Sabha* employed a moderate tone, whereby on one hand it demanded suspension of taxes by the farmer to the government, and on the other hand, encouraging them to improve relations with the *zamindars* and not deprive them of their rent. This tone was to change soon.

The Great Depression and the First World War caused massive fluctuation in food prices causing an initial rise and then a tremendous fall. Land became a coveted commodity, tenants were thrown off the land, and moneylenders turned into speculators. There was a lot of discrepancy in rent price which led to an increase in land suits. Falling prices of food and cash crops coupled with rising rent caused great distress in places like Purnia, where cash crops were grown, and in Muzaffarnagar, where cattle were bred, as neighbouring places like Purnia did not have money. Natural disasters like floods, droughts and earthquakes, which shook Bihar during 1934-36 exacerbated the already serious agrarian distress. All of these factors compounded by oppressive land lords and tenure systems led to peasant impoverishment. Other political events like the Second World War and Quit India Movement affected the peasant movement. The Bihar Provincial Council Committee began to look into the conditions of the Bihari peasants in Gaya, although no report was published out of it.

In terms of ideology, there were some definitional ambiguities regarding who peasants were. The *Swami* began the *Sabha* from a 'class collaborationist' orientation (pp. 209), where he felt that the agricultural labour such as the Scheduled Castes like Harijans, whom he referred to as the semi proletariat, especially those who lost their land, were closely connected to the peasantry and needed to be included in the peasant movement. He declared that due to 'de-peasantisation', the line between peasants and agricultural labourers was blurred. This, however, was difficult to operationalise according to another revered peasant leader Rahul Sankrityayana, also founder of the Bihar Communist Party. These issues created tensions between peasants and agricultural labourers which landlords took full advantage of.

In 1934, the Congress Socialist Party was formed and they began to work with the Kisan Sabha. At this point, after many differences, *Swami Sahajanand* slowly underwent transition of his ideological orientation, by moving away from a moderate attitude towards the *zamindari* system to full abolition without compensation. Just before his death he formed the All-India United Kisan Sabha and advocated for nationalisation of rural assets.

Das provides a detailed narrative about the 'de-peasantisation and proletarianisation of the peasantry', (pp. 211-17), where citing from famous works of Marx and other Marxists, he stresses on the increasing neglect of the peasantry and its resultant weakening. The attempt of capitalism to proletarianise the peasantry, ended up in its pauperisation and impoverishment. Capitalist literature stresses on the eventual inclusion of the peasants in to the capitalist framework, where they would become residual labour, but this was not happening, in fact it was creating rural unemployment as well as a class of kulaks or peasant capitalists. In Bihar, the neglect of the peasantry coupled with the oppressive *zamindari* system proved destructive for the peasantry. Despite this, there were some tenants, called 'substantial tenants' (pp. 217), who managed to bring improvement to food production and participate in resistance movements for 're-peasantisation' (pp. 217) by claiming land (like the Bhoodan movement).

Das attributes lawlessness, violence against *harijans* and other social tensions in Bihar to the, 'tension between an antiquated agrarian base and a lumpenised political and cultural superstructure', (pp. 217). Talking of extremism like Naxal movement in the state, he said that this was a reaction to the situation of oppression against peasants. He then discusses the difference between the first and second phase of the Naxal movement, where it moved from mindless violence and deviation from politics to an organised movement, both of whose origin he traced to the peasant movements. After independence, the Naxal movement drew ideological strength from various factions of the Communist parties. Although the Naxalite movement underwent a slight weakening in the 1970s, it emerged strong in the 1980s and began to spread to rural areas of Patna, Nalanda, and Jehanabad, and others like Gaya and Aurangaba, which invited massive police action. Their main demands were increase in wages, reclaiming their land, and social dignity for SCs, and something the *Swami* had once envisioned, the inclusion of agrarian labourers into the peasant struggle. Besides this, other left movements such as the Jan Sankriti Manch, All India Student Association, Revolutionary Youth Organisation, and others were reflective of the 'awakening in semi-feudal Bihar, (pp. 221).

In the end, Das outlines the stages of peasant struggle in Bihar beginning from when it rode on an anti-colonial and anti landlord rhetoric to one where it was guided by protest against state neglect. Beginning with leaders like Swami Sahajanand and Rahul Sankrityayana, leaders who did not themselves experience the lives of peasants, but helped mobilise them and raise consciousness. They worked through local level leaders like Yadunand Sharma and Ramanand Mishra, which constituted the second stage of struggle during the 1940s. These leaders had experienced the pain of the peasantry. Finally, during the 1960s, peasants themselves took the reins of struggle and this was the stage of action. During each phase of peasant struggle, these three elements consciousness, experience, and action interacted differently.

This chapter by Das is a tribute to Sahajanand Saraswati, and to the efforts of Walter Hauser for trying to bring the Swami's and the peasants sacrifices and contributions from the peripheries to the centre of academia.

In Bihar: *A Virtual Village*, Peter Gottschalk and Mathew. N. Schmalz attempt to bring a nuanced understanding of India's religions particularly Hinduism and Islam in a rural setting, among American undergraduate students. According to them, the west seems to have mystified rural life and compartmentalised the cultural and religious worlds of Hindus and Muslims, viewing them as mutually incompatible. With an aim to introduce and engage western students to Indian rural life, not just in its religious but in the broader cultural, social, and economic settings, a virtual village based on a village in the Bhojpuri region in Bihar called Arampur was set up. This virtual setting has many advantages as it offers a new world view to engage with closely, through interviews and conversations, with village dwellers of different religious and economic backgrounds. However, since answers are fed in and the script is set, it cannot be compared to a real ethnographical experience. Arampur was chosen as it had rich research records of over 100 years. The student takes a tour through the streets of Arampur and engages with people who are living in it. There are three main tools in this model namely Context, Roam, and Interviews.

1. Context: This section provides a multilayered perspective by placing Arampur in the local, state, national, and global context so as to demystify notions of villages being self contained communities with no outside relations.
2. Roam: This component offers a close view of the city's streets, public and religious spaces, economic and religious activities, and people with whom students converse. It offers panoramic views of areas and activities chosen and is the closest one could get to a rural context without physically being there. The aim is to make Hindus and Muslims be seen as having identities other than just religious and involved in multiple socioeconomic activities and engaging with one another in various roles and contexts.

- Interviews: This is an essential part of the village, where certain 'hot spots' are revealed where interviews take place. Various characters such as Hindu priests, Muslim priests, and Christian school teachers are made to talk in native languages so as provide an authentic experience.

Although this model has disadvantages and is not close to real ethnographic research. It also provides a very close look at Indian rural life and provides a better understanding of religion to western students along with 'bridging the gap between historical and ethnographic approaches to Bihar's social and cultural life' (pp. 469).

### 1.6 The Colonial State, Zamindars and the Politics of Flood Control in North Bihar (1850–1945), Praveen Singh, *Indian Economic Social History Review*, October, 2008, Vol. No. 45(2), pp. 239–59.

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**Key Topics:** *Politics of Flood Control, Colonialism*

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North Bihar has been known to be one of the most flood prone regions in the world and its backwardness has allegedly been a result of the annual ravages caused by river spill. The article argues that the debate over the flood problem in the region has centred mostly on technological choices and engineering solutions. Both these dominantly technical points of view have, however, tended to ignore north Bihar's complex environmental history, in particular the great hydraulic transformations brought about by colonial rule. Historical accounts of north Bihar have tended to largely limit themselves to situating its unique agro-ecological setting within a broader political or economic analysis. Environmental histories of India have also tended to focus, till quite recently, on mountains, forests, and semi-arid and tribal inhabited pockets. In this context, the article attempts to bring out the role of the colonial *zamindars* in the varied initiatives undertaken by the colonial administration vis-à-vis flood control in north Bihar.

The first part of the article looks at policy changes related to flood control and the context in which these policies were made. In the second part, the discussion focus is on some specific instances of conflict around flood control in north Bihar, so as to illustrate the impact of the colonial policies, and show the working of these policies as they played out on the ground. This article also highlights the various macro and local level actors who were involved in this process. The attempt is to illustrate the diversity of interests that derived their strength from colonialism and the way these interests and groups influenced the policies and decisions, and finally the outcomes, of the engagement between these different groups and actors.

According to the article, flood control was a major preoccupation of the colonial state in north Bihar. Due to the occurrence of frequent floods and the resultant damage to crops, the attention of the government was forced on a number of issues related to embankments and drainage. The region was characterised by constantly shifting rivers and changing agro-ecological setting. This meant having to constantly keep pace with the shifting (revenue and administrative) boundaries and changing conditions, and having long-term, flexible and adjustable policies for the region.

The study details that the colonial state in Bengal opted for permanence in not only its administrative and revenue policies, partners in ruling over the region, but also in providing permanence to the ecological setting. To ensure the latter, it encouraged the construction of *bandhs* (embankments). Embankments were universally accepted till the 1870s as the most effective protection against floods. It was only in the last quarter of that century that its role in controlling flood began to be critically examined.

Destruction of crops due to floods led to difficulties in the collection of revenue. The colonial state believed that this difficulty could be avoided if the *zamindars* built embankments. The colonial administration was in effect insistent on treating the *zamindars* as some sort of partners in 'development and rule'. Subsequently, several legislations were geared towards achieving this balance—effective intervention without cost responsibilities. The *zamindars*, on their part, enthusiastically took to building embankments for obvious reasons—maximising profits and reducing the damages caused by floods, so much so that the officials became worried at the complex problems that resulted from this. The flood situation appeared to be worsening even further. The colonial government's control through indirect supervision at the local level faltered repeatedly. Later, the introduction of legal measures to implement a policy of 'scientific flood control' also proved ineffective.

Despite the various actions taken by the colonial government to coordinate and manage flood control measures, private embankments continued to be constructed flouting all norms, rules and regulations. There was growing

competition among *zamindars* for constructing embankments to safeguard their lands and crops from inundations. This competitive construction of embankments also saw violent repercussions, with contending parties trying to breach the others' embankments while at the same time protecting their own. Incidents of violence increased during floods, when people were willing to go to any lengths to save themselves and their homes and crops from floods. During the rest of the year they would try and strengthen their respective embankments.

In the last quarter of the nineteenth century, there was large-scale construction of railways and roads in north Bihar. The Irrigation Department was trying to control and regularise the construction of any new embankments and the repairs of old ones. In north Bihar, railways and roads, with inadequate waterways, could be considered as *bandhs*. The way they were built created a lot of problems for the already grave flood situation. The results were detrimental to property, agricultural interests and sanitation. The interests of engineers designing the necessary works and the revenue officers of the local government, who were under pressure to guard the rights of the landlords and *ryots* occupying lands in the affected area, were not identical. The result was often a protracted debate between the two over the role of the railways in aggravating the flood problem and how best to minimise the damage along a railway line.

Thus, it was not only the embankments built by the *zamindars* that were causing drainage problems but the communication infrastructure as well. The extension of railways in the region was very much part of the agenda of the colonial state, but its development does not seem to have been in sync with the 'scientific flood control' policy that emerged at the same time that railways were introduced in the region.

This study of local-level interactions and conflicts also brings out another aspect of colonialism, which often functioned indirectly. Thus, the interaction between these different social, economic and technical forces created its own distinct ecological footprint in the region. A complex network of interests that colonialism brought about in the countryside, played a crucial role in the events.

### 1.7 *Some Aspects of Social Formation in Mithila, Anil Kumar Choudhary, Janaki Prakashan, Patna, 2007.*

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#### **Key Topics:** *Social Formation*

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The book studies some of the aspects which contributed to the social formation in Mithila, an area that underwent the process of Aryanisation from the later Vedic period and a region which constituted an integral part of the great North Indian Plain, where an extensive network of rivers was instrumental in the development of fertile alluvial plains. The study is well planned with chapters and each of them looks into the *Varna* formation, slavery, untouchability, feudal formation in the region, and, finally, it makes an enquiry into the *Vratas*, evolution of Brahminical hegemony in Mithila.

The study constructs the nature of personality in the region of Mithila which underwent the process of Aryanisation from the later Vedic period. This marked the beginning of the process of state and social differentiation in Mithila. The four *Varna* system was implanted and the Aryans came in contact with indigenous groups. The institutional ideas brought in by the people from the 'Kuru-Pancala' land probably changed the socio political configuration of Mithila.

There were Kshathriya and Brahmin settlers in the east of Gandak. These people were familiar with the presence of a proto-state and social differentiation. Cultural exchanges and social accommodation brought these privileged groups from two cultural streams together. The emergent group may have formed the state and laid down the rules for regulation of a hierarchical society.

While the Vedic people acquired important cereals, the non-Vedic people learnt the use of the house, the spoked wheel, and diary based domestication. They may also have been made literate. Their coming together may have promoted iron technology.

The study indicates that perhaps the later Vedic people introduced paddy transplanted which boosted production. The interplay between the two ethnic and cultural groups gave rise to Middle Indo Aryan languages of Pali and Sanskrit. The vocabulary for plants, animal crafts, etc., found in these languages, suggests either the superimposition of Indo Aryan subsistence terms over the existing ones or the borrowing of these terms from the Vedic people because of the introduction of some new modes of subsistence by them. Along with Sanskrit, these

languages facilitated communication and created a favourable climate for the formation of the State and a stratified society.

The study highlights that according to the Dharmasastras, the primary duty of a king is to uphold the hierarchical Varna system. These texts do not refer to territorial inequality. With the emergence of the State and a stratified society in Mithila in 600 B C, untouchability as a social system came into existence. The study makes clear that the first phase, up to 600 BC, provides Vedic background. The second phase extends up to AD 600 is marked by an intensification of the practice and hints of resistance on the part of untouchables. The rank of untouchables swells considerably by the assimilation of several new castes which extends up to AD 1200 and beyond. The elaboration of the *Varna* and *jati* ideology, for which untouchability as an idea and social reality formed an integral part during the period and went hand in hand with hardening and deterioration of class relations. The higher degree of absorption and integration of the Candalas and other backward aboriginal groups in the dominant socioeconomic set up, meant further dependence, exploitation, and disabilities. Untouchability of the Candalas represented the extreme manifestation of the institutionalised inequality of the caste system in Mithila.

The study reports that a perusal of documents clearly shows that slavery was widely prevalent in Mithila. It is the first form of exploitation peculiar to the ancient world, it succeeded by serfdom in the middle ages and wage labour in the more recent period. The regional personality of Mithila got accepted in the early medieval period. The study finds that the Pranji Prabadha of the Maithili Brahmins presents a regional picture of Mithila society. It is an outcome of the crisis of the established *sudra vaisya* mode of production. To contain this crisis, the state granted land to the Brahmins. This shows the feudalisation of economy, that is, there was the spirit of localism, proliferation of castes, social immobility, and closed economy in Mithila.

The study argues that an ideology was imperative to sustain the established social order. The *vratas*, being congregational and caste and gender neutral in character, provided the most appropriate occasion for the transmission of brahminical culture in Mithila. A consistent attempt to create a tradition of public reading of *Puranas*, *Kathavacaka* came into existence. Thus, vast illiterate masses were initiated to the brahminical view when modern means of communication for dissemination of information were not available.

Thus, the study concludes that Brahmanism in Mithila did not target the total population which would have resulted in a sharp, decisive break with former traditions, belief systems, and behaviour patterns, as happens with proselytisation. Rather, it attempted to hegemonise slowly the ingenious communities in Mithila within the brahminical social order. The *Pauranic* treatment of *vrata* is a perfect example of this process and through the composition of the Sanskrit *Puranas*, Brahmanism succeeded in its attempt.

### **1.8 Putting Bihar on the Map: British Efforts to Know Biharis, Peter Gottschalk, *Khuda Bakhsh Library Journal*, Vol. No. 149, July–September, 2007.**

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#### **Key Topics: Cartography**

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The article reproduces the text of the Khuda Bakhsh Extension Lecture delivered by Dr Peter Gottschalk on 17 January 2007 at Patna, wherein he spoke about the British efforts to understand Bihar through the discipline of cartography. This discipline also demonstrates very well how the British, from the start of their imperial conquest, used religion as the central category for understanding the people of the Subcontinent. A historical review of efforts to map Bihar clearly illustrates the British empire's effort to profoundly change the South Asia's intellectual history. This gradually changed the ways in which South Asians pictured their own land, Dr Gottschalk said. To this end, he further spoke of examining three moments in the British Indian representation of Bihar: James Rennell's maps of the late 18th century, the revenue survey of 1845, and the *Imperial Gazetteer Atlas of India of 1931*.

According to Dr Gottschalk, the first important milestone in the British mapping of Bihar was the work by James Rennell, the first Surveyor-General of India. Rennell completed his map, *An Actual Survey of the Provinces of Bengal, Bahar & C* in 1776. The victory of the East India Company at the Battle of Buxar changed its information interests from a purely mercantile nature to one of political control and revenue farming. The Company now needed as much information as possible on manufactures, trade and agricultural production and also militarily useful knowledge of the terrains. The map reflected these new interests and aspirations of the Company, he added. Rennell drew on

indigenous knowledge like *Ain-I Akbari* and relied on local specialists in his effort to create an entirely new map. An important component of this mapping was the use of longitudinal and latitudinal grid system to depict the terrain. Each site was allocated a specific location in this grid, which allowed travellers and armies to determine their position relative to particular sites while on the move. The use of the grid also demonstrates their commitment to standardise systems of measurement, which would impede drawing upon local knowledge and also discourage proliferation of local practices. Rennell's maps provided the British Empire one of the first widely detailed cartographies of India, which defined it as a singular bounded place stretching from Kashmir to Cape Cormorin, with Ceylon peeking above the southern border. This, according to Dr Gottschalk, became the viewfinder for British ambitions in the subcontinent.

A survey was carried out throughout India in 1845 to establish all land boundaries in order to determine the amount of land under each *raiyat's* cultivation. The permanent settlement of Cornwallis had established proprietary rights for *zamindars* and an expected level of production from each *raiyat*, depending on size and quality of land. Collection of this revenue posed persistent problems for the district collectors, like falsification of accounts by the *patwaris*, fraudulent measurements, destroyed records, and outright defiance to part with information. The shifting of course of the Ganga and other rivers also brought changes in the landscape. All these issues led to the Revenue Survey of 1845 which created a more efficient and rational administration and finances for the Company. Surveys were carried out throughout Bihar during the 1840s and large-scale maps of boundaries for all villages in Shahabad district's 13 *parganas* were created. This survey was, however, deemed defective by a later settlement official because of its failure to definitively determine the boundaries of all villages and districts. According to Dr Gottschalk, this judgment simultaneously demonstrated the contested nature of local boundaries and the British persistence to define them.

Dr Gottschalk further examined how the British fixation with Indian religion entered into attempts to know Bihar geographically. He quoted the example of the map of village Chainpur, completed in December 1845, where the Revenue Surveyor, W. S. Sherwill, symbolically represented the four elements of Chainpur most important to the Company. First there were the agricultural resources, that is, water tanks, palm trees and other trees. Second were the roads, and thirdly the settlements, representing homes and businesses, apart from the wells. Finally, the map fixed religious sites using discrete symbols for a mosque and four temples that still stand today. Assuming that Indians primarily identified with and were divided along religious communities, Sherwill inscribed the supposed difference between Hindus and Muslims by specifying temples, mosques and Sufi shrines. His choice to categorise the religious buildings, instead of a general place of worship, reflected on the British intention to propagate the Hindu-Muslim opposition, Dr Gottschalk felt.

According to Dr Gottschalk, the imperial maps also played an influential role in the emergence of the Indian nationalism, which seized upon the same outline to frame an eternal India whose sovereignty was based on a geographic reality. The 1931 Imperial Gazetteer Atlas of India represented the final volume of a 25-volume gazetteer meant as a reference guide to British India. It opened with a map 'Showing India in Relation to the British Empire', where India was situated dead centre, entwined in a global network of marine and overland communication. The next map, 'The Indian Empire and Surrounding Countries' situated the country with the coast of Africa, Central Asia, China and the Indian Ocean. The third map framed the Indian empire from Baluchistan to Burma, Hindu Kush to Cape Cormorin. A group of maps were also dedicated to mountain geography, vegetation, temperature, winds and isobars, rainfall, population density, races, languages, religions, agriculture, minerals, administrative divisions, railway and inland navigation systems, archaeology, and a set of four historical, political maps. A collection of 21 provincial maps followed, including one of Bihar and Orissa.

The Atlas represented a culmination of developments impelled by British imperial needs. It also situated India in its global and continental geographical context, thereby defining the boundary for the space labelled as India. The map soon attained the status of an icon, denoting national pride and identity. Dr Gottschalk also spoke about the centrality of religion in the British mapping. The Atlas editors divided India into areas of Hindu, Mahommedan, Sikh, Buddhist, Christian, and Animist majorities – each ascribed their own colour. In 1947, the British partitioned India much on the lines drawn here. The legacy of British cartography, classification, and science remains more than evident in post-independence India. Bihar's children learn their nation's geography with textbook maps using nearly the same frame and grid system as Rennell's. District administrators rely on maps produced by the Survey of India, all of which are in accordance with the cartographic tradition introduced by the British.



**1.9 Mediaeval Transition and Economy of Mithila [Madhyakalin Sankraman aur Mithila ki Arthvyavstha], Avinash Kumar Jha, Khuda Bakhsh Library Journal, Vol. No. 149, July–Sept., 2007.**

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Key Topics: *Ancient and Medieval Mithila*

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This article traces the evolution of the culture and economy of Mithila from the ancient to medieval period. It notes that in the post-Gupta period, town economy of Mithila was on the decline, and village and local economies emerged during the medieval times. The article attributes the changes in the nature of medieval economy of Mithila to the emergence of *Das* and *Samanti* systems.

According to the article, in the beginning of the 7th Century the main ancient economic cities of Mithila, such as Vaishali, Katara and Chirand, were on the economic decline. New *samant* and religious cities, like Naulagardh, Pandavgarh, Dumra, Akaur, Uccheedh, Durgauli, Kopagardh, Kapileshwar, Mangarauli, Balirajgardh, etc., emerged. These cities were limited to their own needs; they were not economically rich as ancient economic cities. Trade and commerce was restricted to the local economy and was replaced by *haat* trade. The hierarchical social structure of this period had negative repercussions on trade. As trade was on the decline, investments in trade declined and landlordism arose.

The article cites a case from Hazaribagh district, where three traders got ownership of three villages. There is evidence that the traders became *samants* during this period. The article argues that the emergence of a sub-caste system was responsible for the decline of guilds. It notes that in the absence of a banking system and decline of *mahajan*, people started keeping their money in temples. There was, thus, a shift of capital from guilds to temples.

However, certain industries such as that of cotton, wool, and silk cloth flourished in Mithila. This industry was closely connected to China and Nepal from where raw materials such as fibres and threads were imported. The *Varna Ratnakar*, the first available piece of literature in Mithila, records a list of products made from wood, another important industry during the medieval period in Mithila. Ship industry was also a famous industry during this period. Other important industries were goods for agriculture, leather, milk and jewellery. Highly skilled workers were involved in these. Much of the manpower was traditional artisans and family labour was used. However, the economic condition of these artisans was very poor and they played little role in society.

The article argues that there is lack of evidence of existence of money in medieval Mithila. However, there is a mention of few gold, copper and silver coins in some literature sources, which were called *maas*, *karshapan*, *paad*, *rati*, etc. Kauri was an important source of daily transaction. There is also some evidence of existence of a labour class, both high and low, who got a share of a third to a fifth of the production. These have been discussed in *Kirti Lata* and *Varna Ratnakar*. As already noted, the *Das* system was practiced, whereby the *Das* were totally dependent on the owner and their work was also decided by their owner. These *Das* have been called *vahiya* by Vidhyapati, the great Maithili poet and Sanskrit writer.

The article concludes that medieval economy of Mithila was primarily based on agriculture and was characterised by the *Samant* and *Das* systems, which led to the decline of trade and commerce which had flourished in the ancient times.

**1.10 Social Tensions and Political Mobilisation in Bihar (1927–1947), Ajit Kumar, Janaki Prakashan, Patna, 2007.**

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Key Topics: *National Movement in Bihar, Peasant Mobilisation*

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The book aims to examine the interaction between the processes of socio-economic and political change in Bihar and the Indian nationalist movement for the period 1927 to 1947. In particular, the book examines different forms of social tensions such as caste conflict, labour unrest, communal harmony, and agrarian conflict through an analysis of the nationalist movement in Bihar between 1927 and 1947. Further, it examines the aims and objectives of the social and political movements and the forms of mobilisation used during the period studied. It argues that in a highly stratified society, social tensions and economic conflicts have to be meaningfully correlated with political

movements. The study also attempts to critically examine the effects of these social tensions and their manifestation in the programmes and policies of political and social organisations.

The book begins with identifying some key social tensions and the manner in which they were used for political mobilisation prior to 1927. Next, it discusses the process of political mobilisation in Bihar during the Civil Disobedience Movement; in particular, how the Indian National Congress (INC) managed to successfully mobilise peasants despite using a flawed technique for mobilisation in Bihar. Next, the book describes the growing disillusionment of the left parties with the INC and the subsequent split in the party. Finally, it describes the manner in which the INC continued to receive the support of the peasants after the Quit India Movement.

It is argued that even though Bihar has experienced various types of social tensions in the past, it was only after the intensification of the national movement, in the period between 1927 and 1947, that attempts were made by different political parties and social and political organisations to mobilise different social groups for their own purposes. The processes of mobilisation differed in accordance with the class-character of the leadership. However, all three techniques of mobilisation—vertical, horizontal, and differential—were adopted by parties and organisations with varying aims.

The Champaran Satyagraha, launched under Gandhi's leadership in 1917, was the first attempt of the national elite to mobilise peasants and integrate them into the national movement. The book argues that while Gandhi and the national elite managed to mobilise peasants for the national movement, they did so in a very 'superficial' manner, without even touching the fringes of agrarian problems. Thus, minor agrarian issues were addressed rather than fundamental questions relating to the structure of agrarian relations. Compromises were made with those in power; there was greater support from the middle peasantry rather than those at the lowest rungs, and a semblance of relief was provided for poor peasants through constructive work to prevent them from undertaking any revolutionary activity. Further, the book argues that while the INC used the Kisan Sabhas in the state to propagate the Gandhian idea of *Swadeshi*, formation of *panchayats*, abstention from alcohol, and introduced the charkha, it did so at the cost of diverting the peasants' attention from their main economic problems. In fact, the book seems to believe that the INC deliberately addressed issues like development of *panchayats* or abstention from alcohol to divert the attention of the peasants from their more pressing economic problems. The book further critiques the INC and argues that even the holding of enquires to examine the grievances of peasants, a practice followed through the 1930s, and the appointment of agrarian enquiry committees was mere lip service and nothing was done once the enquiries were held. It was this attitude of the INC which compelled the left faction to form the Bihar Socialist Party in 1931. The association of the socialists with the Kisan Sabha resulted in a strong class oriented peasant movement in Bihar. The shift from compromise to class struggle was finally achieved by 1935, when the Bihar provincial Kisan Sabha passed the famous resolution for the abolition of *Zamindari* in its third annual session at Hajipur. However, the movement received a setback at the outbreak of World War II. The principal leaders of the INC, the Kisan Sabha and the Congress Socialist Party began to give more attention to anti-war propaganda. The left even favoured non payment of rent by the peasant and then extensive mobilisation to wage a new struggle against British imperialism. The Kisan Sabha and the Socialists ended their coalition in 1941.

When the Quit India resolutions were passed at the Bombay Session of the All India Congress Committee on 8 August 1942, a peasant rebellion of unprecedented dimension broke out in Bihar and was led by INC leaders. The combined strength of the three strata of peasantry – the rich, middle and poor – made the Quit India Movement in Bihar extremely strong and presented a serious challenge to British rule. Jayaprakash Narayan's escape from jail gave a tremendous momentum to the peasant movement. The Quit India movement provided poor peasants the much needed opportunity to rise in revolt, especially in the context of scarcity of food and rising prices. However, according to the book, the INC socialists were not ready to lead such a socialist rebellion. It is suggested that, perhaps because of their association with the INC and their links with rich peasants, the socialists were not willing to lead the struggle for the establishment of an egalitarian society. After their release, the Congress leaders continued to renew efforts for constructive and social work. Peasants continued to give the INC their support and it was with their support that the INC won a landslide victory in the elections of 1946. The mobilisation of the peasants during this phase of the nationalist struggle was mostly spontaneous, although the left wing organisation such as the Congress Socialist Party, the Communist Party of India, and the Kisan Sabha did play their part. The book, however, concludes by adding that the INC was not the party to lead such a massive peasant struggle to the revolutionary stages and the left was not capable of performing the task.

**1.11 Peasant Violence and Social Change: Purnea in the First Half of the Twentieth Century, Ratneshwar Mishra, *Khuda Bakhsh Library Journal*, Vol. No. 149, July–September, 2007.**

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**Key Topics:** *Peasant Studies, Agrarian Relations*

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This article, published in the 149th issue of the Khuda Bakhsh Library Journal, discusses peasant violence in Purnia district (North Bihar) in the first half of the 20th century and assesses the consequent social changes. One significant observation in the article is that it checked the unrestrained influence of the middle-peasantry and threw up a new class of leadership – with a ‘subaltern’ character – among the ordinary peasants, as seen in the personality of Dulla Manjhi and Nakshatra Malakar.

With an area of 7943 sq km, Purnia has 2,644 revenue villages which are thickly populated. Agriculture is the mainstay of the entire rural population, which makes up 94 per cent of the total population; and 90 per cent of it earns its livelihood either as owner-cultivator, sharecropper or landless labour. The district, like many others in Bihar, was entirely under the possession of one or several large *zamindars* during the colonial period. And all classes of peasants were constantly at the mercy of the landlords and their agents, and suffered many kinds of constraints – social, economic, as well as legal. The *zamindars* had not only amassed wealth but also enjoyed effective share in land control. The permanent settlement conferred absolute property rights on the *zamindar* and it soon became possible for them to resort to violence in the form of rack-renting and illegal imposts, or even evictions, whenever their demands were inadequately met by the peasantry. The government responded to the situation through various tenancy legislations like rent laws, *patta* regulations, *Patwari* law, and ultimately the Behar Tenancy Act, 1885, for occupancy rights to *raiyyats*. Reacting to the situation, the *zamindars* formed political groups like the Landholder’s Society, British Indian Association, and the *zamindari* Association. The *zamindars* of Purnia actively associated themselves with these groups and resorted to all sorts of oppressive methods to curb the rising authority of the peasants.

The tenancy legislations from 1859 onwards altered the situation and the peasants developed a growing spirit of independence from their increased knowledge of their legal rights. The survey and settlement operations started by the government in the early 1900’s gave an opportunity to the peasants of Purnia to get their rights recorded, rent reduced and illegal impositions stopped. A peculiar agrarian characteristic of this district was the existence of many tenure holders owning land from hundreds of acres to a few *bighas* and cultivating them through *bataidars* or sharecroppers. Consequently, these landlords were completely out of touch with the cultivators and did not consider it their duty to contribute to the economy of the district or the welfare of the peasants. The local landless sharecroppers suffered as over a prolonged period they became unfit for sustained labour owing to humid and malarial climate. A piquant situation arose when owing to non-availability of sufficient hands such landlords as the Darbhanga Raj and the Banaili Estate were forced to sell or settle the land for cultivation to migrants from the Indo-Gangetic plains of Shahabad, Chhapra, Siwan, Muzaffarpur, Champaran, and Balia. These outsiders were attracted to Purnia as it had become a fertile and cultivable tract owing to the westward shift of Kosi river. Like the *zamindars* earlier, the rich peasants started persecuting the lower peasants, who had begun to be aware of their rights. In one such incident, the Purnia tenants on being harassed by landlords rose in protest, also leading to a murder in 1914-15.

The rising authority of the peasantry received a further boost in the wake of the growing political awakening under the impact of the nationalist struggle. In 1920, the North Bihar Kisan Sabha was established at Muzaffarpur as a result of Mahatma Gandhi’s Satyagraha against the indigo planters at Champaran. The activities of this *Sabha* extended to Purnia as well. The pro-tenant activities of the political activists further emboldened the tenants to rise up against the *zamindars* at several places in the district. Some sort of a movement was even organised against the Banaili Estate. The economic depression of 1929-30 led to agrarian tension in a peculiar way. In hundreds of villages in Dharampur *pargana* of the Dharbhanga Raj, the rent was raised from Rs 3 per *bigha* to Rs 6 just before the economic depression. These prices crashed with the depression and the tenants were forced to sell their holdings to clear off the arrears of rents—5,360 *bighas* in Korha, 1,560 *bighas* in Kajha and a large number of holdings in Bhawanipur Rajdham circle were sold. The Dharbhanga Raj itself purchased these holdings, resettled them on cash rent or sharecropping basis at higher rates or kept them under its own control. The peculiarity of this situation was that the tenants remained in possession of the land, albeit the sale of the holdings. This led to a confrontation between the tenants and the Raj officials and it was officially reported that riots were expected to break out. The Raj, however,

restored the old rate of Rs 3 and the crisis was averted. The *zamindars*, however, were not to relent. The tension surfaced again in the wake of the politics of the Indian National Congress which had pledged to abolish *zamindari* in its Faizpur session in 1936. Although it could not pursue further due to pressure from the big *zamindars*, it came out with the Bihar Tenantry Amendment Act in 1938 which conferred occupancy right on the under-*raiyats*. But the tenure holders refused to grant rent receipts to them, while on their part the under-*raiyats*, who were mostly *santhals*, started refusing payment. The *santhal* sharecroppers resisted in an organised manner and Dharahara, Raniganj and Forbesganj which witnessed agrarian riots. Although Arbitration Committees and magistrates-in-charge of agrarian affairs were appointed for settling *bataidari* disputes, the agrarian tension continued expanding and the relation between the landowners and *bataidars* remained a law and order problem for many more years. What is most noteworthy is the emergence of Dulla Manjhi and Nakshatra Malakar as the undisputed leaders of the tribals and lower caste agricultural labour, who also secured a place in history rather than their contemporary *zamindars*.

### 1.12 Development of Dalit Consciousness in Bihar, 1937-1964, [Bihar mein Dalit Chetana ka Vikas, 1937-1964], Rajbhushan Upadhyay, Janaki Prakashan, Patna, 2007.

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**Key Topics:** *Dalit, Development of Dalit Consciousness*

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The book is based on the development of *Dalit* consciousness in Bihar which has become one of the most important political issues in contemporary India. The major objective of the study is to explore how *Dalit* consciousness came into existence in Bihar and examine the nature of efforts made by the different social reformers and the government of Bihar for their development.

The word *Dalit* was used by Swami Achutanand in 1910 for the first time and Gandhiji used the word *Harijan* for the most socioeconomically exploited people of our society. The term *Dalit* refers to the most backward caste (and most often class) of our society, who are categorised under scheduled caste in the Indian constitution. *Dalits* face numerous problems such as exploitation, education, and economic backwardness. However, the major problem is the tradition of untouchability created by the so called upper caste Hindus. The concept of welfare and development of this class in our society has a long history.

*Dalit* consciousness started with the *Bhakti* movement which played an important role for the development of *Dalit* consciousness in medieval India. Many social reformers like Kabir, Gurunanak, Dadu, Tulsidas, and Ramanand tried to create an ethos of social equality and reduce the gap between upper castes and *Dalits*.

During colonial times, the spread of western education and ideals, the rule of equal punishment for everyone, the spread of political thought, and equal opportunity in the government services encouraged *Dalit* mobilisation. Social reformers in 19th and 20th century including Raja Rammohan Roy, Jyoti Rao Govindrao Phule, C. N. Mudliyar T. M. Nayar, P. Tyagraj Cheti, Dayanand Saraswati, Shree Narayan Guru, Gopal Krishna Gokhale, G. K. Devdhar, N. M. Joshi, U. S. Shreenivas Shashtri, and K. N. Kunjaroo also made efforts for social equality of *Dalits*. Raja Rammohan Roy was the first modern reformer who made an effort to remove the caste system and discrimination based on caste through the Brahmo Samaj in the 19th century and a similar attempt was made by Dayanand Saraswati through Arya Samaj at the same time.

The effort made by Mahatma Gandhi through the Champaran Movement in 1917 in Bihar and Dr. Bhim Rao Ambedkar in Maharashtra for the development of *Dalits* is appreciable. The *Dalit* movement within the wider Champaran agitation has an important place in Indian freedom history. Gandhiji saw that the *Dalit* were exploited by the British landlords in Champaran and he started the movement against this. As a result of this, numerous schools, health centres, and *asharams* were also opened for them.

There were also many political leaders who fought for their progress including Dr Rajendra Prasad, Jagjivan Ram, Shreekrishana Singh, Anugrah Narayan Singh, Jaiprakash Narayan, Jaglal Chaudhari, etc., but the book argues, no one has achieved this goal yet. The book has also given emphasis to the work done by the Government of Bihar for the socio-economic development of the *Dalit* community between 1937 and 1964. The first national government under the leadership of Dr Shreekrishna Singh, in 1937, made an important contribution to this cause through providing *Dalits* with various crucial facilities such as health and education (such as free education for children, scholarship facility). The government facilitated development through the distribution of land to *Dalits*. The Bihar

government allocated Rs 7.50 lack in the first budget for schemes relating to education, health, and agricultural improvement for *Dalits*.

The constitution of independent India came into existence on 26 January, 1950, and there were many articles made in favour of *Dalits* such as the right to equality, abolition of untouchability under Article 17, right against exploitation under Article 23, cultural and educational rights for *Dalits* and other backward communities under Article 29, reservation in government jobs under Article 335, reservation in Lok Sabha seats under Article 330, etc.

While some *Dalits* have been able to take advantage of these opportunities offered by the Indian State, numerous others continue to lag behind in terms of socioeconomic development indicators. The movement for the empowerment of *Dalits* must be evaluated looking at the overall development indicators for the *Dalit* community as a whole.

### **1.13 The Emergence of Modern Political Consciousness and the Establishment of Separate Bihar Province [Bihar mein Adhunik Chetana ka Uday avam Prithak Bihar Prant ka Gathan], Ranjan Kumar Varma, Khuda Bakhsh Library Journal, Vol. No. 149, July–Sept., 2007.**

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#### **Key Topics:** *Bihar and the National Movement*

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The article explores the establishment of a separate province of Bihar. It traces historical landmarks and asserts that Bihar has an important place in modern Indian history. The first democracy in the world, Bihar highlights the importance of the common people in political administration. This is where the first Emperor of India established his empire and successfully tried to make a nation. While in the Battle of Buxar in 1764, the Emperor of Delhi, Shah Alam II, handed over the revenue authority (*diwani*) of Bengal, Bihar, and Orissa to the English East India Company, many famous movements against the Company happened in Bihar. The article argues that modern political consciousness in Bihar originated with the establishment of Indian National Congress. At the same time, other movements, such as the Wahabi Movement, Revolt of 1857, Birsa Movement and *Bang-Bhang* Movement also contributed to the emergence of modern political consciousness in the state. Other landmarks related to the rise of modern political consciousness and nationalism include the establishment of a Union of Youth in Darbhanga on 3rd March 1909 and the organisation of Bihar Student Conference in 1906. In 1908, an assembly was organised under the leadership of Nawab Sarfaraz Hussain Khan during the Sonpur fair in which Bihar Congress Committee was established. The spread of western education also helped in the rise of national consciousness as exchange of thoughts and ideas occurred in a common language, English. It was also the time when Raja Ram Mohan Roy started the Brahma Samaj Movement in Bengal which helped in the establishment of school and colleges in Bihar. Patna College, a centre of political activities in Bihar, was established in 1863.

According to the article, a new age of Indian political history started in 1885 with the establishment of the Indian National Congress. It draws attention to the fact that Bihar was consistently neglected after the reunification of Bengal, Bihar and Orissa. In fact, it is argued that reunification was a big hurdle for the progress of Bihar. As Bengal had the capital city, it was a centre of political activities and received a larger share of benefits, such as western education. The article draws attention to an incident which occurred in 1893, when Sachidanand Sinha was coming back from England, and he met with a gentleman from Punjab, who was also a barrister. When Sachidanand Sinha introduced himself and said that he was from Bihar, the gentleman replied that he had never heard of the place! This incident had a deep bearing on Sachidanand Sinha's mind and he decided to work towards the creation of a separate province of Bihar. He met Mahesh Narain, a senior journalist, and both of them along with Nand Kishore Lal and Krishna Sahay started the publication of Bihar Times from January 1894. This was quite an achievement and it also lent a new motivation to the movement for the separation of Bihar. When government officers were talking about the division of Bengal in 1894, Bihari leaders submitted a memorandum on behalf of many local institutions to Lieutenant Governor Alexander Mackenji for separation of Bihar from Bengal in Gaya, but he refused it. Around the same time, Rajendra Prasad conducted a Bihari Student Sammelan, which helped many youth to join the separation movement, and their participation resulted in a new energy among Bihari leaders involved the separation movement. Bihari leaders presented a request letter for separation of Bihar to the Viceroy in the beginning of 1911 and on 12th December 1911, the British King, George V, announced a new Province Bihar at the *shahi darbar* in Delhi, much to the delight of the people of Bihar.

**1.14 Dalit Movement in Bihar (1912-2000), [Swarg par Dhaava, Bihar mein Dalit Andolan, (1912-2000)], Prasanna Kumar Choudhary, Vani Prakashan, New Delhi, 2005.**

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**Key Topics:** *Dalit Representation, British Government*

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The objective of this study is to present an account of the position of Dalits and their movement in 20th century Bihar. There is a tremendous shortage of material regarding *Dalit* movements in regard to their organisations and unforgettable struggles and sacrifices. The book is an attempt in this direction to fill up this gap. An attempt has also been made to record all their material systematically, though there is much further scope in this direction.

The study argues that the 20th century is the century of awakening of *Dalits*, who have had a long history of exploitation in Bihar. The struggle for independence and against colonisation was also accompanied by an analysis of the internal weaknesses of the Indian society and intensive efforts needed for their ameliorations. The idea was to ensure that independent India will be a transformed India. The book also presents the challenges for *Dalits* in the 20th century. The dependence of the study is mainly on primary sources such as police and administrative reports and files. Here too, there also is a shortage of simple details regarding the struggles of Dalits to end social, religious, political, and economic exploitation. The available literature on the subject has also been explored as a secondary source of information.

The first chapter gives an overview of the state of Bihar, its socioeconomic and demographic characteristics. The second chapter presents the sufferings of a character, Hira Dom, in verse and presents the sad account of the conditions of the *Dalits* due to hard manual work, very low wages and remuneration, their limited access to water and other facilities, and exploitation in all aspects of life. It touchingly asks a question pertaining to Indian mythology; though God had come to the rescue of Prahlad, Elephant, and Draupadi at the time of their utter difficulty had God also deserted Hira Dom considering him untouchable? So miserable was the condition and state of exploitation of *Dalits* at the hand of the Upper castes.

The book argues that Gandhiji made the removal of untouchability an integral part of his other works such as earthquake relief in Bihar. The official propaganda supported by upper caste Hindus opposed Gandhiji's efforts for the removal of untouchability. These efforts were towards the entry of untouchables in temples, stopping cleaning of private latrines of upper caste Hindus, inter-caste marriages, taking food prepared by non-Hindus, etc. Gandhiji also collected huge funds in various districts of Bihar for the welfare of *harijans*.

According to the book, after the failure of the Second Round Table Conference in London, Gandhiji tried to create awareness against separate electorates for *Dalits*. He believed that *Dalits* were an integral part of Hindu society, tied with caste Hindus, and separation of voting rights by the *Dalits* would be like breaking the limbs of Hindu society. Gandhiji looked at the problem of *Dalits* from a moral and religious angle and felt that separate voting rights of *Dalits* was no answer to the age old exploitation of *Dalits*. He announced hunger unto death in case the government decided to separate voting rights for *Dalits*. Against this declaration of Gandhiji, the British Prime Minister took the communal decision and announced a Communal Award on 17 August 1932. Its main component was the delineation of Vidhan Sabha seats for *Dalits* only in specific areas. Leaving Madras, their special areas were to have high proportion of *Dalits*. It was felt by the government that this arrangement could be required for next 20 years.

Against the Communal Award, Gandhiji announced a fast unto death from 20 September 1932. Gandhiji was not against the higher proportional representation for *Dalits*, but he was against separating them by the constitution which was against the division of Hindu religion based on misconceived notions. He also made a forceful plea to upper caste Hindus to eradicate untouchability from the roots.

The book notes that on 24 September 1932, the British Government announced the Pune Pact. It reserved a number of seats for *Dalits* in the provincial assemblies as follows: Madras (20), Bombay and Sindh (15), Bihar and Orissa (18), Central provinces (20), Assam (7), Bengal (30), United Provinces (20), totalling 148. The election to these seats was to be through a Joint Electoral System. It also delineated the method by which candidates were to be selected for the General Elections. In the Central legislature, *Dalits* were to have 18 per cent reserved seats. The *Dalit* community was not to be held ineligible for local government and government jobs due to untouchability. Their appointment to government jobs was to be based on educational qualifications. In all provinces, an appropriate amount was to be fixed to provide facilities for *Dalit* children.

According to the book, though Ambedkar agreed with Gandhiji partially, he was firmly of the opinion that the political arrangement could not provide a complete solution to the problem of untouchability. He could not understand how the separate voting system was inimical to the national interests, though he felt that this was detrimental from the point of view of majority representation. He was concerned whether the Hindu community would adhere to the proposed system. He, however, doubted if a particular voting system could offer a solution to the much deeper social problem. A lot more needed to be done to restore the dignity of *Dalits* and to make them an inseparable part of the Hindu society.

The study also lists district-wise political and sub-political organisations along with their year of establishment, objectives and their impact on various issues such as upliftment of *Harijans*, their fight against *untouchability*, entry to temples, digging of wells, participation in the freedom movement, education of Harijan children, etc. It gives the number of *Dalits* in the year 1933 in various municipalities. It is seen that representation of *Dalits* in the elected and nominated category both was negligible. In the Bihar and Orissa region, out of total elected and nominated candidates of 932, the *Dalit* candidates numbered only 19. It also gives the names of the 15 of the candidates elected to the Bihar Vidhan Sabha in 1937 and 1945-46.

In sum, the study provides a useful account of the *Dalit* movement in the 20th century Bihar, though there is a need to do much more to understand the dynamics of the scenario after independence.

### **1.15 *Civil Disobedience Movement in Bihar*, Papiya Ghosh, Manak Publications, New Delhi, 2005.**

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#### **Key Topics:** *Civil Disobedience Movement*

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The book attempts to bring out the changes in the leadership, organisation, and social base of Bihar Congress during the Civil Disobedience Movement. Efforts are made in the study to draw on the findings of recent studies on the peasant, caste, tribal, and labour movements in Bihar. It is mainly based on secondary literature, including official records and publications, private papers, institutional collections, and newspapers.

The study finds that the Congress agitational politics made a beginning in Bihar during the Home Rule Movement. Around the same time, much of north Bihar felt the impact of Gandhi during the Champaran Satyagraha of 1917. Three years later, several parts of the province participated in the Non-cooperation Movement. The expectation of *Swaraj* which was declared in several places was unmistakably noticeable. Thereafter, Congress organisational and constructive work remained stagnant till the end of the 1920s, picking up only on the eve of the Civil Disobedience Movement. It was during 1930-34 that the Congress message was spread in the interior in a more extensive way than had earlier been attempted. This exercise in mass contact through and during the agitation widened the Congress base considerably.

The study argues that while the caste base of the Congress leadership had widened in the 1920s to include the Rajputs and Bhumihars, there is evidence of middle caste (Ahirs, Koeris, and Kurmis) Congress workers in several districts during the Civil Disobedience Movement. At least in Champaran, the bulk of the Congress leaders were Koeri, Kurmis, Binds, and Hajjams. On the whole, the study found that the Congress leadership remained in the hands of small *zamindars*, many of whom had professional backgrounds. The study observes that not all Congress workers held strictly Congress views. Several terrorists also received support from congress workers and indeed used congress and later the Congress Socialist Party (CSP) as a cover for their activities.

It argues that the Civil Disobedience campaigns were particularly successful in the well organised Tirhut districts. In Saran, where the majority of the leaders had been arrested early in the movement, there was an attempt from across the border to link grievances over police repression with the oppression of the Hathwa Raj. While the constant contact with Congress appears to have restrained the participants in the movement in Ranchi and Hazaribagh, significantly, Palamu, where the Gandhian message was no novelty and which had threatened the administration's hold in 1922, again caused much anxiety ten years later. Civil Disobedience here was combined with a strong Kisan Sabha agitation led by Kherwar volunteers. Elsewhere in the tribal areas, the Congress movement received support from Santhals, Paharias, Bhumijis, and Kherias. The Civil Disobedience Movements received support from low caste movements too. The congressmen made promises of a changed life after the *Swaraj*. This roused hopes both in rural and tribal societies. These hopes were manifested and reflected in the un-Gandhian conceptualisations of *Swaraj*.

The study reports that it was in the context of Congress silence over *zamindar* oppression in the earthquake ravaged areas that the Kisan Sabha began to move away from the Congress. Under the influence of the CSP, the Kisan Sabha gradually came to support *zamindari* abolition. There were instances of non payment of rent in the belief that the matter would be taken up by congress.

The study reveals that though the provincial Congress avoided taking up agrarian issues, non payment of rent was preached by some congressmen in Gaya and Champaran. The Civil Disobedience Movement did not fade out completely after March 1931 nor was its support thereafter merely urban in character. However, a difference of opinion among the Congress leaders in 1932, about strengthening the movement as well as the increasing emphasis on construction work, led to a gradual withdrawal from the mass contact through agitation.

The book argues that at least two points emerge from a comparison of the mobilisation strategy of the Bihar Congress between 1920 and 1934. While *raiya sabha* was used to spread the Congress message during 1920-21, this phenomenon was missing in 1930-34. Also, the suggestions made by the BPCC in 1922 that labour could be used within moral limits for political agitations, was dropped thereafter. In fact BPCC opposed all moves by the CSP to secure the representation of Kisan Sabhas and labour unions in congress on the ground that it would add to the class conflict. The study concludes that if the Congress temporarily appeared to have overcome the Kisan Sabha-CSP challenge, it was largely due to the political support it received from the Kisan Sabha. Moreover, it could and invariably did fall back on the sacrifices made during different phases of the national movement.

**1.16 History of Communist Movement in Bihar, 1939-1960 [Bihar mein Vampanthi Andolan ka Itihas, 1939-1960], Ashok Kumar Mandal, Janaki Prakashan, Patna, 2003.**

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**Key Topics:** *Left Movement, National Freedom Movement.*

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The main objective of the book is to explore the history of the communist (*vampanthi*) movement in Bihar and the emergence of Communist Party in Bihar. The study also evaluates the contribution of the Communist Party to the national freedom movement and development of Bihar between 1939 and 1960.

The study finds that the Communist Party has played an important role at the international level. The father of communist thought, Karl Marx, wrote the Communist Manifesto in 1848 and gave a new revolutionary direction to the world. The Communist party was established in India in December 1925 and made its presence felt in Bihar politics by 1939 with a humble beginning of five members of the Bihar Communist Party. Sunil Mukharji was elected as the Provenance Secretary of the party. The Communist Party has played an important role not only in administration or politics but its contribution in the minority, farmers, and lower class movements are also appreciable. It has also contributed to several other social movements such as the student movement, peasant movement, and labour movement, among others.

Starting with the Quit India Movement in 1942, the Bihar Communist Party began general meetings, agitating for the release of political prisoners, it fought for Hindu-Muslim unity, the establishment of *Sanyukta Morcha*, establishment of National Government, etc. The effect of these movements was that all the leaders of the Bihar Communist Party were sent to jail between August 1942 and November 1942 by the British Government.

The great famine in Bengal in 1943 affected Bihar as well as. The Communist party was crucial to the delivery of food grains at this time. This shows the important contribution of the Communist Party in national freedom movement.

India became independent on 15 August 1947. One of the first post independence movements started by the Communist Party was for the abolition of *Zamindari* through the Kisan Sabha. The first Communist Party meeting was held in Patna in 1948 and Sunil Mukharji was elected as a Provenance Secretary for the second time. However, the Party lost its glory between 1948 and 1950 because of its narrow perspective on communism and wrong policies. At this stage, the Government of Bihar began strictly monitoring the party, and the leaders and members of the Party had to go underground. The party changed its policies in 1951 and organised itself with new policies. Indradeep Singh was elected as the new Provenance Secretary. However, at this time the number of members decreased from 4,000 to 1,200.



The first general elections were held in 1952. Two members of the party stood for Lok Sabha elections but both were defeated. The party also gave tickets to candidates for 22 seats in the Bihar Vidhan Sabha elections, but none were victorious. After their defeat in the elections, they focused on strengthening the peasant movement in the state.

In the 1956 sub election, the party finally gained some electoral support when Chandrashekhar Singh, the Communist Party candidate, gained victory against Kapil Dev Narayan Singh, the Congress candidate. This gave the party some encouragement. It stood for 59 seats in second Bihar Vidhan Sabha election and won 6 of them. Till 1960, the total number of party members had increased to 10,797.

The Bihar Communist Party, the book argues, has played the role of a strong opposition party, given its involvement in the labour and peasant movements in the state. However, while the communist philosophy gives great importance to the exploitation of labour, unfortunately the Communist Party of Bihar has not made an effective impact on this community. However, it is the only party that places the needs of labour, peasants, *Dalits*, and exploited people first. So if the party works for these communities with honesty and hard labour then it might be able to form the state government and strengthen the socialist principles in the state. The study concludes with the words that while the Indian communist parties face numerous problems and challenges, they can give a new revolutionary direction to Indian people and politics.

**1.17 From Caste to Category: Colonial Knowledge Practices and the Depressed/Scheduled Castes of Bihar, Awadhendra Sharan, *The Indian Economic and Social History Review*, Vol. 40 No. 3, Sage Publications, New Delhi, 2003.**

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**Key Topics:** *Depressed Classes, Criminal Castes, Colonial History*

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This article explores certain criteria (social and religious, law and order, education and political representation) that were employed during the British rule in India, particularly in Bihar, to delineate and classify the Depressed/Scheduled Castes as separate from upper castes, on the one hand, and separate the depressed classes from the untouchables, tribals, and the 'criminal castes' on the other. It maintains that the colonial processes used to define and classify these were fraught with difficulties and were unable to capture variations and complexities. Moreover, these 'imperial classifications', (pp. 280) were devised to serve colonial administrative functions and implied rendering these various groups historically contingent.

**Social and Religious:** The article notes that the British attempted to classify the depressed classes for administrative purposes since 1818 and conducted various surveys. Buchanan Hamilton conducted a series of surveys to understand the agricultural and commercial conditions of his province. However, his findings were based on the opinion of the informed elite and this provided the base on which the colonial sociology would be constructed. Moreover, in his findings, there was not much difference accorded between the lower castes and tribes.

It is argued that later a distinction was made between caste Indians and those that were neither caste Indians nor followed an autonomous culture (like tribes), and were considered as being at the margins of Hinduism. These were referred to as the 'Depressed classes or untouchables' such as the *Dosads, Pasis, Chamars, Doms*, and the *Musahars* of Bihar. These were considered by Hunter as being on the margins of both tribal and caste society, as 'semi-Hinduised aboriginal' (pp. 282) but followers of Hindu customs.

In 1871, it was decided to separate these lower caste Hindus, who followed a different kind of Hinduism, by identifying a clear definition of Hinduism. In the 1881 census, a five-fold classification, namely, Brahmins, Rajputs, Castes of Good Social Position, Inferior Castes, and Non-Hindu or Aboriginal Castes was carved, but it was felt that this classification did not mention the Hinduised tribes.

The article notes that Herbert Risley, in the introduction to his famous book, *Tribes and Castes of Bengal*, used race as an organising principle of caste classification, with the top position occupied by Brahmins and the bottom by *Chamars*. Seven caste groups were identified in Bihar, two of which were 'tribal castes' like those mentioned above and 'occupational castes like Brahmins, Mochis, Bhangis and Chamars. However, the caste Hindus of aboriginal descent still eluded complete classification at this point. In 1901, the census commissioner decided that the 'enlightened opinion' would inform caste classification and caste would be ranked according to 'social precedence'. Six groups were identified, namely, Brahmins, Other castes of twice born rank, clean *Sudras*, Inferior *sudras* and unclean castes

and scavengers and filth eaters. Attempts were made to draw out a clear definition of Hinduism to see who falls within and outside of it.

The article finds that during the Census of 1911, it was decided to create a separate category of 'Depressed Classes'. It was believed that the previous surveys had included millions who were outside the ambit of Hinduism, and hence a precise definition of Hinduism was laid out in the form of ten points, which however were fraught with difficulties. For example, one of the rules mentioned that those who were not allowed entry into Hindu temples were outside of Hinduism. However this was flawed as many 'untouchable' caste Hindus were denied entry into temples.

**Law and Order:** According to the article, from the 1870s to the 1910s, apart from the confusion around caste tribes, there also emerged another category called the outcastes such as the *Doms* and the *Magahis*, who removed dead bodies and acted as executioners. While studying the wandering *Magahiya Doms*, criminality began to be associated with this group and what emerged was a category called 'criminal tribes' that was to be made separate from the Depressed Classes. In 1875, a proposal was made to include them in the Criminal Tribes Act of 1871. This was not accepted as it was seen to be unfair to brand an entire community as criminal, but these criminal castes were to be kept in check. Finally in 1907, the Act was amended to allow the government to designate parts of the tribes, class or gangs, and Criminal Tribes. In 1913, the *Magahiya Doms* were declared a criminal tribe.

**Education:** The article notes that 1914 onwards, education became an organising principle to classify caste on the basis of which a five fold classification was laid out namely, Mohemadans, Europeans, Women, Backward Races, and Aborigines, Untouchables and Depressed Classes. This was done to identify those for whom opportunities were few so that steps towards their moral, material, and educational amelioration could be taken. While taking these measures, the lower castes were divided into the aborigines, the depressed classes, the untouchables, and the criminal tribes. It was decided that the latter two would not be included in the education and other socially progressive schemes as the untouchables (although there was a distinction between untouchable and unclean (who perform unclean work, and here they referred to those doing unclean work) did not have any use of it and if educated would no longer perform these tasks, These, the article finds, were 'a disagreeable necessity who could hold society to ransom because of the jobs they did which no one else would do' (pp. 282). The criminal tribes would also not be included. For the rest of the Depressed Classes (those who were suffering from 'mere social disabilities' (pp. 300) or other general disadvantages, such as the landless and the class of cultivators, education suitable to

**Political Representation:** The period from 1919 till 1935 witnessed a series of social reforms, on the one hand, and politicisation of caste and religion on the other in the form of the Morley-Minto Reforms. There was talk within the British government to give fair representation to the Depressed Classes in the administration for which their clear demarcation became necessary. The classification laid out in the Census of 1911 was not considered relevant as it excluded many Hindus. Thus, it was decided to avoid employing rigidity during classification of castes, which would now be informed by the information provided by the education department (Simon Commission). A clearer and more elaborate set of criteria were spelt out to include those who were Hindu. The Indian Franchise Committee of 1932 excluded tribes from the category of Depressed Classes, along with those Hindus who were economically and socially backward but not considered untouchable, as well as those that suffered only from religious disabilities such as *Telis* and *Kalwars*. Thus, the Depressed Classes were defined as Untouchables essentially, whereas the Criminal Tribes were relegated to a position below the Depressed Classes. These formed the basis on which the Scheduled Castes were identified in the post-colonial Indian state.

### **1.18 Region in History: *Perspectivising Bihar*, Ratneshwar Mishra (ed.), Janaki Prakashan, Patna, 2002.**

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#### **Key Topics:** *Regionalism*

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The major aims of this edited book are to understand if regional historical studies promote fissiparous tendencies or, in fact, contextualise local realities in the national and international perspectives, to evolve a set of guidelines for research to ensure that regional studies are not a mere rehash of district gazetteers, and to evolve a more widely acceptable definition of regionalism. The book uses the definition provided in the Encyclopaedia of Social Sciences as 'a counter movement to any exaggerated or oppressive form of centralisation. It must not, however, be considered solely from the viewpoint of political control or governmental administration. Regionalist problems arise only when

there is a combination of one or more such factors as geographical isolation, independent historical tradition, ethnic and linguistic particularities and political, economic and class interests' (pp. 8).

The book is divided into five major parts, defining regionalism, conceptualising the region and its history, perspectives on a region, constructing the tribal identity, and the sub region as a region. After attempting to define the parameters of regional studies, in the second section an attempt is made to conceptualise regionalism and trace its historical trajectory. In the first section, Thakur examines the constraints faced by historians attempting to study regional history such as the incongruence between geographical boundaries and historical subjects.

Ashok Kumar examines different dimensions of regionalism and argues that regionalism is understood differently in literature and in history, but is rarely seen as antagonistic to nationalism. Heramb Chaturvedi argues for giving greater importance to regional histories as opposed to national histories, so that eventually regional histories do not become obsolete. Z. U. Malik presents an overview of Urdu and Persian studies in the history of the region and argues that regional affiliations (generated through environmental and institutions factors) often cut across caste and communal lines and pull together often diverse strands of sub regional cultures. K. K. Sharma examines the peasant movement in colonial Bihar from 1917-47 and argues that with the leadership of Gandhi and the Congress, peasants often emerged out of their local confines and posed a formidable challenge to the colonial state. Ravi Shankar Chowdhary also examines peasant uprisings in Bihar and argues for greater attention to 'subaltern social groups' and 'protest from below' and suggests unearthing such sources as local literature and different forms of folk art, instead of relying heavily upon archival sources for constructing a more authentic peasant history. Jitendra Narayan analyses the causes for riots in the state and suggests that riots broke out generally when the government was weak and unstable. Prabhakar Prasad examines the functioning of the Bihar Press between 1916 and 1917 and finds that it often reported facts which were seen as contradictory to those reported elsewhere. However, he also finds that it performed better than its counterparts in Punjab, Uttar Pradesh, and Bengal, as it published less communal literature and so refrained from worsening communal tensions in the state.

The third part of the book attempts to examine one or more aspects of history of Bihar and its sub regions. Rajiv Kumar Sinha examines the social formation in ancient Bihar through the disciplines of archaeology and social anthropology, and warns against any oversimplifications of the complex caste system at the time. He writes that the dense population, intensification of agriculture, and ecological factors lay at the root of social formation in the state and both Brahmanical and Buddhist social teachings had an impact on social changes. Birendra Kumar Chaturvedi makes an analysis of Buddhist literary sources and discusses their usefulness in constructing the social history of ancient Bihar. Kameshwar Prasad looks at the ancient city of Champa between the pre *Bharata* war period and the Pala period, and describes it as an important urban centre at the time with commendable commercial activities. S. N. Arya examines the myths and legends relating to Gaya to establish its significance in ancient India. Raju Ranjan Prasad presents an analysis of the peasant movement through examining the writings of Rahul Sankrityayan and suggests that to view the peasant movement in Bihar as supplementary to the national movement is a dangerous oversimplification. He then goes on to examine industrial relations in colonial Bihar between 1920 and 1947 looking, in particular, at the TISCO workers movement.

The fourth section of the book examines the tribal areas of Bihar, most of which are now in Jharkhand and so has been left out of the scope of this compendium. In the fifth and final section, the book looks in particular at a sub region of Bihar, Mithila. Amitabh Kumar Jha reviews the literature on the region and finds that there was very little work done on the same up till the start of the 20th century. Much remains to be done in this regard, he argues. Tulakrishna Jha reviews the sources for writing of social history of Mithila and discusses the challenges faced by historians in doing the same. K. K. Mandal analyses some aspects of the rural economy of early medieval Mithila and finds that the distinct identity of Mithila emerged as a consequence of the intensification of agriculture and not because of Brahminical ideology as originally assumed. Avanindra Kumar examines the rate of growth of Mithila between 1871 and 1971 and places its slow growth rate in the context of slow growth of the state as a whole. Narendra Narayan Singh 'Niralal' makes an analysis of the Quit India Movement. Pankaj Kumar Jha traces the spread of the revolt of 1857 and makes an analysis of its support bases at the time. Madan Mohan Mishra discusses the sources for constructing the history of early medieval Mithila.

**1.19 Locating the Bihar Constabulary, 1920-1922: An Exploration into the Margins of Resistance Lata Singh, Social Scientist, Vol. No. 30 (9-10), September–October 2002.**

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**Key Topics:** *National Movement*

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The article explores the relationship between the lowest rung of the police force under the British government and the mass based anti-colonial Non-Cooperation Movement. This reading attempts to go beyond the conventional domains of understanding of this relationship which is seen to be in conflict as the constabulary was an integral part of the British Police. It tries to relocate the British Constabulary beyond these dichotomous notions of either being supporters of the British or the national movement, and reveal their complicated and multifaceted identities, and relationships with others like supporters of the national movement, family members, and their community.

According to the paper, the British constabulary was considered an essential instrument to maintain British rule and authority in India. The Police force was seen as a symbol of British authority of which the constabulary constituted the integral base. Initially viewed as a respectable profession, the post of the constable was losing respect. They were poorly paid and treated, so much so they started to resist and demand basic pay and rights through strikes and protests. Because these forms of resistance were not organised at first and were largely small scale, they were not considered very significant by the British as traditional notions of resistance implied overt conflict or violence. It is in this context of their resistance, coupled with the strengthening of the Non-Cooperation Movement, that the complex relationships between the *Sipahi* and the nationalists began to emerge. The nationalists were seen to strike a sympathetic chord with the lower rung of the police while offering an avenue to channelize their discontent as well as encouraging them to leave the colonial service and join the nationalist movement. This was not viewed favourably by the British as the constabulary was becoming more and more reactionary, a development which was seen as a sign of weakening of their loyalty to the British government and an opportunity to influence and include them in the nationalist movement. During 1920–21, the constabulary began to stage protests which became increasingly organised. The first few meetings were held in Patna, Chhapra, and Arrah in 1921. Since the 'language of protest were couched in deference and loyalty' (pp. 54), the authorities saw these protests as petitions rather than developments that could have serious effects. Moreover, since the demands were related to their work and living conditions, and were carried out within legal paradigms, they were not viewed as forms of strong resistance. However, when these petitions began to obtain elements of organisation and communication, and began to assume dimensions of organised protests, especially at the time that the Non-Cooperation Movement was gaining strength, the government began to get concerned. Additionally, the *Khilafat* movement was encouraging Muslims to leave the military ranks as it was considered unlawful to serve the British Army, which threw an additional challenge for the British. It was at this time that the support and loyalty of the police was most needed.

The paper argues that nationalists on their part were trying to win the support of the subordinate police in order to isolate and weaken the influence of the colonial regime. This attempt by the nationalists to appeal to the lower rungs of the police force and encourage them to resign and join the movement, and this complex relationship that the police had with the nationalists and others outside of the government, has been attributed to an 'alternate identity', that existed among the constabulary. This multifaceted identity eludes definite categorisation that locates the constabulary as an integral part of the state structure which was against the nationalist struggle. Further, the constabulary was not isolated from external events, contacts, and relationships.

Thus, the paper finds that while one aspect of this relationship between the nationalists and the constabulary was mutual sympathy, the other was conflict and mistrust. The nationalists regarded the constabulary as a symbol of the British regime and confrontations between the two ended in violence. In sum, this complex relationship coupled with the multifaceted identities of the constabulary, led to a need to relocate the constabulary as well as the scope of resistance.

**1.20 Rewriting the Language of Politics: *Kisans in Colonial Bihar*, Arun Kumar Manohar, New Delhi, 2001.**

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**Key Topics:** *Kisan, Peasants, Agrarian Politics, Zamindari System, Religion, Revolt*

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This book examines the political languages of the *kisans* (peasants) in colonial Bihar. It points out that as *kisans* experienced shifts in the existing power relations, 'they tried to articulate their responses and reactions, their hopes and frustrations, apathy and interventions in accordance with the cultural/moral/religious/intellectual resources available' (pp. 13). It argues that while the rhetoric of revolution, a dominant concept in Marxist analyses of peasant political consciousness, remained alien to them, it did not make them less revolutionary than any other social class. The book attempts to gain an insight into the lives of *kisans* in colonial India through combining historical and anthropological methods.

The book attempts to situate its narrative in archival sources as well as in folklore. It points out that much history writing misses the latter, while conventional social anthropology seldom uses the former. It argues for a combination of the two methods, through a more critical and dialectical reading of both to gain a richer understanding of the world of *kisans*.

The book begins with a brief outline of British agrarian policies, such as the Permanent Settlement Act, 1793, which had a direct bearing on the lives of *kisans* in many ways. The book also looks at the manner in which these policies evolved to understand the changing dynamics within rural Bihar. The second chapter presents an analysis of 'migration' and 'crime' as they were the two major articulations by *kisans* against changes imposed on their lives. The book examines the rate of migration and then makes an assessment of the socioeconomic impact of migration, looking also at the experiences of the women whose husbands migrated out. It documents, 'Along with quotidian hardships, women who were waiting for husbands to return had extra burdens to bear: male anxiety demanded their complete chastity and faithfulness, which is reflected in folk songs' (pp. 27). The links between memories of migration and women's militancy in future *kisan* struggles are also looked at. The same chapter also surveys changing views on crime and criminals, and discusses the religious and moral referents of crime in popular imagery.

The next chapter of the book delves deeper into 'stories', looking at *kisan* dissent through the creation of stories relating to the end of the empire, its death, and the collapse of the *zamindari* system around. It elucidates, 'Rumour, as a tactical art of speech of the weak who were denied an open platform to air their thoughts and desires, was used to prepare a "public sphere" of sorts before *kisans* made "mass-movements" a generalised affair... as a social text without an individual author, rumour functioned without as a script of "public opinion" and thrived on religious metaphors' (pp. 27).

Next, the book examines the religious matrices around which colonial domination and anti colonial resistance were being worked out and looking at the rediscovery of the Gita by nationalist leaders in particular. Both Gandhi and Sahajanand found moral and philosophical support for their actions from the Gita. However, the language of this new politics was not constructed unilaterally by the leaders and the people also affected the leadership and the new language in numerous ways.

The fifth chapter explores the religious articulation of *kisans*, their acceptance and rejection of elite construction of the language of mass politics, and the emergence of a new language which failed to find a favourable space in the discourse defined by the political leaderships. The chapter finds a distinct framework which was created by the *kisans* regarding the religious language of politics, 'whose religiosity was neither devoid of a critical consciousness of the world they lived in, nor shy of incorporating the secular of the material in their devotional yearnings. In fact, the *kisans* carefully reworked a tradition that allowed for a space where devotion could be blended with the mundane discontent that they braved in their everyday lives' (pp. 28). The book points out that the 'language of politics' is a new area of historical enquiry. Peasant history has largely been confined to moments of ruptures in history. On the other hand, social anthropology in India has rarely engaged with historical processes.

The book observes that *kisans* did not 'use' religion to propagate their concerns. They did not have to, as their politics was merely an extension of what they felt their religious vocations endorsed. The separation of religion from politics and the sacred from the temporal was too alien to be real and meaningful. Another major observation that the author makes is regarding the disenchantment of the *kisans* from the Congress. It is argued that the overlap

between caste and class played a major role in fuelling this disenchantment as *kisans* often had to survive exploitation legitimised by caste practices.

Finally, the book points out that while migration, 'agrarian crimes' (cattle thefts, in particular), or rumour as expressions of *kisan* consciousness may not be immediately apparent to students of *kisan* politics, the link between these and the political domain is undeniable. In fact, he argues that it is precisely because these links are not obvious that they are potent. For these languages to succeed, a collectivity that participated in a common belief system was necessary. A rumour would not travel very far unless the political properties in it were perceived as a common good. Rumours provided a way to articulate and vent political desires in a period when open political actions were rare.

Thus, instead of focussing on open resistance and revolt, where given power relations are openly challenged, the book has argued for more comprehensive ways of understanding *kisan* political culture in the colonial period through examining both its religious and temporal spheres.

**1.21 Twentieth Century Bihar, K. K. Sharma and Parmanand Singh, *Indian Journal of Labour Economics*, Vol. No. 44(4), 2001.**

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**Key Topics:** *Zamindari System, Peasant Movement*

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The article attempts to delineate the important changes in agrarian social structure and the consequences thereof in Bihar which has been the centre of the agrarian movements and the hotbed of peasant politics through the twentieth century.

The article starts with an analysis of the Colonial Period, arguing that the Permanent Settlement introduced by Lord Cornwallis in 1793 provided the setting against which agriculture and agrarian relations developed in Bihar. This colonial settlement was made on capitalist lines in a traditional social structure that was essentially feudal. It resulted in a considerable change in the composition of agrarian society mainly because of the growth in the land market, an altogether new development in the rural society. Important changes also occurred in the position and powers of the *Zamindars* in the matter of rent collection and also due to the fact that the state had forgone its share in the future increase in agricultural resources, the economic condition of the tenants considerably deteriorated while, on the other hand, the peasants were reduced to the position of tenants at will.

While the Company made some half hearted attempts to ameliorate the conditions of peasants by enacting some legislations, these were carried out in a casual way and failed to make any substantial improvement in the conditions of the great majority of the peasants. Even the much hailed Act X of 1859, popularly known as the Bengal Rent Act, failed to effect any appreciable amelioration in the condition of the tenants. Except the substantial or rich peasants, all other section of peasantry continued to be in heavy debt owing to the revenue drive of *zamindars* to enhance the *raiyyats'* rents, a general rise in commodity prices, the costs of living and cultivation, the increasing extent of cash crop cultivation and greater frequency in the occurrence of famines, and a phenomenal increase in rents.

The article notes that it was against this background that the Bengal Tenancy Act, which later became Bihar Tenancy Act after separation of Bihar in 1912 (Act VIII of 1885), was enacted in order to give peasants security of tenure. By virtue of this Act, rent could be enhanced only once in 15 years, the quantum of enhancement being not more than 12.5 per cent of the existing rent. Above all, it gave the authority to the government to prepare a Record of Rights on the basis of survey in the districts of Bihar. However, the most deplorable aspect of the Act was that it left under-tenants entirely unprotected. This was accompanied by a process of de-peasantisation which had started with the creation of land as a commodity and the right to alienate holdings by the Permanent Settlement. By the beginning of the 20th century, the pace of de-peasantisation accelerated. Bengal Tenancy Act of 1885, though disapproving of free alienations of peasant holdings, provided for recognition of the sales where they were consistent with established legal customs. The available records show that the number of such sales increased steadily over years. The dispossessed peasants were not necessarily driven out of land, rather in most cases they became sharecroppers on their own land. While at about the beginning of the British rule, agricultural labourers were mostly 'attached' domestic servants recruited from the lowest castes and bonded labourers (most important reason for this attachment being debts), later reports emphasise the gradual decline of the domestic 'serfdom' and the emergence of casual labour as the dominant type of agricultural labour (reasons being proliferation of small holdings

and the need to depend on hired labour). However, the system of bonded labour known as *Kamiyauti* remained prevalent especially in South Bihar districts throughout the 19th century. Even at the beginning of the 20th century, a large portion of the agricultural labourers in Gaya, Patna and Munger districts were *Kamiyas*.

The article then argues that the picture of agrarian structure at the beginning of the 20th century that emerges is that of clear stratum of a small number of *zamindars*, large number of moderate and small land holders, a middle stratum of peasants with larger than average holdings and occupancy status, and a swelling rank of poor peasant sharecroppers and agricultural labourers.

The close correspondence between caste and class was an essential feature of the agrarian social structure. The upper classes of the society-zamindars as well as tenure holders were almost exclusively drawn from the upper castes, i.e., Bhumihars, Brahmins, Rajputs and Kayasthas. The upper middle castes were largely peasants, non occupancy *raiyats* and, to a lesser extent, traders and agricultural labourers. The lower middle castes were essentially agricultural labourers and to, a lesser extent, artisans and peasants. The Scheduled Castes were essentially agricultural labourers. This agrarian structure was inherently exploitative and detrimental to agricultural development.

The article also traces the development of the peasant movement in Bihar. In 1907 in Champaran, peasants raised the banner of revolt against the European *thekedars* (lease-holders) planters and forced the indigo planters to agree in 1910 to raise the procurement price of *raiyati* indigo to Rs 13 and 8 *annas* per *bigha* and reduce the area to be cultivated under indigo under the Assamiawar contract from three to two *kathas* per *bigha*. These peasants also formed the backbone of the Kisan Sabhas. Bihar witnessed an unprecedented peasant mobilisation for nearly one and a half decades. The Bihar Pradesh Kisan Sabha was formed on November 27, 1929. The transformation in the Kisan Sabha came about as a result of its association with congress Socialist leaders. The climactic years of Kisan Sabha activism were reached when the Congress formed its ministry in Bihar (1937-39). The Congress Government enacted the Bihar Restoration of Bakasht Land and reduction of Arrears of Rent Act (Act IX 1938) and the Bihar Moneylenders Act to relieve the miseries of the peasants who had lost their lands. However, some lacunae in the Act made it impossible for the tenants to recover their lost lands.

The article highlights the failure of the state to implement laws, such as the Privileged Persons 'Homestead' Tenancy Act, 1947, Minimum Wages Act, among others. It concludes that various land legislations, import of new technology and a number of government sponsored programmes, on one hand, only further strengthened the upper caste peasants at the cost of the depressed classes and, on the other hand, these also contributed to the rise of middle castes, traditionally formed by Yadavs, Koeris, and Kurmis. These middle castes too began to cooperate with their upper castes in perpetration of atrocities on agricultural labourers. Though the various measures undertaken by the government of Bihar failed to remove the iniquitous social structure, they aroused high expectations among the depressed and made them conscious of the glaring social and economic system and aware of their rights. As a result, they extended whole hearted support to the Naxal movement, another social dynamic force in the society of Bihar.

## **1.22 *Land, Power and Market, A Bihar District under Colonial Rule, 1860 -1947, Jacques Pouchepadass, Sage Publications, New Delhi, 2000.***

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**Key Topics:** *Agrarian Relations, Zamindari System*

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This book presents a nuanced analysis of agrarian relations in Champaran district in Bihar, from 1860 to 1947, wherein it examines the manner in which the market expanded in various sectors of agrarian life, and its consequences on the standard of living of the peasantry and the functioning of social relations in the countryside. An important objective of the study was also to bring to light the semantic gap between the discourse of colonial records and the local realities of agrarian Champaran. The book argues that the colonial agrarian policy 'was designed to modify the very rules of social life in certain well defined area according to modern western conceptions of the individual and the market. By attempting to codify along strict market principles all the transactions involving factors of production (land, labour and credit) and to modernise the mode of settlement of agrarian disputes and the relations between the state and local elites, it challenged from specific angles the existing norms of social relations in the countryside' (pp. 35). Of course, the book also points out that the impact of colonial change must not be overestimated. For example, 'colonial legislation did not evolve from a tabula rasa, but from a certain static and reified western reading

of 'tradition' which was "preserved" as much as possible out of prudence while being integrated to a modernising discourse, the result being essentially ambiguous. Last, but not the least, the state had only a limited hold over social life and its legislation was but imperfectly applied' (pp. 35).

The book points out that the structural realities with which this study is concerned, such as the expansion of the modern state, the progress of the market, and the changing nature of agrarian relations are long term phenomena to which no precise chronology can be attributed. His perspective is neither that of the deterministic models of historical evolution, of the 'stages of economic growth', nor that of the theories of social change characterised by the emergence of development economics. His key objective is only to shed some light on the interrelationship between the state, agricultural economy, and the peasant society in North Bihar during the last century of colonial rule. Further, he attempts to describe a process, to examine a process of agrarian change to contribute, if possible, to the typology of the forms of social and economic development under colonial rule in India and elsewhere.

The sources of information for this book are almost entirely of official origin, as the peasant economy at the time, given widespread illiteracy, did not produce written material. The book points out that while the big *zamindars* could not avoid keeping records in order to manage their estates, for the most part, they leased out their estates in bits and pieced for generally brief period to *thikedars* who did not leave much written record behind.

While it is difficult to succinctly summarise the key findings of research work as detailed and rich in description and analysis as this, an attempt is made to highlight some insights provided by the book on agrarian relations in Champaran district between 1860 and 1947. The book points out that between 1860 and 1920, the per capita agricultural output, in spite of some serious climatic accidents, remained at a constant level or even progressed, while foodgrain prices, after an initial stationary phase, rose constantly without, however, visibly improving the average condition of the peasantry. There were two major crises during the inter war years which served to expose the blatant inequalities in the peasant condition and showed that while the poorer masses had gained little advantage from a favourable orientation of the market, they suffered heavily when it fell. Between 1935 and 1950, there was a steady price rise accompanied by high inflation during which time the per capita product kept declining. In the last three decades of the study, the per capita income stagnated at a very low level, and probably fell, as suggested, by the aggravation of social differences. The book then makes a detailed analysis of the causes of stagnation of the agrarian economy during the last century of colonial rule. He argues that endogenous and exogenous factors are impossible to dissociate in understanding the stagnation of the agrarian economy and so one must use the complementary aspects of these the two paradigms for understanding the failure of growth in the non western world—non development as an outcome of external dependence and non development through a perspective of 'stages of growth' and 'backwardness'. The book then highlights three key causes of agrarian stagnation as, firstly, a very unequal distribution of the factors of production, dating back from pre colonial times but which clearly worsened during the first half of the twentieth century; secondly, a severely limited access to the market (especially non food) agricultural products, largely imputable to the colonial situation; and thirdly, the reluctance of the member of the high caste dominant peasantry towards both productive investment, which was relatively unprofitable, and personal involvement in the process of agricultural production, which ran counter to their conception of social prestige. The book ends with a discussion on the role of the state in the agricultural stagnation in Champaran district.

### **1.23 Contribution of Bihar's Muslims in the Freedom Movement, [Sawantrata Andolam mein Bihar ke Musalmanon ka Yogdan], *Takki Rahim, Khudha Bakhasha Public Library, Patna, 2000.***

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**Key Topics:** *Freedom Movement, Muslims of Bihar, Bihar Politics*

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The book is based on the study of the contribution of Muslims of Bihar in the freedom Movement of India. The main objective of the study is to evaluate the contribution of Muslims of Bihar in the Freedom Movement and politics of Bihar. The book begins with pointing out that Bihar and Bengal were the most socio-economically exploited states by the British in comparison with other states of India. The East India Company established its rule over India with control over Bengal, Bihar, and Orissa with the defeat of Nawab Siraj-Ud-Daulah on 23 June 1757, in the battle of Plassey, but it took another 100 years to control the remaining parts of India. So these states were the mostly economically exploited states of India by the British. There were a number of Indian rulers who opposed the British



rule such as Marathas, Tipu Sultan, Sikhs of Punjab, who made a strong competitor of the British. However, the book points out, we must not forget the contribution of the Mughals.

The famous historian Dr Tarachand has written on the condition of India during that time and he also has written expansively about Aurangzeb and the great Mughal Empire. He has written that Babar established the Mughal Empire in the beginning of 16th century and his successors made the empire powerful and expanded it all over India. They developed art and culture in the country. The Mughals peacefully ruled over India till the death of Aurangzeb in 1707. After the death of Aurangzeb, many foreign invaders attacked India but his descendents were unable to stop them.

The study has found that the Muslims of Bihar played an important role in the freedom movement of India. This is evident by their active participation in elections and their election to numerous posts in the government. Bihar and Orissa were states which came under the rule of various Lieutenant Governors between 1 April 1912 and 29 December 1920. Under the Indian Act, 1909, there were 47 members in the governing council and 5 of them were Muslims. Under the Indian Act, 1919, there were total 100 members in Bihar council and there were 33,257 Muslim voters and 292,036 non-Muslim voters. There were 19 Muslim members who were elected in the 1921 elections and it increased to 20 in the 1924 elections. Again 19 Muslim members were elected in the 1927 elections, 20 in the 1930 elections, and 20 in the 1933 elections. Under the Indian Act 1935, there were 152 seats in the Bihar Legislative Assembly and there were 39 seats reserved for Muslims. There were 40 members elected in first general elections in 1937, 40 were elected in the second general elections in 1946, 7 were elected to the Bihar Legislative Council in 1937 and again 7 in 1947.

The Muslim members of Working Council of the Lieutenant Governor of Bihar and Orissa included Syed Sharafuddin and Syed Ali Imam under Indian Act 1909. Under the Indian Act 1919, Khan Bahadur Syed Fakhruddin, Khan Bahadur Syed Mohammad Hussain, and Syed Abdul Aziz became Muslim Ministers of Bihar. Mohammad Yunus became the Chief Minister of Bihar in 1937, but the government only lasted for six months.

The Bihar Legislative Assembly elections were held in 1945 after 8 years. The Congress won a majority and constituted the government under the leadership of Krishna Singh. There were 7 ministers in their cabinet and two were Muslims among them. There have been 5 Speakers of the Bihar Legislative Council during the period 1921 to 1936 and one among them was Muslim. The first elected Deputy Speaker of the Bihar Legislative Council was Syed Hasan Imam. Prof Abdul Bari was elected as Deputy Speaker of the Bihar Legislative Assembly in 1937. Thus, the book concludes that Muslims have a history of active participation in the politics of Bihar and the freedom movement.

#### **1.24 *Women and the Freedom Movement in Bihar 1920–1947*, Sudha K. Sinha, Janaki Prakashan, Patna, 2000.**

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**Key Topics:** *Women, Freedom Movement*

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The book looks into the contributions of women in the Freedom Movement of India, with special reference to Bihar. The study is based on secondary literature on the subject. The period under study is 1920–1947, which is chapterised in the sub-periods 1920-1922, 1923-1929, 1930-1934, 1935-1941, 1942, and 1943-1947.

The study states that at the All India Congress Working Committee which met at Sadaquat Ashram, Patna on 16 August 1921, in which Mahatma Gandhi was also present, a resolution was passed on *Swadeshi*, that is, to bring about effective boycott of foreign cloth and laid stress on using *Khadi* and also constructive work. The constructive work attracted the women of Bihar, and from among them Smt Sarala Devi was one of the prominent women. She visited several districts of the Chotanagpur division, preached the cult of khaddar and charkha and addressed meetings at Patna. The study highlights that her speeches encouraged the people of the province to go ahead for achieving the goals set for the nation.

The study points out that the sixteenth session of the Bihari Students Conference was held at Hazaribagh on the 5 and 6 October 1921, under the Presidentship of Smt Sarala Devi. She made a stirring appeal to the students for dedicating themselves to the service of the country and for throwing off the yoke of foreign domination over the

soil. The Purnia District Congress and the Khilafa conference were held in 1921 at Purnia. These conferences were attended by Smt Krishna Kumari Devi of Chhapra. The study found that her speeches moved the audience to tears.

On 15 January 1922, a big women's meeting was held in Safee Manzil at Muzzafarpur under the presidentship of Smt Lila Singh. She dwelt upon the introduction and popularisation of khaddar and charkha and appealed to the people for enlisting as volunteers. In 1922, with the Chauri Chaura incident, the Non-Cooperation Movement was stopped. Meanwhile, the 37th annual session of the All India Congress Committee was held at Gaya in December 1922 under the presidentship of C. R. Das. Though, C. R. Das advocated for 'council entry', the Gaya Congress decided against it. Amongst the woman delegates who participated in the session were Smt Urmila Devi and Smt Vindhya Vashini Devi.

In January 1927, Mahatma Gandhi visited Bihar. He addressed several meetings in the province. The woman of Bihar also participated in his meetings and they made contributions by donating their jewellery and other ornaments. During these years of constructive programme, Mahatma Gandhi also supported the anti purdah movement in Bihar. In Bihar, during the period 1927-28, a vigorous anti purdah movement was organised. To encourage the movement, Gandhiji sent to Bihar Maganlal Gandhi, his daughter Radha Behn and Durga Bai, daughter of Dal Bahadur Giri. Braj Kishore Prasad and Rajendra Prasad were also active in this movement.

In January 1929, the all India Women's Conference was held at Patna. A Bihar Women's Constituent Conference was also organised. At one of its session held on 7 December 1929, resolutions were passed in support of the *Sarada* Act and against *pardah* and the dowry system. It was also decided to concentrate attention towards the cause of female education in the state. The Congress was also authorised to launch a programme of Civil Disobedience including the non payment of taxes. On 26 January 1930, Independence Day was observed in the country. In Bihar also, the women cheerfully participated in it.

The study states that Pandit Jawaharlal Nehru, the then President of the Indian National Congress, along with his wife, Kamala, visited Bihar from 31 March to 3 April 1930. She presided over a meeting at Chapra where the evil of purdah was rampant. When Gandhiji broke the Salt Law, he asked the Indian women through an open letter to participate in the movement. The Bihari women also heard this appeal and came out of *pardah*. In Patna, a large number of ladies under the leadership of Mrs Hassan Imam went through the streets asking the shop keepers not to deal in foreign clothes. Smt Vindhya Vashini Devi also played a notable role in it. At Sasaram, Mrs Ram Bahadur led a party of ladies and manufactured salt in front of the police station.

In Saran district the *satyagraha* was inaugurated on the 6 April 1930. The most touching scene was the farewell given by the women of the villages near *satyagraha* camp at Bareja to their husbands, brothers, and other relatives. They gave *tikas* and garlanded them. However, to suppress the movement, the government followed a policy of repression. Every woman was not spared. In Monghyr district the *satyagraha* started on 17 April 1930. The mother of Suresh Chandra Mishra took the lead. Saraswati Devi and Devi Nira addressed a meeting at Kuru. In Sitamarhi, Mrs Ramdayalu Singh delivered several speeches. Smt Chandrawati Devi and Smt Kamaleshwari Devi encouraged the salt manufacture at Muzzafarpur. On 4 May 1930, Mahatma Gandhi was arrested and this was followed by spontaneous protests throughout the country. Bihari women also participated in it.

On 9 May 1930, Rajendra Prasad, the then President of the Bihar Provincial Congress Committee, directed all subordinate committees to start picketing cloth and liquor shops. In pursuance of this, women in Bihar started picketing. In Kesaria, P.S. Motihari, women toured the villages and exhorted the male members to get themselves enrolled as volunteers in the *swadeshi* movement. In the 1930s, under the leadership of women, there were daily processions with flags, singing of national songs, and asking the people to participate in the boycott of foreign clothes and liquor shops, which was to be started from 22 May 1930. Thus, the study observes that there was considerable progress in boycotting foreign goods throughout the province of Bihar. Women who had never come out of *pardah* were then taking part at many places in picketing.

Smt Chandrawati Devi, wife of Jagadish Narain Verma of Muzzafapur district, delivered speeches in the Purnia district and it gave an impetus to the movement. Thus, women created a new history. Women made and sold salt to all sections of people. They composed and sang songs, unfurled flags, and raised slogans. They also organised classes to train women for the national cause. They started and led processions and when interrupted, they faced the police and their weapons and courted arrest and filled jails.

To prevent the women from participating in the Civil Disobedience Movement, the government officials misbehaved with the women volunteers. But the women of Bihar boldly faced the ill treatment and the excesses resorted to by the government. The Working Committee of the Indian National Congress met at Bombay from 30 July to 1 August 1930 and congratulated Deshabandhvi Subbamma, Mrs Perin Captain, Mrs Lilavati Munshi, Mrs Lukmani, Mrs Hassan Imam, and others on their contribution to national movement. The women of the province also helped the movement by using charkha. On 21 January 1931, the Congress Working Committee adopted a resolution to carry out the struggle with unabated vigour and, accordingly, Independence Day was celebrated with much enthusiasm on 26 January 1931. At Patna, Mrs C. C. Das, Ms Gauri Das, and Mrs Nawal Kishore Prasad also participated in the celebration of Independence Day.

The 45th session of the Indian National Congress met at Karachi from 29 to 31 March 1931. Among the lady delegates from the Saran district were Smt Janak Kishori Devi, Smt Bhahurijai, and from the Samastipur district, there was Smt Kulabanti. The Indian National Congress had a batch of volunteers for political and social work. In Bihar, the Hindustan Seva Dal was opened for women. The task of the Seva Dal was to educate and train workers for the service of the country.

On 4 January 1932, the government arrested Gandhiji, Patel, Rajendra Prasad, and others. To protest against the arrest, the Congress committee at Jamshedpur organised a meeting on 5 January, in which ladies participated including Smt Ushabati Ray. Though the government was determined to prevent women from their participation in the freedom movement, the direction had no effect on the minds of Bihari women.

On 26 January 1932, Independence Day was successfully celebrated in Bihar. The wife of Alakh Narain of Gaya and her cousin sister participated in the celebration of the Independence Day. They were arrested and, later on, released. The women of other parts of the province also participated in the celebration. On 6 June 1933, the government of India sent a telegram to the government of Bihar and Orissa asking for the statistics relating to the Civil Disobedience prisoners. On 8 June 1933, the government of Bihar sent the reply which proved that 42 women of the province were in prison.

In the year 1943, on 19 January, Rajendra Prasad issued an appeal to the country suggesting the formation of non official agencies for organising relief in affected areas. Mahatma Gandhi reached Patna and visited the collapsed houses. On 30 March 1943, he addressed a huge meeting in Patna. About 5,000 women were present in the meeting. Mahatma Gandhi was accompanied by Ms Loster, Mira Behn, Prabhavati Devi, Bhagawati Devi, Kusum Devi and several others. On 22 April 1934, Gandhiji was accompanied by Ms Patel, Prabhawati Devi, and some other ladies at a meeting in Bhagalpur. Gandhiji visited Gaya and Hazaribagh during this time. On 30 April 1934, Gandhiji held a meeting at Chatra which was attended by 150 to 200 women. The elections to the legislative assembly in Bihar were held from 22 to 27 January with high women's participation. Smt Kamkhya Devi, Lady Anise Imam, Smt Sharda Kumari Devi, and Smt Saraswati Devi were elected to the Bihar Legislative assembly.

The study reports that Bihar was at the forefront in the *kisan* movement. As the intensity of the movement grew, women began to participate in increasing numbers. The study also points out that at the 53rd session of the Indian National Congress, held at Ramgarh in Bihar, women contributed much for its success. In response to the resolution on Satyagraha passed at Ramgarh, Smt Prabhawati Devi spun 2,380 yards at the camp. Smt Shanti Devi of Saran district also participated in the camp. Satyagraha was started in Bihar on 27 November 1940, and several women joined the Civil disobedience Movement and cheerfully went to jail.

In the year 1942, the brave women of Bihar participated in the movement and many of them earned martyrdom. On 14 July 1942, the Working committee of the congress met at Wardha and adopted the Quit India Resolution. Meanwhile on 9 August 1942, Mahatma Gandhi, Nehru, Maulana Azad, Sardar Patel, Acharya Kripalani, Rajendra Prasad, and several others were arrested. To protest the arrest of the leaders, a complete hartal was observed in Bihar. The girl students of Banikpur Girl's High School, Patna, picketed the Girls High School and were dispersed by the police. In the afternoon, a women's procession was taken out and in that Smt Bhagawati Devi, Smt Rampyari Devi and Smt Sundari Devi were the prominent speakers. Vidyotma Devi took lead of the procession in Dharbhanga. The girl students were in the forefront. At Jamshedpur, a *hartal* was observed and girl students made it a success. A girl's procession from Monghyr went to the Fort and asked the government officials to leave their duties and hoisted the national flag on the government office.

The study portrays that on 12 August, a big mob proceeded from the Patna Medical College compound through the main road with the dead bodies of six persons. The students of all educational institutions including girl students went on strike and several processions were taken out in the town. One such was held by Dharmshila and she was arrested and later released by the order of district Magistrate.

The study observes that the brave women of Bihar boldly participated in the Quit India Movement. They were arrested and sent to Bankipur Jail. Later, they were transferred to the Bhagalpur Central jail. Smt Usha Rani Mukherji, Smt Saraswati Devi, Smt Labnya Prabha Ghosh, and several others were arrested. The study concludes that after a long struggle the country became independent, however, the contributions of the women of Bihar deserve a special mention.

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**SECTION 2**

**Political Economy and Development**

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## Overview

The political economy of development and development issues in general cover a wide ranging multidisciplinary ground. The 25 studies in this section are rooted broadly in the disciplines of economics and political science, and there is a clear focus on two issues –agrarian transformation and the role of the State.

But for the recent spurt in economic growth in Bihar, economic development has eluded the state which has been mired in economic stagnation and even decline during the last four decades. Das Gupta (2010) finds that this growth is trade-led and volatile. In a similar vein, Ghosh and Gupta (2007) argue that states like Bihar fail to gain from economic liberalisation and an increased role of the market in development. This is commonly attributed to low levels of investment, especially private investment (Witsoe, 2006) and investment in agriculture (Bhattacharya, 2001). There is also evidence that changes in the structure of employment, in the 1980s, intensified in the 1990s and after the introduction of the New Economic Policy in 1991, and the brunt of this was felt by the rural poor (Sharma and Wilson, 2002). In other words, studies in this section are critical of the neoliberal development path that the country has undertaken and its ramifications on the state of Bihar (Prasad and Dutt, 2001), and there is stress that this part of the country has a direct correlation with India's development or underdevelopment (Sharat and Jha, 2001).

Lack of agrarian transformation, embedded in the historical context of the state, has been the key cause of economic stagnation in Bihar. Some studies attribute the socio-political impasse to the failure of the state to effect an agrarian transition by the abolition of tenancy and the development of infrastructure (Sharma, 2005), and availability of electricity in particular (Avinash Kishore, 2004). It is argued that development of agriculture (Prasad, 2000) and a multi-dimensional development strategy is required for the overall development of the state (World Bank, 2005).

State intervention and an increased role of the State is crucial for development, and more so for a backward and poorly governed state like Bihar. This understanding informs the analysis of other sections as well, and the focus of the summaries is to bring out the major recommendations for the key stakeholders in the policy process, especially the state government. At the same time, the functioning of the local state is complex (Corbridge et al., 2003) and the development paradigm, in general, and the nature of state intervention, in particular, has undergone drastic change in recent years in Bihar. While Rodgers and Rodgers (2001) find state support and institutions inadequate in their study of 2 villages in North Bihar, the same authors a decade later view the state to have become more of a benefactor than exploiter (Rodgers and Rodgers, 2010). Most policy oriented research suggests recommendations such as strengthening institutions and delivery mechanisms, and better governance (Sharma, 2007; Bihar Development Report, 2006; Chandra and Gautam, 2005). There is also a need to understand the importance of decentralised governance and strengthen *Panchayati Raj* institutions (Mathur and Sharma, 2007). Das Gupta (2010) is critical of the public policies which target (and divide) the poor and argues for more universal schemes as they tend to perform better.

In addition, some studies focus on the interaction between the political processes and the initiation and implementation of economic policies in Bihar (Kumar, 2009). A somewhat refreshing book in this section is that by a journalist, which presents an overview of politics in Bihar in the late 1990s (Nambisan, 2000).





**2.1 Contemporary Politics and Changing Economy of Bihar, Amiya K Chaudhuri, Shipra Publications, Delhi, 2010.**

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**Key Topics:** *Political Economy of Development, Coalition Politics, Good Governance*

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This book engages with contemporary politics in Bihar and aims to explore political methods for changing the economy of development in Bihar.

Chapter 1, an introductory chapter, gives an overview of contemporary politics and economic development in the state. It is argued that the problems of political economy of the state, rather than issues such as caste, race, ethnicity, and a sense of economic deprivation, need to be addressed. It finds that poverty and backwardness has gone hand in hand with caste oriented politics in the state since 1977, and this has reinforced the strong nexus between landlords, contractors, criminals, politicians, and administrators. Inequality and backwardness in the vast agrarian state was the hotbed of the political establishments that played on caste divisions in the rural agrarian society. It dwells into the Mungerilal and Mandal Commissions and their ramifications on state politics. The chapter discusses the lawlessness that prevailed in the Laloo era, and the subsequent attempt at good governance by the Nitish Kumar government, post 2005. It argues that the political economy of development in rural Bihar was abysmal in the Laloo regime, even though agricultural production was not particularly bad. This was related to the rise of the Naxalite movement in the state.

Chapter 2, titled 'Geographical Location, Demographic and Cultural Attributes' presents a district profile of the 38 districts of the state, comprising the composition of population in the state with rural-urban, SC/ST, agriculture-industry, as well as the demographic and educational profile of the population. It argues that the low literacy level and educational attainment in the state seriously impacts the political economy of development. It finds that Bihar scores the lowest across all human development indicators, and caste and gender biases are perverse in this patriarchal society. The chapter concludes that the geography, historical-politico-economic, social and cultural attributes, as well the attitudes of the people with their entrenched beliefs and value systems are important components in the understanding of evolving governance and politics in the state.

Chapter 3, the core chapter of the book, titled 'Governance and Performance: Political Economy of Development' reiterates that Bihar remains the most backward state ever, and the socio-political caste-class matrix resulted in social discrimination and further impoverishment of rural Bihar. It presents poverty trends in rural and urban Bihar, and argues that the advances in poverty reduction have been moderate. The chapter discusses the fiscal situation and budgetary expenditure in the state, noting that both plan and non-plan expenditure has been increasing. It concludes that the administration, to succeed, should be liberal and people-oriented, and capable governance without prejudices, and a set of democratic values is the need of the day.

Chapter 4, titled, 'The Government, Coalition Making or Alliances: Political Profiles in Perspective', engages with the nuances of caste and class politics in Bihar. It presents a historical overview of the various political parties in the state, emphasising on Laloo Prasad Yadav and the RJD, as well as the current Chief Minister, Nitish Kumar, and the JDU-BJP alliance in the 2005 elections. It argues that the former, in his 15 year reign in the state, did little to improve the economic condition of the people, concentrated only on caste and communal arithmetic, and ignored the political economy of the state. It argues that it is important to address issues related to the political economy of the state, and that if the political economy remains unattended any combination of political forces that come to power will fail the state.

The final chapter concludes that a historical narrative is essential to understand the politics and political economy of development in Bihar. It is argued that the politicians in Bihar, since the late 1970s, have been least bothered about their role perception and their main concern is to survive, be it as a legislator, parliamentarian, municipal councillor, or, simply, a caste elite. The political will to undertake land reforms has never been present and the state remains semi-feudal. It is argued that the economics of the state in the public sphere has been inhibited by the traditional feudal attitude of the peasant society, and, since the late 1970s, caste politics, which was quite dormant in the preceding decades, was reinvigorated. In recent years, the rise of the intermediate castes is highlighted. The book credits the present Chief Minister, Nitish Kumar, for good governance – tackling crime, providing electricity, roads and water, and combating corruption. It concludes that a skilful management of the political economy of development in different sectors of the society ensured social harmony – a key to the recent successes of the state.

## 2.2 Unravelling Bihar's 'Growth Miracle', Chirashree Das Gupta, *Economic and Political Weekly*, Vol. No. 45(52), 2010.

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**Key Topics:** *Good Governance, Growth Performance, Dimensions of Growth*

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The article notes that it has been conventional wisdom that Bihar's second position at 11.031 per cent growth in the league table of Gross Domestic product (GDP) growth rate between 2004-05 and 2008-09 (CSO November 2009), is an outcome of *sushasan* (good governance) under the NDA government. The consensual views of various commentators on Bihar's growth stem from two articles of faith. First, there is a belief in an economic 'miracle' in Bihar through *sushasan* (the closest translation is 'good governance') under the NDA government. Second, the economic 'miracle' is led by the successful resurrection of a service delivery state through adoption of 'good governance'.

According to the article, far from being a service providing institution, historically, the state has been an instrument in the hands of 'contending classes, groups and political entrepreneurs', each attempting to capture resources for accumulation and steer the process of social transformation in specific directions mediated by market exchange and political power, and closely associated with the specific nature of corruption and social power.

The article, based on political economy, takes on two questions: First, are the numbers that reflect 11.03 per cent growth between 2004-05 and 2008-09 in Bihar reliable? Second, to what extent is the growth process in Bihar attributable to the specific policies of *good governance* under the NDA government?

The article finds that the trend annual growth rates for the primary sector indicate spurts in growth between 2003-04 and 2004-05 mainly explained by a growth in agriculture. If the income figures are correct then growth in cultivation and livestock in Bihar in the last decade is comparable to Punjab and Haryana in the decade since 1965-66. But the crop-wise area and production figures for major crops in Bihar indicate a consistent decline in yield and production since 1999-2000 in most major crops including rice, wheat and maize – the three crops that account for 90 per cent of the total food grain produce in Bihar. How can income at constant prices grow consistently while there is decline in yield and production?

Between 1993-94 and 2000-01, while India as a whole grew at 5.75 per cent, Bihar's economy had grown at 6.09 per cent. This came to an abrupt halt due to the 'economic shock' of bifurcation in 2000. The CSO data from 1993-94 to 2008-09 points to the possibility of a structural break in the early 1990s and *the resumption of a long fluctuating and volatile movement towards a higher growth continuum that had started since 1994-95 but was interrupted by the impact of bifurcation in 2001-02*. Bihar had already caught up again with the national average in 2004-05 and overtook it in the subsequent period. Growth acceleration in Bihar had preceded the NDA government at least by two to three years as the acceleration in growth resumes from 2002-03 and becomes pronounced in the period between 2003-04 and 2005-06. The first set of 'reforms' under *sushasan* started from January 2006 with time-lags for design, adoption, implementation and impact.

Official statistics since 2004 show that crimes like dacoity, robbery, kidnapping for ransom and murder have relatively declined. In the same period, burglary, rape and theft have increased in absolute terms. Total cognisable crimes after 2004 have increased (annual increase of 3.79 per cent between 2004 and 2008) twice as fast compared to the period before (annual increase of 1.75 per cent between 1998 and 2004). The crimes against women, *Dalits* and *adivasis* show an alarming increase between 2004 and 2008. The annual trend growth in rape of *Dalits* (14.5 per cent), kidnapping of women (18 per cent), arson against *Dalits* and *adivasis* (22 per cent) and the annual growth in crimes recorded against *Dalits* and/or *adivasis* under the Prevention of Atrocities Act, 1989, (24 per cent) indicates the change in the social base of crime victims in the latter half of the last decade.

The article argues that the more sophisticated conjectures of the causal link between economic growth and *sushasan* have been based on the substantial stepping up of development expenditure since 2005-06 and its positive impact on investment. In the case of Bihar since 2005-06, investment has not really taken off till date. The relative share of development expenditure in the state government's total expenditure increased since 2005-06 to reach a peak of 64.79 per cent in 2007-08, but fell to 48.35 per cent in 2008-09 and was expected to fall further to almost 2001-02 levels (41.83 per cent) in 2009-10 (47.67 per cent) and 2010-11 (43.67 per cent).

The method of disaggregating Bihar's growth in Gross State Domestic Product (GSDP) in the paper is based on the following proposition:

$$g_{yt} = \sum w_{it} g_{it} + e_y \quad (1)$$

$g_{yt}$ : log-linear trend growth of output in period t

$g_{it}$ : log-linear trend growth of output in ith sector in period t

$w_{it}$ : average per centage share of ith sector in overall composition of GSDP in period t

$e_y$ : residuals due to annual volatility

The residual ( $e_y$ ) for each period is the outcome of: (i) the effect of annual fluctuations of output which are the residuals of the log-linear trend equations in each sector over each period (indicator of annual fluctuations of absolute growth); ii) the effect of annual variations in sector-share (indicator of annual fluctuations of relative growth). The residuals can be considered insignificant for the purpose of analysis since both components of  $e_y$  are by and large normally distributed.

The paper finds that more than 74 per cent of the growth in GSDP in any period between 1999-2000 to 2008-09 consists of the sectoral contributions of four sectors – agriculture and allied activities, construction, communication, and trade, hotels and restaurants. Out of these, agricultural growth was much more important in the overall explanation of GSDP growth in the period: 1999-2000 to 2004-05, when it accounted for 17 per cent of overall growth in GSDP. In the subsequent period, in the three years from 2006-07 to 2008-09, agricultural growth only contributed to 6 per cent of overall growth of GSDP along with a faster decline in sector share. Sectoral volatility in the period after 2004-05 shows a four-fold increase. Thus, agricultural policy, since 2005-06, does not reflect any positive impact on the macroeconomics of agriculture in Bihar.

Second, the contribution of construction in overall growth saw a remarkable rise from 11 per cent between 1999-2000 and 2004-05 to 29 per cent between 2004-05 and 2008-09. However, the peak period of share of construction in the overall growth process seems to have been in 2004-05. In the three years between 2006-07 and 2008-09, the contribution of construction to overall growth declined to 21 per cent. Thus, the article argues that the growth spurt in construction *precedes* the NDA government's public expenditure led construction drive.

Third, the contribution of communication to Bihar's overall GSDP growth doubled from 4 per cent between 1999-2000 and 2004-05 to 9 per cent between 2004-05 and 2008-09. However, this leap was concentrated in the year 2004-05 and remained at that level in subsequent years. The expansion in communication would find a more plausible explanation in the 'telecom boom' in India since 2004-05 than to any particular state-specific policy after 2005-06.

Fourth, the contribution of trade, hotels and restaurants to economic growth in Bihar in the CSO data has hardly been picked up by any commentators. And yet, its significance lies in accounting for the single largest sectoral contribution to overall growth (36 per cent between 1999-00 and 2008-09), consistently reflected over every period in the last decade. Moreover, absolute contribution of trade, hotels and restaurants is reflected in the expansion of the sector by almost 6 percentage points in a decade-long secular expansion with sectoral volatility remaining relatively low in every period. In size, trade, hotels and restaurants is equal to the entire secondary sector in Bihar. Contrary to the assertions around the causal link of construction and communication spurt *incubating a boom* in small trade, the spurt in trade *precedes* the spurt in construction and communication. Neither can this spurt in trade be mapped linearly to 'feelings of safety' due to restoration of 'law and order', per se, as the acceleration in trade precedes by many years the 'law and order' measures of the NDA government. Trade had been the single driver of overall growth in Bihar till Bihar caught up with the 'communication boom' in 2004-05 with the rest of India. Both of these phenomena preceded the tenure of the NDA government.

The article concludes that GSDP data for the decade since 1999-2000, reveals a cyclical move towards a higher growth continuum rather than any structural break under the NDA government. The recent growth path represents the resumption of a long, fluctuating and volatile movement towards a trade-led higher growth continuum that had started in 1994-95 but was interrupted by the impact of bifurcation of Bihar in 2001. A preliminary proposition is that the process of movement to a higher growth continuum since 1994-95 in Bihar follows from the diversified patterns of accumulation through the agency of new entrants to accumulation as an outcome of the social justice movement in Bihar. The evidence presented in this paper indicates a politically fractious movement of Bihar's economy since bifurcation to a volatile higher growth continuum that is lopsided in three dimensions – regional, sectoral and social.

**2.3 The Effectiveness of Targeting in Bihar, Chirashree Das Gupta, Mimeo, Presented at the International Seminar on 'Poverty in Bihar: Patterns, Dimensions and Eradication Strategies', Organised by the Institute of Human Development, Delhi, in association with ADRI, Patna. and supported by UNDP, Delhi April 2010.**

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**Key Topics:** *Targeting, Political Economy of Poverty Eradication*

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This paper argues that abstract economics, which unequivocally puts forward targeting as an effective pro-poor tool or strategy for social service delivery, came under a scanner with a large literature emerging lately that questioned the assumptions and basis of the political economy of 'targeting'. The important observations that emerged from this literature can be grouped as : a) problems faced as 'targeting' were not very particularistic; central issues and concerns emanating from social geography and political economy were similar not only in transition economies like Brazil and India, but even in nations with developed social security systems; b) development of the concept of community based targeting and its social implications; c) politics of all 'targeting' exercises, which often results in a situation where 'more for the poor is less for the poor'. Despite this common pool of knowledge, both opinions and policy makers who framed policies on Bihar have been 'learning by doing' that: a) 'identifying the target' has been an exercise fraught with all problems noted in various literatures; b) programmes which are aimed toward a more universal category of beneficiaries have a relatively better record in reaching the deprived.

The rest of the paper upholds these two central observations based on a review of the issues that emerge from the political economy of targeting in Bihar. This is followed by overviews of four target based programmes aimed to intervene in one or more social aspects of deprivations associated with poverty.

According to the paper, understanding of the specificities of social relations in Bihar that shape policy on poverty reduction are informed by three broad paradigms, viz., Human Development Paradigm, Political Empowerment Paradigm and Economic Empowerment Paradigm. The two conceptual aspects relating to contradiction of the 'targeting' approach that took place in Bihar are further elaborated in the paper. Though these approaches have internal quibbles, what is common to all of them is the separation of 'poverty' from the structural and systemic.

The second section of this paper defines a framework of social mapping of poverty, disparity and exclusion covering three dimensions – regional, sectoral and social, to address the phenomenon of 'excluding' as an institutionalised process in Bihar in exercises of 'identification' of the poor as 'targets'. The mapping reveals that more than 10 percentage point increase in female work participation rates between 1991 and 2001 is directly evident in districts which have remained impoverished and were vulnerable to livelihood insecurity within the overall accumulation regimes after 1991. Second, four districts which have more than 35 per cent Muslim population and higher poverty ratios are also high on the vulnerability index (Araria, Purnia, Katihar and Kishanganj). Three of these four districts along with two others are amongst the five districts with the highest proportion of *adivasi* population in Bihar. The other two are Banka and Jamui, which are also high poverty zones. The two districts with second and third highest *Dalit* population, Nawada and Aurangabad, are high poverty and vulnerability zones, while the district with the highest share of *Dalit* population, Gaya, is an average poverty but high vulnerability zone. Third, this zonal mapping conforms to the wealth gradient of the state which runs from west to east and south to north.

The paper argues that critical analysis of the process of 'identifications' of the poor, when read with this social mapping, reveals that the various methods adopted by the Planning Commission including the Tendulkar Committee and the additional parameters suggested by the N. C. Saxena Committee has been concentrated on defining economic status using consumption indicators, but have overlooked the social dimensions of caste, class, religion and gender in the shaping of poverty as well as the regional basis of poverty. Moreover, the parameters, assuming that migration unquestionably means more disposable income at 'home', do not consider the link between indebtedness and changing consumption status, or those between access to formal sources of credit and social hierarchies of power. At the household level, these indicators avoid any engagement with the power-relations within families. Thus, the exercise of 'identification' is rendered ineffective in two ways: first, the paradox of exclusion as a strategy for inclusion does not get addressed and, second, the techno-economic teleology of poverty that lays out parameters based on reductionist economic symptoms.

The review of four targeted interventions, Mid Day Meal Scheme (MDMS), Public Distribution System (PDS), Swarnjayanti Grameen Swarojgar Yojana (SGSY) and Indira Awas Yojana (IAY), in the last part of the paper is based on a method of district wise rankings for each programme, based on correlations of physical outputs and financial achievements and pooling of 'identified problems' in these programmes from field studies mapped on to the social mapping summarised above.

The paper, using ranking based on district level dataset (2006-07 to 2009-10), finds that the overall utilisation and achievement is the best for MDMS, followed by PDS, IAY, and is the worst for SGSY. The decline in the extension of coverage is the least for MDMS, followed by SGSY and PDS, and is the most for IAY. As far as the extent of inter-district variation is concerned, it is the least for MDMS, followed by PDS and SGSY, and is the most for IAY. The extent of fulfilling identity-markers, such as caste, religion, gender based targets, has been found to be the best for PDS, followed by SGSY and is the worst for IAY.

With this background, the paper finds that the MDMS presents an example of a relatively universal category of targeted beneficiaries where transaction costs of 'identification' are next to nil as social stakes for inclusion are not based on the principle of exclusion. Second, the possibility of leakage is a perverse incentive to implementation. Coverage is better in districts reporting 'leakage issues'. It is thus argued that both PDS and MDMS work better because there is leakage. Third, the paper notes that there were some instances where children who were not enrolled, were reported to be included. This was not a very difficult social situation because in retrospect MDMS became an incentive to enrol rather than an institutional tussle over 'wrongful inclusion or exclusion'. Fourth, social barriers of Brahminical cultural practices were the main impediment in MDMS; there is resistance in many schools, among both teachers and families of students, to eat with *Dalits* and/or Muslims and to eat food cooked by a Dalit. But, the paper argues that the struggle for social justice in Bihar since the 1970s has created a condition where the social forms of upper caste hegemony cannot be blatantly practiced in public institutional spaces like schools. At the same time, according to the paper, the social barrier to implementation has not been the stated concern of the institutional process of implementation.

In conclusion, the paper argues that it is the interstices of the regional, the sectoral and the social which are the fundamental determinants of not just the 'identification' problems but also the explanatory matrix for the effectiveness of 'interventions' for 'social service delivery'. It is necessary to broaden the techno-economist teleology of parameters that identify the 'target' by symptoms qualified only by statistical tests of correlations but no parameters that actually address the social cause of poverty. Schemes that have a more universal category of beneficiaries are less divisive socially in the 'identification' exercise of beneficiaries and, thus, perform better despite existing social constraints or barriers. The dominance of the 'targeted interventions,' with accountability associated with 'clean transaction,' does not look into the issue of social barriers in the design and implementation of the schemes. 'Social development' is not just about redistribution based on economic optimality. Every redistributive action is also a stimulus for contest over accumulation in structurally constrained economies (like Bihar). This process has created winners and losers even within relatively homogenous 'communities'. The 'targeting' process, thus, fails to take into account that every contest over accumulation impacts existing social causes of poverty, deprivation and exclusion.

#### **2.4 Inclusion or Exclusion on the Periphery? Rural Bihar in India's Economic Growth, Gerry Rodgers and Janine Rodgers, Working Paper No. 3, Institute for Human Development, New Delhi, 2010**

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**Key Topics:** *Village Study, Social and Economic Change, Labour Markets, Gender and Migration*

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This paper examines the pattern of change over the last decade in two villages in the Purnia district of Bihar. It first reviews the main economic, social, and environmental developments over this period and their implications for different groups and categories of people. It then analyses some particularly significant changes in economic and social relationships in greater depth. It attempts to assess whether prospects for faster or more equitable development have improved as a result of changes over the last decade.

The two villages under study lie about 7 km from a small town, Kasba, which is located some 10 km from the district headquarters. Pokharia is a small, backward caste dominated village with 918 inhabitants, in 2001. Dubaili Biswaspur is larger, 4,689 inhabitants in 2001. In Dubaili, the paper concentrates mainly on one *tola*, Mazgama West,

accounting for about a quarter of the households in the village, with a backward class Muslim majority and a smaller number of scheduled caste households. Data was collected from primary sources, using focus group discussions and information from key informants, and other secondary sources.

The paper explains that in the 1970s and early 1980s, the two villages studied were backward and stagnant, and poverty was intense. Wages barely sufficed to cover basic subsistence and incomes were, if anything, declining. Mortality was high and production relations semi-feudal, in the sense that debt bondage, tenancy, and attached labour were widespread, served as mechanisms of labour control and exploitation, and resistant to change. Communications were poor, facilities limited, and education levels low. Government action was extremely weak.

From the mid-1980s things began to change, and by 1999, the picture had altered substantially. Migration to North-western India seemed to be an important trigger, undermining feudal relationships, creating new perspectives, generating additional income sources, and pushing up local wages. Diets had improved and to some extent housing. Infrastructure had also improved—roads, irrigation, schools—and there had been a significant increase in agricultural productivity. At the same time, the transition was clearly incomplete, with various remnants of the semi-feudal labour and reward systems still present. Agricultural innovation was limited, gender inequality strong, and there was not much visible impact of government programmes. Nevertheless, there was much more reason to be optimistic than 20 years earlier.

**Infrastructure:** The most striking and visible change concerns communications. Remote and difficult to reach only 25 years ago, access to these villages had already improved by 1999. But today, the situation has been transformed. The villages are only 6 km, along a good quality *pucca* road, from a four lane dual carriageway.

**Agriculture and livestock:** The increase in tube well irrigation, observed in 1999, has continued and by 2009, there were sufficient numbers of borings and pump sets for virtually all the cropped area to be irrigated, with plentiful ground water. But the cropping pattern had not changed very much with the exception of a decline in jute, which to some extent was replaced by maize and an increase in the *garma* crop, connected with the spread of irrigation. Overall, levels of normal year agricultural output in these villages, in volume terms, look to have increased by at least 20 per cent over the decade. This, however, needs to be set off against higher input costs. The price of foodgrains also declined relative to the price of all goods up to the beginning of 2008. However, thereafter, grain prices started to rise more rapidly than all prices so that by the end of 2009, the price index of foodgrains was 6 per cent higher than that for all commodities.

**Wages:** The rise in real incomes, which was noted in 1999, has continued. The main driving forces are increasing incomes from outside the village due to migration and increasing real wages in the local labour market. In 1999, local wages were found to have doubled, in real terms, since 1981. Between 1999 and 2009, they rose by another 50 per cent. In 1999, casual wages (full time, male) were mainly in the range of Rs 25 to 35 per day. In 2009, the range for agricultural work reported by different respondents in the two villages was Rs 67 to Rs 95 (lower in Dubaili Biswaspur than Pokharia and rising to Rs 100 or more in non-agricultural construction work, and for harvesting and retting of jute). Women's wages had risen more than men's. Typically, Rs 20 per day in 1999, normal wages were reported as Rs 57 to Rs 74 in 2009, a rise in real terms of 58 to 105 per cent. There was still a wage differential between men and women, but it was of the order of 15 to 30 per cent rather than the 20 to 50 per cent observed in 1999.

**Physical Environment:** The government housing programme (Indira Awas Yojana) has made a visible difference in Pokharia, where several *pucca* houses have been built recently or are under construction; this was less apparent in Mazgama.

**Education:** The last decade has seen a revolution in school enrolment. Even in 1999, school enrolment of girls was minimal and of boys very low among agricultural labour households. In 2009, enrolment rates in primary school were high and attendance moderately good (average daily attendance over 150 out of 270 enrolled in the local primary school in Pokharia with at least 40 per cent girls). Women are aware of the Mukhyamantri Balika Cycle Yojana. Under this scheme, all girls are given bicycles free of cost by the State Government after getting admission to Class IX. But so far, no girl has benefited from the scheme as most girls drop out before reaching this level.

**Health:** Health systems have also shown some improvement, but the results are uneven and certainly less spectacular than for education. The Janani Suraksha Yojana (JSY) scheme appears to be successful. It aims at reducing maternal and neo-natal mortality by promoting institutional delivery among poor pregnant women. The

scheme provides both cash assistance (Rs 1,400) and delivery and post-delivery care. The Accredited Social Health Activist (ASHA) is the implementing link. She identifies beneficiaries, facilitates registration, arranges transport to the Primary Health Centre, stays with the mother until she is discharged, arranges for the immunisation of the newborn, and advises on breast feeding and family planning. All women from both villages were aware of the scheme and the number of child deliveries in the Primary Health Centre has increased sharply. It was reported that about 50 women in Mazgama and 25 in Pokharia South *tola* gave birth at the Primary Health Care Centre in Kasba. It takes about two months for the cash to be paid to the mothers. Started in 2005, the JSY scheme is likely to have an impact on the neonatal and maternal mortality rates.

**Perception of change:** There was a uniform perception in these two villages that things were improving with a particular emphasis on roads, education facilities, and electricity, among infrastructural improvements. Women felt that they were better off today than 10 years ago due to the higher family incomes. Everyday life was easier and more and better food was the most readily mentioned improvement. The number of hand pumps had increased but sanitation was still a problem. In Mazgama, about 10 households had a LPG stove but the vast majority of households used wood, cow dung, and crop residue as fuel. Wood was increasingly difficult to find and the drop in jute cultivation was felt (jute sticks, a by-product, were used as fuel).

**Agrarian production relations:** The key change that was observed in 1999 was the shift towards market relationships, especially in the labour market. Changing labour relations are a key factor in the process of agricultural change. Opportunities for migration have had the double effect of tightening the labour market and raising wages. Migration, especially short term migration for agricultural work, is to some extent countercyclical, migrants will tend to return for the local paddy and wheat harvests which peak somewhat later in Bihar than in Punjab and Haryana. But cultivators complain of labour shortage, for instance, during the monsoon months of *Asarh*, *Sawan* and *Bhado*, and harvesting and retting of jute coincide with the paddy harvest in Punjab and Haryana, so there is direct competition between the local and distant employers.

**Migration and the labour market:** Migration has become a way of life in these two villages, as it has in many parts of Bihar. In 1999, there were already migrants to North-western India from almost every household, especially the poorer households. Migration was almost exclusively male, short term, and seasonal, mostly between 1 and 6 months at a time. Since then, migration has, if anything, increased (respondents uniformly reported this), with a greater diversity of migration destinations and durations, and some move towards longer term migration, especially to urban areas. But there is still very little permanent migration in the sense of definitive departure of households from the village.

**Impact of migration on gender relations:** The migration of men has had some impact on the workload of women, on their responsibilities within the household and on their mobility. In 1981, women were seldom going outside the village except to visit relatives or for severe health problems. Men went to the market and made all the household purchases. In 2009, women had more frequent contacts with the outside world. They went to the market (as a small group of women or with a male relative, but also alone if need be), and in Pokharia some women mentioned going to the temple, to fairs, and to bathe in the Ganga. However, mobility restrictions still affected young married women who had not borne children.

**The role of the state and institutions of governance:** Since 1999, there have been important changes in the political environment of the state and the JDU-BJP government, led by Nitish Kumar, is widely seen as more effective and less corrupt than its predecessors. In the block office in Kasba, the Block Development Officer reeled off an impressive list of programmes which were in operation. These were not just on paper, activities and impacts of many of these programmes could be observed in the villages. This is in sharp contrast to the situation in 1999 when state presence was weak. It may be too simplistic to attribute this only to a change of political regime for other factors such as improved communications and awareness levels, presumably, also played a role. But the political change was certainly an important factor.

In contrast to these social programmes involving cash transfers and employment creation, state policies concerned with promoting economic development seemed to be much weaker. In principle, a variety of agricultural extension programmes exist, involving loans and subsidies for investment, provision of inputs, and training. There are also programmes for the development of horticulture and fruit. But awareness and impact of these programmes seemed to be limited.

In Pokharia and Dubaili Biswaspur there is change, and it is occurring at a more rapid pace than Bihar's image of stagnation would suggest. The primary force is migration and other forms of communication with the outside world, but this is not the only factor. There is a substantial shift in agricultural practices under way, universal education is likely to create new social conditions, gender relations are changing, the state is starting to look like a benefactor rather than an exploiter, the physical environment is improving, rising incomes are leading to new patterns of behaviour and expenditure, and income inequality may be falling. At the same time, local production systems are still very narrowly based, agricultural innovation is concentrated among richer farmers, land pressure continues to rise, and the sustainability of a migration-based path has to be questioned. Social change has not greatly modified the local hierarchy, there are question-marks about the functioning of local political institutions, and advances in the status of women have yet to be consolidated.

## **2.5 Economic Growth and Human Development in Bihar, P. P. Ghosh and Shaibal Gupta, *Mimeo*, Asian Development Research Institute, Patna. 2009**

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### **Key Topics:** *Economic Growth, Human Development*

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This mimeograph presents an overview of the trend of economic growth in Bihar, during the 1980s and since the 1990s, along with its structural and employment implications. Issues of Human Development, the key focus of the study, are discussed, first using the state-wise Human Development Indices (HDIs) prepared by the Planning Commission and, then, in detail, regarding three of its crucial components—poverty, education, and health. The mimeo argues that although it does not enter as a component in estimation of the HDI, social empowerment is a critical dimension of human development and Bihar has experienced certain major developments in this arena in the recent past. An analysis of this socio-political phenomenon is also a part of this section. The challenge of promoting human development has remained largely unattended in Bihar.

The mimeo argues that the pace of development in Bihar, be it in terms of economic magnitudes alone or its human dimensions, has been very slow during the two preceding decades. The state was already at the bottom of the development ladder in the beginning of the 1980s and it still remains there. Nor has there been any change in the development strategies of either the central or the state government which could raise the prospects of a new development thrust in the near future. To make things worse, the present national strategy of economic reforms, restricting the role of the state and extending the role of the market towards promoting development, make such prospects even dimmer. During the first post-reform decade, Bihar has recorded an economic growth rate which was the lowest for any of the regions of India in any of the decades. If this retarded development had not precipitated into a deeper crisis, it was possibly because a modest growth was realised in its agricultural sector which provides the livelihood opportunities for close to 90 per cent of its population. If the economic growth had to be a pre-condition for the well-being of the people, one would have expected a near stagnation or even deterioration in human development in Bihar in the recent past.

The mimeo finds that, fortunately, however, this line of causation has not been operative in Bihar. The pace of human development in Bihar has been slow, but probably not as slow as that of material development. It appears that the need and urge for development is now so strong in Bihar that the people, including those who are from its bottom layers, are adopting alternative paths to satisfy their development urge in the absence of higher levels of income for them. This is an important conclusion that emerges from the observed trend of economic and human development in Bihar in the recent decades.

The mimeo notes that if one compares the trend of human development in Bihar and India, as a whole, a clear contrast emerges. At the one hand, in spite of enjoying a high growth rate of its economy, the pace of human development in India has been much less than satisfactory, as underlined by the recent Human Development Report of UNDP. But the values of HDI for different states of India, for 1981, 1991, and 2001, show that the national index has increased just as fast as the one for Bihar, the most disadvantaged state both in terms of the present level of income and growth rate of its economy. Of the three states that have been able to register faster human development (Tamil Nadu, Madhya Pradesh, and Rajasthan), two are indeed poor-income states. In other words, in some of the relatively richer states, the pace of human development has lagged behind their material growth.



According to the mimeo, at the root of the problem of low human development in a region and, further, the unequal development among different groups of its people lies the phenomenon of unequal opportunity. Economic growth may cause an 'expansion' of these opportunities, but that does not necessarily imply the disappearance of the 'inequity characteristics' of this opportunity structure. Towards contemplating a development strategy for Bihar, where human development has a specific focus, it is necessary to distinguish between those strategies that promote expansion of opportunities for development and other complementary strategies that 'modify the iniquitous character' of existing opportunities.

The mimeo suggests that in identifying strategies for human development, besides remembering the dichotomy of opportunities as such and their iniquitous characteristics, it is also necessary to remember another dichotomy, short term and long term strategies. The short term strategies are important not merely because the urgency of the needs for human development, but one can generally, and often easily, find some underused or unused resources which could be harnessed to promote human development in the short term. Such strategies, besides having lower investment requirements, may also imply shorter gestation periods of the chosen interventions. The long term strategies, on the other hand, generally involve larger resources, longer gestation periods, and sometimes social mobilisations which aim at attitudinal changes.

Finally, the mimeo concludes that there remains the third dichotomy — between the state and the market — pertaining to the institutional requirements for human development initiatives. When one considers the challenge of human development for Bihar, it is important to remember that, in the face of a much smaller size of the market, the state government has no option than to act as the 'server of the last resort'. If one cares to locate the principal agency responsible for any creditworthy achievements in human development, for example, educational achievements in Tamil Nadu and Rajasthan, or demographic transition in the southern states through better health services, they have largely been due to the efforts of the state government, proving the potential of this institution to serve the objectives of human development. The reform measures might absolve the state of some of its economic responsibilities but such sectors as health, education, and other services for human well-being will continue to be its agenda for any foreseeable future. In defining a specific role of the state government, bearing in mind its limited capacity to mobilise additional resources, the primary strategy should be to make administrative efforts to ensure 'full utilisation of existing structures' for health and education services, as well as those meant for the disadvantaged population like children, women, and the scheduled castes/tribes. Such initiatives may not entail expansion of opportunities for human development, but they could greatly contribute to lessening of inequalities vis-à-vis access to the existing opportunities. Since all these could be initiated within a rather short period, they could form the core of short term policy initiatives for human development.

## **2.6 *The Social, Political Processes and the Economic Development of Bihar*, Subodh Kumar, Manak Publications, New Delhi, 2009.**

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### **Key Topics:** *Economic Growth, Social Development*

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The key objective of this book is to analyse the reasons behind the slow process of economic growth and to discuss the reasons which have affected the process of development in the state. The book aims to examine the interaction between the political processes and the initiation and implementation of economic policies in Bihar.

The book argues that since independence, the situation in Bihar has gone from bad to worse. Hence, the time has come to reassess its past, take stock of its political, social, economic, and other resources, and analyse them in the changing circumstances so that Bihar can develop fast. The decay of Bihar is a manifestation of apathy, wrong priorities, and extreme caste contradictions which often assume the form of a class struggle being manifested by the rival presence of *Ranbir Sena* and the *naxalites*. However, in social mobilisation and communal harmony, it is far ahead of other economically more advanced states.

To accelerate economic growth in the state, the book makes recommendations such as, the state should leave behind the concepts of backwardness and strengthen its law and order, there should be transparency in the working of the government, and emphasis should be given to building infrastructure like roads, transportation, railways, water, communication, airport modernisation, and power production. Emphasis should be also given

to agriculture-based industries like dairy, fodder, fertilisers, fisheries, tanning industry, horticulture, and the silk industry. The state should bring in tea gardening and industry status should be given to it. The government should take measures to revive the closed sugar mills and it should also try to increase the productivity of sugarcane, try to enhance modern technology in mills, and loans should be given to farmers. Development can only be possible if information technology is used extensively by the state, for which proper infrastructure should be built. The government should formulate a long term strategy to develop the tourism industry. The entertainment industry must also be given priority, with old rules replaced by new, picture halls should be kept away from government interference, and taxes on regional cinema should be lowered, with priority being given to regional films. There is a need for new guidelines in the field of small scale industry so that these flourish. Textiles, handlooms, and other household industries should be given priority, with the government giving training to people to enhance the capability of workers and developing a market for finished goods. The state government should take steps to restore the sick and closed industries. Modern technology and monetary concessions are necessary along with proper direction to govern the industry.

**2.7 *Liberalisation and the Economic Growth Process in Bihar: Recent Trend and Future Possibilities*, P. P. Ghosh and Shaibal Gupta, Mimeo, Asian Development Research Institute, Patna, 2007.**

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**Key Topics:** *Liberalisation, Economic Growth*

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This mimeo presents an overview of the growth process in Bihar during the 1980s and since the 1990s, along with its structural implications and issues of human development. The political economy of the overall problem of regional economic disparity in India and the specific case of Bihar's economic backwardness is analysed in terms of the role of central and state-level governments. Under the regime of economic liberalisation, the role of the market in development has become more important, but how the disadvantaged economies, like that of Bihar, fail to gain from such a regime is discussed next. The main pillars of an alternative growth strategy which would involve putting agricultural growth at the centre stage of development along with a few other steps to make development more inclusive, both regionally and socially, is also outlined in this paper. Finally, the paper ends with a concluding section, collecting the main conclusions of the study.

The mimeo points out that the phenomenon of substantial regional inequality has been a part of the overall Indian economy for long and it has been widening in the recent decades. It is indeed a reflection of the national strategy of growth where the regions that were better off to start with have continued to grow faster, leaving the disadvantaged regions even more disadvantaged. It is, therefore, not surprising that the relative rankings of different states in India have remained nearly unaltered since the 1970s. Bihar just happens to be at the bottom of this ranking.

The mimeo argues that whether one takes the decade of 1980s or the period since the 1990s, Bihar's economy has grown at a rate much lower than the national growth rate. But the process of liberalisation has meant a greater disadvantage for the Bihar economy where the size of the industrial economy, which is the focus of the policy of liberalisation, is very small. Indeed, the growth rate of the Bihar economy since the 1990s has been the lowest among any of the regions of India and in any of the earlier decades. The redeeming feature of Bihar's economy during the post-reform period was an accelerated growth of its agricultural sector. In the human development front, again, Bihar continues to be at the bottom. But, fortunately, because of the relatively better health standards and a substantial reduction in absolute poverty, the overall HDI for Bihar had grown as fast as the national Index, in contrast to its highly unequal growth performances.

On the issue of why Bihar's economy has been continuously experiencing low growth, especially since the 1990s, it is relevant to remember the expected role of the state and the market in development initiatives. Before liberalisation, Bihar's economy had suffered, first because of the policy of freight equalisation and, later, because of being left out of the scope of the Green Revolution. The second part of discrimination was, of course, related to the abandoning of the agenda for structural change in the agrarian sector, a case of wilful default by the local agrarian polity and a convenient default by the national industrial policy. In any case, all these discriminations had occurred because of the state, either directly or indirectly. During the 1990s, when the market was expected to replace the state as the main initiator of growth impulses, Bihar's disadvantage was indeed deepened. In this strategy, Bihar, with

its small industrial sector and, hence, an extremely limited command over the market, was unable to exploit the opportunities of market-led growth.

The mimeo suggests that fortunately, the prospects of an alternative development strategy to particularly address the problems of regional inequality in India are brighter today than ever before. There are at least three clear indicators of such brighter prospects. First, the national planning exercise now underlines inclusive growth as one of its key goals along with the earlier goal of accelerated growth. The second important indicator, a boon in disguise, is the threatened food security of the nation which should force the planners to pay higher attention to agricultural growth, benefiting states like Bihar. Finally, the present government of Bihar has got elected on the basis of its promised development initiatives, which should enhance its growth prospects.

The above triad of forces obviously call for a new thrust for development in Bihar which, in turn, demands an alternative strategy. The study underlines five pillars of this development strategy in terms of high priority for agricultural growth, supporting the growth of the informal sector, increasing human capabilities, improving infrastructure for market integration, and, finally, improving the efficiency of all poverty alleviation programmes. Except for the last pillar, viz., more efficient poverty alleviation programmes, all others require resources of the state government. Thus, even in an era of liberalisation, the states of the poorer regions have a substantial developmental responsibility. Once the development process takes off and gains momentum through appropriate state interventions, the strong market forces are almost certain to emerge, providing the fillip for a sustained growth process of the presently disadvantaged regions.

## **2.8 Bihar Development Report, Institute for Human Development, New Delhi, 2007.**

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### **Key Topics:** *Human Development, Socioeconomic Development*

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The main objectives of the present study are to identify the factors that are responsible for Bihar's poor performance in socioeconomic development, to suggest the thrust areas of future development, and to isolate the core measures to bring about a turnaround in the state's economy.

The study, divided into several chapters, gives a broad overview of development in Bihar. Each chapter covers specific parameters of development in terms of agriculture, water resources, infrastructure, power, transportation, information and communication technology, population, employment, urbanisation, modernisation, tourism, rural development, social issues, education, health, gender issues, public and institutional finance, and issues related to the key role of an efficient system of governance and strong institutions as aids in promoting development.

The report addresses eight main issues which need to be borne in mind while devising policies for achieving growth which should not only be high in level but also be inclusive in content, and embracing all segments of society. The major strengths of the economy include its natural resource base, production base, social scenario, and new areas of employment and poverty reduction. However, key bottlenecks to growth in the form of lack of proper infrastructure, loss of non-agricultural production base, agricultural constraints, dilapidated state of human development institutions, institutional structure, the state of public finances and public sector institutions, poor private sector investment climate, and the state of governance also exist.

The report argues that strategy for development of the state must capitalise on its strengths. In agriculture for example, it might mean raising agricultural productivity and related policies, enhancing crop diversification, minimum support prices, and modern technology. There should be diversification towards allied sectors and related activities like animal husbandry, pisciculture, sericulture, apiculture, tea cultivation, Agro based industries, and tourism must be developed within the state.

The report outlines key strategies for overcoming weaknesses in the economy including infrastructural investment in physical capital (power sector, transport sector, irrigation, water management, flood control and drainage), strengthening the human capital infrastructure through a wider focus on the education and health sectors, restructuring and modernisation of the industrial sector, development of information and communication technology, and enhancing the size and efficiency of the urban sector.

It is argued that in order to ensure that economic growth also translates into greater welfare for the majority of the population, the report recommends adequate job opportunities and poverty alleviation programmes, ensuring

access and delivery of public facilities through improvements in the Public Distribution System, health facilities, basic educational facilities, and basic amenities. It is also critical that policies are gender sensitive.

## **2.9 Poverty and Growth in Bihar: Emerging Pattern and Issues, Ashok Mathur and Alakh N. Sharma, Mimeo, Institute for Human Development, 2007.**

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**Key Topics:** *Poverty, Economic Growth*

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Bihar has a very high pressure of population (880 per sq km) which is the second among the major states according to the 2001 Census. The highly adverse demographic scenario in the state creates two direct repercussions which are of vital concern for economic well-being in the state. First is the very low level of per-capita income, which stands among the lowest in the country. Second repercussion is the incidence of poverty, which was the highest among the major states of India up till 1993-94. Bihar continues to be saddled with 425.6 lakh persons below the poverty line. Bihar is also one of the least urbanised states in the country with less than 10.5 per cent of its population living in urban areas. In this context, this study attempts to discuss how to change this condition and how fast.

Before going into an in-depth analysis of the incidence of poverty in Bihar, the paper examines the sectoral structure of the Bihar economy and some facets of the growth process which are inextricably interlinked to alleviation of economic deprivation. The paper also briefly delineates major thrusts towards diversification of the agricultural sector, the state of employment scenario, and public finance within the state, all of which are closely linked to the incidence of poverty.

The study finds that in terms of SDP data, the authors reveal that the trend growth rate in Bihar during 1994-2004 emerges to be 5.34 per cent p.a. which is lower but not too far behind 6.03 per cent p.a. for India as a whole. However, in terms of its actual visibility, growth in the Bihar economy does not appear to be matching up to that emerging on the basis of statistical data.

The study finds that although over the years poverty has declined in Bihar, it is still at substantially high levels. One of the most important indications of vulnerability of rural masses in Bihar is the situation of acute food insecurity. Bihar is not a food deficient state, in terms of per capita availability of food grains, but failure of the centre to provide minimum support prices for farm produce, an almost defunct PDS system, and inadequate and ineffective programme of employment and income generation, and the resultant lack of purchasing power of the poor in the seasons of distress, have led to a seasonal food crisis situation in the state. The study points out that a properly designed employment assurance programme, strengthening of the PDS, through minimising leakages, and better targeting may be taken as one of the foremost requirements in terms of policy initiatives in the state.

The annual growth rates of GSDP show that the growth rates in primary as well as secondary sector are subject to wide swings. The poor in Bihar face double risk, of widespread deprivation and its exacerbation every alternate year. Steps to reduce instability in productive activity, through strengthening of irrigation facilities and dampening the fury of floods in North Bihar by entering into river water treaties with Nepal, need to be pursued on an urgent basis. In the interim, suitable measures of social security need to be devised in case of Bihar along the lines suggested in the Draft Bill on Social Security for Workers in the Unorganised Sector, proposed by the National Commission for Enterprises in the Unorganised Sector (2005), in order to cushion the double edged vulnerability of the poor in the State.

The study unveils that Bihar is left with not only a very weak industrial base but also a poor tax base. The surplus labour in rural areas is too large to be absorbed by agriculture, even though employment potential of agriculture is not fully realised. Lately, diversification of agriculture from purely crop-based production to allied spheres in the realm of dairy farming, fishing, vegetable cultivation, horticulture, and rural non-farm activities has increased noticeably. But potential in this area needs to be tapped further. Yet, certain structural changes can improve the asset base of the poor. At this juncture, the present study points out that land reforms have to be approached with a broader perspective of identifying all forms of public and private land that could be utilised for distribution among poor.

The area under fruits and vegetables has been increasing over the years. It not only added high value but also increased employment, both in agriculture and related processing and storage activities. This trend needs to be

strengthened and sustained by augmenting public and private investment in agriculture. Moreover, institutional financial support and provision of incentives to the agricultural sector needs to be increased substantially. The SHGs can also help in breaking the culture of individual isolation and promote collective thinking. Agricultural diversification holds immense potential to check out-migration, increase employment absorption in agriculture and agro-processing, and to eradicate rural poverty substantially. Similarly, dairy products hold great prospects for increasing income and employment, especially of rural women in the state. The success story of Sudha dairy is one such. Improvement of transport, storage, and development of market information and linkages, would go a long way in improving production and employment opportunities in these activities allied to agriculture.

Rural infrastructure, both social as well as physical, continues to be underdeveloped. Rural electrification has suffered one of the worst retrogressions in Bihar. As a result, there has been a shift to diesel engines for water lifting at a very high and unsustainable cost to the farmers. Power supply in rural Bihar has come down from an average of 9 to 10 hours per day in 1985-86 to 6 hours in 1990-91 and to 2 hours in 1999-2000. The present power crisis in Bihar needs bold initiatives by the centre to harness abundant hydropower in cooperation with Nepal. What is needed is not only increase in public investment in rural infrastructure, but also revival of rural institutions to promote public participation and to rebuild the rural community spirit, without which much of the infrastructure would become dysfunctional.

The paper brings us the importance of decentralised governance and the need to strengthen *Panchayati Raj* institutions. Rural Bihar would languish if democratic grassroots governance institutions like *Panchayats* are not freed from semi-feudal oligarchies and nursed back to life as decentralised democratic institution.

The study highlights that development in many distant regions in north India not only draw labour from Bihar but also have changed the social and economic conditions in many parts of rural Bihar. The millions of migrants provide remittances, part of which go to acquire assets including land. But the bulk of the remittances flow directly into consumption, which helps to reduce poverty.

The study recommends that there is need for revival of traditional non-farm activities which still have strong demand like the products of village industries, handlooms, and handicrafts through appropriate assistance in terms of information, marketing, skill training, brand building, and institutional arrangements. Some of the new non-farm enterprises, which are coming up in recent years, are largely home based and spread over the whole state. But employment conditions in them are likely to become uncertain. The intensification of programmes like PMRY, SJGSY, etc., may be a good attempt in this direction. These apart, programmes which are already in vogue like rural development programmes and, particularly, poverty alleviation programmes, have to be better targeted and made accessible to the rural masses in a simplified manner.

According to the study, another area of serious concern is the high level of open unemployment in urban areas, particularly among higher educated and technically skilled youth. This is bringing about a substantial loss of human capital to Bihar, since lack of opportunities within the state is causing large scale out-migration of the educated and skilled personnel. To tackle this problem, development of manufacturing, trade, and financial service activities is imperative. This cannot be done without building up physical and financial infrastructure.

The study highlights that the Credit-Deposit ratio is also one of the lowest in the country and has declined, rather surprisingly, at a very fast pace in the rural areas in the post-reform period. Consequently, the quantum of plan outlay per-capita as well as public and private sector investment per-capita in Bihar emerge to be either the lowest or the second lowest in the country. At the same time, Bihar finances have to meet substantial load of debt servicing charges. In order to bring about a reduction in the incidence of poverty and improve the level of human development prevailing in the state, it shall require substantial financial resources and channelising a higher proportion of expenditure to the social sector. In order of emerge out of this imbroglio, it would be essential for the centre to provide a higher quantum of plan assistance to the state. The authors conclude the paper suggesting that the Centre should consider waiving off at least a part of its loans in view of the situation arising from bifurcation of the State. At the same time, the state shall have to ensure greater accountability in expenditure devoted to the social sector.

**2.10 Political Economy of Poverty in Bihar: Nature, Dimensions, and Linkages, Alakh N. Sharma, Working Paper No. 1, Institute for Human Development, New Delhi, 2010.**

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**Key Topics:** *Political Economy of Poverty, Rural Development*

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This paper presents a detailed overview of the political economy of poverty in rural Bihar through analysing the structure and growth of the economy, key human development indicators, the magnitude and nature of poverty, changes in poverty among various groups, key determinants of poverty, changes in patterns of poverty, and gender and poverty. The paper also examines the dynamics of change and the persistence of poverty in the state through an analysis of the relationship between labour markets and rural wages, migration of workers, literacy, land and class relations, and indebtedness.

Starting with an analysis of the status of poverty in rural Bihar (the rural population comprises 90 per cent of the state's population) and changes in its nature, dimensions, and intensity over time, the paper uses both secondary data as well as primary data. In case of the former, consumer expenditure and employment-unemployment data from the three quinquennial rounds (1983, 1993-94, and 2004-05) of NSSO have been used. For other indicators of development and well-being, data from various sources have been used. A major part of the paper is based on data generated from two primary surveys in 12 stratified randomly selected villages as a part of a larger study of labour markets and poverty in the state. The first survey was conducted during 1981-83 by a group of researchers from the A. N. Sinha Institute of Social Studies (ANSISS), Patna, and the International Labour Organisation (ILO), Geneva. The second survey was undertaken by the Institute for Human Development (IHD), New Delhi, during 1999 covering the same villages and using the same methodology which was adopted in the earlier survey.

The paper then gives a brief account of the overall growth and human development scenario in Bihar at the macro level. Based on secondary data, the next section is based on quinquennial rounds of NSSO by using the unit level data analyses, the status and changes in rural poverty and other indicators of well-being, and the third section attempts to capture the underlying factors for change in poverty. The fourth section provides the broad changes occurring in rural Bihar, based on the analysis of data collected from the two above mentioned primary surveys. The fifth section gives an analysis of the factors behind change or perpetuation of poverty, and, finally, the last section provides the conclusions and emerging policy perspectives.

The paper finds that there has been a perceptible reduction in poverty in Bihar during the 1980s and 1990s. This is revealed both by the secondary as well as primary data. The major factor behind this change has been the significant increase in rural wages, which was even much more than India as a whole and most of the other states. The rate of reduction in rural poverty in Bihar has been higher than all-India. However, the level of poverty in the state remains to be very high. Moreover, given the recurring livelihood shocks in the state, such persons are very vulnerable. The vulnerability is also reflected in the consumption pattern which is dominated by cereals. Even the food basket is much less diversified in Bihar. Not only is the proportion of non-food expenditure lower in Bihar but its level is extremely low, which leads to meagre expenditure on items such as education and health. The state being primarily a rural economy and having no industry worth the name, majority of the workforce depends on agriculture for their livelihood. In this regard, there has been little structural change in the state since independence.

As a whole, low labour productivity coupled with very low growth of agriculture over the years has led to a persistence of high incidence of poverty (42 per cent in the rural areas of the state as against the national average of 28.3 per cent). This is also reflected in the very low outcome indicators of a number of socioeconomic variables such as literacy and educational achievements, health status, and access to various amenities, etc. In terms of most social and human development indicators, also, the state ranks low as compared to the major states and the all-India average. The reduction in poverty has been very uneven among various groups. Some groups such as agricultural labourers, non-agriculturists, and cultivating households with small pieces of land (up to 0.4 hectares) have shown lower reduction in poverty as compared to other groups and, as such, over the years there has been increasing concentration of the poor among these groups. These groups overlap with scheduled castes, backward castes, households (both among Hindus and Muslims) cultivating very small pieces of land, and women headed households. Scheduled castes, agricultural labourers, and landless households constitute the largest segment of the poor in rural Bihar. They are followed by the lower backward castes (having landholding of less than 0.4 hectare),

self-employed in non-agriculture, and those cultivating very small holdings up to 0.4 hectare. Incidentally, in the context of rural Bihar, these three categories largely overlap.

Although there has been some improvement in terms of food security, access to domestic possessions, literacy, and health indicators, the level is still very low and most of them continue to be in the state of abject poverty. Health expenditure on institutional sources is almost negligible in Bihar, due to which the poor spend much more on private healthcare. Out of pocket payments by households in rural areas in proportion to consumption expenditure is quite substantial in the absence of adequate primary healthcare services. Women, in general, disabled, and old people, face various kinds of intra-household discrimination.

Low levels of literacy and education, indebtedness from traditional sources, land loss, low asset holding, high cost of healthcare, disability of family members, particularly of the main bread earner, etc., are some of the factors contributing to the persistence of poverty. In contrast, increased literacy and education, access to institutional credit, and access to productive assets have played a positive role in lifting vulnerable groups into transient and non-poor groups. Participatory studies on poverty reveal that the poor use different criteria to assess their own situation and its change over time. An analysis of the criteria used by rural people in Bihar shows that they use a wide range of criteria in which, apart from ownership of assets and land, education, health status, and physical ability feature prominently while ranking the state of their own well-being. Further, the poor attach considerable importance to personal freedom and dignity.

Migration has probably played the most important role in reducing poverty among all castes and classes. Even the distress migration of lower caste and class households has a strong positive impact on reducing poverty through remittances. However, although over the years, the intensity of workers' migration from rural Bihar has increased phenomenally, the workers from a large section of lower castes and class households are less likely to migrate because of lack of access to resources and information and, hence, may continue with abject poverty. Moreover, although migration has reduced income poverty, its social costs are high in terms of increased expenditure on health, increase in the work load of women, education of children, etc.

A striking feature of the poor in Bihar is that they show high sensitivity towards the prevalence of relative poverty with regard to their economic conditions and access to basic amenities. They seem to particularly resent the indifference of the government for failing to provide adequate educational and health facilities. Schooling is increasingly being viewed by parents as an opportunity for upward mobility. This point is confirmed by the fact that not only the availability but parents are concerned with the quality of education. Even illiterate parents feel that the quality of education is low, and cite lack of regularity and commitment of teachers as one of the reasons. Similarly, people resent the inaccessibility, callous attitude of the health staff, and the cost of treatment they have to incur, even in government hospitals. The demand for basic amenities is a part of the rising aspirations of the poor for advancement. There is a growing awareness that the poor are entitled to basic amenities as a matter of right.

The paper concludes by suggesting key policy implications of the research include development of the local economy, access to credit, enhancing human development and skills, asset and income transfers, strengthening institutions and delivery mechanisms, governance and development at the grassroots, administrative transformation at the lower level, mobilisation of civil society, and ensuring accountability through monitoring, evaluation and quality control.

## **2.11 Who are the 'Community'? The World Bank and Agrarian Power in Bihar, Kalpana Wilson, *Economic and Political Weekly*, Vol. No. 47(13), pp. 23–27, 2007.**

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**Key Topics:** *Community, Agrarian Power, World Bank and Agriculture*

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This article draws attention to the agenda of the World Bank in Bihar which does not question the existing structures of power and underlying relations of production. It explores three key characteristics of the neo-liberal discourse applied to rural Bihar—the assumption that it is possible to reform the state without transforming the structures of social and economic power and the relations of production which underpin it, the focus on the so called machine reforms at the expense of land reforms, and the exclusion of the class of agricultural labourers from strategies for agrarian development.

The article points out that the World Bank agenda considered the absence of 'adequate infrastructure' and 'economic incentives' as more important constraints to development than the agrarian structure. It argues that the absence of infrastructure cannot be understood in isolation from the nature of social and economic power in the state. Crime, corruption, political careerism, and the siphoning off of development funds have emerged as key sources of accumulation for those rich peasants who were able to amass significant agricultural surpluses in the relatively favourable production conditions which prevailed in the 1970s and early 1980s.

The article explains that successive groups of dominant landowners found it more profitable to extract rental surpluses from the poor and landless cultivators. These surpluses formed the initial capital which provided access to networks which linked administrators, criminal gangs, and the dominant political parties. Thus, agrarian power provides not only the social but the economic basis for entry into other, more lucrative, avenues of accumulation, and this power is reinforced by the ubiquitous threat of violence against anyone who challenges it.

While the World Bank acknowledges that 40 per cent of Bihar households are primarily dependent on agricultural wage labour for survival and the rural poor 'are far more likely to be agricultural wage workers or casual non-farm labourers, rather than cultivators or employed in a regular non-farm job,' and that this group is strikingly absent from the strategies being put forward for Bihar's development. This amounts to ignoring the direct producers of a large proportion of the state's food and other crops. It also attempts to marginalise the experiences of those who, with little or nothing to fall back on, have been left most vulnerable to the shocks of the global market.

The article hints that the process of polarisation is underway in Bihar—between different sections of its working people, on the one hand, and complex networks of powerful landowners, politicians, administrators, and criminal gangs, on the other. Evidently, this process involves a struggle between two different types of solidarity. First is that based on caste linkages and relations of dependence with the goal of maintaining the status quo. On the other hand, there is solidarity between the mainly *Dalit* agricultural labourers, small cultivators of diverse caste backgrounds, and those sections of the middle classes who are also excluded from and terrorised by processes of accumulation through corruption and crime, with the shared goals of social and economic change. In conclusion, the article notes that the growing political consolidation of this latter alliance must shape any genuine 'development strategy' in Bihar.

**2.12 Social Justice and Stalled Development: Caste Empowerment and the Breakdown of Governance in Bihar, Jeffrey Witsoe, Monograph, Centre for the Advanced Study of India, University of Pennsylvania, 2006.**

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**Key Topics:** *Public Administration, Economic Development, Social Justice*

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The monograph examines Bihar as a case study of the regions within India that have not benefited from recent economic growth. Bihar had the worst economic performance of any of the major states through the 1990s and despite an abundance of fertile land, plentiful groundwater (and until its bifurcation in 2000, mineral resources), its economy grew at only 0.12 per cent in the 1990s. Bihar's poor economic performance cannot be solely attributed to economic factors. It must be understood in the larger context of a struggle for control of the state, a struggle pitting the elected political leadership belonging to the Other Backward Classes (OBCs) in the state government against officials in the bureaucracy and judiciary, both of which were dominated by upper castes.

In rural areas, OBC households are more likely to cultivate uneconomical plots of land and a large majority of scheduled caste households are dependent on income from agricultural labour. The growing inability of the agrarian economy to absorb new entrants into the labour force not only has led to record levels of migration from Bihar, but has contributed to the momentum of the Naxalite movement.

The first section of this study, 'Bihar: a Case of Constrained Growth' documents Bihar's economic decline during the 1990s, while also highlighting some frequently ignored gains such as an improvement in the female literacy rate, a drop in the infant mortality rate, and access to improved water resources. Even though Bihar has fertile soil that allows for double and sometimes triple cropping, as well as an abundance of groundwater for irrigation, agricultural productivity remains low. However, this also means that increased investment could significantly increase agricultural productivity and sustained investment could help the state realise its growth potential.



Perhaps the largest economic constraint facing Bihar in the post-reform period has been the decreasing amount of investment. Data on private projects currently being implemented suggests a very low level of private investment in Bihar. The state also has one of the lowest utilisation rates of allocated central funds. There were many reasons for such poor expenditure performance, including lack of administrative and technical capacity, late release of funds from the centre, lack of 'matching funds' required for many central programmes and overestimation of real resources for plan budgets. Bihar has the highest out migration rate of any state in India, with numbers increasing over time. In 2001, there was over 200 per cent more migration from Bihar than in the year 1991, while the average increase for Indian states was just 21.5 per cent.

The next section, 'The Political Rise of the Backwards Castes: An Incomplete Revolution,' examines the struggle for control of the state arising from Lalu Yadav's incomplete social revolution. In 'Caste, Politics and Public Administration' the study examines tensions between the political leadership and bureaucracy, including a paralysis of decision-making and the marginalisation of development issues in electoral politics. Conflict between politicians and bureaucrats meant that the control of state bodies became a more important prize than administrative performance. In response to a perceived breakdown of public administration in Bihar, the courts increasingly intervened in matters normally under executive authority.

The next section, 'Caste, Violence and Agrarian Structure' extends the analysis to the interaction of caste and politics in the agrarian economy, a confrontation which has led to a breakdown of governance in areas where Maoist revolutionaries confront private *senas* which are led by landowners. Naxalite groups as well as the Ranvir Sena have specific areas of control where they demand 'taxes' and dispense private justice. And, both justify their existence as a response to the state failure in Bihar. In the final section, 'Lalu's Fall and the Rise of New Social Forces' the study analyses the 2005 election results, along with their implications for the future development of the state.

The monograph concludes by pointing out that while it was the pursuit of social justice through political empowerment that resulted in widespread social conflict and breakdown of governance and development in Bihar, if increased political participation is considered a measure of democratic legitimacy, then it is not necessarily the failing of democracy, but rather its increasing penetration that contributed to Bihar's poor governance. It argues that if growth has to be sustained in India, Bihar cannot be left behind.

### **2.13 Poverty Reduction strategy as Implementation of the Right to Development: A Case of Bihar, Navin Chandra and Kumar Gautam, *Mimeo*, Institute for Human Development, 2005.**

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#### **Key Topics:** *Right to Development*

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The study is an attempt to capture the status of human development in the state from the perspective of right to development through a micro-level primary study. To gain an insight into the socioeconomic and political realities of the lives of the people in Bihar, as it has direct relevance for the quality and magnitude of the development attained, a field survey was conducted in two districts. The selection of the two districts namely Bhojpur from South Bihar and Purnia from North Bihar provides an interesting comparative perspective of the human rights based development process. From each of these two districts, two blocks were selected, followed by two villages representing each block. A stratified random sampling was applied to draw 301 households in total from the two districts at the rate of 30-40 households from each of the eight villages. Eighty per cent of the sample households were BPL households and 20 per cent belonged to the APL.

The study finds that Bihar at present is a stagnant economy that is overwhelmingly agrarian. Therefore, agriculture needs careful attention. In North Bihar, where there is an emphasis on Cash Crop Cultivation, the per-capita income from farms is not as low as in South Bihar, but it is still marred with food insecurity, hunger, and starvation deaths. Not only is the land concentrated in very few hands, even the wages to agricultural worker are depressingly low. The small holdings of land with the SCs, Muslims, and BPL families cannot sustain them as they neither have irrigation facility nor have the modern means of production or credit available with them to enhance the productivity of their land.

The study reveals that the existing credit system is neither efficient nor poor-friendly. Therefore, besides attempting commercialisation of agriculture and credit reforms, it is important to revive and diversify agriculture

itself which has crucial backward-forward linkages. Landlordism, especially absentee landlordship, still needs to be abolished and the land distributed among the land hungry poor. Strict implementation of minimum wages and due importance to food security is important too.

The study recommends that the anomalies present in the functioning of PDS need to be corrected for this purpose. The healthcare mechanism needs both infrastructural and attitudinal reforms. Especially, the health of women and children should be given priority as they appear to be vulnerable and neglected in the present scenario. The role of creating awareness is very important here. The coverage of housing provision through the *Indira Awas Yojana* should be enlarged. Employment generation programmes, if implemented in earnest, could contain distress out-migration and its negative fallouts.

The study urges that the mafia-contractor-landowner-politician-bureaucrat collusive nexus needs to be broken. Land reforms may be helpful in this direction, but the most crucial reform required in the attitude of the government functionaries, who contrary to the ideas of the plans and policies, in fact, reinforce the evils persisting in the society. The bureaucracy shall have to show due regard to the rights of the poor and also tolerance if the disadvantaged sections assert their rights to have their due share allotted to them.

The study concludes that better governance is the key to development. It asserts that good governance becomes more significant because it is the cornerstone of the approach, 'Right To Development' and a cautious and careful transformation of the 'Right to Development' in Bihar into a workable paradigm would be a fitting reply to the million dollar question gazing squarely into the eyes of the people of Bihar, 'Development which way now?'

**2.14 Agrarian Relations and Socio-Economic Change in Bihar, Alakh N. Sharma, *Economic and Political Weekly*, Vol. No. 40(10), pp. 960-72, 2005.**

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**Key Topics:** *Agrarian Relations, Peasant Movement, Migration*

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This article provides a nuanced overview of changes in agrarian relations in Bihar over the last hundred years and situates them within the larger socioeconomic changes that took place during the same period. In particular, the study presents a detailed analysis of post independence developments in Bihar, arguing that two developments, mobilisation of poor peasants and increased migration, have been critical agents of change in rural Bihar over the last three decades. It also points out that the disjuncture between political mobilisation on the basis of caste and economic mobilisation on the basis of class, and the linking of class with caste, on the part of organisations leading the labour movement, lie at the root of the crisis of governance, on the one hand, and the impasse of the militant movement of the labouring poor of rural Bihar, on the other. It is argued that these two developments in the last three decades, mobilisation of the poor peasants and increased migration, appear to be the most striking agents of change in rural Bihar. These changes were set in motion from the 1950s, following an incomplete land reform programme that ostensibly favoured the middle landlord class. Increasing poverty, poor returns from land and rising rent demands have since then widened the ranks of the poor peasantry, which now consists of a mix of several castes. It is again from these sections that most migration to urban areas, mainly as unskilled or low-skilled labour, takes place. On the other hand, middle castes, mainly drawn from the upper backward castes, increasingly make up the landlord class. It is these caste groups that have been able to perpetuate their dominance by also making up and aligning with the dominant political classes. On their part, the radical left organisations that have made headway in several areas of south and north Bihar have been unable to mobilise rising peasant class consciousness in rural areas due to their inability to fully comprehend the dichotomy that defines caste and class in the state.

The study shows that the delay in the process of land reform led to large scale *benami* transactions. On the other hand, the tenants were made to buy the land under their cultivation. As a result, only substantial tenants could retain ownership of land while the rest became either tenants-at-will or agricultural labourers. Thus, there emerged the new surplus-hungry landlords and big peasants as the economically dominant classes in rural Bihar. This class of landlords and big peasants also became the politically dominant class. Since the middle castes comprised the largest proportion of substantive tenants under the *zamindari* system, the inter-caste power relations started shifting in favour of the middle caste rich peasantry.

This trend became increasingly dominant with the transfer of land from the upper castes to the middle castes. As a whole, during the last two and half decades or so, the 'semi-feudal' relations have considerably broken down because of a combination of factors such as militant movements launched by poor peasants and labourers, rising trends of real wages, declining patron-client relationships, increasing casualisation of labour, commercialisation and diversification of agriculture although limited, increasing migration, and inflow of remittances, etc. The access of the middle castes to seats of state political power is a natural concomitant of the above factors.

The emergence of the new surplus-hungry landlords and big peasants went hand-in-hand with the pauperisation and proletarianisation of a large number of peasants, inundating the rural labour market. The emergence of these landlords and rich peasants acquiring more and more surpluses without making investments for raising productivity and production levels inevitably led to exploitation of the agricultural labourers and poor peasants. On the other hand, the increasing marginalisation of landholdings led to the emergence of a class of poor landlords among the traditionally non-cultivating castes. The caste taboo against manual work in land was further accentuated by the spread of education divorced from manual labour. The landholdings became too small to produce surplus and as a result the nominal surplus appropriated by the poor landlords cut into the necessary produce to be appropriated as wages. This is what manifested as the incapacity of these landowners to pay even the statutory minimum wages. When the workers demanded their due wage, these masters, unable to pay, had to militantly suppress the workers movement for higher wages. The resistance of the working poor to their excessive exploitation along with social oppression invited reprisals from the landlords and rich peasants. When this exploitation in the form of depression of wages and other means became acute, the resistance of the labouring poor strengthened further. This sparked off atrocities in the form of even mass killings of agricultural labourers, who are mostly *Dalits*, by the rich peasants and landlords of the middle and upper castes. By the mid-1960s, the labouring poor were forced to take to organised militancy, leading to the emergence of militant movements of the poor peasants and agricultural workers, popularly known as the Naxalite movement. In a large number of areas, the rural labour now are in direct conflict with the dominant classes, belonging to upper and dominant middle castes, and they have even imposed 'extra-economic sanctions' against the latter in the same way as they had historically experienced at the hands of upper castes. They are now increasingly able to assert what they perceive to be their rights.

This peasant mobilisation in the state has important implications for rural labour and the socioeconomic and political structure of the state in general. One obvious impact of this massive mobilisation has been the increased consciousness among the poor peasants and agricultural labourers about their socioeconomic and political conditions. This growing consciousness has also had an impact on the state. Although the state is far from becoming sympathetic to the cause of the poor peasants and rural labourers, in the face of the growing unrest among them, it has had to initiate some measures with regard to their welfare. The drive for the acquisition of surplus land over the ceiling limits in the mid-1970s was essentially a response of the state to the violent outbreak and unrest among poor peasants and labourers in some districts of south Bihar. The occasional pronouncements of the government, giving the assurance that it would take effective steps to safeguard the interests of the tenants, were largely prompted by the peasant mobilisation and their increasing political importance as a pressure group. At the same time, the peasant groups have been able to increase real wages and keep the land reform agenda alive.

The article concludes that the socio-political impasse in Bihar is due to the failure of the state to effect an agrarian transition by the abolition of tenancy and the development of infrastructure such as irrigation, rural roads and electrification. This would boost agricultural growth and help the state to rise above the economic stagnation witnessed in the last three decades.

## **2.15 Bihar: Towards a Development Strategy, World Bank, New Delhi, 2005.**

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**Key Topics:** *Economic Growth, Social Service Delivery, Public Administration*

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The report presents an analysis of Bihar's complex and challenging development issues and underscores the importance of recognising Bihar's own development goals and objectives. Persistent poverty, complex social stratification, unsatisfactory infrastructure, and weak governance are some of the hurdles to achieving economic and human development in the state. An improvement in the same requires a multi-dimensional development strategy that builds on Bihar's successes.

The report points out that Bihar's progress in achieving the Millennium Development Goals (MDGs) has been much lower than the all-India average. Bihar is predicted to fall behind on most MDG targets by 2015, undermining national performance. Poverty is primarily rural as rural poverty incidence (41.1 per cent) is substantially higher than in urban Bihar (24.7 per cent). This is linked with limited access to land and livestock, and poor education and healthcare. Social or caste characteristics also play an important role in deciding economic opportunities in the state. For example, scheduled tribes are thrice as likely to be poor as compared to upper castes.

Due to low growth rates in the state, income growth and consumption levels have lagged seriously, thereby, widening the gap between Bihar and the rest of India. Bihar's exceptionally weak agricultural performance has contributed to this. According to the report, agriculture is the bedrock of Bihar's economy, employing 80 per cent of the workforce and generating close to 40 per cent of the gross domestic product. However, agricultural growth rates actually declined by 2 per cent per annum in the early 1990s and grew by less than 1 per cent since 1994-95 (hence, falling in per capita terms). Low investment rates, lack of water management with annual flooding of the Gangetic plains districts, and weak transport and marketing infrastructure have contributed to this scenario.

Private investment in the Bihar has been exceptionally low as compared to other states. In fact, Bihar's share of private projects, being implemented in the 1990s, was one of the lowest of the major states. According to the report, the state's bifurcation in November 2000 has exacerbated the state's financial challenges as Jharkhand received most of the revenue yielding industrial and mineral resources, while Bihar retained most of the liabilities.

The report also points out that programme resources allocated to Bihar from the centre are not fully or efficiently utilised, even though Bihar is more dependent on these to finance public investment and development programmes than other states. In fact, Bihar has one of the country's lowest utilisation rates for centrally funded programmes, and it is estimated that the state failed to utilise one-fifth of central plan assistance during 1997 to 2000.

Poor service delivery, especially for the poor, is one of the major causes outlined by the report for poor social sector outcomes in the state. According to the report, there is a serious short fall of health sub-centres and primary health centres as compared to national norms. Existing health centres and clinics also face endemic problems relating to quality standards with poor maintenance of facilities, idle equipment, and chronic shortage of medicines and vaccines, particularly in rural areas. Moreover, public subsidies often fail to reach the poor. Both education and health subsidies are skewed in favour of the upper economic groups and males (especially related to secondary education).

Like in other parts of the country, public service norms in Bihar are poorly defined and plagued with political interference and a non meritocratic bureaucracy. However, some problems that are unique to Bihar's case include Bihar's highly centralised government; its ad hoc, non transparent and non meritocratic system for recruitment, promotion and sanctions, and high levels of corruption.

Creating a development strategy for Bihar requires moving away from a narrow focus on political gains or special interests to making development outcomes the measure of good governance, focusing the political and civil discourse on building roads, controlling floods, and educating children. The report bases its development strategy on two key pillars, viz., enhancing Bihar's growth performance by establishing a healthy investment climate to encourage entrepreneurship, investment, and the spread of improved technologies, particularly in the rural sector, and supporting human resource development through improved quality and access to social services, particularly for the poor and socially disadvantaged communities

The report argues that the primary reason for Bihar's weak investment level and growth rate is its poor investment climate. Several contributing factors are identified, including inferior infrastructure (roads, power, water, and telecommunications), weak financial markets and low access to credit, shortage of skilled labour, poor law and order, and a general lack of political support for private investment. It suggests that strengthening Bihar's weak infrastructure and improving law and order should be two of the most important priorities for the government's growth strategy. Water management and roads require special attention with regard to infrastructure. Improving law and order is crucial to reversing the perception of endemic problems in this area. There are also numerous entrepreneurial success stories in Bihar, for example the Bihar State Cooperative Milk Producers' Federation Ltd. (COMFED) and Bihar's litchi export industry which accounts for about 70 per cent of India's total production.

According to the report, a robust social service delivery system requires attention to three core relationships: (i) between policymakers and service recipients to make policies more responsive, (ii) between policymakers

and service providers to ensure quality, and (iii) between end clients and service providers to strengthen the accountability mechanisms. The gradual devolution of power and responsibilities to PRIs is also important. Further, an important vehicle for strengthening service delivery is increasing community involvement in programme design and implementation.

To support the two development pillars, the report also stresses the need for better management of public resources to reduce waste and improve resource mobilisation, and administrative and governance reforms. The three main elements of a fiscal reform strategy are: (i) developing a medium-term expenditure framework, (ii) strengthening public expenditure management in the areas of budget preparation, accounting, audit, procurement, and cash management, and (iii) addressing constraints in the use of central assistance and project implementation to improve utilisation rates. Tackling Bihar's daunting administrative reform agenda is fundamental both for a more efficient use of public resources and to improve the many dimensions of government performance. Key strategies to achieve the same consist of strengthening decision-making procedures, restructuring civil service staffing, establishing meritocratic civil service practices, rationalising government functions and staffing, and making government more accountable to citizens.

The report concludes with outlining five major areas where further analytic and strategic efforts are needed. These include improving Bihar's investment climate, public administration and procedural reforms, strengthening the design and delivery of core social services, budget management and fiscal reform, and improving public law and order.

**2.16 Understanding Agrarian Impasse in Bihar, Avinash Kishore, *Economic and Political Weekly*, Vol. No. 35(19), pp. 3484–91, 2004.**

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**Key Topics:** *Agriculture, Rural Development*

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The article notes that agriculture in Bihar grew at a slower pace, over a smaller base, for a shorter time after which the momentum was lost in spite of an impressive expansion of tube well irrigation. This article tries to explore the reasons for this relapse.

The study is based on primary data collected from field studies carried out in eight villages from six districts of Bihar in 2003. Two of the villages were from Nalanda and Bhabhua districts of south Bihar, while the rest six were from districts Muzaffarpur, Saran, Gopalganj, Darbhanga, and Madhubani in north Bihar. While Darbhanga and Madhubani are agriculturally least developed, Nalanda and Bhabhua are agriculturally the most developed districts. Muzaffarpur, Saran, and Gopalganj fall in between these two extremes. This paper is an attempt to distil the lessons learned during the fieldwork in these eight villages.

Based on fieldwork in eight villages of Bihar, the article argues that, more than agrarian structure, the lack of adequate infrastructure and economic incentives has contributed to the agrarian stagnation in Bihar. On analysing why tube well irrigation development is not enough to sustain agricultural growth in Bihar, the paper presents an array of reasons. The sharp increase in diesel prices is the principal factor affecting agricultural growth. As subsidies were reduced, there has been a substantial increase in price of chemical fertilisers. Increased outmigration in peak seasons resulted in sharper increase in peak-season wage rates than the non-peak season wage rates. Depressed foodgrain prices and absence of effective price support were also considered to be equally responsible for agricultural stagnation. Reduced rate of public capital formation and the virtual collapse of infrastructure (such as rural roads, power supply, major and medium irrigation systems, sugar mills, etc.) has further worsened the situation.

The article argues that in the last two decades, public capital investment in agriculture in Bihar has concentrated mainly in increasing the density of shallow tube wells and pump sets through credit and subsidy schemes. However, performance in major and medium irrigation systems and rural electrification, which would have given long-term cost advantage to farmers in the state, has been miserable. Thus, poor infrastructure resulted in inefficiencies and higher costs of production, marketing, storage, and processing making agriculture uncompetitive in the state.

While the phenomena like rapid decline in rural infrastructure, absence of procurement support, and poor performance of rural credit schemes may well be the problems of demand rather than supply, the article argues that there has been complete absence of remunerative prices, reliable power supply, free electricity, and writing off of

farm loans in Bihar, which itself led to a slackening in the demand for better services, even if the need is not lacking. Indian council for Agricultural Research (ICAR) studies show that advancing sowing of rice by a month will help to realise higher yields of both rice and wheat. The high cost of irrigation is the biggest hurdle in large scale adoption of this proven strategy of yield enhancement in rice-paddy systems of Bihar. Poor infrastructure and underdeveloped primary agricultural marketing network further worsen the problems of farmers by increasing the cost of marketing and price fluctuations.

The study also draws attention to possible options for revival of agriculture. Most of the farmers in Bihar are practicing 'cost-covering agriculture' and from this point if the crop yields are raised even by 20-25 per cent, the net incomes of farm households would increase by 60-70 per cent making a significant dent in rural poverty in the state. Input intensification to increase yields is a possible way of reducing per quintal cost of production and increasing profit margins. This strategy, however, will catch on only if production and price risks are low and farmers have access to suitable crop varieties which respond adequately to input intensification.

According to the study, rural electrification is one state initiative which can provide a major boost to agriculture in Bihar. It can also trigger growth in storage and processing infrastructure, which will permit value addition and the much needed crop diversification in the state. The article concludes that unless this is addressed by extending procurement operations more effectively in the state, there will be insufficient incentive for the sustained yield increase.

**2.17 Making Social Science Matter—I: How the Local State Works in Rural Bihar, Jharkhand and West Bengal, Stuart Corbridge, Glyn Williams, Manoj Srivastava, and Rene Veron, *Economic and Political Weekly*, Vol. No. 38(4), pp. 2377-89, 2003.**

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**Key Topics:** *Social Science, Local State*

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This paper, published in two parts, reports on an extensive programme of social, scientific, and action research in Bihar, Jharkhand, and West Bengal. In this first part are present some of the main findings of a research project that was concerned with questions of state performance in these three states, particularly as this performance affected and was experienced by different groups within the rural poor.

The paper first discusses the choice of field districts with activists and scholars in Bihar and West Bengal, the research team sought to locate blocks and *gram panchayats* that would not be untypical of the political regime types that characterised the districts more broadly. The field assistants had helped the team to carry out an initial census of the 1,700+ households that resided in the five field sites. The census provided baseline information on household and community composition, on livelihoods and assets, and on patterns of receipt of government benefits. This data, along with government and local accounts of poverty and vulnerability, was used to select 80 poor households in each village for further and more intensive work around the main themes of the research. Twenty non-poor households were also selected for study in each village, again on a random basis and with the consent of the respondents. In addition to this village-based work, the team worked extensively at the block, district, and even state-levels.

The paper finds a lack of success of the Employment Assurance Scheme (EAS), a recurrent theme in this paper. The concern here, however, has been less with the developmental ambitions of the EAS than with the lessons that a close analysis of the scheme might offer for the study of state-society relations in rural eastern India. In this respect, the paper takes a cue from the recent work of James Scott on what he calls 'high modernism'. In Scott's view, high modernist states come 'to see' the populations for which they are responsible in terms of a bloated regard for ends over means, and of the rights of developmental states over those of weakly developed civil societies. India has not yet suffered from the worst ills of high modernism.

The paper argues that if the state in India has been kept in check by a free press and democratic institutions, its developmental ambitions have been tinged by scientism and even authoritarianism, and poorer men and women have been forced to behave as supplicants to the individuals who are meant to serve them. All too often, sarkar has presented itself to ordinary people as it did in the British days (from which time many of its practices derive), and the people have developed mechanisms for dealing with the government that keep it at an arm's length.

The paper contends that, if the state 'sees' these people, at least officially, in terms of various fixed categories (scheduled caste or tribe, below poverty line, registered unemployed), the people 'see the state' only dimly and after much wasting of time and money. Unless poorer women and men have access to important figures in political society they can have little expectation that they will be dealt with courteously, or that they will be invited to contribute significantly to the design of programmes that are meant to improve their welfare.

The paper highlights that the almost complete lack of awareness of the EAS that was uncovered in the Malda block and the Bihar field sites is evidence of this, and is not untypical. If people show little loyalty to the idea of a dispassionate state (preferring often to capture it), or are given few opportunities to voice their concerns about such matters as accountability or the rule of law, it can be of no surprise that the favoured option is the exit option. In Ranchi district, it was found that poorer families did keep the state at a distance, but for reasons relating less to ethnicity (tribalness) than to the need to construct sustainable livelihoods, in which venture the government often seemed to be irrelevant.

In conclusion, the paper sums that none of this means that the local state is a monolith. The study has demonstrated that an understanding of the state must have regard for the pressures that act upon named bureaucrats as well as the pressures that define the state as a social relation. In Bihar, in particular, where the local state was not balanced by functioning *panchayati* institutions at the time of the fieldwork, the conversion of the EAS into a scheme for the building of *pucca* assets had a great deal to do with conflicts of interest between district-level personnel and those working below them.

**2.18 Making Social Science Matter—II: How the Local State Works in Rural Bihar, Jharkhand and West Bengal, Stuart Corbridge, Glyn Williams, Manoj Srivastava and Rene Veron, *Economic and Political Weekly*, Vol. No. 38(4), pp. 2377–89, 2003.**

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**Key Topics:** *Social Science, Local State*

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Part I of this paper described the patterns of participation of the rural poor in state-sponsored schemes and the characteristics of the political society in each of the blocks and districts studied. It also provided evidence on the scale and significance of rent-seeking behaviour and a preliminary mapping of what has been called 'the anthropology of the everyday state'. The discussion in Part 2 turns to an 'action research' project that followed on from the 'academic' research in Part I.

This project involved the research team in a prolonged dialogue with different groups of actors in Malda and Bhojpur districts that were identified as 'failing' districts from the point of view of effective pro-poor governance. The study begins with a brief discussion on the background to this research and describes how the action research process was organised before proceeding to present the main findings of the workshops that were held in these two districts. These findings speak of the ways in which different groups of stakeholders, and members of the rural poor, most especially, see the state in Bhojpur and Malda and how they would like to see certain practices of the state abolished, extended, or reformed.

The paper argues that in Bihar, the idea that a ruling party would seek the empowerment of the poorest is still hard to imagine. Laloo Yadav's first government made efforts to empower its key supporters from within the 'creamy layer' of the OBCs, and there is some evidence to suggest that the lower layers of the OBCs did well in the *panchayat* elections that were finally held in Bihar in the summer of 2001. For the most part, though, the labouring classes are excluded from positions of power in Bihar, and in Bhojpur these communities also have to face the consequences of pervasive state failure in the wake of continuing violent conflicts.

Against this backdrop, the main objective of this research in Bhojpur was not to come up with a list of detailed policy recommendations; rather (and this was also the case in Malda), the first objective was to get different groups of people talking, both among themselves and to others with whom they have little contact. The article reveals that the Bihar workshops were more successful and found that, most interestingly, many participants displayed a willingness to think imaginatively in the workshops and to describe 'ideal type' changes that they probably would not adopt in practice, given existing institutional and incentive structures. For example, several of the politicians who attended the state-level seminar were prepared to describe in detail how and why they took 'commissions', and why

this system was pernicious, even as they made it clear that they would continue to act in this manner. By the same token, some representatives of the NGO community were prepared to think about the ways they might encourage villagers to hold government to account, or to claim various entitlements from the state.

There was universal recognition that there is a major information deficit in Bihar. Existing sources of information are limited, information provision is often arbitrary, and the form and content of information supplied is often not appropriate or accessible. But groups also recognised that information is only useful to people if they can put it in context, understand its significance, purpose and potential, and come to act upon it. It is, thus, important that they have alternative sources of information, so that they cross-reference or even interrogate information supplied to them by the state.

The paper notes that even when governments are effective in diffusing information, poor people sometimes have little incentive to participate in the selection or execution of development programmes, or they may find themselves being excluded by more powerful villagers. This is especially the case with poor female villagers. It was suggested that participation would increase only when people had built up greater confidence in government, and when schemes provided benefits that are either properly targeted and/or consumed collectively. Attention would also have to be given to the culture of mistrust that affects many government departments in Bihar. Above all, perhaps, there would have to be serious efforts to improve the credibility of government, given widespread corruption and an evident lack of accountability.

### **2.19 *Development of Bihar and Jharkhand: Problems and Prospects*, Sharat Kumar and Praveen Jha, Shipra Publications, New Delhi, 2001.**

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#### **Key Topics:** *Social and Economic Development*

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This edited book notes that economic problems of a populous state like Bihar are immense and there is wide consensus that any progression or regression in this part of the country has a direct correlation with India's development or underdevelopment. An attempt has been made in the present volume to explore the possibilities of shifting higher the existing production possibility curve in the state and pave the way for requisite transformation of the economy.

The book is divided into five sections. They are Development Perspectives, Agriculture and Forestry, Industry and Mines, Irrigation, Power, Credit, and Fiscal Reforms. Each section has a collection of papers from the respective fields.

Part 1 of the book has essays on the socioeconomic deprivations of the agricultural labourers and the development dilemma of tribals in the state. Recognising the larger share of primary sector in the state domestic product, K. N. Prasad, in his paper, lays greater emphasis on stepping up agricultural productivity than on industrial development. Praveen Jha opines that there exist intra regional differences as well, in regard to levels of development within the state. He observes that in north and central Bihar, there are districts which show better irrigation coverage, fertiliser consumption, and a respectable agricultural growth over the past couple of decades. Agricultural workers constituted 81 per cent of total main workers. He highlights that agricultural labourers in the state continue to face lower wages and lack of adequate employment. Migration to advanced states has not brought any improvement in the conditions of life of the people. Moreover, the tribal community appears either to have been bypassed by the development process or has become the victim of development. Sharan and Dayal in their paper discuss the different social groups among the tribals and their occupations. The study points out that while agriculture and handicrafts continue to remain underdeveloped, the development process in the region has depleted the forest resources. Industrialisation in the small scale industrial sector could not make them an equal partner as they continue to lag behind in education, financial resources, managerial skills, and initiative.

Part 2 of the volume has essays on 'Agriculture and Forestry'. In his paper Shankar Prasad reviews the land reform policy in Bihar, which basically stood for the objective of land to the tiller. The study points out that the land reforms in Bihar were not able to bring actual cultivators of land in contact with the state. The Ceiling Act also led to large scale evictions of under *raiyyats*, swelling the ranks of agricultural labourers. The study concludes that land reforms directed towards self cultivation alone would not lead to higher growth in agriculture, a great



deal has to be done with regard to irrigation, better use of inputs, and credit support. Chandra Mohan et al., on the other hand, examine the production of food grains in the state separately for pre and post Green Revolution phases. Analysing the respective progress of rice and wheat in foodgrain production, they note that though wheat production increased, rice production was low. The study attributes part of the problem in rice production to the rising level of floods in the state. This is corroborated by the paper by Kamta Prasad. According to the study, paddy and maize are the two important crops which suffer most during the flood season. He observes that the findings gave some evidence of higher *rabi* production consequent to floods arising from slit deposition as well as improvement in soil moisture condition. Basawan Sinha, on the other hand dwells upon the controversy around the ox bow lakes, *chaurs*, and other such natural depressions, which abound in the north and south Bihar plains. Sinha sums up that the unplanned uncoordinated pursuits by different government agencies, all seeking their own objectives, has led to the improper development of the natural depressions. K. Sharma, in his paper, introduces the reader to the rich forest resources in the state. He argues for bringing 10 per cent of the net sown area and part of the land under administrative control of schools, colleges, government offices under forestry plantations. He also advocates for joint forestry management in Singhbhum to overcome the issue of political felling of trees and supports natural forests in place of Eucalyptus and outside species.

Part 3 of the book comprises of essays on 'Industry and Mines'. Chandrashekhar Prasad, in his paper, highlights the significance of small industries on account of their ability to generate large-scale employment at low cost for promoting exports and for regional development. The study notes that there is a trend towards manufacturing of high value products on account of better knowhow and skilled labour in the state in recent years. While the paper argues for a cluster approach as the future strategy for SSI's development, it is critical of the role played by the plethora of promotional institutions. The paper on 'Fruits and Vegetable Processing Industry' by Jagadish Prasad dwells on the prospect of this sector in the state. The study points out that the prospects of the industry cannot be improved by adoption of post harvest technology, specialisation in different stages of processing, or export to high income economies. Ajit Prasad, in his paper, highlights the availability of iron ore resources with high iron ore content along with the availability of coking coal and lime stone resources in the state, making it the most ideal for steel production. The study also expresses concern on wide fluctuations in value added from one year to another, which exhibit certain weaknesses of the sector. Equally worrying is the marked difference between the magnitude of value addition in the core sector and in downstream activities. Dwelling upon the growth prospects of the cement industry in the state, S.C. Lahri, mentions cement manufacture as one of the most important areas of operations of the private corporate sector in India. The study hints that the rise in the cost of installation of cement plants can be reduced by setting up high capacity plants. Setting up of slag based plants would conserve limestone reserves and would be environment friendly. Discussing the challenges before the fertiliser industry in the state, B. K. Tiwari maintains that while soil contains nutrients, all soil does not contain nutrients. Moreover, crops take away nutrients every season causing a decrease in soil fertility. The study suggests that as the demand for fertiliser will keep growing, more units could be set up to reduce transportation cost and existing units need to be restored to good health. In their paper, Prasad and Tiwari dwell upon the pre and post nationalisation era in coal mining in the state and also discuss the new possibilities in the light of recent reforms. Since the coal fields are usually located in tribal areas and tribals hardly approve of mining, there is an increasing reluctance on the part of the local population to spare their land for coal mining. While recommending further development of coal mining in the state, they emphasise the significance of related issues like environment, land acquisition, and rehabilitation.

Part 4 of the volume comprises of Irrigation, Power and Credit. Deliberating on the status of irrigation development in the state, S. S. Singh informs that only 40 per cent of the gross cropped area in Bihar has been provided with irrigation. There is also a huge gap between the irrigation potential created and its utilisation with regard to minor irrigation. Singh observes that if land is plainly levelled, there will be reduction in water requirement for irrigation and will help to increase the agricultural produce. Qamar Ahsan, in his paper, discusses how power development in the state is synonymous with doings and misdoings. Investment in the power sector has not only been low but the rate of growth of investment has been declining from the Third Plan onwards. He points out that growth in the consumption of electricity in the industrial sector is coming down and the share of agriculture using electricity is increasing. He criticises the wasteful use of power and recommends setting up of a regulatory authority to examine, evaluate, and monitor tariff rates. In his paper, S. K. Sinha provides a commentary on the functioning of commercial banks in the state. The need for credit support is more in Bihar, but the growth in outstanding credit

has been far behind the growth in deposits. The advances to agriculture and small industries have also declined. Sinha opines that the poor repayment performance of the borrowers is the major factor responsible for the low disbursement of credit.

Part 5 of the book comprise of essays on 'Fiscal Reforms'. Sharat Kumar in his paper points out that education and health are the two main items of expenditure of Bihar government. Without sufficient revenues, the state government has not been able to pay due attention to irrigation, power, and roads. According to the study, the state government should distance itself from debt creating instruments by keeping a check on its revenue expenditure.

## **2.20 Bihar in the Grip of Globalisation [Vaishwikaram Ke Chapet me Bihar], Pradhan H. Prasad and Meera Dutt, Bihar Hindi Growth Academy, Patna, 2001.**

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**Key Topics:** *Globalisation, Industrialisation, Agriculture*

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This book is a collection of 60 small articles (28 by Pradhan H. Prasad and 32 by Meera Dutt) published in various journals and dailies. Though Professor Prasad was recognised as belonging to the Marxist tradition, in this book his strong appreciation for the Gandhian perspective is quite evident. In titles like 'Gandhi and Technological Development' and 'Gandhian Policies Alone Can Provide Solutions' (*Gandhi ki Neetian hi Ubbar Sakti hai*), the author has staked high hopes on the Gandhian path for coming out for the crises generated by globalisation. He suggests that for development of India and a poor state like Bihar, and for generation of employment and elimination of poverty, it is an imperative to replace the present costly and unproductive administrative system with *Panchayati Raj* as elaborated by Gandhi and strongly advocated by Bhagat Singh and his friends (pp.53).

The division of the state between Bihar and Jharkhand, it is argued, will make no difference in the life of the common people. Only Non Plan Expenditure may go up, putting the state in debt. As the Non Plan Expenditure does not reflect on people's lives, only Ranchi, as the capital city, will grow by linking it with a few new trains and flights. The book argues that the hue and cry is only in the media. The traditional ruling class of the upper castes with their feudal background supported the bifurcation to divide the rising ruling classes from lower castes. The division may release some new kinds of pressures in which the people will directly relate themselves to development and, in this process, the role of the labouring masses will attain importance and not that of the brokers. The level of people's consciousness will get a push, Jharkhand will thrive on its natural resources and Bihar will sustain on its wasteland and irrigation potential.

In this collection, the first author seems to strongly reiterate the old stand on the lopsided development in independent India and states like Bihar, Orissa, and Jharkhand being a victim of this process. They argue that the central government has held these states as its virtual colonies, with the policy of freight equalisation, and that these states could not get the due benefit of their vast coal reserves. On the contrary, with locomotives shifting from coal to diesel, such states had to bear the burden of growing petroleum imports and price, hikes. The book regrets non implementation of the recommendation of the 10th Finance commission which denied the state like Bihar its due share to the tune of Rs 3,624 crores (pp. 105). Due to wrong policies of the central bureaucracy, the state is entrapped with lack of development and dependency. As such, a massive process of marginalisation results in the growth of Naxal activities which the ruling class, with its semi-feudal mind-set, attempted to see as a simple law and order problem. Here, also, the book puts a high premium on *Panchayati Raj* institutions. By giving power to such bodies, the people's aspirations, in the real sense, will be met and the clutches of the upper caste semi-feudal forces of the power structure may be done away with.

Meera Dutt takes strong exception to the growing urge for foreign investment as the only solution of the problem of underdevelopment. It is argued that after independence, the industrial development of the entire country moved along the colonial pattern except that of Punjab, which was not due to high foreign investment but due to growth of farm based activities and the benefits of the irrigational projects like Bhakra Nangal. The book asks, if Punjab can develop without foreign investment, then why not Bihar? The book explains that lack of capital is not the real cause of lack of development or non-industrialisation. Every year, the public sector banks transfer about Rs 110 crore from the domestic savings of Bihar to outside the state, but do not invest in Bihar. So, naturally, lack of capital is not the real problem.

Besides, the book highlights a host of other issues in Bihar in the post liberalisation era. Whereas, the industrial growth rate in India declined from 8.21 per cent in the pre-liberalisation era to 5.77 per cent in the post-liberalisation era, in Bihar it declined from 5.30 per cent to 0.28 per cent in the corresponding period (pp. 131-32). The cause of lack of industrialisation again, is not the lack of capital but the lack of demand. Due to growing poverty among the people of Bihar, the demand for industrial goods has dropped. In Bihar, the employment in the organised sector grew by 0.24 per cent in the pre-liberalisation era and fell down to 0.13 per cent in the post-liberalisation period. The average growth rate of food grain production in India and in Bihar was 9.09 and 8.52, respectively, in the pre-liberalisation era which was higher than the post-liberalisation era. This comforting figure about Bihar is attributed not to better technological or agricultural management in Bihar, but due to the growing confidence in the middle and lower castes after 1989.

According to the book, the recommendation of the Fifth Pay Commission created a serious crisis in the state. It added an additional burden of crores on the state exchequer, whereas, the tax and revenue mobilisation capacity of the state is very poor. The state's inability to meet the demands of the various categories of employees led to the strikes and strife all around.

## **2.21 A Leap across Time: When Semi-Feudalism Met the Market in Rural Purnia, Gerry Rodgers and Janine Rodgers, *Economic and Political Weekly*, Vol. No. 36(22), pp.1976-83, 2001.**

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**Key Topics:** *Rural Economy, Semi-Feudalism, Migration*

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This study is based on earlier studies by the authors in two villages of Bihar's Purnia district in the years 1971, 1981, and 1999. It seeks to map the impact and changes in the traditional Indian economy by the forces of marketisation and monetisation.

The villages of the earlier studies on poverty and employment in 1971 and 1981, two neighbouring villages in Kasba block of Purnia district, northeast Bihar, were re-visited in 1999. The 1971 study looked at the impact of public works on rural poverty in several villages close to substantial public works projects. In 1981, they tried to explore longer term change in the living conditions of the poor. In the 1999 visit, they revisited the villages of Pokharia and Dubaili Biswaspur and re-contacted a number of the same families. One village is quite small, about 650 inhabitants, in 1991, the other large, over 3,500. This paper attempts to give a picture of the rural economy in Bihar over the period.

Over the years, the study finds that with daily wages of the order of US\$ 0.75, agricultural wage workers in these villages were extremely poor by any decent standards, enabling them to buy three kg of grain which was roughly sufficient for the basic caloric needs of a family of four, but for absolutely nothing else. The study found that these people are vulnerable to floods, living in unfavourable health conditions with inadequate housing, and their children unschooled. The study contends that there is a long way to go. But even so, in these villages there has been progress.

The study argues that despite the decline in mechanisms of semi-feudalism and a rise in labour income corresponding to a decline in agricultural income, traditional forms of wage payment as sharecropping continued. Ills of a previous decade, such as high mortality, female illiteracy, and poor health systems, persisted, revealing not merely the inadequacy of existing social institutions but also an absence of much needed state support.

It notes that rise in real incomes has very little to do with local development. Instead, it shows the power of an integrated market across north India and that development and change in the north-west is having a substantial influence on living standards of the poor in Bihar. It finds it fascinating that economic growth in Delhi, Haryana, Punjab and elsewhere, not only offers income opportunities to poor Biharis but radically changes the functioning of economic systems 1,000 km away. For the future, the obvious question is whether these changes will lead to a sustained transformation and growth in Bihar.

The study highlights that large numbers of labourers are now migrating across north India on a seasonal basis and that their remittances provide the potential for capital accumulation and development in their areas of origin. But on the whole, these migrants are not the landowners, not those who can invest in their own cultivation. The bulk of remittances go directly into consumption, mainly of food. On the other hand, this will have indirect effects, widening the market for agricultural goods and increasing incentives to produce for the market.

The study reveals that the potential for sustained growth is clearly present in these villages. But the existing institutions, both social institutions in the village and the framework of state support, are clearly inadequate. It will be necessary to think through how the state could take advantage of this opportunity for growth by providing the incentives, the institutions, and the public investment in infrastructure, which can convert this potential into reality.

## **2.22 *Poverty, Growth and Change in Bihar*, Alakh N. Sharma and Kalpana Wilson, *Mimeo*, Institute for Human Development, 2002.**

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**Key Topics:** *Economic Development, Development Strategy, Social Change*

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The study attempts to analyse Bihar's development experience and specifically looks at poverty, growth, and change in the state in the post independence era. It begins with an overview of the socioeconomic characteristics of the state and its geographical divisions. It then dwells on land distribution and access to land for poor households, and poverty levels in the state followed by agricultural performance during the 1980s and strategies for development. The study ends with a section on institutions, people's movements, development, and policy recommendations.

The study finds that Bihar is one of the slowest growing regions of the country and the employment structure of the state is characterised by heavy dependence on the primary sector. It is revealed that during 1981-91, the dependence of the workforce on agriculture has increased while that on the manufacturing sector has declined. The study also notes that though the unemployment rate is low in the state, a low percentage of rural workers are engaged in non-farm employment.

The study argues that the changes in the structure of employment in the 1980s were intensified in the 1990s, and after the introduction of the New Economic Policy in 1991, rural areas have borne the brunt of the workforce restructuring process. At the same time, the growth rate of manufacturing in the state has declined in the 1990s.

According to the study, distribution and use of land is a key question for Bihar's future. It finds that the share of the bottom 60 per cent of landholders in land operated has declined in the 1970s and 1980s, revealing a picture of erosion of access to land for the rural poor. Sharecroppers have become powerless tenants and the proportion of households not cultivating land has increased from 1981-82 to 1991-92. The study finds that while the 1980s witnessed a decline in poverty levels in the state, NSS data for 1993-1994 shows that the percentage of population below the poverty line shot up again.

The study finds that agricultural performance in the state was better in the 1980s than in the preceding decades, which can be traced to rising fertiliser consumption and High Yielding Variety (HYV) use along with greater irrigation coverage. The study also attributes adoption of new technology to the large-scale seasonal migration to North West India, where migrants were exposed to new technologies. The study finds that the credit flow from financial institutions to agriculture in Bihar deteriorated in the post reforms period in real terms. This, coupled with stagnating revenues, and a decline in development expenditure to the state has proven to be disastrous.

The study argues that key strategies for development of the state, such as infrastructural development, institutional reform and agricultural diversification, land reforms, provision of basic health and education, social security, and food security are crucial. At the same time, the study is of the view that the success of all development plans, schemes and public action crucially depends upon the institutions and agencies involved with their implementation and execution. It believes that the most important sources of change will be the organisations of the poor and exploited themselves, and reflects on the movement of the poor peasants and agricultural labourers in the state whose main focus has been the organisation and mobilisation of the poor towards the struggle of wages, land redistribution, and social oppression.

In conclusion, in order to set in motion a development process genuinely geared to the needs of Bihar's poor, the study identifies a number of key tasks. First, policies related to the access of the poor to land, food, education, health, employment, and common property resources should not only be strengthened in quantitative terms, but qualitatively as well. In particular, development of rural infrastructure such as power, irrigation, credit facilities, and rural roads is essential. The study notes that the record of the state in terms of execution of development schemes and programmes, especially for the poor, has been very unsatisfactory and there are clearly powerful constraints to the effective adoption of such policies which are rooted in the nature of socioeconomic and political power in Bihar.

At the same time, the study feels that recent developments such as the positive forces and energies generated by the organisations of the poor and exploited, which challenge the very basis of the power structure which sustains and perpetuates inequality, poverty, and stagnation, offer some hope. Albeit, they are suffering setbacks due to the violent backlash against them, their continued struggles hold out a promise of the future transformation of the nature of state itself.

**2.23 Bihar after Bifurcation: A Challenging Future, Dipankar Bhattacharya, *Economic and Political Weekly*, Vol. No. 35(44/45), pp. 3800–04, 2000.**

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**Key Topics:** *Bifurcation of Bihar, Economic Development*

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The article discusses the prospects and challenges to Bihar's development post bifurcation, that is, creation of Jharkhand, and argues that any such discussion need not be unduly predicated on the reality of Jharkhand's separation from Bihar.

The study, divided into sections, begins with examining the overall development issues in Bihar and de-linking them from the bifurcation issue. In the next section the study gives solutions and puts forward suggestions in dealing with the current scenario.

The study finds that the bifurcation of Bihar, by itself, is not likely to make any major dent into the shocking state of affairs that already persist at all levels in the state. Undivided Bihar had already fallen way behind most other Indian states in terms of almost all relevant indicators of economic development and social progress. The separation of Jharkhand, of course, means an apparent loss of a major source of minerals and some industrial islands. But one finds this loss apparent or largely notional because the mines and heavy industries in Jharkhand have hardly been generating wider gains for the region, let alone for the rest of Bihar in terms of secondary industrialisation, or other progressive socio-economic or cultural linkages. Bihar will, of course, suffer a certain loss of revenue, or an addition to the burgeoning revenue deficit. However, the loss of revenue from the mines and industries could perhaps be more than compensated in terms of a decline in the incidence of systemic corruption.

It also argues that it is wrong to suggest that post-bifurcation Bihar cannot have an industrial future. The mineral-rich Kaimur region and the oil refinery of Barauni will still be in Bihar, and a rich and diversified agriculture can always support a host of agro-based industries. Bihar can surely be home to key industries producing cement, textiles, paper, sugar, chemicals, and many allied products. The central and state governments must come up with a special time-bound package to ensure an early revival of Bihar's sick and closed industries and establishment of employment-generating labour-intensive industries in every district.

Private investment in agriculture has, of course, been growing, but any major breakthrough in agricultural production and productivity needs heavy doses of public investment, especially in key infrastructural areas like irrigation, power, roads, and transportation.

Large parts of Bihar, especially in the northern part of the state, are devastated by recurring floods every year. The Kosi project and other flood-control plans have made very little headway in all these years and now the embankments do not even have the benefit of routine maintenance. The question of flood control and water sharing has never been taken up seriously with Nepal. A serious and committed investment in flood control and water management can bring about a sea change in the economic profile of north Bihar.

The study argues that the importance of greater investment in education and healthcare can just not be overemphasised in Bihar. While schools, colleges, and health centres are routinely converted into paramilitary camps and police pickets, schools go without teachers and teachers go without salaries. While the World Bank and the government are now making some noise about improving literacy rates, the system of higher education has been completely ravaged by years of sheer neglect. An alternative economic vision needs an alternative political discourse. This new politics will also need a new social balance, a new alignment of forces. Not administrative bifurcation, the real challenge for Bihar emanates from the continuing fragmentation of Bihar into decentralised fiefdoms controlled by Bihar's own warlords.

The article concludes on an optimistic note, arguing that Bihar is not a monolithic monument of mystery and misery. It is rather a massive mosaic of live contradictions. The image of Bihar, beamed through the audio-

visual media and even large sections of the print media, is often misleading and one-sided. If brutalisation and backwardness are the hallmarks of the old Bihar, there is also this other Bihar which is passionately yearning for change and progress.

## **2.24 Bihar is in the Eye of the Beholder, Vijay Nambisan, Viking, New Delhi, 2000.**

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### **Key Topics:** *Politics, Conflict and Development*

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This book presents an overview of politics in Bihar in the late 1990s, which is a result of six essays on Bihar published in *The Hindu*, *Sunday Magazine*. It is an account of the sixteen months that the author spent in Bihar, between September 1996 and January 1998, and the subsequent elections in February 1998. It provides lucid and often entertaining insights into the politics of Bihar through these six essays where the author clearly places himself as 'an outsider' looking into the politics of Bihar. His observations on Bihar stem from his experience of living in a small town, M, located about 100 km east of Patna. While this is not strictly a research study, it is an important contribution to the literature on Bihar, especially the politics of Bihar and, thus, finds a place in this compendium.

The first chapter gives us an understanding of the author's impression of Bihar in the first few months of staying in town M. He writes, 'Everything about Bihar fascinated me, it was so different from anything I'd ever experienced: The culture, the politics, what people took for granted and what provoked them to rebellion' (pp. 5). Given the chapter's title, 'Laloo Prasad and the Secret of Democracy', it is evident that Laloo Yadav was one of the most fascinating figures in Bihar politics at the time. Of course, the study is of a time much before talk of development took root in Bihar, and the scenario he describes seems somewhat distant in contemporary discussion of the rapid development of Bihar.

The book paints a picture of abject poverty in the state, 'I knew a doctor at M whose brother found a job on the Andhra–Maharashtra border, and has since refused to return to his roots. Why should I come back to Bihar?' he asked on one of his rare visits home, 'There is no crime where I live, I can get a seat on the bus, and my children can learn English in school.' (pp. 12–13). The author adds in an ironic note, 'Those who know the Andhra–Maharashtra Border will vouch for the fact that it is no land of milk and honey' (pp. 13). The running theme of the first chapter is a speech given by Laloo Yadav at a mela held in the month of Chaith (March–April). The book points out that Laloo Yadav's energetic participation in the fair in the 1990s garnered him at least an additional lakh votes from Dalits in the area. He describes Laloo Yadav's speech, in which, given the seasoned politician that he is, he makes promises of the powerful high caste babus working for the masses and doing their bidding, and of the low castes becoming temple priests. The author is not sure that the audience buys into the Yadav's spiel, but believes that 'unwitting or no, Laloo Prasad has arrived at the very secret heart of democracy, he has succeeded in refining it to its fundamentals as no one before him has' (pp. 22). However, he adds, 'The fact that he is a son of the soil does not mean that he knows what is good for his land, or that he will ensure its welfare' (pp. 22).

In the third essay, the book discusses the high crime rate in the state and the political control of police. It explains that while it is quite bad in states like Uttar Pradesh, it is possibly the worst in Bihar. According to the book, the only reason for the proliferation of such well armed, organised criminal gangs is political patronage. They have become essential for the winning of elections now. Gangs operate even in the villages of 'M' and, when they can be spared from election duty, they are sent to other districts of Bihar. In fact, gangs in 'M' have made a lot of money from extortion and contracts and even 'own the town in one sense or another' (pp. 53). Ironically, they are also legal contractors, mostly for railway projects.

The fourth essay, 'I was kicking someone' refers to the Naxalite movement in Bihar. The essay notes that while they had no presence in the area around 'M', their various 'armies' had begun to antagonise landlords in the peripheral districts in the early 1980s and virtually controlled large areas of Bihar soon. The essay notes that their rule has not turned out to be any more beneficial to the area than the zamindari rule was. The essay documents, 'they rule by terror, too, and kill and kiss just as arbitrarily' (pp. 78), and also mentions the retaliatory 'armies' formed by the upper castes in the state, the best known of which is the Ranvir Sena. The essay points out that 'in many districts it is an open war between the landlords' armies and those of the Naxalites and the MCC. The police come to the scene after the battle is fought, count the dead and clean up' (pp. 79).

Despite the bleak picture that is painted in the remainder of the book, it ends on a somewhat hopeful note, 'Given a leader and a will it can be set India's showpiece in ten years... we create it, foster it, carry it about with us; and when, treated harshly by this creature we fashioned to betray, we condemn it, we have only ourselves to blame. Bihar justifies the attitude you carry to it: Bihar is in the eye of the beholder' (pp. 280).

**2.25 *New Bihar – A Future Prospective [Nav Bihar – Ek Vawishaya Nirupan]*, Jagdish Prasad, Patel Foundation, Tanya Press, Patna, 2000.**

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**Key Topics:** *Division of Bihar, Economic Condition of New Bihar, Possibilities and Challenges of Economic Development.*

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The book focuses on the economic conditions and challenges to the economic development of Bihar after its division into two parts, Jharkhand (with the area of Santhalpargana and Chotanagpur) and Bihar (with the north and middle parts). The main objective of this book is to point out the problems which will emerge during the development of the new Bihar and suggest some measures to improve economic conditions in the state

After the division of Bihar, a number of challenges are going to appear for Bihar, such as financial crisis, poverty, unemployment, etc. The non-tax Income of Bihar is going to be only around Rs 48 crore, which is much less than that of undivided Bihar, and the financial deficit of New Bihar is going to be Rs 2,892 crore, which is also a large amount compared to undivided Bihar.

The economic structure of Bihar will change drastically after the bifurcation of the state and creation of Jharkhand. New Bihar will cover 54.2 per cent land and 74.7 per cent population of undivided Bihar. This implies that there will be an immense increase in population density in the newly formed state of Bihar, which will be about 685 per sq km compared to 497 per sq km for undivided Bihar. The per capita availability of land is going to decrease from 2.01 Hectare in undivided Bihar to 1.45 Hectare in new Bihar. Moreover, the economy of the new state of Bihar will be primarily dependent on agriculture because most industries and mining areas are going to Jharkhand, and only agricultural land with natural and human capital remains with Bihar. Additionally, most agricultural land in the state is affected by floods. Given this context, the economic development of the state is going to be a major challenge for its government. The economic development of the new Bihar is difficult but not impossible because we have the example of Haryana, which has established a new dimension of development as an agriculturist economy. Its natural resources and human capital can become one of the strong points of the state. New Bihar can be developed to promote agriculture and its allied industries with the help of its sufficient productive land, water resources, capital and, most important, its manpower, by adopting a good strategy for development. The development of agriculture will promote the related areas economic activity and will facilitate the creation of improved employment opportunities and incomes for the population.

The book concludes with the statement that the development of the new Bihar is not impossible but it requires good strategy for and direction of development.





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**SECTION 3**

**Agrarian Issues and Rural Development**

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## Overview

Given the importance of agriculture in Bihar, it is natural that there are 28 studies in this section on agriculture and rural development which can be categorised around three broad areas. First, in the debates on agrarian development, and the possible routes therein, there is a clear focus on land reforms (or the lack of it) in Bihar (Kumar, 2005; Choudhary, 2002). Singh (2009) gives an account of the pre and post independence land reform measures in the state. D. N. (2002) revisits the land reform issue in the state and argues that poverty and illiteracy are very much connected to the failure of land reforms. This failure had ramifications on the pattern of agrarian development in the state, which was marked by a process of accumulation among larger cultivators (Wilson, 2002), and was accompanied by caste and class unrest, stemming from exploitation of agricultural labourers placed at the bottom of the caste ladder, and was manifested in polarisation and violent struggles between the landed and the landless. While there has been a breakdown in semi-feudal relations, traditional dominance perpetuates in myriad ways. For instance, Wilson (2002) argues that the adoption of new techniques of agriculture by subsistence cultivators in the 1990s is not an organic development. A large number of cultivators are essentially subsistence producers who have been compelled to adopt high-yielding crops and technologies in order to pay rents and service debts. It has been a matter of compulsion, rather than choice, reinforcing their dependence on larger landowners, ensuring that they remain trapped in a cycle of poverty. At the same time, while adoption of modern inputs as well as irrigation increased total factor productivity in the post-green revolution era, in recent years, Bihar has been confronted with diminishing returns to technological change, which may adversely affect both economic growth and household food security (Singh et al., 2002). This is also corroborated by the decline in the agricultural credit flow in the case of rural credit markets in the 1990s (Singh and Nasir, 2003).

Second, there is a focus on innovations, new developments and techniques in agriculture. Bihar has made a beginning in exploiting its potential in certain areas within agriculture such as vegetable and fruit production, dairy farming, livestock rearing, and pisciculture (Kumar, 2009; Mohan, 2009). The role of agro-industries is crucial in agricultural and rural development (Kumar and Jha, 2003; Singh, 2003). While maize productivity has substantially increased (Badal and Singh, 2001), there is evidence of excessive use of fertilisers in the case of winter maize (Mishra, 2005).

Third, there is an emphasis on the role of the State in agriculture. The Report of the Steering Group on Vision of Agricultural Development in Bihar (2009) maintains that the role of the state is critical for effectively addressing the issues of low productivity and low incomes. The state government has to formulate relevant policies, enhance investment in agriculture, strengthen supportive institutions, ensure supply of the quality inputs, partner with the private sector and civil society institutions, and play an advocacy role along with the Central government and other relevant agencies. At the same time, policy documents on new success stories in agriculture, such as those highlighted by World Bank (2007), share one common feature – a reduced role of the government. Some scholars argue that the development story of Bihar has to be rooted in its particular socioeconomic and institutional context (Prasad and Mishra, 2000). In a comparative study of Bihar and Punjab, Kumar and Sarkar (2010) find that that the problems that Punjab farmer is facing today relates to the question of sustainability, a consequence of intensive cultivation of land in the state. In Bihar, the farmer, on the other hand, is trapped in the web of backward infrastructure, low factor intensity resulting in low productivity, and, consequently, low returns from agriculture. Understanding this phenomenon is crucial for pertinent policy formulation and action. In a similar context for the case of dairy development, Kumar (2010) finds that the players in the milk market are small, informal traders, and he argues that this model of informal trading and processing of milk is a viable model, and state policies that allow informal players to improve their performance would serve the interests of both milk producers and consumers.

The role of agricultural credit and investment in improving agricultural productivity is highlighted by various studies in this section (Singh, 2009; Singh et al., 2003; Saurabh, 2007; Pandit et al., 2007). Access to other inputs and infrastructure, in particular electricity, is crucial to bring a turnaround in the stagnant agricultural sector (Oda and Tsujita, 2010). Quality seeds are also a big concern (Singh et al., 2009). Some specific studies in the Compendium argue that the state has great potential for pisciculture and recommends that institutional support, such as technical assistance and credit linkages, should be provided to fishermen (Mohan, 2009; Singh and Kumar, 2002; Singh et al., 2003; Singh and Singh, 2005).

**3.1 Milk Marketing Chains in Bihar: Implications for Dairy Farmers and Traders, Anjani Kumar, *Agricultural Economics Research Review*, Vol. No. 23 (Conference Number), pp. 469–77, 2010.**

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**Key Topics:** *Dairy Farming, Milk Production and Marketing*

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The article notes that while food marketing is undergoing a paradigm shift in India and the emergence of integrated food supply chains is one of the fast growing market phenomenon, in Bihar, the traditional milk marketing still controls about 85 per cent of the milk marketed. It is argued that the structure and functioning of the traditional/informal milk market is not well understood in Bihar and the criticism about the functioning of traditional/informal milk market is mainly built on perceptions and not backed by empirical evidences. In this background, the present study was undertaken to (i) understand the structure of milk production and marketing in Bihar, (ii) estimate the costs and returns in traditional milk marketing chain, and (iii) identify the drivers for participation in traditional milk processing.

This study is based on the primary data collected in 2007 from 225 milk producers and 75 milk market agents in the traditional milk value chain in Bihar. The data collected was used to estimate the costs and returns for different stakeholders in the milk supply chain, viz., milk producers, traders, and processors. Partial budget analysis was carried out to estimate costs and returns of these stakeholders. A logit model was estimated to identify the factors influencing milk traders' decision to participate in the value addition activities of milk.

The study finds that milk production in Bihar is dominated by small landholders. Landless, marginal and small landholders accounted for 64 per cent of total milk production and 69 per cent of marketed milk in Bihar. Based on herd size, a similar pattern was discernible. Seventy eight per cent of milk production and 67 per cent of marketed milk in Bihar was contributed by the households having one or two milch animals. About 49.3 per cent of the milk was marketed while 50.7 per cent was retained for domestic consumption. The milk supply chain presents a mixed picture in Bihar. Private informal traders turned out to be the biggest buyer of marketed milk (38.4 per cent), closely followed by dairy cooperatives (34.8 per cent) and consumers (21.4 per cent). Formal private processors accounted for only 5.4 per cent of marketed milk.

The analysis of milk marketing in Bihar reveals that (i) the dominance of landless, marginal, and small dairy farmers in milk production is quite strong in Bihar, (ii) despite the presence of modern milk supply chain, the traditional milk marketing supply chain continues dominate, and, most importantly, (iii) there is no distinguishable difference in the choice of marketing chain based on either land size or herd size.

The study finds that dairying appeared to be a profitable venture in the study area. On an average, milk producers selling milk through the traditional milk marketing chain make a profit of Rs 2.98 per litre of milk production. The profit from milk production turned out to be considerably higher in the case of farmers linked with the modern milk supply chain (Rs 4.71 per litre). There is not much difference in the prices paid for milk by traditional and modern milk marketing chains. However, the farmers linked with modern milk supply chain could reduce cost of milk production (per unit) and, thus, were able to raise their profitability because of reduction in transaction cost, adoption of better breeds, and improved management practices. However, the household income generated from dairying in the study area is meagre (Rs 43 to 94 per day) due to lower herd size and, consequently, the lower scale of production. This holds true for farmers, irrespective of their linkage with the milk marketing chains.

It is also found that, on an average, the milk trader in the study area earns a margin of Rs 2.30 per litre. A milk trader makes a profit of Rs 155 per day, which is a little higher than the prevailing wage rate. Milk processing offers sufficient scope for value-addition and income generation for the milk processors. On an average, traditional milk processors earn a margin of about Rs 11 per litre in Bihar. A number of marketing agents interact at various levels in the milk supply chain. The producer's share in consumer rupee is an assessment of the relative bargaining power in the market. The producer's share in consumer rupee varied from 45 to 76 per cent, depending upon the milk marketing chain and the level of processing involved. Producers get a higher share when they sell milk directly to the milk processors. Producer's integration with milk market agents, operating at a higher level of supply chains, ensures a higher share in consumer rupee to the producer. By and large, the age, education, household size, experience, and occupation have been found to be the important drivers for inducing milk market agents' participation in milk processing.

The study concludes that the informal trading and processing is an economically viable proposition and the informal milk market does not appear to be exploitative. The presence of multiple players in the milk market ensures better price for the milk producers. The value addition to milk offers more lucrative options for milk market agents. Further, there has been no evidence that the modern milk supply chains are more attractive than informal traders to large scale producers. The traditional milk markets should be addressed in a constructive manner in view of its continued dominance in milk marketing processing. However, the increased attention to quality and safety by the consumers may work against these markets. The quality gap can be addressed by popularising training and certification programmes with informal milk traders and processors. These policies would allow informal players to improve their performance which would serve the interests of both milk producers and consumers.

### **3.2 Economic Reforms and Small Farmers: Implications for Production Marketing and Employment, Parmod Kumar and Sandip Sarkar, Monograph, Institute for Human Development, 2010.**

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**Key Topics:** *Agriculture and Economic Reforms, Production and Marketing, Small Farms*

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This book looks at the impact of recent agriculture related policy changes on the emerging production, marketing, and earning status of small versus large farmers. Specifically, the study examines: (i) the input-use pattern by small versus large farmers to ascertain the degree of technological updatedness in their production outfits, (ii) the relationships between farm size and intensity of input-use, cropping intensity, yield rates, productivity levels, and net returns per hectare cropped, for different farm size holdings, (iii) the marketing channels, locale of disposing of marketable surpluses, net effective prices received, and compare the proportion of output marketed among small and large farmers, (iv) the degree of on-farm employment diversification, that is, dairy, fishing, forestry, hunting, etc., in addition to crop production reported by marginal/small farmers compared with higher groups of farmers, (v) the income distribution pattern, in respect of on-farm, off-farm, and total household income to ascertain whether the conventional edge of marginal/small farmers in respect of off-farm employment and earnings is getting lost, especially in areas which are opening up to international production and trade regimes.

Given the objectives of the study, a detailed analysis has been undertaken based on both secondary and primary data sources. For the secondary data, the study used various government publications. To take an insight into changes taking place at the grassroots level, a field survey was done with village and households as the primary units of investigation. The household database of the present survey was based on a sample survey conducted in 12 villages in Bihar and 16 villages in Punjab. The entire survey was conducted in two rounds, in the years 2003-04. A total number of 426 households in Punjab and 430 households in Bihar were selected following the stratified random sampling method. Prior to the survey, a listing of all the households in the selected villages was undertaken along with a one page census questionnaire to get acquainted with the basic household characteristics, land size, broad economic activity undertaken by households, particularly in agricultural and allied activities and other agricultural and livestock assets. In all, a total number of 3,446 households in Punjab and 3,043 households in Bihar were covered in the census to seek information on the broad categories. The study was funded by the Indian Council of Agricultural Research (ICAR) and was carried out at the Institute of Human Development, New Delhi.

The study finds that the pattern of land distribution among the selected cultivators presented the broad trends prevailing in these two states. The average size of holdings among the selected households was 6.7 acres in Punjab and that was much higher compared to 3.4 acres in Bihar. On the diversification front, wheat and rice dominated the cropping pattern in both the states. Comparing productivity in two states, the average value of output per acre in Punjab was more than twice that of Bihar. However, the difference in productivity between the two states was much less in the case of marginal farmers as compared to large farmers. Across farm size, value of output per acre had a positive association in Punjab while the trends were completely opposite in the case of Bihar. In Punjab, due to mechanisation, economies of scale in large farming have turned the productivity advantage in favour of large farmers. The Bihar agriculture, it seems, is still caught in the web of subsistence farming with a very high percentage of holdings being marginal and small. Therefore, mechanisation and commercialisation of agriculture in the state is still at a primitive stage, tilting the advantage of input intensity in the favour of small farmers and, thereby, higher productivity for them.

The study notes that cost statistics revealed very interesting results for Punjab and Bihar. The components of modern technology namely, fertiliser, pesticides, irrigation, and tractor, together accounted for around 21.8 per cent of total cost of cultivation in Bihar, whereas, their contribution was 52.2 per cent in the case of Punjab. Interpreting the results of production functions in the two states, it was observed that the coefficient of operated area was significant, with opposite signs in the two states. Its positive sign in Punjab indicated higher productivity for large farmers against the negative sign in Bihar emphasising higher efficiency of small farmers in terms of higher land productivity. The elasticity of mechanisation variable in Bihar was almost half of that of Punjab, indicating lower productivity of mechanical instruments in Bihar because of the predominance of small farming in the state. On the other hand, the elasticity of human labour in Bihar was almost one and a half times higher than in Punjab indicating higher productivity for manual agriculture in that state. Punjab farmers were highly commercialised producing a very high proportion, more than 4/5th of their output for the market. Bihar farmers, on the other hand, were subsistence farmers who produced more than half of their output for self-consumption. In Punjab, marginal farmers with 75 per cent market surplus competed well with large farmers who contributed 84 per cent of their output to the market. In Bihar, on the other hand, contribution of marginal farmers was only 31 per cent, whereas, large farmers contributed around 53 per cent of their output to the market. Price analysis revealed that realised prices of all crops, except vegetables, were higher in Punjab compared to Bihar. The realised price for wheat in Punjab was almost equal to the minimum support price (MSP) during the survey year, while paddy price was above the MSP price. On the other hand, the realised prices of wheat and paddy in Bihar were much lower than the MSP prices announced by the government for these two crops.

While comparing farm and non-farm earnings, the study observes that the farm income was the chief source of earnings in Punjab, which contributed around 76 per cent of the total income for the selected households. Among the non-agricultural employment activities, government/semi-government jobs, casual labour, self-employment, and remittances from outside were the other major source of household earnings. Bihar presents a completely different picture in terms of farm and non-farm earnings. The share of farm income in total household income was only 36 per cent. The share of livestock activities was also very small, only 4 per cent, whereas, in Punjab it was above 8 per cent. Thus, although farming (and allied activities) in Bihar, were a full time occupation for the cultivators, they were not able to eke out even half of their earnings from it, consequently, forcing them to largely depend on non-farming activities to make both ends meet. Jobs in the government or private sectors, self-employment, old age pension, casual earnings, and remittances were the major off-farm earning activities in Bihar. Across farm size categories, per household farm income was not as diverse as it was in Punjab. Comparing gross household income in Punjab and Bihar, the statistics revealed that household income in Punjab stood at more than twice that of Bihar. Nonetheless, the difference was much higher, more than 4 times in the case of farm business income. Moreover, the difference in total household income between the two states was much lower in the lower strata of the operated area as compared to the higher strata, among the selected households in the two states. Per capita income in Punjab was less than twice that of Bihar in the lower strata and more than twice in the upper strata of operational holdings.

The study notes that respondents identified the major problems as health, shortage of basic facilities, stagnating land productivity and poverty, or lack of money, especially during the slack season due to lack of supplemental earnings. Lack of employment opportunities for the educated youth and lack of other supplementary employment opportunities in the peripheral areas of the respondents in both the states were the other problems. A significant number of respondents in Punjab and Bihar wanted to opt out of farming and go for service, business, or trading activities, if such an eventuality did arise, for a solution to their key problems. Noticeably, very few respondents, only 10 per cent viewed government as a messiah for their betterment. On the question whether the respondents' income had gone up or down during the last 10 year period since the globalisation process started in the agriculture sector, around 41 per cent households in Punjab and 58 per cent in Bihar were of the opinion that their income had gone up during this period. Around 25 per cent respondents in Punjab and 18 per cent in Bihar felt the opposite while 34 per cent in Punjab and 24 per cent in Bihar were of the opinion that there was no significant difference in their income during the last 10 years. On the other hand, above 30 per cent marginal and landless farmers in Punjab and around 25 per cent in Bihar were disappointed by the policies of the last 10 years, which led to a fall in their incomes during this period. Almost all respondents viewed some marginal increase in the access to agricultural inputs during the last 10 years in both the states. In view of selected agriculturalists, the major hurdles faced by them in their agriculture operations were the lack of quality inputs, improper price policy in the agriculture sector, and the lack of agricultural

infrastructure. Further, to a question on what help they desired from the government, 58 per cent respondents in Bihar sought an improvement in the physical infrastructure in their surrounding areas. In Punjab, a majority of households wanted better access to agriculture inputs at cheaper prices.

The study argues that policy implications include that understanding the current status of globalisation is necessary for setting a course for the future. However, each region (or state) differs in its economic setup and it is not possible to have a single set of policies to deal with all the states or regions. As seen in the present case, whereas agriculture in Punjab set the course of commercialisation way behind in the early 1970s, with the beginning of green revolution, and the state agriculture is now prospecting for a new phase of corporatisation of agriculture, leading to the ascendancy of processing and value addition of farm products. On the other hand, agriculture in Bihar still lags behind with small farm orientation led by overwhelming subsistence concerns. The problems that the Punjab farmer is facing today relates to the question of sustainability, a consequence of intensive cultivation of land in the state. The Bihar farmer, on the other hand, is trapped in the web of backward infrastructure and low factor intensity, resulting in low productivity and, consequently, low returns from agriculture. Therefore, the study concludes that different policy actions are de rigeur to bring the farmers out of their dilemmas, especially the small and marginal ones who are at the ebb of deprivation.

### **3.3 The Determinants of Rural Electrification in Bihar, India, Hisaya Oda and Yuko Tsujita, *IDE Discussion Paper No. 254*, pp. 1–20, September, 2010.**

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#### **Key Topics:** *Rural Electrification*

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This paper explores intra-state disparity in access to electricity and examines the determinants of electrification at the village level in Bihar. The study is based on a village-level survey in 80 villages in 2008–09, covering a three-tier PRI system of district, block, and village. Five districts were selected, one each from the five groupings of districts in accordance with their rankings for the livelihood potential index. This index is based on the availability of land per rural household, cropping intensity, agriculture productivity, bovine per thousand capita, and the percentage of urban population. Four blocks were randomly selected in each district and then four *gram panchayats* (GPs) in each block. Finally, the study selected the revenue village during a field visit after reaching the GP. One revenue village was selected in each GP based on the caste composition and population size that best represented the particular GP. Interviews were mainly with *mukhiyas* and/or village leaders.

The study adopted the government's old definition of electrification, i.e., a village is regarded as electrified if any household is electrified. It found that 48 out of the 80 villages (60 per cent) were electrified. This figure roughly coincides with the latest official figure for village electrification (61.3 per cent). More developed districts were likely to be electrified. All 16 villages (100 per cent) in Rohtas district had electricity compared to only 5 villages (41.7 per cent) in Kishanganj district.

The study found that the pace of electrification picked up noticeably after 2005, i.e., 41.7 per cent of villages were electrified after that year. In the survey, seven villages pointed out that access to electricity was one of the three most important reasons why the villages were relatively better off than ten years ago. All these villages were electrified after 2007. The recent rapid expansion of village electrification can be explained by the accelerated efforts of the central government's Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) launched in April 2005.

The study notes that during the 1990s and the first half of 2000s, Bihar's electrification process had been slow as the state government of that time had put insufficient priority on development. The growth rate of total energy availability in 1990–91 to 2000–01 (62.9 per cent) was less than that in 1980–81 to 1990–91 (78.0 per cent). The length of transmission and distribution (T and D) lines in the state in 1990–91 was 175,270 Ckt Km; it was still only 177,567 Ckt. Km in 2000–01 when the Bihar was bifurcated into two states.

According to the study, except for two villages in Rohtas district, only a limited number of households in the surveyed villages benefitted from electricity. Only a quarter of the villages were able to distribute electricity to more than half of the households and, on average, the proportion of electrified households was only 31.9 per cent. The quality of electricity in terms of available hours also varied from village to village. On an average, it was only 6.3



hours in good months and 1.3 hours in bad ones. Kishanganj district was the lowest in terms of the proportion of electrified villages and households among all the surveyed districts. However, the hours with available electricity was the highest of all the districts. There was only one village where round the clock electricity was available in good months and that was located in Kishanganj district. At the same time, the proportion of electrified households in that particular village remained at only 20 per cent, even though the village had been electrified back in the year 1990. One of the two villages where all households had access to electricity had been electrified in 1966, while the other was in 2008. However, both villages could enjoy only three hours a day of electric power, even in the best months.

In 46 of the 48 electrified villages, kerosene was considered the primary source of lighting, followed by electricity in 40 villages. This suggests that electricity becomes a primary source of lighting once it is available to a certain proportion of households and for a reasonable number of hours.

The study found that only four out of 80 government primary or middle schools in the surveyed villages were electrified. No access to electricity adversely affects children's learning at school, such as dark classrooms, less concentration on learning due to the lack of air-conditioning facility, no provision of electric gadgets for enhancing understanding of studies and so on.

The econometric analyses demonstrated that the location of a village is the most important determinant of electricity connection and concluded that villages in remote areas tend to have less access to electricity. This is because electricity is supplied through a grid to the village and, as a result, villages closer to the grid are more easily connected for technical and financial reasons. Another important finding is that due to the rapid progress of rural electrification under the RGGVY and the tendency to connect the villages which are easily accessible, the collective bargain power of the village, which used to significantly affect the process of electrification, has lost its influence. This implies a seriously adverse effect on remote villages. For no matter how hard the villagers may demand electrification of their village through collective action, they are unlikely to be heeded.

The study argues that one of the important implications for Bihar's development is that rural electrification would trigger the growth of state's stagnated agriculture by reducing the cost of irrigation and improving agriculture related facilities, notably processing and storage. The study points out that unless the existing pattern of the rapid electrification of villages near to urban centres can be modified, public investment in rural electrification with social objectives will paradoxically reinforce the existing socioeconomic disparity within the state, districts, and villages.

### **3.4 *Towards Accelerated Agricultural Development in Bihar, Report of the Steering Group on Vision of Agriculture Development in Bihar, Government of Bihar, Patna, 2009.***

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#### **Key Topics:** *Vision of Agricultural Development, Accelerated Agricultural Development*

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The report examines the growth stimulating and growth inhibiting factors in the agricultural sector and prepares a roadmap to ensure efficient, vibrant, and ecologically sustainable agriculture within a given time frame.

The task of reviving Bihar's economy and ensuring the welfare of its people hinges on agricultural development. The state is richly endowed with fertile soil and ample water resources. It also has a moderate climate that facilitates optimal crop production providing enough scope for accelerated and sustainable agricultural growth. In this context, the Steering Group has assessed the performance and reviewed the main challenges being faced by the agricultural sector in the state.

The study points out that though economic growth started decelerating in the state since the late 1980s, agricultural growth remained fairly stable. Between 1993 and 2003, the all-India agricultural GDP grew at 2.2 per cent per year, whereas for Bihar it was 2.7 per cent. However, because of the overwhelming dependence of the state's workforce on agriculture, which was growing at the rate of 2.1 per cent per year, the increase in per capita income of the agricultural workers was only marginal.

It is revealed that though agriculture contributes nearly 33 per cent to the state's GDP, its share in the workforce is 74 per cent. As employment opportunities in the non-farm sector in the rural areas have not increased, the asymmetry between the SGDP from agriculture and the workforce dependent on it has widened over a period of time.

In recent years, some major structural changes have been observed within the agriculture sector of the state. Though, the share of the crop sub-sector in the total value of agricultural output declined, there is a steep increase in the share of the livestock and to some extent in the fisheries sector in the state.

The study finds that the average per worker income in agriculture in Bihar is half of the average income of the agricultural worker in India. The main challenge, therefore, is to reverse the declining trend in productivity and to boost the growth momentum in some of the sub-sectors, primarily dairying. The total demand for cereals, pulses, and milk products in Bihar is projected to grow up to 22.5, 1.4, and 5.5 million tons, respectively, by 2020-21. In order to meet the projected demand, domestic production needs to be increased every year. However, the study points out that the situation in the state is not conducive for achieving the targeted increase in the production of major staples and concerted efforts are required to achieve production levels that are as close to targets as possible.

The other challenge faced by Bihar's agriculture sector is the rising cost of cultivation and, consequently, the falling income of the producers. The marginal farmers are being hit especially hard because of their inability to access inputs at reasonable prices.

The study has proposed that for growth in the incomes of agricultural producers, in the first five years, productivity in agriculture should reach the average attained by the country, and during the next five years, it should be equal to the best among the states of the country. The strategy proposed by the Group is based on enhancing the income and promoting the welfare of agricultural producers in the state.

However, many of the ills afflicting the agriculture sector in Bihar can be cured primarily by addressing the issues concerning the other sectors of the economy. These include strengthening the production base of agriculture, development of land and water resources, ensuring fair and just agrarian relations, ensuring value addition in crop production, strengthening the supplementary enterprises of dairy, fishery, etc., strengthening agricultural research and extension systems, reforming agricultural credit and marketing systems, instituting adequate risk mitigation measures, and ensuring that the government plays a more constructive role, both at the State and Central levels.

The study has proposed that for promotion of agro-forestry, developing miscellaneous trees and groves as community forests could be the best way. Expansion of non-agricultural activity should be undertaken on barren and uncultivable land. Industries can be offered incentives and tax rebates to set up new units on such lands. Cultivable wasteland should be developed as pastures and for grazing, and fallow land should be made cultivable by increasing cropping intensity. Another issue that needs to be addressed is arresting the deterioration of land quality in the state.

The strategy proposed for the water sector includes a crash programme of repairs and maintenance of canals and water bodies, extension of management of water resources by the users to cover at least half of the irrigated area by 2020, promotion of greater coordination between agricultural scientists and irrigation authorities, and implementation of controlled irrigation through drip irrigation and sprinkler irrigation in water-scarce regions.

With respect to flood control, the study proposes installing reliable early warning systems with the help of ISRO, constructing reservoirs with large storage in Nepal, implementing a properly planned watershed programme integrating farm ponds, village ponds and check dams, mobilising villagers to remove silt from water ponds and check dams, and for strengthening embankments, and enacting a Flood Code on the lines of the Drought Code to give clear directions before, during, and after the floods, and in addition, developing and popularising flood tolerant rice varieties.

For dealing with the problem of droughts, the study recommends harvesting of rainwater and recharging of wells, encouraging cultivation of low water using, drought resistant crops and crop varieties, promoting subsidiary occupations like dairy, poultry, piggery, and introducing a higher productivity fodder crop like hybrid Napier and the practice of sowing tree crops in the peripheral areas.

Small and marginal farmers, comprising 93 per cent of the state's agricultural community, dominate Bihar's agriculture. More land in the state is cultivated in these holding groups, than any other. In this context, the study suggests legalising tenancy, within the existing land ceiling provisions, purchasing of land from landholders by the State Land Development and Finance Corporation and selling it to the small and marginal farmers at fair prices, encouraging credit institutions to advance loans to marginal and small farmers, promoting horticulture and vegetable growing, particularly on small and marginal farms, promoting contract farming, and ensuring transparent and fair agreements between contracting parties, encouraging the collective organisation of farmers with similar economic interests, and drawing a road map for consolidation of holdings.

With respect to the dairy sector, emphasis should be on identifying and propagating superior local breeds, evolving a proper feed supply programme taking into account nutrient deficiency in each region, strengthening veterinary services by training and involving the rural youth, organising dairy producers in reformed cooperatives, new generation cooperatives or producers' companies, encouraging the apex organisation to opt for high value milk products, and establishing a close liaison with the National Dairy Development Board.

The study reveals that the obstacles encountered in the fisheries sector can be overcome by enforcing strategic intervention for the development of aqua culture to meet the demand and generate surpluses for the fishermen, renovation and deepening of ponds, determining and adhering to a proper stocking rate and scientific fish production, timely supply of quality fish seed, construction of at least one fish seed hatchery in each district, ensuring the availability of credit and technical support for scientific storage, insurance of fish production, organisation of cooperatives of fish farmers, training farmers to undertake scientific fishery, and promotion of paddy-fish combination in areas practising flooded paddy.

The study finds that poultry farming is pursued only in small units in the unorganised sector. For the development of this sector, the study proposes the introduction of superior breeds of birds, ensuring adequate feed production capacity in the state, encouraging poultry keeping households to organise themselves in groups, and to organise their marketing cooperatives; and establishing links between small poultry keepers and organised poultry marketing firms, both within and outside the state.

The Steering Group maintains that growth in small farm agriculture critically depends on the support extended by the institutions of research, extension, credit and marketing. The investment in agricultural research and education in the state is only 0.2 per cent of the state agricultural GDP. There is very little coordination between the agricultural universities and the ICAR institutions, and Bihar has not been able to take full advantage of the various schemes offered by ICAR.

The weakest link in agriculture in Bihar is extension. The three main public players for agricultural technology dissemination in Bihar are *Krishi Vigyan Kendras* (KVKs), government departments, and the Agricultural Technology Management Agency (ATMA). The study recommends for the appointment of and proper training for technical and non-technical personnel on a priority basis, and creation of necessary infrastructure.

The National Sample Survey (NSS) has shown that only 33 per cent of the rural households have access to credit in Bihar, as against a national average of 48.6 per cent. In order to make credit a powerful aid for agricultural development, the study suggests that credit dispersal for agriculture has to increase at the rate of 30 per cent per year, inclusive banking targets given by the Reserve Bank of India have to be fulfilled in all districts by the next five years, and at least half the cultivators should be members of the reformed cooperatives or bank-linked Self-help Groups (SHGs). The study states that in Bihar, co-operatives provided 50 per cent of total agricultural credit in the early 1980s, which declined to only 10 per cent in 2007. Serious efforts, thus, have to be made to strengthen the cooperative credit structure.

The study points out that the prevailing system of marketing of agricultural products is not adequate and efficient. Farmers are not able to sell their surplus produce remuneratively and there are widespread distress sales, particularly by marginal and small farm households. This necessitates encouraging the organisation of genuine cooperative marketing societies, strengthening of the marketing infrastructure by increasing the number of marketplaces, upgrading the facilities at the designated marketplaces, constructing rural godowns and cold storages, and making arrangements with the credit institutions to honour warehouse receipts and pledges; removal of policy hurdles by constantly reviewing legislation and government orders to meet exigencies, and launching of an awareness campaign for examining standards and sorting out products according to well established grades.

The agricultural commodities markets in Bihar are not integrated with major markets in other parts of the country. This is evident from the fact that the farm harvest prices of maize and paddy in major markets in Bihar were found to be lower than the MSP, which was the ruling price in several other markets. Efforts should be made to improve the situation by reducing the hegemony of traders and developing countervailing market power. The state should bring about market regulations through cooperative marketing agencies and public agencies, and by providing an environment conducive for contract farming. Two other instruments that can be used to reduce uncertainty in agriculture produce and to provide a measure of stability are MSP and forward markets.

According to the study, crop insurance in Bihar has helped only to a limited extent. The coverage in terms of area, number of farmers, and value of agricultural output is very small. Payment of indemnity based on the area approach, leaves out the affected farmers outside the compensated area and most of the schemes are subsidy-driven. This calls for renewed efforts by the government and insurance authorities to improve the viability of the insurance schemes over time.

The study states that as the role of the state is critical for effectively addressing the issues of low productivity and low incomes, the state government has to formulate relevant policies, enhance investment in agriculture, strengthen supportive institutions, ensure supply of the quality inputs, partner with the private sector and civil society institutions, and play an advocacy role along with the Central government and other relevant agencies. Systematic efforts can be made to dovetail NREGA activities also. In the field of research, strengthening the Rajendra Agricultural University should receive the highest priority.

The state government should ensure the supply of seeds of high yielding varieties of crops for food grain, which are so important for food security. The Bihar *Rajya Beej Nigam* needs to be strengthened to process and market seeds produced by the farmers. There is also a need for the effective enforcement of seed laws and for an elaborate arrangement for seed testing and certification.

The state must ensure the strengthening of soil and fertiliser testing laboratories. Alternatives to chemical fertilisers and balanced use of nutrients will have to be vigorously promoted by the state government. Organic cultivation in niche areas and in niche products should be promoted by the state.

The state government should encourage the adoption of alternative methods of pest control like Integrated Pest Management (IPM) and Non-Chemical Pesticide Management (NPM). Pesticide laws should be enforced to keep a check on the quality of pesticides. The use of bio-pesticide and integrated pest management should be encouraged and promoted. With respect to irrigation, the study points out that the government needs to support farmers to economise the use of irrigation water by encouraging the use of modern methods of micro-irrigation. Electrification of private tube wells on a massive scale is needed for reducing the cost of cultivation. Ancient systems of irrigation and traditional water bodies, viz., *aahar*, *pyne*, and ponds should be renovated as a part of the programme for soil and water conservation. The organisation and functioning of the state department of agriculture needs to be reviewed to ensure that it has the capacity to fulfil the tasks assigned to it.

*Panchayati Raj* Institutions (PRIs), which have a great stake in agricultural development, should be encouraged and equipped to shoulder increasing responsibilities. Opportunities for public-private partnership should be exploited to the maximum. A partnership should be forged with other stakeholders including non-government organisations (NGOs), agri-clinics, input supplying agencies, and cooperatives as well as the media. The state should encourage NGOs to play an innovative role while also acting as 'watchdogs'. The role of women in agriculture should be recognised and rewarded.

The study recommends that the state government should establish a rapport with the central government and enlist its support for rapid agricultural development in the state. The central government should take into consideration; enhancing allocation under the macro management mode to Rs 100 crore per annum, from the present level of Rs 20-25 crore per annum. Sanction of work plan for centrally sponsored schemes should be done for five years and the present system of the annual sanction process should be done away with. The central government should consider reducing the number of centrally sponsored schemes by merging them without losing focus, revision of guidelines for the macro management mode of agriculture and addition of new components, sanctioning of all new schemes for the next financial year so that the necessary budget provisions can be made in time, facilitating the supply of seeds of new crop varieties, such as the Pusa Gold variety of wheat, and the supply of new farm implements like the Happy Seeder; establishing a Central level research institute for dry land and rain-fed farming in the southern part of the state, establishing a Central Agricultural University in South Bihar, helping the Rajendra Agricultural University establish agricultural/horticultural/veterinary colleges and enhancing allocation for research, ensuring procurement at Minimum Support Price (MSP), creating storage infrastructure and cold chains through the Food Corporation of India (FCI) and Central Warehousing Corporation (CWC), and undertaking a massive programme of flood control and water management in North Bihar.

**3.5 Economics of Fish Farming in Flood Prone Areas of Bihar with Special Reference to Kosi River System, Ugra Mohan Jha, Anga Institute of Research Planning and Action, Bhagalpur, 2009.**

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**Key Topics:** *Floods, Fish Farming*

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The main objectives of the study were to assess the prospects of fisheries development in water-logged areas and the efficacy of reservoirs for fisheries development and to evaluate reorganising, improving, and strengthening the infrastructural components of training and extension programmes, so as to improve the socioeconomic status of fishermen and providing part time and full time employment to the rural people residing in the region of the flood prone areas in Bihar. The universe of the study was the Kosi River Zone of Bihar. The study was undertaken in two flood affected zones. The first subzone of the Kosi River Basin is the north-western region of the basin and the second sub-zone is the north-eastern region of the Kosi basin.

A multi-stage stratified random sampling design has been used for the bottom unit of the sample. At the first stage, three districts from each of the zones were selected on the basis of (a) larger area inundated under flood water for longer period, and (b) extent of larger crop damage and larger number of ponds, tanks, rivulets, ditches, dry catchment area of dams, canals, etc., that are filled up with water. Therefore, six districts, namely, Madhubani, Darbhanga, Samastipur, Khagaria, Supaul, and Purnia were selected for the intensive study. At the second stage, two blocks from each of the selected districts were selected on the same basis as stated above. At the third stage, a reconnaissance survey on the basis of Rapid Rural Appraisal Method was made with a view to enlisting the fish farmers and non-fish farmers engaged in cultivation in the area. At the fourth stage of sampling, 40 respondents from each block, comprising 20 fishermen and 20 non-fishermen, were selected from all categories, that is, marginal, small, medium, and large fish farming and three categories of other crop growing farmers, on the basis of high damage, medium damage, and low damage.

The study found that north Bihar occupies a very important role for fish production. The entire area of north Bihar is prone to floods. The intensity of floods varies from time to time and from year to year. Culture fisheries are of great importance and necessity for the people of North Bihar. The inhabitants of the flood prone areas of north Bihar are poor and need nutritious food to ward off malnutrition. Further, they need an increase in their incomes which can come from fish farming also. These are great impediments in development of fisheries in this area. There is a need for these to be removed and floods, which are a source of devastation and ruin, can be converted into a source of blessing and prosperity through the adoption of fish farming on a large scale.

The Kosi river system is a part of the river system of the entire state. The network of the Kosi river has immense potential. Several small rivers like Kamla, Bagmati, Burhi Gandak, Tilinga, etc., flow in the area. Thus, the development of fisheries in flood prone areas of north Bihar is not only a necessity but a desirable good for the well-wishers of the state of Bihar.

The study found that 42.92 per cent of the sampled respondents were illiterate and only 19.79 per cent of the respondents have education up to secondary level. Only 6.25 per cent had intermediate level of education. This state of affairs is alarming. The level of education of the fishermen must be improved. The findings indicate that only one sampled respondent out of 480 had technical education. It indicated that 479 respondents were carrying on fishing operations without any technical knowledge. Thus, it is a sorry state of affairs because a highly technical operation like fish farming is being carried without any authentic knowledge.

It is also observed that all sections of social groups are engaged in fish farming. The Scheduled Castes, Scheduled Tribes, OBCs, and the general castes, all participate in fish farming. But it is the OBCs who play a dominant role as revealed by their number. Out of 480 respondents, 375 belonged to this OBC group.

The main source of fish production is the river (37.08 per cent) followed by ponds (22.70 per cent). The lakes, canals, and other sources are 12.08, 13.54, and 14.58 percent, respectively. Thus, it is observed that all sources of fish production are available in the study area. The respondents used own sources of production and also other sources. Production from rivers or canals constituted 40 per cent followed by ponds and lakes (32.91 per cent) and other (27.08 per cent). Only 40.62 per cent of the respondents got water from different sources and the rest could not secure water for fish production. Respondents incurred the entire cost of production themselves. The cost included rent of land, digging cost, and others. So far as the operational cost is concerned, it has been found that labour cost

(6.45 per cent) and lime cost (6.25 per cent) constitute the major items. All other items of operational cost veer round 5 per cent.

The study recommends that fish farmers need technical assistance which is provided by government agencies, cooperatives, local retailers, and technical experts. As far as training in fish farming is concerned, only 43.33 per cent of the respondents informed that they were trained, but 56.67 per cent were not trained. 20.41 per cent of respondents pointed out that pollution of water bodies was the main problem, and 22.50 per cent of them opined that anthropogenic disturbances were the main problems in fish farming. The opinion of 24.16 per cent was that lack of modern equipment was the main problem. Only 15.41 per cent held the view that lack of training facilities was the main hurdle. Hence, it is clear that different views and opinions about the problems facing fish farming were expressed by the respondents.

The study highlights that prospects of fisheries development in the study area are tremendous. All the requirements, factors, features, and the elements for the development of fish farming are observed in abundance. The area which is full of rivers is suitable for catch fishing. There are great prospects because of the existence of numerous water bodies like ditches, ponds, tanks, *mauns*, *chaurs*, etc., which hold water and retain it when the floods recede. There are two requirements of fish farming, availability of water and the retraction of water in tanks, which are abundantly available in the study area. These are gifts of nature. They provide and constitute the foundation of fish farming. In order to develop it, human action is needed and they can be provided by individuals, by any society, by any organisation, or by the government. Thus, it is clear that full possibilities and potentialities exist in the area for the development of fisheries.

### **3.6 Production, Marketing and Export Potential of Fruits and Vegetables in Bihar, Sanjeev Kumar, Dr B. R. Ambedkar University, Agra, 2009.**

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#### **Key Topics:** *Fruits and Vegetables, Production and Marketing of Fruits, Export Potential of Fruits*

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The scenario related to export potentiality and export performance of fruits and vegetables in Bihar is almost identical to that at the all India level. In India, the production of fruits and vegetables is high and export performance of these items is somewhat meagre but impressive. A similar trend is also noticed in Bihar agriculture that in spite of the production base of fruits and vegetables, export of these commodities in considerable quantities is yet to be explored.

The present study is based on both primary and secondary data. Primary data was carried out with respect to Muzaffarpur and Vaishali districts of Bihar, which were purposively selected. A total of 120 fruit and vegetable growers were randomly selected from six villages of the sample area under study. The secondary data were obtained from different sources, viz., Directorate of Statistics and Evaluation (Government of Bihar), Directorate of Horticulture (Government of Bihar), National Horticulture Board (NHB), Patna, Agricultural and Processed Food Export Development Authority (APEDA), other government agencies like National Agricultural Cooperative Marketing Federation (NAFED) and NHB, and different websites. The collected data was summarised and analysed by appropriate statistical tools.

The Cropping pattern of project area of Muzaffarpur and Vaishali districts is dominated by fruits and vegetables which cover about 6.8 per cent and 10.12 per cent of the respective cropped area of the district. The crop diversification was worked out by using two measures of crop diversification, namely, the Herfindhal index and the Ogive index. Herfindhal index showed that crop diversification was higher in Vaishali district than in Muzaffarpur district. Among different size of farms, marginal farms were more diversified in Muzaffarpur district, whereas, small farms were least diversified. Ogive index, like Herfindhal index, is an inverse measure of crop diversification. It uses the deviations of actual share from equal share of existing alternatives. Higher the value of Ogive index, lower is the diversification and more is the concentration. According to this measure, crop production in Vaishali district was more diversified than in Muzaffarpur district. Like the Herfindhal index, crop production on the marginal farm was more diversified in Vaishali district. On the other hand, crop production on the medium farm was most diversified in Vaishali district and large farm was least diversified, as per Ogive index. On the basis of both the crop diversification indices, crop production was more diversified in Vaishali district than Muzaffarpur district. It was mainly due to large number of vegetables produced in different seasons in Vaishali district.

The study found that quantitative potentiality was in direct relation with the surplus of supply over demand available for export. The empirical exercise was worked out to determine the surplus involved analysis, both from the side of supply and demand. The surplus of production over consumption of fruits and vegetables has been considered as the export potential.

The study revealed that all major mango producing districts of Bihar, identified for the study, showed surplus balance except Saran (-1.17 thousand tonnes) ranging from 56.3 thousand tonnes to 687 tonnes. Darbhanga occupied first rank with respect to export potential, while Katihar had the lowest rank. Volume of export potential ranged from 11.3 thousand tonnes to 0.138 thousand tonnes. The study area comprising Vaishali and Muzaffarpur districts were placed at third and fourth rank, respectively, in terms of surplus balance as well as export potential. Vaishali showed 6.6 thousand tonnes export potential while Muzaffarpur 6.4 thousand tonnes.

In case of *litchi*, Muzaffarpur, well known in the country for quality litchi production, turned out with the maximum surplus balance of 26.95 thousand tonnes with higher export potential, 5.389 thousand tonnes, whereas, Sitamarhi was placed as a marginal district with the lowest surplus (310 tonnes). Vaishali had the second position in surplus balance (9.9 thousand tonnes) and export potential (1.97 thousand tonnes). It is worth pointing out that out of 15 major *litchi* producing districts of Bihar, only 4 were surplus with reference to the base year 2005-06. Districts like East Champaran, West Champaran, and Katihar had an adequate gross production but the high load of their population and consumption caused a negative surplus. On the contrary, gross production of Sheohar district was not high as compared to districts like East Champaran, West Champaran and Katihar, but the balance and export potential showed 2.8 thousand tonnes and 561.3 tonnes, respectively.

So far as the position of surplus/deficit balances and the export potential of guava available in major producing districts of Bihar was concerned, Rohtas had the maximum surplus balance (6.5 thousand tonnes) and export potential (1.3 thousand tonnes) and Bhojpur district had the minimum surplus balance (1.1 thousand tonnes) and export potential (221.8 tonnes). The study area, Muzaffarpur and Vaishali districts, were also one of the deficit balance districts despite very high gross production of this fruit.

In the case of bananas, out of 15 major banana producing districts of Bihar, 7 districts were in deficit balance despite high gross production. Muzaffarpur, followed by Vaishali, emerged as the district having the higher surplus balance (100.1 and 54.4 thousand tonnes, respectively) and also higher export potential (20.19 and 10.88 thousand tonnes) of bananas while Khagaria had the lowest surplus balance (4.46 thousand tonnes) and export potential (892.6 thousand tonnes).

In case of brinjal, all the major brinjal producing districts identified for the study showed surplus balance except Patna district (-899.7 tonnes) ranging from 88.9 thousand tonnes to 1.15 thousand tonnes. Nalanda occupied the first rank in both surplus balance (88.85 thousand tonnes) and export potential (17.77 thousand tonnes). Vaishali and Muzaffarpur districts, the project area under study, were placed on the second and third rank in both surplus balance (30.55 and 20.14 thousand tonnes, respectively) and export potential (6.11 and 4.02 thousand tonnes, respectively).

Bihar being the second largest producer of cauliflower in the country had 15 major cauliflower producing districts. Out of these 15 districts, 14 districts turned out to be surplus balance districts with Vaishali followed by Darbhanga and Muzaffarpur having the maximum balance surplus (43.01, 30.46 and 23.19 thousand tonnes, respectively) and export potential (18.6, 6.09 and 4.64 thousand tonnes, respectively) and Gaya, which had the minimum surplus balance (427.8 tonnes) and export potential (85.6 tonnes).

In the case of cabbage, all the 15 major producing districts turned out to be surplus balance districts. Vaishali district followed by Muzaffarpur district observed the higher surplus balance (19.59 and 19.30 thousand tonnes, respectively) and export potential (3.91 and 3.86 thousand tonnes, respectively) districts in Bihar. Purnea district had the minimum surplus balance (2.75 thousand tonnes) and exportable quantity (551.5 tonnes).

Bihar being the second largest producer of okra in the country had 15 major okra growing districts. Among the 15 districts, 12 districts emerged as surplus balance districts. Vaishali occupied the first rank with respect to surplus balance (22.49 thousand tonnes) and export potential (4.5 thousand tonnes), while Patna registered the lowest rank in both surplus balance (667.3 tonnes) and export potential (121.5 tonnes). Muzaffarpur occupied fourth position in terms of gross production and net availability in Bihar, but registered a low export potential (860 tonnes) due to high population.

All the major potato producing districts of Bihar were reported to be with ample surplus balances and plenty of export potential. Nalanda registered the first rank in term of gross production (594 thousand tonnes), surplus balance (433 thousand tonnes), and export potential (86.61 thousand tonnes), while Samastipur recorded the lowest rank in surplus balance (62.9 thousand tonnes) and export potential (12.59 thousand tonnes). But in terms of gross production, Bhagalpur was the lowest. Vaishali was reported to have surplus balance (221.4 thousand tonnes) and export potential (44.3 thousand tonnes) at the third position, while Muzaffarpur realised a moderate surplus balance (89.40 thousand tonnes) and export potential (17.88 thousand tonnes).

The study concludes that the gist of the strategies developed under the programme referred to above and, also, as emerging from the present analysis is that effective steps to create a strong infrastructural base and facilities related to post harvest technologies are needed so that growers and traders feel sufficiently equipped to undertake export as a profitable venture. Some steps to create export awareness are also needed so that the export potentiality already existing in the state can be fully exploited.

### 3.7 Practitioner's Paper Land Reforms in Bihar, India: An Unfinished Agenda, Madhulika Singh, *Asia Pacific Journal of Rural Development*, Vol. No. 11(2), pp. 167-186, 2009.

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#### Key Topics: *Land Reforms*

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Land Reform is a critical issue in the national economy and its benefit is not only restricted to peasants but also to the nation as a whole. The present study outlines the structural anomalies with respect to land reforms in the rural economy of Bihar, starting with the pre independence period.

The study attempts to give a brief account of the pre and post independence land reform measures in Bihar. The concluding section of the paper also gives suggestions for improvements for the same through a comparison with Punjab.

Starting with the colonial period, the study explains that Indian agricultural land was administrated under three systems, *Zamindari*, *Mahalwari*, and *Raiyatwari* system. It covered the provinces of Bihar, Bengal, Orissa, North Madras, Eastern UP, and parts of Assam. It created unprotected tenants, sub tenants, and share croppers who did not have any security over the land they cultivated. Between the *zamindars* and the tillers, there was a parasitical layer of intermediaries. These intermediaries used to collect 7.7 times the intended revenue in Bihar. This permanent settlement turned *zamindars*, who were merely collectors of revenue for the state in pre colonial days, into proprietors of land. The condition of the peasants further worsened by the ordinance passed by the government in 1799, which gave the landlords the right to dispose of the belongings of their tenants (for example, crops, cattle, and agricultural implements) in case of non payment of rent. Their land could be confiscated and right of occupancy sold. The regulation placed the peasants at the mercy of the landlords. Moreover, their gravest handicap was the absence of authentic documents (rent receipts by the landlords, record of rights) with which to build up their case in the court. The Indian Famine Commission blamed the land laws as responsible for the famine which broke out in Bihar in 1874-75. Even after the enactment of Bengal Tenancy Act, the illegal enhancement of rent by landlords remained practically unchecked throughout the province. This was testified by the settlement officers of various districts like Saran, Champaran, Patna, Shahabad, Gaya, Munghyr, and Bhagalpur. It was found that during the first decade of the 20th century, Ramnagar Zamindar in Champaran was levying feudal cess or *abwabs* ranging from 50 to 60 per cent of the rent. The Kisan enquiry committee in Gaya District listed 44 types of *abwabs* or feudal levies imposed on the peasants. In the first quarter of the 20th century, the problem of insecurity of tenure or tenancy rights became much more acute in many districts like Shahabad, Roera in Gaya district, Barahiya Tal in Munghyr.

The Champaran movement led by Gandhi did not bring about any revolutionary change in the agrarian set up of Bihar, even though the peasants were mobilised as a powerful force for asserting their rights. In 1929, Bihar Provincial Kisan Sabha (BPKS) was organised by the Congress to redress the specific grievances of the peasants. Later on, under the leadership of Swami Sahajanand Saraswati, a powerful Kisan leader, the BPKS started fighting for socioeconomic issues like rent reduction, land to the tillers, and abolition of landlordism. Further, the socialist led Kisan Sabha leaders mobilised peasants to resist the illegal demands of landlords.



However, the tenancy legislation of 1937-38 could not come up to the expectations of the peasants. When the Congress Ministry was formed in Bihar, the most burning problem, the agrarian issues were taken up as *Bakash* agitation was again revived in 1946. Hence, the *zamindari* abolition committee was set up to deal with it.

The next section in the paper deals with post independence stages. After independence, land reforms came to be recognised as a fundamental condition for economic development. It assumed a high priority at the policy making level, both at the centre and in the states. In 1948, a major policy decision was made under the leadership of Vinoba Bhave to launch the *Sarvodaya* movement, which later assumed the form of *Bhoodan-Gramdan* movement. Thus, a movement was initiated for changing the agrarian structure. Bihar Legislative Assembly was the first to come out with legislation on land reforms.

Bihar Land Reforms Act, 1950, popularly called the Zamindari Abolition Act, was to eliminate intermediary tenures and for securing land rights for erstwhile riots. During 1950 to 1955, the land reforms legislation, enacted by the Bihar government, did not aim at comprehensive land reform but attempted only to tackle the most burning problem of exploitation by *zamindars*. This phase of legislative and administrative efforts for reform is identified as Phase I of the land reform measures. Though, the state of Bihar passed several land reforms acts it failed to implement them properly.

Land reform in Bihar or elsewhere was meant to restructure the agrarian relations and also to limit the concentration of land being held in the hands of a few. From this aspect, the second phase (1955-71) of the land reform measures by the government was significant. It imposed a ceiling on agricultural landholdings. The Act of 1961 imposed land ceiling taking the individual (and not family) as a unit and recommended 20 to 60 acres of land for each individual. Landholders were also allowed to transfer land above and in excess of the ceiling area to sons, daughters, and other relatives within one year of the commencement of the Act. However, the Act of 1961 did not enable the government to acquire surplus land for distribution. In the 1970s, the land grab movement was launched by the left parties and there were a series of peasant revolts led by peasant organisations belonging to the left political parties.

The Ceiling Act was amended in 1972 and 1973. It was further amended with a substantially reduced ceiling limit. The ceiling was to be worked out on the basis of the family instead of the individual, consisting of husband, wife and minor children. Major sons were treated as a separate unit for the purpose of ceiling. The landholders were not allowed to retain homestead or orchard lands over and above the ceiling limits. Land was classified taking in to account its fertility and irrigation sources. The Act also laid down guidance for settlement of surplus land in which priority was to be given to landless, SCs, and STs of the same village, and then other landless persons of the same village.

In the government's special drive for implementation of the land ceiling programme, it acquired the largest acreage of surplus land from the districts of Purnia, Katihar, West Champaran, Saharsa, Bhagalpur, East Champaran, and Munghyr where a few big landlords were caught due to the rigorous administrative drive. So the land grab movement of the early 1970s and the peasant movement contributed to generate an appropriate political and administrative climate for the implementation of the land ceiling Act. Agricultural census data indicated that landholdings of big landlords declined between 1961 and 1981.

However, the study highlights that the abolition of intermediaries and land ceiling did not make much of a dent in reducing the land inequality. This may be due to varied reasons. The implementation of the Act was hindered because of the fear of disturbance in agrarian peace as the traditional landlord class and castes were in no mood to surrender their landed property. They did not hand over all the records of rights in land they owned and the land transferred by them after 1959. Moreover, most of the records of rights of ownership and of transfer were false, which created a hindrance for the administration to properly implement the Ceiling Act. Updating of land records was not systematic and successful even after the passing of Maintenance of Land Record Act in 1973 in Bihar. Another troubled area which posed problems for application of the Ceiling Act was the classification of land in class I, II, III, IV, etc., based on fertility and irrigation facility. Moreover, there were many other loopholes in the Act which were manipulated by the administration to favour the dominant landlord class.

The study quotes the Planning Commission Report of the Task Force on Agrarian Relations (1973) that through misusing institutions like the courts, the landlords escaped the ceiling net due to their dominant influence over state politics and administration. By and large, they have succeeded in protecting their interests. Further, politicians and bureaucrats themselves violated the law and held land in excess of the prescribed ceiling.

Under the Bihar ceiling laws, subletting has been prohibited except in a few cases. This has resulted only in pushing tenancy underground. As long as the class of landowners is unable and unwilling to cultivate land and a large population of landless poor peasantry co-exists, the legal ban on leasing out land will remain a dead letter.

According to the findings of the study, Bihar's performance in the implementation of tenancy reforms is unsatisfactory. Highly exploitative insecure tenancy in the form of crop sharing persists in large parts of Bihar. Most of the existing tenancies are largely oral, not recorded, and informal. The share of the landholders was much more than 25 per cent as stipulated by the law. Further, to circumvent the occupancy rights of the tenants, landlords let out lands to their trusted clients, who were not likely to claim occupancy rights in land. Moreover, verbal agreements have resulted in creating a mechanism for keeping a firm grip on the sharecroppers for exploitation. Besides this, big landowners, to retain land above the ceiling, created tenancies and under tenancies through unregistered documents.

Lack of tenancy reform in Bihar has led to its negative effect on productivity, which is a great obstacle in rural development. In Bihar, most of the tenancy transactions are benami transactions without written deeds which contribute to the insecurity of tenure. Thus, the study recommends that tenancy reforms in Bihar, on the lines of West Bengal, are required for agricultural growth in Bihar.

The study argues that Bihar's dismal performance in land reform measures is due to the unsystematic upkeep and management of record of rights of landholding and utilisation of institutions like the legislative assembly, law courts, and bureaucracy by the socially and economically dominant landholders to maintain their interests. Though, awakening among the disadvantaged is taking place in some parts of rural Bihar in the wake of social mobilisation by diverse groups like by *Chatra Yuva Sangharsh Vahini*, the Indian People's Front, the *Mazdoor Kisan Sangram Samiti*, and other left-wing organisations, the study points out that the land development aspect of land reform has been ignored in Bihar. Wherever the allotted land was uncultivable or not economically viable, lacked basic infrastructural facility, it did not improve the economic condition of the allottees. To bring about the desired growth process in the agrarian structure and, thereby, socio-economic improvement of the bulk of the rural population, requires land development. The lack of progress on the consolidation of fragmented holdings ensuring compact plots in Bihar has also converted it to a food deficit state.

The experience of Punjab could provide lessons to Bihar. In the absence of political will and commitment on the part of the bureaucracy, the people of Bihar have to rise up for the demand of reforms which would usher in successful rural development. Moreover, it is necessary to dovetail poverty alleviation programmes with land reforms. The integral part of poverty alleviation and rural development of the state requires acquisition, distribution, and consolidation of land, in addition to the existing schemes of IRDP and JRY. Access of the rural poor to agricultural land and then developing infrastructural facilities would be the permanent solution.

The study points out that unless the landlords economic power, based on an unjust land system is broken, the country as a whole cannot engender growth with equity and social justice. *Dalits* can be liberated and empowered through large scale comprehensive land reforms. The Naxalite movement, which emerged in the decades of the 1970s and 1980s, generated some notion of empowerment of the deprived section of the population through violence. Now the Naxalite movement has engulfed as many as 180 districts of the country and has become a threat to internal security. The study recommends that government should make a concerted effort to plug the loopholes in the existing laws and improve their implementation.

### **3.8 Performance of Agricultural Credit System in Bihar: Some Empirical Evidences, R. K. P. Singh, State Farmers Commission, Patna, 2009.**

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**Key Topics:** *Agricultural Credit, Cooperative Credit*

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The study was undertaken to examine the performance of the agricultural credit system in Bihar. It is based on secondary data obtained from published reports of National Bank for Agriculture and Rural Development, National Sample Survey Reports and records of the State Level Bankers Committee, Bihar.

The study finds that in Bihar, public and private investment in agriculture has declined during the last 15 years, and food grain productivity is the lowest among major states in the country. The majority of farm households do not have savings to invest in critical inputs such as irrigation, seed, fertiliser, and agricultural chemicals. Institutional

agricultural credit is the only option which can help in increasing investment in agriculture through improving the liquidity of the farmers for using critical inputs at the proper time. The financial requirement of farmers has increased manifold due to adoption of modern technology.

The study argues that while institutional bankers perform a gap-filling function in Bihar, whereas, the situation is just reverse in other parts of the country. Among the major states in India, Bihar is at the lowest ladder in terms of the proportion of institutional loan to total loan disbursement to farmers. The high indebtedness to money lenders may be an important reason for the indifferent attitude of farmers towards lending institutions, resulting in low investment and low productivity in Bihar.

According to the study, provision of credit to the agriculture sector has been one of the main concerns of policy planners in India since independence. However, an assessment of the situation at the ground level indicates that recourse to non-institutional credit continues to dominate as far as rural areas and agriculture sector are concerned. Institutional credit expanded with a slow growth rate during 1980-81 to 1990-91, when it took 10 years in doubling the amount of credit in Bihar. The similar growth pattern was observed during 1990-91 to 1999-2000, when it increased from Rs 231.81 crore to Rs 477.12 crore during the period. The growth in agricultural credit remained slow up to 2002-03, when the total amount of agricultural credit could hardly reach Rs 1,587 crore. The farm credit package announced by the Government of India in June 2004, stipulating doubling institutional credit flow to agriculture during the following 3 years seems to have worked in Bihar as well. Although agricultural credit flow in the state increased from Rs 1,587 crore in 2003-04 to Rs 2,985 crore in 2006-07, and Rs 3,700 crore in 2007-08, the base itself was very low. But the share of agricultural credit flow in Bihar to national level agricultural credit flow declined from 1.82 per cent in 2003-04 to 1.47 per cent in 2006-07. It clearly indicates that the institutional credit system in Bihar failed to perform at par with systems functioning in other parts of the country.

The expansion of commercial banks has been impressive in the post nationalisation period, but per commercial bank branch rural population increased from 50,000 in 2002 to 66,000 in 2008 in Bihar. The study notes that the cooperative system is still an important source of agricultural credit in Bihar. In spite of several drawbacks, cooperatives continue to be a highly favoured agency for financing agricultural and allied activities. The Bihar State Co-operative Land Development Bank was established to cater to the needs of long-term agricultural credit, but it has been in recurrent loss for the last 13 years and the bank does not qualify for any assistance from National Bank for Agriculture and Rural Development (NABARD) due to poor recovery performance. The short-term cooperative credit structure has Bihar State Co-operative Bank at the apex level. At the middle level, the state had originally 25 District Central Co-operative Banks (DCCBs), of which license applications of 3 were rejected in 2003 reducing the number to 22 with 279 branches. There were only 12 profit making DCCBs in Bihar in 2005-06 and the majority of DCCBs experienced deposit erosion from 50 to 100 per cent and none of the bank qualifies for audit classification of 'A'. The poor financial performance of DCCBs is reflected in their inability to respond to the increasing demand for agricultural credit in Bihar.

The study reveals that a majority (69 per cent) of Primary Agricultural Cooperative Credit Societies (PACS) are non-viable, and about 1,000 PACS are non-functional in Bihar. Their ability to disburse credit has deteriorated due to weak financial strength. The Task Force on Restructuring of Co-operative Credit Institutions (2005) underlined the need to eliminate State Government interference in the functioning of cooperatives and recommended a revival package for retiring the share capital contribution to cooperative societies. The State Government initiated the implementation of the Task Force recommendations but progress is still slow as compared to most of the states in the country. The Government of Bihar has, however, amended the Co-operative Act and constituted an organisation for conducting election of co-operative institutions. A campaign has been launched by the State Government for increasing membership of PACS. There are, however, still large numbers of interested farmers who are being denied PACS membership by concerned PACS officials. The State Government should take suitable steps to involve these farmers under the co-operative movement initiated in the State. But the strengthening of cooperatives under different programmes may not by itself solve the problem of farmers because even the viable and profit making PACS are not assigning priority to agricultural credit and the majority of these PACS are engaged mainly in banking business. It is, therefore, suggested that PACS officials be sensitised to adopt empathetic and pro-farmer attitude towards agricultural development.

According to the study, prior to reorganisation of the Regional Rural Banks (RRBs), there were 17 RRBs in Bihar, covering all the districts of the State. Since their inception in 1975, the RRBs have grown rapidly in structure and

strength. During this period, the financial performance of RRBs was much better than rural branches of commercial banks, but the RRBs failed to maintain their edge over rural branches of commercial banks and were caught in trap of high Non Performing Assets (NPAs), 46.45 per cent, and poor recovery, 34.13 per cent. Due to financial weakness, RRBs could disburse only Rs 75 crore of loans in 2001-02 but increased the level of disbursement to Rs 431 crore in 2005-06. Regional Rural Banks have a large network of branches in the rural areas of Bihar and they can play a significant role in agricultural financing.

The study argues that adequate agricultural credit is a prerequisite for increasing agricultural production. Per hectare agricultural loan granted in Bihar (Rs 882) was the lowest among the major states of the country and much lower than the national average of Rs 3,386 in 2000-01. Per hectare agricultural loan disbursement in Bihar increased from Rs 882 in 2000-01 to Rs 4,814 in 2006-07. However, the increase at the national level has been from Rs 3,306 to Rs 11,363 during the period. If the projected agricultural credit is achieved in Bihar during 2008-09, the per hectare agricultural loan would be Rs 9,225, which will still be about 25 per cent less than the average national achievement of 2006-2007.

The study finds that Kisan Credit Card (KCC) has emerged as the most important instrument of disbursement of agricultural credit in the country. At the national level, about 77 per cent of farm households have been provided KCCs for hassle free credit disbursement. Andhra Pradesh and Kerala took the lead in making available KCC to more than 90 per cent of their farmers. In Bihar, about 10 lakh farmers could get KCCs in the year 2009 which is about 35 per cent of farm households. This is only about half the national average. The tempo generated by the first series of Mega Camps at Block headquarters needs to be sustained and even accelerated.

The study also explains that during the last 15 years, there has been a phenomenal increase in the number of SHGs. Some 29 lakh credit-linked SHGs have so far been established up to 2007 in the country. Bihar accounts for 8 per cent of the national population but more than 18 per cent rural poor of the country reside in the state. Only 2.46 per cent of SHGs of the country have been established in the state up to 2007. Although a substantial number of SHGs have been promoted by various agencies during last two years, all the eligible SHGs have not been credit-linked in Bihar. Out of 10,716 SHGs organised by the Women Development Corporation, Bihar, 7,786 SHGs have been linked to micro-financing institutions, but only 2,990 are credit-linked. Given the poverty level in the state, predominance of small and marginal farmers, as well as landless labourers in Bihar, SHGs have tremendous potential in lifting the disadvantaged groups and rescuing them from the poverty trap. This assumes particular significance and urgency in view of the difficulties being faced in accessing credit from the institutional sources in Bihar.

### **3.9 Adoption of Modern Agricultural Technology in Bihar: A Micro Level Analysis, R. K. P. Singh, Ravishankar Kumar, Manoj Kumar, and N. K. Yadav, State Farmers Commission, Patna (supported by NABARD), 2009.**

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**Key Topics:** *Agricultural Technology, Farm Mechanisation, Modernisation of Agriculture*

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Against a unique agro-economic and socio-political background in Bihar, characterised by low agricultural growth, a wide gap between the potential yield and the actual yield, concurrence of droughts and floods in the state, the study was undertaken to identify the extent of adoption of modern technology at the farm level. The study is based on primary data which were obtained through interviewing farm households (160), agricultural scientists (11) and extension officers (15). The study covers the whole state of Bihar and the required information was collected from all the four agro-climatic zones. The village survey was conducted through a structured schedule. At each stage of the study process, respondents were asked to identify and discuss the critical issues that affected extent of adoption of modern agricultural technology and the constraints to and the opportunities for adoption of modern agricultural technology for improving their livelihoods. An attempt was also made to know their involvement in implementing various agricultural development schemes. Information on the monitoring process and their opinions for improving monitoring and transfer of technology systems were also obtained. The quantitative primary data obtained from farmers were summarised using descriptive statistics. These results were complemented by the information gathered through interviewing agricultural scientists and officers. The descriptive statistics were also useful in examining information about the concentration of technology transfer efforts in a few villages of Bihar.

The study argues that seeds are a critical and basic input for attaining sustainable growth in crop production. It is a carrier of new technology for crop production. However, the purity of even self-pollinated seeds is maintained up to 3-4 years of release. In Bihar, farmers are using modern varieties for cultivation which were released in the 1970s. The statistics relating to use of high yield variety (HYV) seeds, published by government, indicates more than 90 per cent coverage under HYV seeds of both the wheat and maize crop and more than 70 per cent in case of paddy, but the majority of farmers are using degenerated seeds, particularly in case of paddy and wheat. Analysis of information relating to aging of seeds revealed that about 12.5 per cent of the interviewed farmers used paddy seeds released within the period of five years. However, the comparatively large proportion of large farmers (25 per cent) used recently released paddy seeds vis-à-vis other categories of farm households. The majority of farmers (76.3 per cent) used paddy seeds released during last 10-20 years. In the surveyed villages, farmers were found using paddy varieties namely, *Sita*, *Pankaj*, *Rajshree*, *Mansuri*, etc., which were released before 1990. One-fourth of the interviewed farmers either used local paddy varieties or varieties released during the 1970s and 1980s.

In the case of wheat cultivation, about 16 per cent the farmers interviewed used recently released varieties but more than 40 per cent large and medium farmers used recently released seeds of wheat in the surveyed village. About one-third of the farmers used wheat seeds which were released during the 1990s. About 35 per cent of the farmers interviewed used seeds which were released in the 1980s. U.P. 262 wheat variety, which was released before 1980, is still the most preferred in Bihar. According to the study, Bihar is the leader in production of winter maize in the country. The majority of interviewed farmers (57 per cent) use maize varieties released within the last 10 years because they cultivate hybrid maize and use purchased seeds for cultivation.

Area under pulses constitutes about 8 per cent of the gross cropped area in Bihar, but farmers do not have access to modern varieties of seeds. Only 1.3 per cent farmers interviewed could use recently released varieties. However, 75 per cent of interviewed farmers used local varieties of pulses for cultivation. Farmers were also asked to indicate whether they purchased modern seeds of principal crops from any public source (NSC, SFC, TDC, SAU, State Govt.) during the last 5 years. About 37.50 per cent interviewed farmers used modern varieties of wheat seeds purchased from public sources. However, access to public source for wheat seeds was higher for medium and large farmers (>50 per cent), while only 25 per cent marginal farmers used modern varieties of wheat seeds purchased from public sources in the surveyed villages, indicating poor access of marginal farmers to public sources for modern varieties of seeds.

According to the study, fertiliser is the most critical input for increasing agricultural productivity and production. Fertiliser is used by all categories of farmers and per hectare use of chemical fertilisers reached 170 kg in 2008-09 against the corresponding national average of 130 kg. In the surveyed villages also, interviewed farmers used fertiliser, of about 161 kg (NPK) in paddy, 181 kg in wheat, 258 kg in maize, and 363 kg in vegetable production per hectare.

Among micro-nutrients, zinc was used by 9 per cent of interviewed households either in paddy or wheat cultivation but none of the interviewed farmers used zinc in the cultivation of winter maize. Farmers neither used Boron, Sulphur, Iron, and other micro-nutrients in crop production nor were they aware of the benefits of these micro-nutrients in crop production. None of interviewed farmers got their soil tested to have information about status of NPK and micro-nutrients in their soils. Hence, it may be inferred that the technology of use of chemical fertilisers has been transferred to farmers but they are still unaware about the importance of the balanced use of NPK and micro-nutrients in crop production. The state government has planned a comprehensive scheme for soil testing in each block but it is still at an infancy stage which will take more than a decade in reaching the majority of agriculturally developed villages and much more time in reaching the remote villages of state.

The study notes that the government has launched a programme to popularise bio-fertilisers, including use of vermi-compost. Farmers are getting bio-fertilisers at subsidised rates and financial assistance is also available for production of vermi-compost. Despite the best efforts, only 7.50 per cent interviewed farmers used bio-fertilisers in crop production. However, the proportion of large farmers using bio-fertilisers was comparatively higher (18.8 per cent) than other categories of farmers (58-88 per cent), indicating a low level of awareness among small landholders about bio-fertilisers. We have to make sincere efforts in transfer of this technology to the weaker section of society for the benefit of these categories of farmers.

As far as the use of agricultural machinery is concerned, the study finds that tractor, power tiller, and zero till machines are commonly used in crop production in Bihar. In the surveyed villages, tractor is used by all categories

of farmers. About 93 per cent interviewed farmers either fully or partially used tractor for crop production. Even 90 per cent of interviewed marginal farmers used tractor for crop production. But power tiller was used by only 8.75 per cent of farmers. The comparatively large proportion of marginal farmers (12.3 per cent) used power tiller than large (6.3 per cent) and small farmers (3.5 per cent). Low level use of power tiller was only due to low density of power tiller and higher hiring cost of power tiller in Bihar, (Rs 700/acre). Government is providing a subsidy of Rs 60,000 to farmers for purchase of power tillers but farmers still do not have easy access to them due to the non cooperation of government and bank officials. In the surveyed villages, about 6.25 per cent of farm households used zero till machine in wheat cultivation. Small and marginal farmers also used zero till machine for wheat cultivation but zero till machine has only been introduced in agriculturally developed districts like Begusarai, Samastipur, Bhojpur and Patna.

The study finds that the adoption level of modern varieties of seeds of principal crops is comparatively high in Bihar than its respective national average but farmers do not have access to quality seeds. However, adoption level of pulses varieties is quite low, mainly due to unavailability of quality pulses seed. In Bihar, Agricultural Research system could not release any promising pulses variety during the last 20 years.

Farmers used almost recommended quantity of NPK in production of principal crops, but farmers are still to adopt balanced use of NPK in crop production. Awareness about use of micro-nutrients should be created among the farming communities, particularly among marginal and small farm households. Farmers' access to soil testing facilities is still poor which needs improvement by establishing soil testing labs at the block level. Despite efforts made by the state government, less than 10 per cent of farmers adopted bio-fertilisers. The use of organic manure is declining due to decreasing number of animals and use of dung as fuel in rural area.

Tractor is now a common draft power in Bihar but other agricultural machineries like power tiller and zero till machine are still to be adopted by farmers, particularly by marginal and small farm households in Bihar. Farm category wise analysis revealed that the sub-marginal farmers (<0.5/ha), constituting 60 per cent of farm households in Bihar, do not have access to agricultural development programmes. It might be due to their small land base because agricultural projects providing subsidy to farmers are bank ended and banks do not provide loan without sufficient land base. None of interviewed farmers could get subsidy for purchase of zero till machine in the surveyed villages. Hence, the study concludes that a strategy has to be formulated for increasing access of marginal and small farmers to modern farming stream which will help increasing agricultural production and improving the rural economy in Bihar.

### **3.10 Financing Agriculture: A Study of Bihar and West Bengal, Arun Pandit, N. K. Pandey, Barsati Lal, K. P. Chandran, and Rajesh K. Rana, *Indian Journal of Agricultural Economics*, Vol. No. 62(3), pp. 340-49, 2007.**

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#### **Key Topics: *Agriculture, Credit***

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The study tries to analyse, critically, the credit avenues and constraints of potato cultivators of the eastern region of the country. The majority of potato cultivators in the region are small and marginal farmers and, hence, the study considers it crucial to analyse the sources of credit available to those cultivators. The study is based on primary data collected from four districts of West Bengal (Jalpaiguri, Burdwan, Hooghly and Paschim Medinipur) and three districts of Bihar (Nalanda, Muzaffarpur, and Patna). About 439 families spread over 155 villages in 7 districts were surveyed. The survey included 3 blocks from each district and a minimum of 3 villages from each block. The study was conducted for the period of January–February, 2007. In order to measure the effect of demographic and economic variables on the access to institutional loans, a logit model has been fitted in the study.

The study shows that potato cultivation requires a huge amount of investment. A major share of investment has to be made in the initial period. In both the states, seed accounts for the single largest item of cost. West Bengal potato farmers rely on Punjab for seed and a substantial amount of seeds come from Bhutan to North Bengal, especially to Jalpaiguri district. A lot of farmers from Bihar buy seed from West Bengal named 'Bengal Jyoti' for lower prices.

Farmers depend on various sources to acquire credit. The farmers of Bihar could acquire 20.47 per cent and the farmers of West Bengal could acquire 28.37 per cent of the capital from various sources. The study found that compared to farmers of West Bengal, a much smaller number of farmers in Bihar could acquire institutional credit.

In Bihar, only about 15 per cent of the farmers went for institutional loans. More than 34 per cent availed non institutional loans. The paper reveals that more than one-third of Bihar potato farmers relied on non institutional sources like fellow farmers, moneylenders, input traders, etc. The easy, hassle free, timely availability and familiarity of non institutional sources attracted the small farmers of Bihar. The logit regression model shows that young age, large operational holdings, high education, and absence of off farm income are conducive to accessing institutional credit.

The study reveals that cooperative societies have a very strong presence in Bengal, while in Bihar they are almost non-existent. In Bihar, a lot of farmers do not have a proper knowledge of bank procedures and do not get crop insurance with the loan. Further, the farmers are afraid of defaulting on loans. Corruption and harassment in the institutional sources is also reported by small farmers.

The present study unveils that formal sources of credit were not available to many potato cultivators. Hence, the study suggests that banks and cooperatives should come forward to rescue potato farmers. Formal sources of credit should be made more easily available to poor farmers to release them from the clutches of the moneylenders. The banks should revise the existing scale of finance, taking into consideration the increased cost of inputs, to help the farmers to use optimal levels of inputs and increase productivity of crops. The study argues that strengthening cooperatives and forming new self help groups is also necessary. Recovery of dues resulting from wilful default should be addressed. Redressal mechanisms, like counselling farmers and sorting out their difficulties with the help of banks and cooperatives, can also be resorted to. The study found that the introduction of KCCs has had a welcome effect. Lastly, private participation in agriculture insurance also needs to be encouraged.

### **3.11 *Agriculture Development and Investment Pattern in Bihar, Abhas Saurabh, Janaki Prakashan, Patna, 2007.***

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#### **Key Topics:** *Agricultural Development, Investment Pattern*

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This book finds that during the post green revolution period, a considerable degree of development appeared in Indian agriculture. Modern cultivation caused a great impact on the investment pattern of farmers. There has been a significant increase in the use of modern inputs, which, in turn, increased the productivity of land. As a result, there was increase in farm incomes and savings. Farmers diverted their savings into allied activities and non-farm sectors. But this development was not uniform in all regions.

In this context, this study attempts to identify the various factors responsible for change in the investment pattern of the farmers in the state of Bihar. The main objectives of the study are to identify the factors influencing agricultural performance of the beneficiaries, to study the farm investment pattern of the beneficiaries and non-beneficiaries, and to study the off farm investment pattern of the beneficiaries and non-beneficiaries. Multistage stratified random sampling was used for selecting the sample villages and sample households. In Vaishali district, Hajpur block was selected for the study because of its diversified agriculture, that is, a few villages of the block being progressive with greater impact of the green revolution, whereas, a few being remote. Respondents were selected from each of the two sets of selected villages namely, Senduari and Digghi. From both sets of sample villages a sample size of 100 households were selected.

In the book, Chapter 1 deals with the objectives, hypothesis, methodology and plan of the book. Chapter 2 provides background information of the agrarian setting of the sample villages. Chapter 3 focuses on the investment pattern and performance of beneficiaries of agriculture development, along with constraints for further development efforts. Chapter 4 has been devoted to discuss a proposed prospective plan for future agricultural development of the sample area. Chapter 5 presents the summary and conclusions of the study.

The study finds that the two villages namely Senduari and Digghi have identical climate and soil. The soil of the villages is well drained loam and clay loam with slightly acidic to neutral soil. The net sown area in the village Senduari and Digghi accounted for as much as 77.63 and 80.25 per cent, respectively, of the total geographical area of these villages. The net irrigated area constituted 79.50 per cent in Senduari and 71.41 per cent in Digghi. The maximum crops grown include the food grain group, with banana and vegetable cultivation. Senduari has an edge over Digghi in the area under crop, banana and vegetable cultivation. State tube wells, private tube wells and diesel pump sets were the mains source of irrigation in the selected villages.

The study presents that village moneylenders were the main source of credit to farmers. The contribution of family labour to total supply of labour in the two villages was high. Male labour was generally employed in construction and female labour performed less strenuous jobs. About 66 per cent of the households in Senduari belong to the category of small/marginal farmers, whereas, the corresponding proportion in Digghi is 76 per cent. The percentage of owner cultivation is high at 60 per cent compared to 40 per cent in Digghi. Senduari appears to be an agriculturally developed village where cultivators find it profitable to continue own cultivation rather than to lease it. In the agriculturally less developed village of Digghi, the proportion of combined owner turns out to be high. In Senduari, a good number of small farmers also possess assets like farm building, implement shed, oil engine, and pump sets. Compared to Digghi, in Senduari more than 50 per cent of the medium and big farmers possess different assets. The number of farmers with a high level of adoption of HYV seeds increases with an increase in the farm size groups. This trend is stronger in Senduari.

The study reveals that the level of farm income, capital expenditure, net savings are high in Senduari. Senduari has an edge over Digghi with respect to asset structure, tenurial condition, socioeconomic status, and also with regard to HYV technology adoption. Employment generation will also be high where the development indicators of income, savings, and investment are high.

The study reports that constraints are more serious in Digghi. Hence, the study recommends the involvement of the state for tenurial reforms, creation of stronger structural base, credit facilities, input markets, and farmer's accessibility to them. The study concludes with a micro level plan framework and a schedule showing the sectoral pattern of investment required for the development of resources and production.

### **3.12 Bihar Agriculture: Building on Emerging Models of "Success", Agriculture and Rural Development Unit, World Bank, 2007.**

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#### **Key Topics:** *Agricultural Development Models*

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This study delves beneath the surface of Bihar's pervasive and persistent adverse economic environment to examine trends, constraints, and opportunities in selected segments of the agriculture and food sector.

The study aims to achieve its objective by (a) providing insights into the underlying basis for competitive advantage in Bihar's agricultural economy, (b) analysing cross-sectoral and product specific elements that have shown some success and/or resilience, (c) examining the organisational, technical, economic, and institutional factors in an attempt to explain observed success, and (d) draw lessons that can be applied to other sub sectors in Bihar and other parts of India. This report focuses primarily on encouraging models of 'success' that have emerged within Bihar's difficult environment and that could provide lessons on what is needed to develop the agricultural sector in the state. The models identified include, first, the decentralised approach to agricultural services delivery in the areas of agricultural extension and irrigation management. Second, case studies examine a number of agricultural commodities including maize, dairy, *litchi*, mango, and potato to illustrate emerging challenges and options for entrepreneurial success and supply chain development.

Although Bihar projects a bleak image to the outside world on its prospects for economic and agricultural development, but the reality on the ground provides some encouraging findings. Even though Bihar faces serious challenges to improve growth performance and strengthen public administration, services delivery, and the investment climate, it has had notable successes in certain segments of the agricultural sector that, if built upon, could provide lessons on how to move forward.

This study is focused on these elements of success. Two noticeable areas are identified as community and stakeholders' involvement in the design and delivery of public services, especially in the areas of extension services like ATMA and Participatory Irrigation Management (PIM). Entrepreneurial successes, within the greater effort of building supply chains for specific agricultural commodities.

To preserve, sustain, and scale up the success stories under these two areas, all stakeholders in both the public and private sectors, should take action. The study finds that participatory activities and joint efforts are well established in Bihar. These participatory activities generally follow the ATMAs and PIM models. However, both



models need considerable support from both the Government of Bihar and the Government of India to mature as vibrant institutions.

Commodity-based analysis reveals that a common feature across all commodity supply chains is the high costs of wastage and transportation. For some commodities, these costs accounted for nearly 40 per cent of the total margins along the chain. Lack of proper post-harvest handling and processing, coupled with poor infrastructure and shortage of cold storage capacity, are the primary causes of losses. If spoilage and transportations costs are reduced, all of the participants along the supply chain will benefit. Farmers will have more produce to sell, and post harvest players will gain from increasing economies of scale.

Possibilities exist for public-private partnerships in the development of market infrastructure and market operations and management. A cold chain is a prerequisite for fruit and vegetable market development in Bihar, both to counter the significant spoilage problem and to access larger markets. The lack of private investment in Bihar has caused products to move out of the state for value-adding activities.

The Mandi Board could also devolve the management of the existing facilities to the private sector to improve the quality of their infrastructure and services. With the notable exception of dairy, most of the commodity chains examined in this study have not established productive backward linkages with farmers or forward linkages with processors. Similarly, farmers have not embraced cooperation as a way to generate sufficient marketed surplus to take on product handling tasks with economies of scale.

Current market information services are poor, are not standards-linked, and do not report traded volumes. Farmers' effective use of information requires training in both decision-making and in pre- and post-harvest techniques to generate price advantages.

Investment is needed in the development of improved varieties of fruits and vegetables with higher productivity levels, longer shelf life, and greater suitability for processing (*such as litchi and mango*). This could be done through sustained and effective linkages among agricultural universities, research and development institutions, and users of research output.

Little attention has been given to product quality and safety, which is essential to Bihar's developing its potential in horticulture production. Focusing on improving product and quality are the keys to mobilising producers' efforts to increase their own incomes. Farmers' ability to influence prices is limited to quality achieved. Upgrading quality, in turn, is only possible if quality is being measured and promoted in ways that market participants, particularly farmers, can use. Enforcement of standards of food safety and quality is generally a public good, linked closely to actions and responsibilities in the private sector. In related settings and to promote Bihar's agriculture, mechanisms to monitor chemical residues and associated codes of practice should be put in place.

Finally, Bihar can and should make better use of Central Government schemes, and improve their accessibility. Poor uptake of government schemes greatly raises unit costs, while further isolating agro-industry from its potential public sector partners in development.

While uncovering successes, this analysis exposes areas of concern that should mobilise timely efforts at various levels to address them. This wide range of areas in which to take action includes (a) formation and capacity building of producers' organisations; (b) weak institutions for business information, coordination, and credit and risk management; (c) under-investments in physical infrastructure in both the public (for example, power and transport) and private (for example, quality standards and cold storage) sectors; (d) dysfunctional public institutions, even in cases of commercially viable opportunities; and (e) outdated laws and policies that negatively impact the investment climate and deter private sector engagement from within and beyond the state.

The analysis points to a change in the understanding of the role of government in development of the agricultural sector in Bihar. One common noticeable feature of the 'success' stories considered in this report is the low level of government involvement in them. When communities are empowered and involved in the day-to-day management of resources and in planning and formulating schemes according to their own needs, positive results are bound to emerge. Accountability starts at the grassroots level and moves upwards, thus, improving overall service delivery and benefiting all stakeholders, including the government.

### **3.13 Land Reforms in Bihar: An Appraisal, Niraj Kumar, *IASSI Quarterly*, Vol. No. 24 (2), 2005.**

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**Key Topics:** *Land Reforms, Agrarian Change*

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The article appraises land reforms in Bihar, the background to these reforms in the state, and an overview of three phases of reforms. It also studies the lacunae in implementation of reforms and concludes with pertinent policy recommendations.

According to the study, in recent decades, the main instrument for the redistribution of income, wealth, status, power and opportunities has been thought to be land reforms. Land reforms constitute an important step in promoting dispersal of land concentrated in a few hands. This is needed to ensure a shift in locus of power in favour of the underprivileged. India has the distinction of having the largest number of legislative enactments for land reforms in the shortest possible time.

The study notes some important measures related to land reforms in Bihar which include abolition of intermediaries, security of tenure, redistribution of land, consolidation of holdings, prevention of alienation/restoration of alienated land and upgrading of land records. It is argued that land reforms have an economic basis as the cultivators under informal tenancy are unable to take advantage of subsidised facilities offered by government in the interest of higher production. Therefore, government pursued land reforms as a policy for achieving both a higher level of production and income as well as better distributive justice.

According to the study, the evolution of land reform policy can be classified into three distinct phases, viz., 1936-1955, 1955-1971, and 1972-1995. During the first phase, land reforms were thought of primarily as a step to do away with the feudal land tenures that were a by product of colonial history. The salient feature of the second phase of land reform movement was the imposition of ceilings on agriculture landholdings in the state. The government of Bihar passed the Bihar Land Reforms Act (Fixation of Ceiling Area and Acquisition of Surplus Land) in 1961. This Act has been amended twice: in 1972 and 1973. As per the latest amendment to the Act, the ceiling limit for a family consisting of not more than five members is up to 45 acres. The overall land in the state has been categorised into 6 categories and for each category there is a separate ceiling provision. However, the net effect of these laws on mopping up of surplus land for distribution among the rural poor was very marginal. The impact of the third phase of land reform was only symbolic in Bihar. This very period witnessed agrarian unrest in Bihar. Up to March 15, 1989, only 2.49 lakh acres of land was distributed among beneficiaries. Most of the assigned lands were poor in quality and required heavy investment for bringing them under the plough. The assigned plots were also small, hardly providing economic sustenance to the beneficiaries. Moreover, a majority of tenants, who are mostly sharecroppers, did not even enjoy security of tenure.

The article notes that Bihar was the first state to take legal recourse for the abolition of the intermediary class. However, the landlords remained embedded as they were able to retain sufficient land. The benefits largely accrued to the upper and middle layers of rural society. The marginal peasants, sharecroppers and landless labourers, who constituted the bulk of the rural population, hardly derived any benefit from the abolition of intermediary interests.

In essence, the article finds that Bihar has failed to implement the land ceiling Act laws. Bihar is placed among the states having the largest number of landless households. In fact, in order to escape the provisions of the ceiling Act, litigations are frequently made. The bureaucracy has shown deliberate indifference towards implementation of land reform acts. Many acres of land have been transferred to religious institutions in order to deprive the actual tillers. Such lands are mostly used for personal cultivation. Security of tenure also remains elusive as crop sharing arrangements are largely informal and verbal. Wages on agriculture tend to be traditionally determined. The provisions of the Minimum Wages Act are not implemented in most parts of Bihar.

The article argues that failure to implement land reforms together with the inability of the rich peasants to modernise their behaviour in response to a modernising economy contributed to the perpetuation of the exploitation of the poor. Persons having land are not inclined to till the land. The recently raised middle castes (Yadav, Kurmi, and Koeri) also seem to have developed such orientation. In fact, the new rich are reported to be more exploitative than the feudals of the past. According to the article, women from the deprived communities have been the worst victims of exploitation. Continued misery of the poor has made them antagonistic to the large land owners who tend to prosper at their cost. Unshared prosperity has led to eruption of violence in Bihar.

The article finds the question of peasant organisation to be very relevant, and argues that this should receive the attention of government. It suggests that mere legislative provisions are not enough. They have to be supported by vigorous efforts to raise their level of consciousness through sustained work by different development agencies and that NGOs can play a vital role in this area.

The article concludes with a list of policy recommendations which include abolishment of absentee landlordism, that is, land be vested with the state automatically if the land is kept fallow for more than one season, development of all cultivable wasteland lying idle through a land development agency, distribution of all pending ceiling surplus land and *bhoodan* land to eligible beneficiaries, legalise tenancy to allow leased out land within ceiling limits, recording of all tenants and sharecroppers, updatation of revenue records, consolidation of landholdings, updatation and computerisation of land records, awareness creation at the village/*panchayat* level for protection and proper management of common property resources, identification of wastelands for reclamation measures, crop insurance to all marginal and small farmers, encouragement of joint or community farm management among the marginal landholders/ marginal farmers in the state, preventing conversion of agricultural land to non agricultural uses, involvement of PRIs in implementation of land reform measures, and at least 30 per cent of allotment exclusively in the name of women beneficiaries.

### **3.14 *Economics and Resource Use Efficiency in Wheat and Winter Maize*, R. R. Mishra, PhD Thesis, Rajendra Agricultural University, PUSA, Bihar, 2005.**

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#### **Key Topics:** *Resource Use Efficiency*

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This study was conducted with the objectives of comparing the economics of wheat and winter maize and estimating production efficiencies of major inputs with respect to both of these competing crops. The study is based on primary data collected with the help of pre-tested well built schedules from 60 sample farmers, growing both wheat and winter maize. These farmers were selected from four villages of Mansi and Chautham Blocks of Khagaria district of Bihar following probability proportionate to size method. Khagaria district was purposively selected for the study as it was one of the most important districts of Bihar with respect to area, production, and productivity of wheat and winter maize in the state.

Cobb-Douglas Production function was used to study the resource use efficiency of the various inputs used because of its capacity to give direct measures of response to factor inputs, and also because it gives a relatively good fit to agricultural input-output data.

The study found that 125.95 man-days of human labour was used in growing a hectare of winter maize. Size group-wise analysis revealed that use of human labour decreased with increase in farm size. There was not much difference between small and medium farms with respect to utilisation of human labour. On the other hand, on an average, 53.93 man days were used for growing one hectare of wheat. Analysis of human labour utilisation on different farm size groups of farms in wheat showed a similar pattern. Further analysis of human labour revealed that per hectare utilisation of hired labour was more than that of family labour, irrespective of size of holding in both the crops. It was also observed that there was higher utilisation of female labour in case of winter maize. On the contrary, in case of wheat, more male labour was used. The reason for these observations may be that certain operations like irrigation, inter-culturing, top dressing, etc., have to be completed within a short time during the peak period. Separation of maize grain from the cob, which is a female dominated operation, may have been the reason leading to higher use of female labour in maize as compared to that in wheat.

It was found that utilisation of machine labour in winter maize and wheat indicated that it was higher in winter maize in comparison to that in wheat. Winter maize, being a longer duration crop, needs more number of irrigations at shorter intervals and threshing of maize being a labour consuming affair, may have been the reason for higher utilisation of machine labour in winter maize.

Seed is a crucial input for growing any crop. Per hectare, 25.07 kg of seed was used on sample farms in the case of winter maize. Farmers belonging to all size groups used almost an equal amount of seed per hectare. In case of wheat, the average seed rate was 102.80 kg per hectare. It was observed that marginal and small farmers used higher quantity of seeds in comparison to medium and large farmers.

Detailed analysis of fertiliser application in winter maize and wheat revealed that nitrogen was applied in excess of recommendation in case of both the crops. Phosphorus and potash were applied in less quantity than what was recommended for the area. Application of nitrogen in excess of recommendation was probably because of the widely held fallacy that higher dose of nitrogen would lead to higher production. Along with chemical fertilisers, zinc was also added to the soil as basal dose. All size groups of farmers applied an almost equal amount of zinc in case of winter maize (4.96 kg per hectare). A similar trend was observed in case of wheat, with 4.80 kg of zinc application per hectare of cropped area.

A detailed analysis of cost of cultivation of winter maize and wheat was carried out. Per hectare total cost (Cost C) of winter maize was calculated to be Rs 24,247.85, out of which 72.75 per cent was operational cost and 27.25 per cent was fixed cost. In the case of wheat, the total cost per hectare was estimated to be Rs. 20,263.98, out of this Rs. 13,534.95 was operational cost and constituted 67.28 per cent of the total cost. Remaining Rs. 6,629.03 was fixed cost (32.72 per cent of the total cost). Fertiliser, irrigation, machine labour, and human labour were identified as important items of operational cost in both the crops.

The study led to the conclusion that the cost of cultivation of winter maize is higher than that of wheat but cost of production of winter maize is lower than that of wheat. The study shows use of nitrogenous fertilisers in excess of recommendation and no use of organic manures in both the crops. Cost of major inputs per quintal of produce is relatively lower in winter maize than that in wheat. The result of the functional analysis shows positive influence of timely sowing and use of machine labour and the adverse effect of over utilisation of chemical fertilisers on winter maize production. Production coefficients of machine labour and irrigation are positive and significant in case of wheat, indicating significant influence of these factors on wheat production.

The study highlights five key policy implications. First, production of winter maize should be promoted at the cost of wheat in winter maize growing areas. Second, use of irrigation in wheat and use of machine labour in both the crops (winter maize and wheat) should also be promoted. Third, application of nitrogenous fertilisers should be brought down to levels recommended. Fourth, use of organic manures should be encouraged so that soil health is improved. And, fifth, timely availability of quality seed, fertilisers and irrigational facilities should be made available to the farmers at reasonable prices.

**3.15 Stocking Density and Species Mix in Composite Fish Culture in North Bihar: A Techno-Economic Analysis, R. K. P. Singh and Tun Tun Singh, *Journal of Fisheries Economics and Development*, Vol. No. 6 (1), 2005.**

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**Key Topics:** *Pisciculture, Aquaculture, Fish Production*

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The article notes that global fish production is becoming increasingly scarce and more subjected to anthropogenic influence. The transition to relative scarcity will be ameliorated by better management of fisheries resources and good management practices. Aquaculture also offers possibility for species diversification through genetic engineering to meet consumer taste and market requirements. Bihar plays an important role in inland fish production in India. Total fish production increased continuously from 0.40 lakh metric tonnes in 1961-62 to 3.06 lakh metric tonnes in 2010-11, and it places Bihar in the third (8 per cent) position in inland fish production in the country after Andhra Pradesh (20 per cent) and West Bengal (29 per cent).

The article finds that despite an increase in fish production, Bihar's share in national Inland Fish Production declined from 14.4 per cent in the early 1960s to 8 per cent in 2010-11. This was mainly due to a comparatively slow growth of fish production in the various fishery ecosystems in Bihar. Low level of adoption of aquaculture technology seems to be the main reason for slow growth in fish production in Bihar. The article argues that technological progress alone is likely to add 17 to 19 per cent to the total fish output in 2005. It observes that after launching the Fish Farmers Development Agency Programme, a few farmers could partially adopt the improved aquaculture technology. It is argued that the programme failed to create the required infrastructure for production of fish seeds. The article laments that there is a dearth of empirical studies dealing with process of stocking and composition of fish seed for fish production in Bihar. Hence, the present study was undertaken to analyse the adoption of fish production technology, particularly dealing with quantum, compositions, and quality of fish seeds in fish production in north Bihar.

The article is based on a primary study for which data was obtained through a field survey of fish farmers. The study was conducted in 6 districts in north Bihar, covering 3 blocks in each district and 6 villages in each block with comparatively large area under water and quantum of fish production. In the survey, 180 farmers were interviewed to obtain required information. These farmers had 202 ponds. Selected fish farmers were categorised into three groups on the basis of size of ponds, that is, small pond owners (<0.5 ha), medium pond owners (0.5 to 1.0 ha), and large pond owners (above 1.0 ha). Data was collected by interviewing the respondents with the help of a structured questionnaire which relates to the period 1999-2000.

The study finds that fish production depends up on various variables, viz., seed, feed, fertiliser, labour and good management practices. However, fish seed is an indispensable and necessary factor of production. The stocking of the right quality and quantity of appropriate number of desired species of fish seed at the right time may help in higher levels of production per unit area. The third week of July emerged as the most common period of stocking activities in north Bihar. The majority of ponds (67 per cent) were stocked by a mixed species of indigenous fish, viz., *rohu*, *catla*, *mrigal* and exotic species like grass carp, silver carp, and common carp. On an average, fish seed amounting 18.66 kg were stocked in ponds under study which constituted 76.53 per cent indigenous and 23.47 per cent exotic carps. Per hectare rate of stocking was comparatively high in small ponds (26.45 kg) followed by medium ponds (20.61 kg) and large ponds (15.37 kg). It has been observed that the large size pond owners used comparatively low quantum but large size of fish seed which has low mortality after stocking. It has further been observed that the medium size pond owners stocked a comparatively large proportion of exotic carp (25.57 per cent) followed by small (23.36 per cent), and large pond owners (21.34 per cent). However, 14.36 per cent of sample pond owners stocked Indian *Mangur*. The proportion of Indian major carp, i.e., *rohu*, *catla*, *mingal* has been estimated at about two-thirds of the total fish seed used in north Bihar. The proportionate stocking density of exotic species, viz., common carp, grass carp and silver carp was estimated to be 23.47 per cent in ponds under study. The size of indigenous major carp varied from 1" to 2.5", exotic carp from 1.5" to 3.5" and *mangur* for 1.5" to 2.5" in the project area.

The study finds that among the indigenous and exotic species, *rohu* constituted 38 per cent and common carp 40 per cent of stocking quantity, respectively. While conducting the survey, the study found that the farmers showed their complete unawareness about the recommended stocking proportion, indicating the poor fisheries extension services in the project area.

The study also examined the proportions of different species of fish in composite fish culture. Fish farmers stocked about 29.09 per cent of column feeder (*rohu*) against recommended proportion of 20-30 percent, 30.72 percent bottom feeder (*mrigal* and Common carp) against recommended proportion of 40-45 percent. The proportion of grass carp is almost as recommended but surface feeder proportion is lower than the recommended level. The different size of ponds did not differ much with respect to proportion of fish species stocked by them. Hence, the study infers that the fish farmers could not adopt the recommended proportions of different fish species in composite fish culture.

Besides quantum and composition, the high level of fish productivity also depends upon source of fish seed. Fish seed procured from wild sources (rivers, *jheel*, *chaurs*) contain many undesirable species. The study finds that farmers utilised multi sources for procuring fish seeds. Traders emerged as the major source of fish seeds in the study area but two-thirds of the traders involved in sale of fish seed collected from wild sources and supplied poor quality of fish seeds. It is argued that probably this is an important reason for low fish productivity in north Bihar.

The study concludes that fish farmers are neither using recommended proportion of fish species nor purchasing fish seeds from reliable sources for composite fish culture because there is a dearth of scientific hatcheries in Bihar. To make matters worse, Fisheries Cooperative Societies are almost non functional and need to be rejuvenated.

### **3.16 Land, Labour and Power: Agrarian Crisis and the State in Bihar (1937–52), Usha Jha, Aakar Books, New Delhi, 2003.**

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**Key Topics:** *Agrarian Crisis, Zamindari System*

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The book examines the agrarian problems of Bihar and relevant policies of the state government during the period of 1937–52. It focuses, in particular, on issues related to land, its tenures, rack-renting suppression of the rights of

*raiya*s, and perpetration of injustice on them. The key objective of the study is to trace the significant development in agrarian life in Bihar during the chosen period and examine the policy of the Indian National Congress towards agrarian issues. The book has been divided into seven chapters including a concluding chapter, dealing with the agrarian adversities of Bihar, various changes in land tenures and the need for a transformation, the attitude of the Indian National Congress towards the agrarian question, agrarian movements during the period, the abolition of *zamindari* in the state, and its socioeconomic impact.

Primary and secondary sources of information have been used for the study. Besides unpublished records of the State Archives, Government of Bihar, official reports, proceedings of the Bihar Legislative Assembly and Council, annual budgets, memoirs of Congressmen, and contemporary newspapers and journals have been consulted.

The book begins with outlining some major ills that plague agrarian growth in Bihar including subsistence type of farming and a consequent deficit in the agricultural economy, poor equipment, inferior livestock, defective preparatory tillage, fragmentation of holdings, lack of adequate credit facilities, insufficient, irregular and uncertain water supply, soil exhaustion due to continuous cropping, soil erosion, lack of adequate supply of improved seed, and a faulty land system. In particular, the book argues that the system under which land was owned and cultivated in Bihar was an important factor leading to low productivity. This included the problem of land tenures, the legal or customary system under which the land was owned, and the problem of land tenancy, the system under which land was actually cultivated, and the produce divided between the owner and cultivator.

The book argues that the colonial agrarian policy under the British rule was never peasant oriented. The non agricultural sector was not developed enough to absorb the surplus labour force. Because of the weakening of the Indian cottage industries during colonial times, a large number of craftsmen lost their means of livelihood and were reduced to levels of starvation. The book argues that landlords were not interested in increasing agricultural inputs and their *raiya*s did not have enough money to invest in farming. Fragmentation of landholdings contributed to this agrarian crisis. Fragmentation entailed wastage of land in the form of boundaries, hedges and plough ways. The illiteracy of farmers further compounded this problem.

The book points out that the land revenue system changed under the British rule. Since they were unfamiliar with the problem of land management in the country, they adopted a method of letting out *Zamindari* rights to the highest bidder leading to disastrous results. Soon, the 'permanent system of land tenure' also known as the *Zamindari* system was introduced. This, the book argues, transformed rural society because it enacted proprietary rights for *Zamindars* and placed the *raiya*s at the mercy of the former.

The period between 1937–52 was one of historical significance as the Bihar Prantiya Kisan Sabha paved the way for the rise of the All India Kisan Sabha. While the Kisan Sabha saw the Congress as class collaborationists, the author argues that in fact the Congress had 'awakened the *kisans*, provided them with a model for organisation, and methods for fighting. The freedom struggle brought awakening among the peasants which made them conscious of their own economic rights vis-à-vis the *Zamindars*' (pp. 217). The book points out that the passage of the Land Reforms Act 1950 is the turning point in the history of modern Bihar. The most important result was that it abolished the intermediaries system between the land and the tenants. Further, it cleared the path for post abolition reforms and brought peasants in direct contact with the state by conferring the right to ownership on them. However, the land reforms failed to solve the land problems through abolition of landlordism and redistribution of land to the tiller. Moreover, the Act did not even completely eliminate the semi-feudal exploitation of the peasantry.

The book points out that the key to success of any political party is based on its land policy in Bihar. The government must have the political will to implement the Land Reforms Act in the true sense. It concludes with pointing out agrarian issues that must be dealt with urgently, including the modernisation of agriculture through the adoption of a broad strategy focused on science and technology based agricultural development, research, and extension and development of irrigation. Secondly, the control of flood and drought situations through the implementation of an integrated scheme of flood control, irrigation, and rural electrification, so that the abundant water resources of Bihar may be well utilised. Thirdly, the principle of rectangulation should be applied in the matter of consolidation as it is one of the key factors responsible for agricultural growth in Punjab. Fourthly, appropriate institutions must be created and existing institutions such as the Block Development Agencies must be strengthened to supply necessary help to the agricultural and industrial sector. Fifthly, more industries must be established, based on local industrial potentialities. Sixthly, the family planning programme must be strengthened to check the

population explosion in the state through opening health cum family planning centres at the *Panchayat* level. Finally, the people of Bihar must be made aware of and participate more fully in the plethora of government schemes that exist today.

### **3.17 Agricultural Development in Bihar: Performance, Constraints and Priorities, Anjani Kumar and D. Jha, Institute for Human Development, New Delhi, 2003.**

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#### **Key Topics: Agricultural Development**

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The study notes that the dominance of low income agricultural sector, low per capita income, and high poverty in rural areas of Bihar is attributed to lack of opportunities in industries, poor rural–urban growth linkages, underdeveloped infrastructure, population pressure on natural resources, and high density of livestock. In this context, the present study attempts for a critical assessment of Bihar agriculture, for the period 1980-1999, in a new perspective.

The study is mainly based on the data from secondary sources, especially data from the Directorate of Statistics and Evaluation, Government of Bihar. The report has four main sections. Section 1 deals with features of Bihar agriculture, Section 2 shows the agricultural performance in the state, Section 3 describes the major constraints in agricultural development, and Section 4 concludes, with policy recommendations.

The study reports that agriculture in Bihar is dominated by small farms as 84 per cent of the farmers have less than one hectare of operational holding, and this indicates that development strategy for agriculture must be focused on the small farm sector. Food grain crops cover 87 per cent of the Gross Cropped Area in the state. Rice and wheat cover 70 per cent of the cropped area. Livestock generates nearly 21 percent of the agricultural output in the state and is a major source of employment for the landless and small landholders. Fisheries also provide employment to a sizeable population in the state.

With regard to the performance of agriculture during the 1980s, significant growth rates in production were recorded for a number of crops. During the 1990s, the production growth of three major crops, rice, wheat, and maize in the state has been respectable. The study found that major horticulture crops exhibited mixed growth trends in the 1990s. Brinjal, tomato, cauliflower, onion, *litchi*, and banana recorded significant growth in area as well as production. Dismal performance was observed in chillies, potato, guava, and mango. These trends indicate the need for focused attention on high value horticultural crops and their market trends. Among the major livestock products, only milk and wool have shown significant growth in 1990s. On the other hand, the fisheries sector performed exceptionally well.

The study reports that despite favourable soil and climate, yield levels for most crops are low in the state. The growth in fertiliser consumption slackened in the 1990s as compared to the 1980s. Irrigation intensity is also stagnating in the state. However, analysis of HYV coverage shows that high yielding varieties of rice, wheat and maize are gaining wider acceptability in the state in recent years. The study found that the availability of tractors and pump sets, insecticides, and pesticides has also increased.

The econometric analysis brings out that agricultural production in the state can be raised by the use of modern inputs like fertiliser and irrigation, and also by increasing the levels of investment in infrastructure like rural roads and markets. Agricultural production in the state suffers due to some generic maladies, which are pervasive. More than 41 per cent area of the state is flood prone. Water logging affects a substantial area in the state. *Diara*, *tal* and *chaur* lands are kept fallow during *kharif*. In several of these situations, the terrain restricts drainage options. Hence, the study recommends that a suitable strategy for such lands must be designed. The dominance of small farms is compounded by the existence of fragmentation of holdings. Despite having a long history, the study reveals that attempts to address these structural constraints have not been successful.

Even though the state is endowed with rich water resources, the agricultural sector faces inadequate management of drainage, floods, droughts, and poor water management. Surface irrigation systems and ground water exploitation is in a sorry state. Further, the pricing and distribution inefficiency in the public irrigation system needs immediate attention.

Due to extremely low seed replacement, crops lose their potential. The study reveals that the state seed corporation is unable to meet the seed demand, either quantitatively or qualitatively. Revamping the seed sector is

a must for technological dynamism. The study points out that the low fertiliser use in the state can be attributed to infrastructural inadequacies, an inefficient distribution system, and unscrupulous private trade. The declining public investment in agriculture over the last decade shows that the productivity potential of the state is eroding. Although private investment in agriculture has grown, the study argues that it cannot compensate for the decline in public investment.

Though, the state experienced a sharp increase in the marketed surplus of wheat and rice, the study reports that the farmers have not benefited from the government's procurement policy. With respect to prices, the study states that the farm harvest prices received by the farmers for paddy and maize in Bihar continue to be very low.

The study suggests that agricultural research and transfer of technology is a prime source of development. But there has been no real investment in the 1990s, either in terms of finance or scientific manpower resources. Moreover, all institutions concerned with agriculture and rural development have become practically non functional. The legal provisions governing the institutions have also become outdated or obstructive. Lack of coordination and integration of programmes of various departments has resulted in dissipation of effort and inefficiency. The study states that hard decisions must be taken to address these problems.

In the section on policy thrust, the study highlights that policies relating to land and water resources needs to be rationalised and marketing regulations should be modified. A complete overhaul of the policy and legal framework governing critical institutions is the need of the hour. There is a growing requirement to develop agricultural and rural development programmes on the basis of a regional approach. Agro industries play a critical role in accelerating agricultural and rural development. Hence, attempts should be made in providing incentives and enabling conditions for their development.

### **3.18 Commercialisation of Agriculture in Bihar, K. M. Singh, Paper presented at the National Level Workshop on 'Agriculture, Agro-based Industries and its Scope for Development in the State', Patna, 18-20 June 2003.**

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#### **Key Topics:** *Agriculture, Commercialisation Strategies*

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The agriculture sector in India is getting increasingly commercialised and monetised, and there is an increase in the volume and proportion of output that enters into the market. Hence, along with optimisation of production, producers have to achieve optimisation of sales to realise the best returns on their efforts and investments. This would require knowledge about market demand, prices, timing of sale, relationship between commodity attributes and prices, methods of sale, consumer preference for physical and quality characteristics, etc. In this context, the present study proposes certain commercialisation strategies for the agriculture sector, with special reference to Bihar.

The study gives a broad overview of the strengths and weaknesses of Bihar's agricultural economy and then delineates some commercialisation strategies. The study unveils that the main strength of the agriculture sector in Bihar, which enables it to compete in the international markets, is that it has regions which are climatically favourable for the cultivation of every commercially important plant species grown in other parts of the country, ranging from tropical mangoes, pineapple, tea and medicinal plants, to a wide range of commercially attractive crops. Bihar also has large areas of irrigated land with potential for further development. The abundance of available skilled, educated, technical, and scientific manpower is an additional strength of the state.

However, the study adds that poor infrastructure, lack of governmental support to the farm sector, and a bad law and order situation has ensured that new entrepreneurs are unwilling to take the plunge in exploiting the otherwise conducive conditions. The central government has also not paid much attention to the problems of Bihar farmers, which is reflected in the procurement policy of the state owned Food Corporation of India. While the farmers of Punjab and Haryana are paid incentives, Bihar is deprived of its share year after year.

The paper points out that small farmers in Bihar should be advised on Product Planning. A careful selection of the crops and varieties to be grown with marketability in mind is an important starting point. Providing this basic advice to the farmers is very essential to enable them to withstand the competition in the market.



Farmers need information on two aspects of marketing, current price and market arrival information, and forecasting of market trends. This information must also be supplemented with other information about reaching a particular market, to get a particular price, arrangements available in the market related to storage, transactional methods, quality requirements, post-harvest handling requirements, etc. Along with the information on the spot market, the forward future market prices are also required to be disseminated to the farmers. They have also to be educated or trained in taking appropriate signals from the forward and futures prices.

The extension agencies like ATMA can advise farmers for grains to be sold to the government agencies, in making contract-marketing arrangements with processors, wholesale traders, or other bulk buyers. In order to avoid 'gluts' in the small local markets, farmers can be advised to take benefit of warehousing with pledge finance schemes, entering into forward contracts, or go in for futures trading. The study states that the farmers also need education on improved harvesting methods, standardisation and grading, improved packing and handling practices, appropriate storing methods, etc., for profitable marketing of his produce. Marketing extension should also help the rural population establish and operate markets on their own and save them from exploitative elements. Run by the farmers, the rural markets, particularly, can become centres of marketing rules and regulations. The rural population will be able to protect their interests better when they visit distant wholesale or terminal markets. The farmers should be trained on quality production, post harvest handling and management, presentation for marketing, and value addition for better prices and more returns. Under the present conditions, when food habits are rapidly changing and the consumers have developed various preferences about the quality of the commodities, the processors need specific characteristics in a commodity and it has become necessary to consider the cultivation of those varieties which have comparative advantages, better demand, and higher acceptability.

The paper also suggests that farmers should be trained on pre harvest care, quality care, grading, transport and handling, strategy to complement the economic liberalisation, meeting the growing domestic demand, tremendous export opportunities, and closing the productivity gap.

Bihar is generating less income for its farmers per unit of available land and water. In this context, this low water and soil productivity can be overcome by adopting proven modern technologies for soil restoration and water conservation.

Although it is widely believed that the problem of educated unemployment cannot be solved, a shortage of agricultural graduates is actually developing due to the rapid development of commercial agriculture. When the commercial potentials of agriculture are fully recognised, students will flock to agricultural colleges and universities as a course of preference and many agricultural graduates, who come from rural families, will return to the land to become entrepreneurial commercial farmers, rather than migrating to urban areas in search for employment.

The technology and capital required to bring about a second revolution in Bihar agriculture are readily available and well within the country's means. Institutions like ATMA can be used as a role model for such organisations.

Fresh water fish and prawn culture can be a highly remunerative undertaking for rural farmers, provided that they have access to appropriate technology, feed, processing, and marketing facilities. The study suggests that the government should establish rural aquaculture estates and lease out small production ponds to farmers and landless labour.

New models and innovative approaches are needed to bring small producers together to form viable rural enterprises. One option is for groups of farmers to constitute their own firms for joint production, processing, and marketing. Integrated sericulture projects can be established in which all the essential operations from mulberry cultivation to spinning of silk yarn and weaving of silk fabric can be brought together in a small cluster of villages, minimising the need for middlemen and maximising profits to the primary producers.

Large tracks of waste land can be converted into productive cultivable land by an infusion of capital and sophisticated technology to tap deep aquifers, install drip irrigation facilities, and in some cases green houses. The cost and technical input required to develop these lands can be undertaken by agri-business corporations.

The corporate sector can also play a role in stemming and reversing the degradation of forests. Appropriate policies need to be formulated to encourage the private sector to invest in planting the barren areas and farming portions of tree crops, which they can raise under contractual agreements with the forest authorities, as is done in several highly industrialised nations. Such arrangements will generate job opportunities and enhance supplies of much needed wood products.

The study points out that to implement the extension programmes on marketing aspects, in the context of competing in international trade, the central government organisations have to play a vital role. The state government could also create special cells/organisations to help and train cultivators for export purposes.

The study proposes an action plan for the year 2020 which argues for the need to establish commercial farming schools on leased lands in every block to demonstrate cultivation of highly profitable cash crops and train young farmers in advanced methods to raise productivity, to establish integrated horticulture estates for private farmers to cultivate high profit vegetables and fruit crops linked to professional processing and marketing by private or public sector agencies, to establish integrated sericulture projects in which all the operations from mulberry cultivation to silk spinning and weaving are carried out scientifically within a cluster of villages and the products are professionally marketed and exported, and to establish intensive aquaculture estates, each of 50 acres, consisting of quarter acre intensive production ponds leased out to small farmers and landless workers with centralised technical support, feed plants, processing, storage, and marketing facilities. Additionally, it recommends establishing scientifically run soil labs in every district and block to test soils, for micronutrients, and prescribe measures to restore soil fertility and double crop productivity, while reducing inputs of macronutrient chemical fertilisers, encouraging the private sector to acquire or lease degraded, uncultivable wastelands and to utilise advanced technologies to reclaim land for intensive horticulture and farm forestry, and revamping the curriculum of agricultural colleges and universities to impart practical skills in commercial farming, and to encourage graduates to take up scientific farming and agri-business ventures. Finally, it also recommends publishing widely achievements in the Agri-business sector to generate awareness of the enormous potential for the country, promoting the use of organic methods and practices in agriculture, promoting new enterprises like medicinal and aromatic plants, cultivation and value addition on a war footing, to take advantage of the locally available resources, encouraging farmers to form commodity based interest groups and facilitate their working so that they have enough technical and financial power to take up new and costly enterprises, and also establishing information kiosks from where farmers can get timely information on not only markets, but also prices and technology to suit their needs.

**3.19 *Technology Status and Future Vision in Agro and Food Processing Sector, K. M. Singh, Paper presented at the Seminar on Agro and Food Processing organised by the Confederation of Indian Industry, Bihar State Council, Patna, on 15 October 2003.***

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**Key Topics:** *Agro and Food Processing Sector*

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The Agro and Food Processing sector ranks fifth in terms of its contribution to India's GDP and employs around 18 per cent of the country's industrial force. Exports from the sector have gone up from Rs 2,821 crores in 1991-92 to an estimated Rs 10,770 crores in 2000-01. In India, the Agro and food processing sector holds significant potential for India's future development. Despite the strengths, the industry has certain weaknesses. With a view to providing a boost to the sector as also exports from the sector, the study has delineated a number of recommendations. The study details the technology status of cereals, dairy sector, cereals, and fruits and vegetables, and provides a future vision to each of these sectors through recommendations.

The Food Processing Sector comprise of Fruit and Vegetable Products, Fisheries Products, Meat and Poultry Products, Milk and Dairy Products, Grain and Cereals Products, Consumer Industry Products, and Plantation Products. The study states that processing can multiply the export value of farm produce by 50 to 500 times and open up vast international markets.

India's mushroom exports are mushrooming. Over the past 3 years, not less than 9 export-oriented mushroom projects with an investment of more than Rs 130 crores have been established in joint venture with foreign companies.

With regard to the dairy sector, India is the second largest milk producer in the world today. The study states that the 'Operation Flood' programme undertaken by the National Dairy Development Board has improved milk production in India. However, the major concerns facing the dairy sector in the area of milk production are large number of unproductive cattle and low milk yield. The average milk yield per milch cattle has been reported around 520 kg per year in India, compared to 7000 kg per year in USA. Limited usage of right quality and quantity of feed to the cattle and inadequate healthcare infrastructure are two major concerns in the dairying sector. There is also no national level breeding policy

for high yield cattle and inconsistent milk production policies exist at the State level. According to the study, artificial insemination, multiple ovulation and embryo transfer, and development of transgenic animals can contribute in increasing the milk yield. Improved cattle feed and by-pass protein feed technology also contribute towards improving the milk yield.

In the milk procurement system, the study recommends for Electronic 'milkotesters' for establishing fat, SNF content, bacterial count, heavy metals and pesticides residue, etc. Widespread usage of farm bulk coolers for chilling of milk at the village level and enzymatic protection by lacto-peroxidase system are suggested towards reducing procurement losses and improving milk quality. According to the study, on the processing front, only 12 per cent of the milk produced in India is processed today. Technologies for primary processing are not widely used in the country. There also lies an enormous scope for production of various processed milk products.

Cereals account for the largest share, about one fifth of the consumption expenditure in India. The study found that though cereals are consumed as products from primary processing, products from secondary processing of cereals are yet to gain mass acceptability in the country. Rice, Wheat, Maize, and Sorghum are the four major cereals that are grown and consumed in the country. India accounts for 14 per cent of world rice production. However, there is a decline in its production since the last five years. Wheat accounts for around 30 per cent of the total cereal production in the world. India's share in international trade of wheat is negligible. Bulk of maize is dry milled in small quantities for direct consumption. About 10 per cent is wet milled to obtain starch and its derivatives, oil and cattle feed, and the rest is used as fodder. Almost the entire quantity of sorghum is dry milled for direct consumption.

Around 10 per cent of rice is processed into traditional products like popped rice, flaked rice, etc., in the cottage industry. Wheat flour is processed mainly into bread and biscuits and to a smaller extent into pasta products. The study points out that due to non-segregation of different varieties and qualities at the collection stage, the quality of wheat flour is inconsistent. Only a small quantity of starch derivatives are being produced from maize and another shortcoming is that bulk of this is being done by the acid technology, whereas, internationally the more efficient enzyme-route is followed. About 400,000 MT of oil is extracted from rice bran. Wheat bran and maize gluten are extensively used as animal feeds. Though India has been exporting around 500,000 MT of Basmati rice and around 300,000 MT of white rice accounting for less than 5 per cent of the global trade, only very small quantities of wheat and maize are currently exported.

Detailing on the weaknesses existing in the foodgrains sector, the study reports that manual handling of grains results in spillage losses. Mechanised handling and loading and unloading devices are not used in India. About 40 per cent of rice is milled in hullers, while 60 per cent in shelters and modern rice mills. Significant losses are also recorded during transportation of foodgrains due to improper stitching of bags, multiple handling, usage of books, and pilferage in India. The study found that more than 6 per cent of rice is lost due to poor storage design and practices. The paper suggests that adoption of controlled atmosphere storage and vacuum storage technologies in the long term would help to bring down the losses. Eco-friendly poly lined bags and wholly plastic bags can be resorted to. Tile box wagons for bulk transportation may be used in the long term.

The study reveals that although India is the largest producer of fruits in the world, the production per capita is only about 100 gm per day. The fruit production in India has recorded a growth rate of 3.9 per cent, whereas, the fruit-processing sector has grown at about 20 per cent per annum. However, the growth rates have been higher for frozen and fruits and vegetables. There exist over 4,000 fruit processing units in India with an aggregate capacity of more than 1.2 MT. Around 20 per cent of the production of processed fruits is meant for exports (Mango and mango-based products constitute 50 per cent of exports); the rest caters to the defence, institutional sectors, and household consumption.

According to the study, manual harvesting is widely practiced for fruits due to abundant supply of surplus agricultural labour. The fresh fruits are mostly harvested by hands or hand tools. Sorting and grading of fruits is done on a very limited scale and that too based on visual inspection only. Land ceiling is also a major deterrent for large-scale cultivation of fruits and vegetables, especially in the organised sector. Limited pre-cooling facilities are available for grapes, strawberries, etc., and only for export purpose. Moreover, India's farmers suffer from an aversion to fruit growing as this requires high initial investment and long gestation period. Poor quality of seeds and other planting material available affect the yield of fruits and, thereby, return to the farmers. Low educational level coupled with poor technical training/extension facilities available to the farmers, adoption of new technologies has always been a problem area. These results in non-uniform quality of fruits produced in India.

India is the second largest producer of vegetables in the world and accounts for 15 per cent of the world's production of vegetables. Less than 2 per cent of the total vegetables produced in the country are commercially processed as compared to 70 per cent in Brazil and 65 per cent in USA. The paper suggests that there exists a strong need for extension education and training for the growers. Cooperative and contract farming may solve the problems for small landholdings towards improved yield and quality in the long run. Application of fungicides/pesticides and chemical preservatives would be phased out and would be replaced by more environment friendly technologies in the long run. The study states that while pre-cooling (cold chain) and surface coating are expected to dominate in the short run, CAIMA packaging and irradiation technologies are expected to emerge in the long run for preservation and extension of shelf life.

The small scale and unorganised sectors today account for 75 per cent of the total industry having only local presence without much access to knowledge, technology, and marketing network. In processed food products, the high price on account of the cumulative effect of low productivity, high cost of raw material, spoilage due to poor infrastructure, inefficient and costly transportation, high cost of finance, and a high incidence of taxes and duties, leads to the vicious cycle of low demand, low capacity utilisation, high per unit cost, and, again, low demand. According to the study, despite the existence of a strong and wide network of R&D institutions, their linkage with the users like farmers and industry is not well established, resulting in lack of technology flow, pure and academic research rather than applied and commercial, lack of involvement of industry in research work, and resource crunch.

The unattractive nature and the high risk profile of food processing industry has impeded the required flow of credit from financial institutions, who are yet to acquire the proper understanding of this sector to attain the requisite levels of appraising skills. Low margins, seasonality and high perishability being the distinct features of this industry. The access to seed capital and working capital is not easy. Despite having been declared a priority lending sector, there is hardly any growth in capital flow to this industry. Despite the vast domestic market size, the present level of processed food marketability is very low. However, the study hopes that by massive awareness and educational campaigns, this market could grow higher enough to consume a substantial part of any quantum of our processed foods.

This calls for adoption of high tech machines and technologies, as also development of entire chain of the infrastructure. Weak database and lack of market intelligence are the prevailing features of this sector. The backward linkage between the farmer and the processor is yet to take proper shape to tide over the impediments which exist on account of fragmented and small landholdings, erratic production due to natural factors, non uniformity and inconsistent supply of raw material, and longer chain of intermediaries. Multiplicity of laws and regulatory authorities throttle the industry in its further growth calling for harmonisation of laws, development and administration of standards in consonance with international standards like Codex through a single authority.

The prevailing packaging system also lacks requisite quality and presentability parameters, creating a handicap as compared to the imported products. Cooperative institutions and other para-statal organisations are weak and people's participation, either through *Panchayat Raj* Institutions, NGOs or farmers organisations, and industries association in the food sector remains far from adequate. Economic Reforms have mainly benefited the business class and the periphery has been ignored.

The study reports that India should make concerted efforts to meet the challenge of rural employment, demand for food products, and land and water availability. An agro-industrial revolution will need basic infrastructure. The study states that to achieve an agro-industrial revolution, India needs a new policy framework including level playing field through deregulation of agriculture and encouragement of investment, drive for education, information, training of rural youth, and a massive marketing effort to shift from traditional family-based farming to modern farm management and food processing. Elimination of middlemen through the abolition of Agricultural Produce Marketing Committee (APMC), change in co-operative laws to encourage farmers to link with more than one co-operative to break monopsony, deliberate encouragement to set up competitive multiple entities in each district. Identification of wasteland for the benefit of marginal peasants, setting up of growth centres, and removal of all entry barriers in food processing is required. Reduction in excise and custom duties on farm equipment, food and milk processing machines, bulk coolers and cold chains, removal of all subsidies by state governments for co-operative societies, and elimination of bureaucratic control in the functioning of these co-operatives, computerisation of land records and land transfers, establishment of community communication centres for supplying farmers with all input and output information and introduction of a simple, comprehensive and strict Food Safety Act to ensure hygiene standards on par with international norms.

The study suggests that cultivation of medicinal plants can also lead to economic prosperity. It has resulted in many state governments propagating the cultivation of herbal and medicinal plants (setting up committees/boards in the process), on a larger commercial scale than before, to reach the international markets. With health concerns growing and increase in the ageing population the functional food has gained importance. The study proposes that world acclaimed India's tremendous knowledge base of alternative medicines like *Ayurveda*, *Unani*, and *Siddha* would definitely give an add-on advantage in harnessing the emerging potential of the Nutraceuticals industry.

**3.20 Agricultural Credit Flow in Bihar: An Economic Analysis, R. K. P. Singh and S. Nasir, *Indian Journal of Agricultural Economics*, Vol. No. 58(1), pp. 137–45, 2003.**

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**Key Topics:** *Agriculture, Economic Analysis, Credit Flow*

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The article focuses on identification of factors influencing agricultural credit flow in the Bihar. It points out that capital requirement has increased manifold in agriculture due to increased use of purchased inputs like high yielding varieties of seeds, fertilisers, irrigation, pesticides, and agricultural machinery. Moreover, agricultural production process is biological in nature and has a longer transition period, which results in a large time gap between investment and income. Although farmers prefer to hold their savings to invest in physical productive assets on their own farms, they also rely on credit. In order to produce more, the farmers need to spend more on modern inputs which must be financed either out of savings or through borrowing. The article, thus, argues that an increased institutional credit flow is critical for faster agricultural growth. Instead, what exists is a rural financing market which is small, widely dispersed, weather dependent, partly commercialised, and deprived of a basic socio-economic and institutional infrastructure.

However, the article also points out that agricultural credit policy has been progressively institutionalised for providing timely and adequate credit to farmers to increase agricultural production. The institutional agricultural credit system has made it possible for small and marginal farmers to access institutional credit. However, while agricultural credit policy has been progressively institutionalised and agricultural loans have registered a large increase at the national level, the corresponding growth has been lower in Bihar. There is a dearth of empirical studies dealing with agricultural credit flow in Bihar. The major emphasis of the study is on identification of factors influencing agricultural credit flow in the state. The study is based on district wise secondary data, relating to the period 1980–81 to 1996–97, and indices such as deflation index, diversification index, and infrastructure development index were constructed.

The study finds that agricultural credit has increased in the last two decades but without a steady growth, particularly in the early 1990s at 1980–81 prices. Further, agricultural credit flow (at 1980–81 prices) declined in the early 1990s which might have adversely affected the private capital formation in the agricultural sector in Bihar. Commercial banks and cooperatives are the two leading agricultural financing agencies but none of them could maintain the steady increasing flow of agricultural credit in Bihar up to the early 1980s. On the basis of per hectare agricultural credit flow, they find agricultural credit to be inadequate in Bihar. They argue that agricultural development (adoption of HYV seeds and fertiliser consumption) and functional rural institutions have a positive influence on agricultural credit flow. Therefore, according to the study, improved access to modern crop production and rural institutions (bank branches and dairy cooperatives) will increase credit flow in Bihar. The paper is useful for students of agricultural economics looking to understand credit flow in Bihar, as it presents a very lucid analysis of and suggestions for improved credit flow in agriculture.

**3.21 Dynamics of Pisciculture in North Bihar, R. K. P. Singh, K. K. Prasad and S. K. Singh, *Journal of Fisheries Economics and Development*, Vol. 4 No. 1, 2003.**

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**Key Topics:** *Pisciculture*

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This article notes that in Bihar the increase in fish production has been faster than the increase in production under different sectors of the state economy. However, fish productivity has been quite low from riverine, reservoir, and

semi-confined ecosystems because, generally, capturing fish is practised in these ecosystems. Pisciculture is practised in ponds but the per hectare fish productivity varies from 350 kg to 2,800 kg in Bihar. Hence, there is a scope for increasing fish production in the state of Bihar since per hectare potential yield of 3,000 kg is quite common without use of many inputs in farmers' ponds.

The study examines the various socioeconomic aspects of fish farming enterprises, costs, returns, human labour employment, marketing practices and constraints in fish production in north Bihar. The study is based mainly on primary data which was obtained from 180 fish farmers (10 fish farmers from each of 18 sample blocks), 180 fishermen (labourers), and 18 each of main market functionaries, retailers, and vendors.

The article notes that fish production is the domain of poor farmers who generally do not get finance either from the Government or from any Bank. The majority of them belong to socioeconomically backward community (*Mallah*). Scientific improvements in fish farming are likely to increase the level and quality of life of these poor farmers. Fish production is practised mainly on small size ponds in north Bihar. Almost all the ponds are natural and none of them were constructed during the last 50 years. These ponds have not been repaired/desilted during recent years. These ponds generally get dry during the summer season. A majority of fish ponds are under lease arrangements for short periods, which is also an important factor for not undertaking any expenses on repair or/and improvement of ponds. An increase in the lease period to 10 years may encourage fish farmers to make necessary investment on repair/improvement of the ponds. Fish production is a labour intensive enterprise since it is still practised with traditional technology. There is a lack of awareness about improved practices of fish production in the project area, mainly due to almost non-existence of fish extension services in north Bihar. Economics of fish production is favourable; however it could be improved further if farmers adopt scientific practices. There is a shortage of fish seed due to lack of fish nurseries in Bihar.

The article argues that fish productivity is, no doubt, quite low but per hectare productivity of 2,000 kg is quite common, mainly from medium size ponds with use of about half of the recommended level of inputs. It clearly indicates that there exists fish production potential which could be harnessed by educating farmers and making resources available to them for using the recommended quantum of inputs in fish production.

The article laments that fishery cooperative organisations are almost non-functional and engaged only in leasing ponds from government and leasing them out the same to fishermen. It should be strengthened by providing managerial and financial resources so that they are able to undertake supply of inputs and marketing of output for the benefit of the poor fishermen. As fish marketing is still unorganised, farmers are required to pay unauthorised charges in fish marketing. Agricultural market regulation is still to cover fish marketing in north Bihar.

The article recommends that the fishery development department needs to be reorganised to take more responsibilities and to have better rapport with fish farmers. Institutional efforts should also be made to train fish farmers to enrich their knowledge in the field of scientific fish farming. NGOs may also be involved in imparting training to fish farmers. Fish nurseries should be established on a large scale to bridge the gap between supply and demand for fish seeds in north Bihar. To overcome the problems in fish production due to recurrent floods, fish farmers should be advised to adopt pen fish culture. Credit institutions may be advised to increase the credit flow for constructing fish ponds which will help increasing the employment opportunities to fishery labourers who are underemployed in north Bihar. Fishery cooperatives need to be established at panchayat level so that the members could have a close rapport among themselves. In conclusion, the article sums that the revitalisation of the fishery cooperative will go a long way in improving the economy of fish farmers through arranging inputs and marketing of output of fish production.

Fish farmers should be encouraged to bring their produce to the market yards. It can only be done if wholesalers are advised to operate from market yards. The market regulation should also be enforced in such a way so that unauthorised deductions are not charged from fish farmers.

**3.22 Land Reforms and Pattern of Land Concentration in Bihar, R. K. Choudhary, PhD Thesis, Centre for the Study of Regional Development, Jawaharlal Nehru University, New Delhi, 2002.**

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**Key Topics:** *Land Reforms, Land Concentration, Land Distribution.*

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The study reviews the various land reform measures in Bihar and examines the pattern of land distribution and changes in the agrarian structure in the state. It also examines the national distribution of landholding using the National Sample Survey (NSS) data. The main aims of the study are to present a review of land reforms in Bihar in its historical perspective, analyse the distribution of landholdings by size groups in terms of number as well as area owned as well as changes in it over the selected time periods across the states in India, examine the district-wise pattern of distribution of landholdings in terms of number as well as area owned over the selected time periods and analyse the change over the same time period in Bihar, and examine the inter-regional inequalities in the state of Bihar and analyse the pattern of concentration of landholding therein.

To look into the changes in the distribution of landholdings, the NSS reports and the agricultural census reports on landholdings are the two major sources of data. The agricultural census data are largely carried forward, questionable, and less reliable than land revenue records at the grassroots level for most of the states. The data prepared by the NSS are based on a more scientific methodology. To analyse the progress of various components of land reforms, annual reports of the Ministry of Rural Development for various years have been used.

The study has examined the changes in various aspects of land distribution in rural India by using the state level data for 1971–71 to 1991–91. The discussion is mainly focused on the issues of landlessness, size distribution of operational holdings, and land concentration in operated area, and changes in it over time. A general feature of size distribution of operational holdings is that the percentage of holding decreases as the holding size increases. The percentage distribution of operational holdings reveals that the decline is getting progressively steeper with each decade. The pressure of growing population on the limited land resources and the consequent division of holdings is clearly reflected in the percentage distribution of operational holdings in different size classes. It has been observed that the proportion of operational holdings in different size categories is not changing at the same rate, or even in the same direction over time. The percentage of marginal operational holdings in total operated area has increased. The share of small holdings has also registered growth at a slower pace and there is some growth in the share of semi-medium holdings as well. However, at the other end, one sees a significant decline in the share of large holdings.

The study outlines some key factors as contributing to the changes mentioned above. They include, firstly, an increase in the rural population coupled with a breakdown of the joint family system, occurring mainly due to the operation of law of inheritance and strengthened norms of individualism. Land reform measures such as ceiling on landholdings, tenancy reforms, *Bhoodan* Movement, etc. Secondly, historical perspective of land reforms in Bihar reflects that it was the first state in independent India which came forward to implement land reform measures. Even after the introduction of various measures to break the monopoly of land among a few hands, there are still a few people who control most of the land. It is mainly due to the various weaknesses in the law. Thirdly, changes in the distribution pattern can also be attributed to the fertile alluvial soil, with availability of irrigation facilities, high concentration of population, and high growth rate of population. South Bihar, however, has a very low concentration of small size of holdings. The study suggests that this is because of a lack of the factors mentioned above.

The study finds that distribution of number of operational holdings under medium size class is highly concentrated in the southern districts of Bihar. In the Northern districts of Bihar, fewer numbers are under this size class. Distribution of number of operational holdings under the large size class is highly concentrated in the districts of southern Bihar, while, lower concentration is found in the districts of North Bihar. This is due to the vast geographical area and low concentration of population in South Bihar. The average size of holdings in all the size classes is continuously decreasing due to the high population pressure on limited land. Decreasing trend of average size of holding is an indication of high dependency of the economy on agriculture. The inter-class concentration ratio (ICCR) districts shows that marginal and small size groups had a lower extent of land than its share, while the semi-medium, medium, and large had a high proportion of land under the condition of equal distribution. The district wise pattern of ICCR value indicates that in all the districts the value is greater than hundred for semi-medium, medium, and large size of holdings. The study concludes by arguing that there seems to be very limited

success in implementing land reforms. It is argued that this has been largely due to the dominance of large landlords over rural society as well as state policies and administration.

**3.23 Breaking the Deadlock: Land Reform Revisited, D. N., *Economic and Political Weekly*, Vol. No. 37 (26), pp. 2545–49, 2002.**

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**Key Topics:** *Land Reforms*

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This article looks at some of the issues involved in the regions with continuing peasant insurgencies led by various shades of Maoists with continuing land reform questions. While there may not be an overall coalition in favour of compulsory land redistribution, particularly, given the continuing though diminishing role of rural landlords as controlling vote banks in an election system, there is nonetheless a substantial opinion that something needs to be done about the inequities of existing land ownership in these regions. The paper also suggests a possible way to break the deadlock.

The paper notes that it is a general impression that land reform has more or less been completed in Asia. It argues that while this is true of East Asia and parts of South-East Asia, it is not true of the rest of Asia. South Asia, in particular, has a substantially unfinished agenda in land reform. The paper tries to unfold the current issues of land reforms in South Asia. According to the paper, in India, land reform is particularly important for Bihar, East Uttar Pradesh, Orissa, Madhya Pradesh, Rajasthan, and Andhra Pradesh, and in Pakistan the focus of needed land reform is the Sind province. In the Philippines it is Luzon and the plantations on Negros and Mindanao. While in Indonesia, the main arena for redistributive land reform is Java itself.

The paper finds it as no surprise that the regions with continuing peasant insurgencies (or, armed struggle), led by various shades of Maoists, are those with the continuing land reform question, Nepal, Andhra Pradesh and Bihar in India, and the Philippines. According to the paper, the issues in the currently needed round of land reforms are not the same as in the earlier rounds of the 1950s and 1960s. In India, the abolition of intermediary tenures is not any more an issue. What is important is the security of tenancy, redistribution of ceiling surplus land to the landless, and land rights of women. One can also include the reduction of land ceilings in order to restrict ownership to the size of a family farm.

The paper points out that at the production level, the case for land reform rests on three main propositions. Owner-operated family farms are, in general, more efficient in use of land and other inputs than large farms operated with supervised wage labour. Secure tenancy rights promote longer term investment in enhancing productivity and conservation, compared to insecure rights, and that securing women's land rights too increases agricultural productivity. Secure property rights would enhance investment by owners and women's ownership of land becomes a necessary condition for adequate use of credit and necessary flexibility in the management of farm resources. The land relations situation has also become more complicated. In areas of intense movements by the landless (like Bihar and Andhra Pradesh), after the land struggles had begun or after notices for distribution of ceiling surplus lands to the landless had been issued, the landlords tried either to sell the land or rent it out to tenants, who were from the rising middle castes. These tenancies were entered into in order to escape ceiling laws. This proves that land ceiling reforms have not been implemented with any degree of seriousness. Redistribution to the landless is both difficult to implement. Studies of Bihar and Uttar Pradesh point out that the *Dalits* are concentrated among the agricultural labourers. The paper argues that aim of redistribution of ceiling surplus land is not to create 'viable' farms, but one of enabling a more equitable participation in the growth process; one, which would reduce the incidence of poverty of the landless. Studies point out that ownership of even a tiny plot of land increases the bargaining power of the agricultural labourers. The transfer of property rights to the landless and land poor increased their bargaining power in the wage market.

The paper indicates that specific attention has to be paid to increasing the bargaining power of women as agricultural labourers by allotting them individual land rights as well. Among the various Maoist organisations mentioned above, only the Nepal Maoists have recognised the importance of women's right to land and included it in their land reform programme. The paper suggests that in order to affect massive land transfers, policy measures directly assisting land transfers, such as the subsidy for the purchase of land or the imposition of land tax will be



indispensable. A way of redistributing good quality land is through government purchase of designated lands and their subsequent transfer to the poor. For the success of such market mediated land reforms, what is needed is to link up with movements of the landless in the various stages of identification, take over, and redistribution. Buying up of landlords' lands is certainly a compromise compared to outright confiscation. But the Maoists on their part have failed to build, even locally, an effective coalition in favour of such confiscation.

The paper concludes that poverty and illiteracy are both connected to the success or failure of land reforms. Together they affect both the depth of the Indian market and the supply of skilled and professional labour. Another important finding is that land reforms can benefit the landless by raising agricultural wages. The study also reveals that land reforms and literacy are also connected to each other, and land reforms enable an advance in literacy. Despite limited land reform, a comparison of neighbouring and similar states, like West Bengal and Bihar, or Kerala and Tamil Nadu, points out that superior literacy status is achieved in states where land reforms are implemented successfully.

**3.24 Fish Production and Marketing in Bihar: An Economic Analysis, R. K. P. Singh and Ashwani Kumar, Rajendra Agricultural University, PUSA, Samastipur, Supported by Indian Council of Agricultural Research, 2002.**

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**Key Topics:** *Fish Production, Marketing*

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The study aims at analysing the economics of fish production and marketing system in the state of Bihar. The study is based on primary data obtained through a field survey from representative respondents. A sample of 160 farmers, 180 fisheries labourers, and 54 market functionaries were selected by following multi-stage stratified random sampling technique. The survey method of enquiry was followed for data collection which relate to the period 2001–02. Tabular analysis was done to reach at relevant conclusions. In order to study the association between output and various inputs, Cobb-Douglas production function model was used.

The study finds that despite an increase in fish production from 2.20 lakh tonnes in 2001-02 to 3.06 lakh tonnes in the year 2008-09 in Bihar, the performance in inland fish production has been inferior to many states of the country. Its share in national inland fish production has declined from 17 per cent in 1960–61 to 9.02 per cent in the year 2000–01 and 7.44 per cent in 2008–09. In Bihar, there are two important dimensions of fish production, that is, predominance of government owned fish ponds and fisheries co-operative societies which are expected to exert much influence on fish production system in the state. Besides, the fish marketing system is also expected to play an important role in increasing the profitability to fish farmers which would ultimately motivate them to invest as well as to adopt improved technologies in fish farming to increase fish production. Bihar is, no doubt, still a deficit state in fish production and a large quantity of fish is supplied through different states of the country. The process of fish marketing, which is still most disorganised, has also not attracted effective attention of institutional agencies.

The study reveals that fish production is the domain of poor farmers in north Bihar. The majority of them belong to a socio-economically backward community (*Mallah*). Any improvement in fish production practices is likely to increase the income level and quality of life of these poor farmers. Fish production is practised mainly on small size of ponds in north Bihar. Almost all the ponds are natural and none of them constructed during last 50 years. These ponds have not been repaired/de-silted during recent years. These ponds generally go dry in the summer season. The majority of fish ponds are under lease arrangement for short periods which is also an important factor for not incurring any expenses on repair or/and improvement of ponds. An increase in lease period of 10 years may encourage fish farmers to make necessary investment on repair/improvement of ponds.

Fish production is a labour intensive enterprise since it is still practised with traditional technology. There is a lack of awareness about improved package of practices of fish production in the project area, mainly due to the almost non-existence of fish extension services in north Bihar. Fishery co-operative is an inactive organisation, mainly due to poor rapport amongst members. Fish marketing is still unorganised. Farmers are required to pay unauthorised charges in fish marketing. Regulation of fish marketing is still to be implemented effectively in north Bihar.

The conversion ratio and potential production in north Bihar have also been examined. Per hectare fish production was worked out to be 14.16 quintals, constituting 73.94 per cent indigenous and 26.06 per cent exotic

fish in the project area. Per hectare productivity of 20 quintals and more on 25.32 per cent of medium ponds and 10.53 percent of small ponds clearly indicate the potentiality of fish production in the project area. Hence, there is a need to make concerted efforts in making the resources and technology available to fish farmers for increasing fish production in the state. Per hectare higher fish production from medium ponds was probably due to use of comparatively high quantity of fertilisers, lime, and supplementary feeds on this category of ponds than that of other categories of ponds under investigation.

On an average, the conversion ratio was 71.37. However, it was comparatively high in case of exotic fish (82.55) than indigenous fish (68.12). Among indigenous fish, the comparatively high conversion ratio was observed in case of *Rohu* species of fish (68.05) whereas silver carp of exotic species exhibited higher conversion ratio (94.00). Despite the higher conversion ratio of silver carp, it was not the preferred fish species for production in north Bihar, mainly due to the inferior taste as compared to other categories of indigenous and exotic fish species.

Production efficiencies of different factors of fish production were estimated by using Cobb-Douglas production function model of regression. The cross sectional data of per hectare value of fish output and value of major inputs namely; manures, fertilisers, lime, fish seeds, feed, and wages for human labour were used for analysis. The estimated F-value (13.50) suggests that the independent variables included in the analysis affect the fish production significantly on ponds under investigation. Analysis revealed that about 57 per cent of fish production from ponds under study is explained by six variables included in the analysis, however, the estimated co-efficient of determination shows 32 per cent of the total variation in fish production explained by inputs included in analysis.

Analysis further revealed that almost increasing return to scale exists in fish production on sample ponds. Manure, fertiliser, lime, fish seed, and feed have positive and significant coefficients, indicating that these variables had significant influence on fish production but production co-efficient of human labour is negative but not statistically significant. The estimated MVPs of manures, fertiliser, lime, fish seeds, and feeds clearly indicate that one rupee investment on each of these variables generated additional fish output of Rs 5.9, Rs 7.4, Rs 3.6, Rs 3.4, and Rs 4.4, respectively.

The study argues that there is an urgent need to make institutional efforts in the field of research, extension, and training to exploit fish production potentiality which have been in utterly neglected in Bihar. It recommends that arrangement should be made to lease out government fish ponds for longer periods, that is, at least five years and more. The Fishery Development Department needs to be reorganised to take more responsibilities and to have better rapport with fish farmers. Institutional efforts should also be made to train fish farmers to enrich their knowledge in the field of scientific fish production. NGOs may also be involved in imparting training to fish farmers; Fish nurseries should be established on large scales to bridge the gap between supply of and demand for fish seed in north Bihar. To overcome the problems in fish production due to recurrent floods, fish farmers should be advised to adopt pen fish culture. Credit institutions may be advised to increase the credit flow for construction of fish ponds, which will help increasing the employment opportunities to fishery labourers who are underemployed in north Bihar. Fishery co-operatives need to be established at the *panchayat* level so that the member could have close rapport among themselves. The revitalisation of fishery co-operative will go a long way in improving the economy of fish farmers through arranging marketing of inputs and output for the fish production system. Fish farmers should be encouraged to bring their produce to market yards. It could be only done if wholesalers are advised to operate from market yards. Market regulation should also been enforced in such a way so that unauthorised deductions are not charged from fish farmers.

**3.25 *Trend in Total Factor Productivity of Crop Sector in Bihar during Green Revolution Period*, R. K. P. Singh, A. K. Choudhary and Vinod Kumar, In Anil Kumar Thakur and Dalip Kumar (eds) *Growth of Real Sector in Indian Economy*, Deep and Deep, 2008, 2002.**

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**Key Topics:** *Total Factor Productivity, Green Revolution*

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The study analyses the performance of irrigated agriculture by measuring Total Factor Productivity (TFP) indices at the district level. The district level analysis captures the location-specific differentials at the micro level, which is the first of its kind. Thus, the study is an attempt to analyse changes in TFP at the district level in the irrigated agriculture in Bihar.

The objectives of the study are to measure the district-wise total factor productivity (TFP) indices of the crop sector in an irrigated agro-ecosystem and to examine the changes in TFP of the crop sector and to identify the factors affecting the same. The Divisia-Tornqvist index is used in the present study for computing the total output, total input, and TFP for the crop sector by district and agro-eco region. The total output, total input, and TFP indices are computed.

The study finds that the input index (1981–96) rose in all the districts except Nawada district in the South Bihar plain. The comparatively high growth in input index was observed in Darbhanga district and low in Muzaffarpur district. Out of 37 districts, 10 districts could achieve output index growth of more than 2 per cent, however, districts of Gopalganj, West Champaran, Katihar, and Aurangabad experienced stagnation in output growth. There were only two districts (Sitamarhi and Nawada) which experienced negative output growth. The magnitude of TFP growth varied from –1.52 per cent in Sitamarhi district to 4.22 per cent in Saran district. Out of 37 districts, 10 districts observed stagnant TFP growth. It is worth mentioning that about 50 per cent of districts of North Bihar experienced stagnation in TFP growth.

An analysis of these growths for two periods, that is, 1981–92 and 1990–96, revealed that there was relatively higher growth in input, output, and TFP indices in the 1980s as compared to the 1990s. The higher growth, especially in TFP, implied higher contribution of technical change to output growth. The decline in TFP indices was observed in the North West Alluvial plain (Zone I) and North East alluvial plains (Zone II) during the 1990s. The results present a gloomy picture of agricultural growth in the 1990s. The sharp decelerating growth in the crop sector has been a major cause of concern and there is an urgent need to adequately address the issues of sustainability and technical changes in the agricultural sector reforms.

The study concludes that during the green revolution era, a greater investment in research and development was made on irrigated agriculture. The promotion of HYV seeds fertiliser-irrigation technology had a high pay off and rapid strides of progress had been made in food production. However, in recent years, Bihar has been confronted with diminishing returns to technological change because a large number of districts have been facing stagnation in TFP growth. If the sustainability issue of the sector in Bihar is not properly addressed, it may adversely affect both economic growth and household food security.

### **3.26 Small Cultivators in Bihar and ‘New’ Technology, Choice or Compulsion?, Kalpana Wilson, *Economic and Political Weekly*, Vol. No. 37(13), pp. 1229–38, 2002.**

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**Key Topics:** *New Technology, Small and Marginal Farmers, Irrigation, Economic Liberalisation*

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The aim of the study is to understand the reasons for the adoption of new technology by small cultivators in Bihar and, in particular, to examine whether it is because of choice or compulsion. The article argues that in the context of a sharply unequal distribution of land and other resources, small and marginal cultivators’ adoption of new technology has been the result of compulsion rather than choice, and that their integration into a number of markets has reinforced their dependence on larger landowners, ensuring that they remain trapped in a cycle of poverty. Further, these relations of dependence are used by dominant landowning employers in attempting to resist the demands put forward by agricultural labourers for improvements in wages and conditions. This debate is clearly of particular significance in the context of the impact of globalisation and the new economic policies of 1991 on Indian agriculture.

The data presented here draws upon fieldwork in Chandkura and 11 other villages in Hilsa block (Hilsa community development block lies in the heart of Bihar, on the border of Nalanda district and adjoining Patna district) during 1995–96, and the comparisons it generated with a study carried out by the A N Sinha Institute of Social Studies in conjunction with the ILO (henceforth, the ANSIS/ILO study) in 1981–82 and 1982–83. The study also looks at the technological changes that have occurred in Chandkura and elsewhere in Hilsa, first from the period when tube well irrigation was introduced after the drought of 1965–66 until Chandkura was surveyed in 1981–82, and second during the 1980s and early 1990s, until the author’s own survey was carried out in 1995–96.

The study finds that while the first period saw a process of accumulation among larger cultivators, with the extension and improvement in irrigation being accompanied by a change in the cropping pattern and the pattern of

input use as well as some initial mechanisation, the second period did not see further development along the same lines. While irrigated area and per hectare fertiliser use continued to increase, in the second phase, this increase represented primarily the adoption of these inputs by small and marginal cultivators. During the second phase, irrigation had largely been extended through larger cultivators hiring out diesel pump sets to smaller cultivators. With electricity cut off from the early 1980s onwards, irrigation costs have increased steeply, with much of the burden of the increase being borne by those who hire in irrigation facilities.

Fertiliser costs have risen steeply in the 1990s with subsidies withdrawn. All this has made poor and middle peasants more dependent on the rich peasants for loans to cover consumption and input costs, which are provided at very high rates of interest. In any case, the limited supply of fertiliser, seed, and diesel at the block level is frequently cornered by rich peasants linked to the bureaucracy, who resell it at prices higher than they pay. In fact, in Chandkura and all the other villages surveyed, cultivators complained that seed and chemical fertiliser were sold by the block development office to wholesalers, who charged them black market rates and often adulterated them. Even when seeds were available from the block, they were often considered too expensive by smaller cultivators. In a situation of almost universal adoption of biochemical inputs, the difference in yields between the HYVs, used by poorer cultivators, and those to which richer cultivators have access, reinforces a pattern of inter-class disparities in the net cost of cultivation. The large landowners, who were given loans to buy agricultural machinery in the 1970s and early 1980s, are now using them to extract surpluses from marginal and small cultivators by renting them out. A large proportion of these cultivators are essentially subsistence producers who have been compelled to adopt high-yielding crops and technologies in order to pay rents and service debts.

Meanwhile it appears that the rich peasants, who were identified as potential 'capitalist farmers' in the early 1980s, have not continued to invest their surpluses in agricultural production. While using their existing assets (tractors, threshers, and diesel pump sets) largely to appropriate surpluses produced by smaller cultivators through rent, they are involved in money lending and other non-productive activities, while there has been little further technological change. Relations of dependence of smaller upon larger cultivators in both input and credit markets were utilised by dominant landowners to attempt to resist the demands of agricultural labourers for improved wages and conditions. For example, whereas labourers had deliberately targeted only big landowners during strikes, the latter pressurised smaller cultivators to also suspend cultivation. The study argues that such strikes have become a site of struggle between two different types of solidarity, one based on caste unity and relations of dependence between small and large cultivators, with the goal of maintaining the status quo, and the other rooted in a class-based alliance between small cultivators and agricultural labourers, and with the goal of bringing about change.

The study concludes by suggesting that as long as a highly unequal distribution of land and other resources persists, poor peasants' adoption of this new technology and their integration into a number of markets will remain 'compulsive' and can only deepen their dependence on those with economic, social, and political power.

### **3.27 Technology Change in Maize Production: A Case Study of Bihar, P. S. Badal and R. P. Singh, *Indian Journal of Agricultural Economics*, Vol. No. 56(2), April-June 2001.**

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**Key Topics:** *Maize Production, HYV Seeds, Local Variety Seeds*

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India has seen a rapid rise in maize production over the last few decades (2.08 million tons in 1951-52 to 10.86 million tons in 1997-98). The present article draws attention to the fact that there has been a rise in the yields rather than an increase in the 'total maize area'. The reasons for such an increase in the yields are: the usage of the HYV seeds on large areas for maize cultivation and also the introduction of the improved maize germplasm, which has helped to make the maize plant cold resistant in the winter months. However, given that the agriculturally backward areas are yet to reap the benefits of this technology change, the present article endeavours to check the future potentialities of this technology shift (by taking a productivity difference between the HYV seeds and the traditional variety (TV) seeds).

The article uses primary data collected from 180 households over 12 villages in Samastipur, Vaishali and Hazaribagh districts in the year 1996-97. The article has employed Cobb Douglas production function (to estimate the elasticities of various factors of production used in the cultivation of local and HYVs of maize, where the maize output (Y) is estimated as a function of human labour (N), seed (S), irrigation (I), fertiliser (F), plant protection chemicals

(P), bullock labour (B) and land (L) which is not used in the estimation process due to multicollinearity problems. The study estimates the Cobb Douglas equation (by taking logarithmic transformations) for four cases: a) the local variety seeds, b) the HYV seeds, c) the pooled data set and d) the pooled data set with dummy variables. The article has used the simple OLS estimators and the equations are estimated separately for the *kharif* (where they drop the irrigation variable) and the *rabi* season. They have also used the Chow test for testing as to whether the functions of the HYV seed and the local variety differ due to intercept or/and slope shifts.

Looking at the regression results, the common trend that emerges out is that the coefficient for the 'human labour' and 'fertiliser' component in the equation for the *kharif* season is significant for all the equations. It also must be noted that the coefficients reflect the elasticity of a particular factor of production and on comparing them in the case of the local variety seeds and the HYV seeds, one finds that the all the coefficients (excepting for 'bullock labour') are higher for the HYV seeds. The article states that excessive use of bullock labour in the *kharif* season has caused the coefficient to be negative. A careful examination of the equations for the *rabi* season shows that the coefficient for the fertiliser, irrigation and bullock cart is positive and significant in all the cases, barring the coefficient for bullock labour for the local variety seeds. In this case also, the coefficients for the HYV seeds are greater in magnitude than the local variety seeds (except for seeds and fertilisers where the reverse is true but by a very small margin). In either case, the elasticities are less than 1, which is standard in a Cobb Douglas production function. The results of the Chow test give an F-statistic that is significant for both the slope and the intercept coefficients (for both the *kharif* as well as the *rabi* season).

Apart from the above, the article also has a table which gives the geometric means for the various inputs in case of the HYV and the local variety seeds (for the *kharif* and the *rabi* season). From the table it is clear that the inputs in case of the HYV seeds are significantly higher than the local variety seeds. The gross output in case of the HYV seeds is higher as compared to the local variety seeds. However, the difference is higher in case of the *rabi* season (85 per cent as against 70 per cent in the *kharif* season).

Beyond this, the article also contains a decomposition analysis of the productivity difference between local and modern variety technology of maize. It states that in case of the *kharif* maize, the productivity difference owing to technological and input differences is 69.15 per cent, whereas the technology component alone counts for 30.48 per cent of the productivity difference. In case of the *rabi* maize, the contribution of the technology difference is 45 per cent and input difference is 35 per cent to the productivity difference. The article also contains an analysis of the 'neutral' and the 'non neutral' technology, depicting that with the usage of HYV seeds the net efficiency of the other factors also go up (excepting the efficiency of the 'bullock labour' in the *kharif* season and 'seed' and 'fertiliser use' in the *rabi* season). Among the inputs used, the highest gap in productivity differences has been caused by fertilisers in the *kharif* season (which caused greater productivity for the HYV seeds) and by seeds in the *rabi* season.

Thus, the article carefully examines the various aspects that could give rise to a productivity difference by using HYV seeds in place of the traditional variety seeds by using the elasticities of various factors of a Cobb Douglas production function. It concludes that the productivity on traditional variety farms can be increased by about 39 per cent in *kharif* and 35 per cent in *rabi* seasons, respectively, if the per hectare input use levels on these farms are increased to the same levels as on HYV farms.

### **3.28 Rural Development in Bihar: Problems and Prospects, Yuvaraj D. Prasad and Anil Mishra, Har Anand Publications, New Delhi, 2000.**

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**Key Topics:** *Rural Development, Panchayati Raj, Science and Technology, Cooperatives Banks, Market Access, Monitoring and Implementation*

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The book, divided in 6 parts, addresses issues relating to strategies for rural development in Bihar, the role of *panchayats*, development officials and NGOs, and the role of science and technology in rural development in Bihar, as also the role of banks, cooperatives and market access, women in rural development and the finally monitoring and implementation of rural development schemes in Bihar.

D. P. Yadav presents an outline of the major challenges to rural development faced by Bihar. He highlights the fact that Bihar lags behind other states in numerous fields including those of education, industry, agricultural

production, and food consumption. He suggests a number of measures to improve this, including drastic changes in the administrative set up and rapid infrastructure development. Professor Kamta Prasad lists the large number of special features of Bihar and argues for the need to contextualise any strategy for Bihar's development in those features. He argues that despite high rates of poverty in rural Bihar, the state has not initiated measures to develop policies and programmes for rural development. He argues against the assumption that liberalisation and globalisations and the higher growth rates associated with them would eliminate poverty, and points out that the trickle-down effect has not always worked in the past. One of his key recommendations is that there must be a functional integration of various schemes and more careful micro level planning, with a more participatory approach.

Srivallabh Sharan and D. D. Guru examine the role of PRIs in the alleviation of rural poverty in Bihar and both underscore the importance of these institutions in doing so. According to Srivallabh Sharan, the major factors behind the continuing poverty in Bihar include an increase in the population of the state; an adverse land-man ratio; natural calamities; a lack of infrastructure (such as power, irrigation, communication, education, health care etc); lack of industries and employment; and the rigid caste structure in the state. He argues that while the Bihar *Panchayat* Raj Act of 1993 gives *panchayats* sufficient power to implement various development policies, for any real change to be initiated by the *panchayats* in the rural areas, there must be concrete support from all quarters in the state including the government and bureaucracy, academics, social activists, political parties, NGOs, financial institutions, and the people.

D. D. Guru traces the development of the *panchayati raj* in independent India. He argues that the *panchayati raj* failed to reach its desired objectives in the initial years because of a number of factors including bureaucratic centralisation and political interference. However, he also points out that the launching of a large number of anti poverty schemes in the state could lead to the PRIs playing a vital role in the state's development. He argues that for the programmes to become more meaningful, the involvement of people's representatives in local level planning, design formation and implementation is required and also in the selection of the beneficiaries for anti-poverty and employment schemes.

Nil Ratan discusses the role of voluntary organisations in the development of Bihar. He points out that while these are important, they must not be projected as alternatives to the government but as facilitators of the government's development objectives. He looks, in particular, at the functioning of three of the largest NGOs in Bihar and concludes that they have been quite successful in accelerating the pace of development through greater involvement of the beneficiaries in deciding the priorities, scale, and method of implementation of their programmes. He concludes by pointing out that greater networking between these organisations would improve development outcomes to an even larger extent.

A. K. Rath, Sailesh Kumar Bandopadhyay, and C. Prasad examine the role of science and technology in rural Bihar. Bandopadhyay examines the role of different technologies and their impact on the development of the *khadi* and village industries in Bihar. He argues that the introduction of modern management techniques can go a long way in rejuvenating the *khadi* industry in Bihar. C Prasad highlights the challenges that face the state in the efficient usage of science and technology in agriculture. He strongly recommends the application of modern technology for raising productivity in addition to giving high priority to soil and water resource management in the state.

Abhimanyu Singh, Jagdish Prasad, Sujata Singh, and A. K. Singh examine the role of banks, cooperatives and market access in the development of rural Bihar. Jagdish Prasad, for example, looks at the role of cooperatives in increasing market access in rural Bihar. He argues that despite increasing agricultural productivity in recent years, there has not been a parallel reduction in rural poverty in the state. This, he argues, is primarily because of the failure of those institutions which had to strengthen the linkages between production and marketing. Sujata Singh and A. K. Singh examine the functioning of the Bihar State Financial Corporation. They find that most industrial units in the state have become sick and loan assistance given by the Bihar State Financial Corporation has either remained unutilised or been wasted. Further, they find that 93 per cent units financed by the BSFC have very little change of recovery. They point out that the non availability of electricity, inadequate infrastructural facilities, especially those relating to roads and bridges, education, and health have been the main reasons for the slow industrial growth in the state.

The last section of the book examines the monitoring mechanisms of schemes implemented in the state. All the authors jointly criticise the poor quality of the implementation of development related schemes, especially poor monitoring of the schemes. Key factors which emerge from this section are the failure to identify beneficiaries of schemes, uneven financial performance, imposition of schemes on beneficiaries and indiscriminate allotment.

In the concluding chapter of this section, Indradeo Sharma makes an analysis of the Integrated Rural Development Programme and argues that given the extent of poverty in the state, universal implementation of schemes, rather than targeting would have ensured more success in the implementation of the IRDP. In all, the book presents a comprehensive overview of the different aspects of rural development in the state.





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**SECTION 4**

**Irrigation, Floods and Water Management**

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## Overview

The sixteen studies in this section of the Compendium are of two genres. First, the ones which deal with irrigation and, second, which deal with floods. Both have a distinct focus on water management. Studies in the former dwell on micro-irrigation, groundwater marketing, use of innovative technologies such as the treadle pump (Srinivas and Jalajakshi, 2004), etc. Raju (2006) makes a strong case for participatory irrigation management through water user associations. He argues that this innovative mechanism will not only lead to better management of the canal irrigation system, but also improve revenues for the state. Singh, Chaudhary and Sinha (2007) argue for a paradigm shift in irrigation policy. They recommend that subsidies be provided for tube well installation, instead of diesel and electricity, as this along with the development of canal irrigation system will help the small and marginal farmers, and thereby increase agricultural production and livelihood security in the state. A government of India study on bamboo boring finds that bamboo tube wells are very successful irrigational devices which are not only economically feasible, but also labour intensive and environment friendly, and have tremendous potential in the state.

Second, studies related to floods in the Compendium look at causes of floods in the state, its dire consequences in terms of lives and livelihoods, role of the government in relief and rehabilitation, measures of flood prevention, etc. Mishra (2001) gives a historical perspective to the Kosi flood issues and argues that more research needs to be done to understand the complexities in all aspects of floods. Rorabacher (2008) argues that poverty and floods go hand in hand in Bihar. Floods are an annual event in the lives of the poor in Bihar. Jha (2008) puts forward a solid argument for adoption of a scientific approach in the management of floods, especially tools of communication and technology including remote sensing and GIS application, among others. Sinha et al. (2008) stress on the need to focus on non-structural measures for flood management. Sharma and Priya (2001) study flood management for Patna and give some serious recommendations for improving the current situation in this regard.

Some studies in this section specifically discuss the Kosi flood of 2008, which was unprecedented in its nature. Iyer (2008) discusses the causes of the Kosi flood of 2008 which resulted in a tragic loss of lives and livelihoods. Jha (2008) argues that emphasis should be on developing long term measures for flood management and, along with a scientific approach, focus on non-structural measures is crucial. Here, Bhat et al. (2010) find that the use of space based technologies was critical in the management of the Kosi disaster. Shrestha et al. (2010) argue that the severity of the Kosi flood can be attributed to the lack of local awareness and disaster preparedness, lack of anticipation and prioritisation given to the possibility of an embankment breach, lack of monitoring and maintenance of the embankments, the hierarchical communication mechanism, and the exclusive and complex nature of the institutional design for dealing with the Kosi. The IHD and UNDP (2009) capture perceptions of the local populations regarding coping and recovery. The study finds that while cultivators suggest the provision of subsidies and moratoriums on payment of debt, labour and artisan households suggest strategies which include provision of subsidised loans for establishing small enterprises or shops, and women suggest implementation of NREGS on a large scale, provision of credit at low interest rates, along with formation of SHGs and training and capacity building for micro-enterprises.

In recent years, groundwater depletion has been a cause of concern (Saha et al., 2010). Other research areas have been the waterlogging in the irrigation command areas in the state (Chowdary et al., 2008), water pollution and potable drinking water (Mandal, 2006).



**4.1 Space Based Disaster Management of 2008 Kosi Floods, North Bihar, India, C. M. Bhatt, G. S. Rao, P. Manjushree and V. Bhanumrthy, *Journal of Indian Society of Remote Sensing*, Vol. No. (38), pp. 99–108, March 2010.**

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**Key Topics:** *Satellite Data, Kosi River, Flood Hazard Management*

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The article highlights the role of space based technology in flood hazard reduction and management during the Kosi disaster in 2008. Kosi flood (2008) in Bihar was one of major disasters in recent times that caused huge loss of life and property. However, remote sensing based technology provided critical help in real time flood mapping, monitoring, and observation of floods. North Bihar has witnessed recurrent floods due to river shifting and according to the article, methods like embankments of rivers, particularly in context of Kosi, were not very helpful. The 2008 Kosi flood inundated huge areas that were considered to be 'flood safe'. People as well as administration were not prepared to cope with the disaster that gave them little time to react.

Timely information for taking decisions and actions is the key in such disaster management. Remote sensing technology helps in assessment of floods, and in gathering regular and comprehensive information from remote and large areas. During the 2008 Kosi floods, Decision Support Centre, established at National Remote Sensing Centre, supported flood assessment in multiple ways. For example, near real time flood mapping, monitoring, and flood breach analyses.

The article presents brief details of space based technology used for different purposes, particularly about types of satellite images used, historical satellite data sets that was used in event monitoring and inundation mapping. After the breach, the immediate response was in form of tilting IRS and acquiring satellite image to delineate the flood inundation. The images were layered with data sets of administrative boundaries, road and rail network with help of Geographical Information System (GIS) technology. Quick preparation of maps in different scales and dissemination to different state and national agencies helped in immediate response. Floods maps on different scales were updated and were shared with Government of Bihar, particularly Flood Management Information System located in Water Resource Department. Based on these maps, severely affected areas were identified and rescue and relief operations were coordinated in affected districts of Bihar. These maps were proved to be key resource in monitoring flood progression and recession.

To assess the flood situation at regular intervals optical and microwave data from Indian and foreign satellites were programmed over the flood affected region. Flood was closely monitored during August- October 2008. Satellite images helped in observation and analysis of breach site. CARTOSAT data helped in measuring length of breach, observing changed courses of Kosi and tracking the status of main course (old one). Satellite images also facilitated observing dimensions of new course of river and progression of flood. Daily update on progression of flood area, area of submergence and inundation in different blocks and districts (Saharsa, Madhepura, Supaul, Araria and Purnia) of the affected region proved to be important input for decision makers. The paper also includes a few satellite maps, paper for illustrative purposes. Similarly, satellite images helped in tracking recession of inundation in following months.

Based on satellite images of 1998-2010, the paper presents a brief discussion on dynamic nature of Kosi. Location of river course, change in direction, sediment deposition over period and alignments of embankments have been demarcated in satellite images presented in the paper. These images also help in analysis of cross sectional area of the river, carrying capacity and possible causes of avulsion. The paper also suggests probable role of sub structural movements as sub Himalayan zone is tectonically active. Paper emphasises integrated approach for effective flood management, including contributions from hydrology, geomorphology and geology.

In concluding section, the paper highlights crucial role played by geospatial products prepared and disseminated to Government of Bihar during Kosi Floods. Data prepared and shared in 'near real time' was resource for tracking flood inundation, recession and assessing the damages. The paper also recommends use of remote sensing technology for their repetitive and synoptic coverage and cost effectiveness. Space based technologies can further be used in Bihar used for monitoring the river shifting, proximity of river course to embankments and channel aggradations. Policy makers and planners can take help of the technology for strengthening embankments and channel stabilisation.

**4.2 Delineation of Groundwater Development Potential Zones in Parts of Marginal Ganga Alluvial Plain in South Bihar, Eastern India, Dipankar Saha, Y. R. Dhar, and S. S. Vittala, *Environmental Monitoring and Assessment*, Vol. No. 165, pp. 179–91, 2010.**

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**Key Topics:** *Groundwater Development*

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Groundwater remains the lifeline of socioeconomic development in the Ganga Alluvial Plain (GAP) since the dawn of civilization in the Indian sub-continent. Increasing groundwater extraction from GAP has resulted in surfacing of aquifer-stress symptoms like lowering of water levels and groundwater quality deterioration. A recent assessment in the three states of north and east India, viz., Uttar Pradesh, Bihar, and West Bengal, covering nearly 80 per cent of GAP, identified 37 community development blocks under over-exploited category. A planned approach is, therefore, essential for sustainable development of this precious natural resource as dependence on groundwater is likely to increase in future. The present investigation lies in the southern part of GAP, bordering Precambrian Highlands in the Mid-Ganga basin. The study aims to delineate different zones based on the groundwater development potential (GWDP). Groundwater development potential determines to what extent the area is suitable for groundwater development and the scale of extraction.

The study area encompasses 2,228 sq km in Nalanda district of Bihar (in the Mid-Ganga basin). An array of multiparametric dataset on hydrogeology, chemical quality of groundwater, replenishable resource, and groundwater draft are generated during the research water levels are measured from 36 wells (depth 25–78 m) during the pre and post monsoon periods. Water samples are collected from these wells during post-monsoon field campaign. Besides electrical conductivity and pH, physical parameters like temperature, turbidity, and odour are measured on the spot. Samples were collected after 5–10 min of pumping (to get representative aquifer water) in high quality tight-capped polythene bottles and were immediately transported to laboratory. The samples were analysed following the standard methods. Aquifer hydraulic parameters, viz., permeability and storativity, were assessed by analysing time-drawdown data of four long-duration pumping tests carried out in bore wells. Aquifer permeability values from additional four sites from earlier works have been incorporated. Groundwater resource availability is expressed by stage of development. Replenishable resources of 11 community development blocks are included. Volume of groundwater extracted from the Quaternary aquifers was calculated for irrigation and domestic uses. Annual average groundwater drafts for various types of irrigation wells (dug well, dug-cum-bore well, bore well, (shallow and deep tube well) were assessed by field survey. Numbers of irrigation wells under different categories are adopted from Govt. of Bihar and further adjusting it by annual increment of 1 per cent. Human and cattle population figures are taken from Surveys of Government of India and Government of Bihar, respectively. Lithological logs of 42 bore wells drilled in Quaternary sediments by different government agencies have been analysed to assess spatial variation in cumulative thickness of sand beds (aquifers). The Precambrian rocks are marked with low groundwater potentiality and are not included in the study. The GWDP zones are categorised on the basis of following criteria: (a) hydrogeological characteristics of the aquifer system, (b) groundwater resource availability, and, (c) suitability of groundwater for irrigation and domestic uses, based on physical and chemical parameters. The following 9 thematic layers have been prepared by spatial analyses of multiparametric data set, viz., pre and post monsoon depth to water level, water level slopes during pre and post monsoon periods, aquifer permeability, cumulative thickness of Quaternary aquifers overlying the bedrock, suitability of groundwater for drinking and irrigation uses, and replenishable groundwater resource availability for further development. The grade of a particular grid in GWDP zones is expressed as the weight assigned to different segments of each layer. Each of the layers: 1, 2, 3, 4, 5, 6 and 9 is further divided into three segments: good (weightage 9), moderate (weightage 6) and poor (weightage 3). The layers 7 and 8 are divided into two segments: good (weightage 9) and poor (weightage 3). Thus, a particular grid in a layer gets a weightage of 3, 6, or 9. The rank (range 0.1 and 1.0) assigned to a particular layer, depending upon the importance of the theme in shaping up groundwater development potential. Highest rank (1.0) is assigned to two themes—(a) cumulative thickness and (b) hydraulic conductivity of aquifers. These two factors vary widely in marginal Ganga alluvial areas, but remain a major contributing factor controlling yield from aquifer. Depth to water level is considered as the next important theme. Groundwater extraction cost escalates as water level declines, owing to higher expenditure on well assembly and water lifting cost. Pre monsoon depth to water level exhibited wider variation and is given a higher rank (0.8) than post-monsoon (0.6). The layers on suitability of groundwater

for drinking and irrigation have been assigned rank of 0.5 each. The patches with unsuitable water for drinking and irrigation uses have already been assigned poor weight (weightage 3). Groundwater resource availability is expressed as stage of groundwater development. The areas experiencing groundwater draft exceeding replenishable resource is not considered under development potential zonation. The theme on stage of groundwater development is assigned a rank of 0.6. In the marginal Gangetic alluvial areas hydraulic gradient vary positively with the slope of the land surface, except for the overexploited patches. Overexploited areas are not considered in the development potential zonation. Under natural flow conditions, hydraulic gradient indicates hydraulic conductivity of aquifer material. Hydraulic gradient is given a low rank of 0.1 as hydraulic conductivity is already included as a separate theme with high rank (1.0). The weightage and ranking system is adopted after carefully observing the field conditions and may vary from place to place. Logarithm of grid value is considered in the equation as the range of the values of parameters in different layers varied widely.

The analysis reveals that the GWDP zones in marginal alluvial areas in South Ganga Plain can broadly be correlated with northward increase in thickness of sediment overlying Precambrian bedrock. However, deviations are noticed at places due to three factors, namely, variation in cumulative thickness of aquifers resulting from uneven bedrock topography, deep water level particularly during pre-monsoon period, resulting from localised heavy groundwater extraction and aquifer permeability distribution. Parts of Asthawan and Rahui blocks comes under high GWDP zone due to the combined effect of thick aquifer, higher K and low hydraulic gradient.

The factors like deep pre monsoon water level, steeper hydraulic gradient, and limited aquifer thickness in areas around Bihar Sharif block have brought parts of Noorsarai and Rahui blocks in low GWDP zone. About 49 per cent of the area represents high GWDP zone reflecting aquifer capacity and conducive hydrogeological conditions for large scale development.

The study points out that this unit holds surplus replenishable resource of 215.0 million cubic metres per year and is lithologically underlain by the northern fringe of Nawada and patches of Fatwa Formations. The medium- and low-development potential zones are underlain by Pleistocene-Lower Holocene deposits. From medium GWDP zone 104.5 million cubic metres from medium GWDP zone can be additionally extracted annually. Low GWDP zone, underlain by similar lithostratigraphic units as Zone II, has limited development potential, mainly because of low permeability (<20 m/day) and limited aquifer thickness (<25 m). This unit is found adjacent to the exposed Precambrian bedrock at Rajgir Hills and in two additional patches, one in north of Bihar Sharif block and the other in east of Islampur. Additional 81.5 million cubic metres per year replenishable resource can be extracted from Zone III.

According to the study an increase in groundwater extraction in Zone IV would worsen the scenario as the unit is overexploited to the tune of 3.44 million cubic metres per year. The study recommends that artificial recharge measures may be adopted to fulfil the gap in groundwater draft replenishable resource. For sustainable development, any enhancement in extraction in zones I, II and III to be limited by its replenishable resource. The GWDP zones are likely to help the user agencies to take a planned approach for groundwater development, particularly in the southern marginal alluvial part of GAP, where alluvial aquifer thickness is comparatively less and exhibits wider spatial variability in geometry, hydraulic heads, and aquifer hydraulic conductivity.

### **4.3 Institutional Dysfunction and Challenges in Flood Control: A Case Study of the Kosi Flood 2008, Rashmi Kiran Shrestha, Rhodante Ahlers, Marloes Bakker, and Joyeeta Gupta, *Economic and Political Weekly*, Vol. No. 14(2), pp. 45–53, 2010.**

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**Key Topics:** *Kosi Flood, Flood Control Policy*

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This article discusses the key reasons for the failure of flood management in the Kosi. This is followed by an analysis of the relevant institutions managing the Kosi river. Finally, the paper concludes with suggestions for better flood management in the Kosi basin.

This article is based on field research carried out between November 2008 and January 2009 in Nepal, in three Nepalese villages (Shreepur, Haripur, and Paschim Kusaha) severely affected by the 2008 Kosi embankment breach were visited. In addition, 50 semi-structured interviews were conducted with different stakeholders, including

government officials and flood victims in Nepal. Four interviews were held with Indian officers from the Kosi project office in Birpur, Bihar, the liaison officer from the water resource department from Bihar, and a senior official from the embassy of India in Nepal.

The paper argues that the disastrous 2008 flood on the Kosi river, calls for an examination of what went wrong and how can such a flood be prevented in the future. It focuses on the institutional aspects and demonstrates that the seriousness of the flood can be attributed to five direct reasons, namely, the lack of local awareness and disaster preparedness, lack of anticipation and prioritisation given to the possibility of an embankment breach, lack of monitoring and maintenance of the embankments, the hierarchical communication mechanism, and the exclusive and complex nature of the institutional design for dealing with the Kosi. These reasons are further attributed to three higher-level challenges. These include the nature of trans-boundary politics between Nepal and India, the internal national politics of Nepal, Bihar and India, and the inherent weaknesses of the now outdated Kosi treaty.

According to the paper, in Bihar, flood preparedness and rescue efforts were poor and that assistance was provided a week after the disaster took place. The warning from the local people was not heeded, the danger was underestimated and time was spent debating in meetings rather than taking action. The Government of India was not aware of any problems along the Kosi in the Nepali territory because communication from both the field level officers in Bihar as well as Nepal did not reach it in time.

A further level of complexity the study highlights is that the Kosi treaty is signed by both Government of Nepal and Government of India, while the responsibility for execution of the Kosi project is assigned to the Water Resource Department, Government of Bihar. There is no direct link between the province of Bihar and the national authority of Nepal at the same political level. This institutional mechanism is problematic and hindered immediate decision-making. There is lack of decision-making power and full authority for the senior officers of the Kosi project office, lack of responsibility and accountability of the Kosi project office, and gaps in supervision of the tasks carried out by the Kosi project office. Moreover, the issues regarding the Kosi project which should have been discussed, at least annually, were not communicated for nearly two years before the embankment breached on 18 August 2008.

The study points out that the 2008 flood is a wake-up call highlighting the urgent need to find alternative solutions to the flood problems of the Kosi. Multi-stakeholder participation, involving local people and the local government in the process of decision-making and implementation is one way forward. In addition, clear tasks, more direct communication, accountability, and enforcement need to be prioritised for ensuring all affected are responsible for the matters of the Kosi. The paper suggests that some of these challenges can be addressed by making the goals of the Kosi treaty more comprehensive, by ensuring a clear division of responsibility between the two national governments and the local governments, and accountability mechanisms to ensure that activities listed are implemented.

#### **4.4 *Kosi Floods 2008: How We Coped! What We Need? Perception Survey on Impact and Recovery Strategies, Institute for Human Development, New Delhi and United Nations Development Programme, 2009.***

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##### **Key Topics:** *Kosi Floods, Coping and Recovering Strategies*

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This perceptions based study was conducted to document the experiences of groups of people affected by the Kosi floods, to explore the extent of damage at village and household levels; to document impacts on shelter, access to food, water and sanitation, health and education, and livelihoods; to identify coping mechanisms of people belonging to different social and occupational groups; and to document potential recovery mechanisms as suggested by people.

A total of 40 broadly representative villages were surveyed as well as 820 sample households, of which 377 respondents were women. Another 200 respondents from relief camps were selected. Focus Group Discussions (FGDs) were held with people belonging to various social groups in 20 out of 40 villages, where household surveys were not conducted.

The study found that since most affected households had not experienced floods for several decades, they were not prepared to respond quickly, which resulted in more loss of life and property. The State was also not prepared to



deal with a catastrophe of this magnitude. A large number of households did not wait for the government or outside agencies to evacuate them to safer places, but used their own means.

Nevertheless, the study findings suggest that the Government played a significant role in rescue and evacuation operations. Government camps, even with minimal facilities, were seen as important and were appreciated because they provided food and shelter. No discrimination was found in disbursement of relief assistance (food grain, cash, medicines, and clothes) across social groups, including to SCs, Muslims, and OBCs. Likewise, very few cases of corruption were reported during the FGDs. On the whole, government relief was well targeted and managed.

Both the local economy and livelihoods were severely disrupted, and there was massive damage at both village and household levels. Among villages, the losses were focused on roads, public infrastructure, and electricity and irrigation systems while at the household level, the losses were more in terms of lives, livestock, agricultural operations, and employment opportunities. Ill health also contributed to loss of livelihoods.

Almost all households, across social groups (93 per cent), reported income losses of more than 50 per cent during the first three months after the floods, a very significant observation given that most of the affected people eke out their living by casual labour and agricultural work. Households across social groups also reported the loss of work implements, household goods, stored good and other items, rendering them completely dependent on the government for relief and rehabilitation.

The valuation of houses damaged stands at around Rs 880 crores (US\$ 195 million). Enormous amounts of goods were lost, including food grains and domestic items worth Rs 400 crores (nearly US\$ 88 million) and Rs 155 crores (US\$ 34 million), respectively.

As far as coping and recovering strategies are concerned, it was found that households adopted several short-term coping mechanisms, including finding temporary shelter, selling assets, withdrawing children from school and engaging them in work (if any), reducing household food portions, using stored foodgrains, and resorting to drinking contaminated water. Short term migration, particularly to sites outside Bihar, proved to be a key coping mechanism. Other coping mechanisms, dependent on external support, included food and cash relief to buy food, chlorine tablets to purify drinking water, attending existing medical facilities and relief for restoring livelihoods.

Key longer-term recovery strategies identified by affected people included Government support for rebuilding their houses, through IAY provision of land to the landless for house construction and of loans at cheap interest rates/compensation for house damage, continuation of short term government assistance (food or cash), creation of employment and provision of more healthcare facilities in villages, connecting schools with high quality roads, provision of mid day meals to school children and reconstruction or renovation of schools, irrigation and electricity systems, embankments, roads and bridges.

In particular, cultivators suggested the provision of subsidies and moratoriums on payment of debt, effective steps for land improvement through NREGS, government construction/repair of irrigation systems, supply of fertilisers and pesticides at subsidised rates, free distribution of diesel pump sets, compensation for lost crops, shelter and assets, provision of crop insurance, and waiver of loans for flood affected farmers. Labour and artisan households suggested strategies included reconstruction of destroyed/damaged houses, provision of subsidised loans for establishing small enterprises or shops, encouragement of activities such as piggery, animal husbandry and poultry, life insurance for the poor and landless as well as people with disabilities, encouragement of income generating activities, and extensive, effective implementation of NREGS. Women suggested implementation of NREGS on a large scale, provision of debt relief and credit at low interest rates, provision of training for micro enterprises and formation of self help groups.

**4.5 Assessment of Surface and Sub-Surface Waterlogged Areas in Irrigation Command Areas of Bihar State Using Remote Sensing and GIS, V. M. Chowdary, Vinu, R. Chandran, N. Neeti, R. V. Bothale, Y. K. Srivastava, P. Ingle, D. Ramakrishnan, D. Dutta, A. Jeyaram, J. R. Sharma, and Ravindra Singh, *Agricultural Water Management*, Vol. No. 95(7), pp. 754–766, 2008.**

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**Key Topics:** *Waterlogging and New Technologies*

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Of the total area suffering from waterlogging in India (3.3 x 106 ha), the state of Bihar alone constitutes an area of nearly 0.9 x 106 ha. In Bihar, the waterlogging problem is especially serious in the Gandak and Kosi command areas, lying in the lower reaches of the Gandak basin. Plants that are waterlogged are very susceptible to salinity, especially in their early growth stages. Waterlogging and salinity problems pose a serious threat to productive agricultural land. There is often disturbance of the natural balance when irrigation is introduced, which causes a rising water table, where natural drainage sinks cannot cope with the increase in ground water recharge. Recharge to deep aquifers is closely linked to the incidence of water logging and to the development of land salinity. A proper assessment of waterlogged areas is a prerequisite for finding a solution to the problem. The article shows the utility of integration of remote sensing and GIS techniques for assessment of waterlogged areas, especially areas which lie in regions where waterlogging conditions occur, both due to excessive irrigation and accumulation of rain and floodwaters.

For mapping of waterlogged areas, an integration of remotely sensed data and the use of GIS is used as a guide for the selection of training areas for classification and to update a database for the assessment of spatially and temporally dynamic phenomena. There is growing concern about the decline in soil fertility, changes in water table depth, deterioration in the quality of irrigation water, and rising salinity in Bihar. During the monsoon period, nearly 74 per cent of the total geographical area of the state is affected by flood hazards. The water logging and drainage problem over vast agricultural lands of this eastern region of India is of a magnitude that requires immediate attention. The present study makes a systematic attempt for rapid and reliable assessment, and delineation of the surface and sub-surface waterlogged areas in all the irrigation command areas of Bihar state, using remote sensing and GIS techniques for both monsoon (*kharif*) and non-monsoon (*rabi*) seasons.

The study area is confined to the state of Bihar, which is a part of Eastern Gangetic Plains and is now considered as the bread basket of much of South Asia. The major cropping pattern in the study area is cereal based with rice, maize, and wheat as the major crops. Besides this, some cash crops such as sugarcane and tobacco are also grown in the area. Under irrigated situations, rice–wheat or rice–rice constitutes the most important crop rotation practice. Irrigation is provided through extensive canal networks which are fed through diversion of river flows. To supplement the uncertainties in surface water supplies farmers use groundwater to meet irrigation requirements during the *rabi* season.

Pre-monsoon season satellite data were geo-referenced with respect to the control points taken from Survey of India map on 1:50000 scale. Distinct control points such as sharp road intersections and canal–road intersections were taken as ground control points, as they appear clearly both on the map and satellite image, respectively. Efforts were also made to ensure that the ground control points are uniformly distributed on the image. A second order polynomial model was generated with root mean square error less than a half pixel. Subsequently, post-monsoon season satellite data were geo-referenced with respect to the pre-monsoon season data.

In the present study, four categories of water logging, i.e., surface inundation (seasonal), perennial water logging, saturated profile (seasonal), and saturated profile (perennial) are identified in the state. Surface inundation (seasonal) is the waterlogged area where land is not available for cultivation in *rabi* season, but by summer the surface water is drained. Perennial waterlogged areas are those where land remains waterlogged throughout the year. Seasonal saturated profile refers to land which might be inundated in *kharif*, but water is drained during *rabi* leaving the soil moist. Perennial saturated land remains saturated throughout the year but is used for agriculture with some constraints. Spatially distributed surface waterlogged areas for both pre- and post-monsoon seasons are delineated using remote sensing data and overlaid with irrigation command area boundaries.

Command area wise, surface waterlogged areas and saturated areas in the study area were estimated. It was observed that 20 command areas/groups had waterlogged area less than 1 per cent of command area. Considering the different stages of waterlogging, the study found that 90.2 per cent of the waterlogged area is under seasonal

waterlogging, which includes surface inundation and saturated soil, mainly caused due to heavy floods in the rainy season and poor drainage conditions. The total waterlogged area in Bihar is 628 \_ 103 ha, which is 10.57 per cent of the total command area (5939 \_ 103 ha) spread over all the irrigation command areas. Perennial surface inundation in the study area covers 2.95 per cent of the waterlogged area in the command areas. Maximum waterlogged area is observed in the Gandak command area followed by Eastern Kosi irrigation scheme, and Sone modernisation scheme.

Analysis of the pre- and post-monsoon groundwater regimes indicate that the area under non-critical category during pre-monsoon period was reduced from 4287 \_ 103 ha (72.72 per cent of command) to 1391 \_ 103 ha (23.42 per cent) in the post-monsoon. The area under most critical category during post-monsoon period increased from 0.083 \_ 103 ha of command area in pre-monsoon period to 50 \_ 103 ha. It was observed that nearly 96 per cent of the ground water critical zones match with the waterlogged area obtained through remote sensing in both the seasons. According to the study, the water logging problem is serious in the Gandak command area lying in the lower reaches of the Gandak basin. The major causes of water logging here include superfluous irrigation supplies, seepage losses from canals, impeded sub-surface drainage, and lack of proper land development. Further, soils of recent alluvial plains, which cover the major portion of the Gandak command area, are also responsible for water logging. These soils are very deep, poorly drained, and fine loamy to fine in texture. Waterlogging problems in most irrigation command areas can also be attributed to the seepage losses from the extensive unlined or poor canal network present in the study area. The silt deposition in the canal reduces the capacity of canals. Although soils are generally permeable, in many places internal drainage is blocked in, which raises the level of ground water. The accumulation of rain and floodwaters in depressions has aggravated the situation. The shifting of river courses and consequent deposition of heavy sediment loads prevents drainage outlets to the river and forms a sprawling sheet of water, rendering *kharif* cultivation impossible. Formation of meanders, ox-bow lakes, abandoned channels, and sand bars in the Ganges and its tributaries also cause waterlogging and saturation of soil.

The study highlights that in most of the command areas, river banks generally are quite high and the tributaries are flooded and pushed back at the high water level. The embankment constructed along the course is found to impede the recession of floodwater. Overall, the discharge from the tributaries is heavily silt-loaded during floods which when deposited in a favourable environment, creates more problems of floods and the river channel oscillates between the two banks damaging the existing protective measures. According to the findings of the study, the low topography, low carrying capacity, and avulsive behaviour of the river system is attributed to frequent and prolonged flooding in some of the irrigation commands.

The study states that the poor performance in the command areas can be attributed to the failure of public sector management, a significant factor being the inability to provide adequately for the cost of operation and maintenance. The problem is even more severe in public drainage schemes, as drainage does not generate more income, but simply aims to protect existing income. Farmers are reluctant to pay much to support such schemes. Other major problems that play an important role in water logging include availability of main/public drains, high cost involved in connecting individual farm drainage systems to the public drains, resistance by neighbouring land owners to drainage effluent passing across their fields, environmental concerns, salt loading of rivers and availability of drainage sinks in closed basins.

The study reports that the major problem in the assessment of waterlogging areas in the command areas is the discrepancy in the extent of waterlogging areas reported by different agencies. The differences are due to evaluation criteria, time of observation, and methods used for delineation of waterlogging. Reliable assessment of waterlogged areas forms a crucial element in the irrigation command area development programme.

The article recommends that a similar analysis can be carried out at frequent intervals to study the dynamics of these phenomena and to evaluate the impact of irrigated agriculture. Further, such analysis facilitates the administrators and planners in planning and implementing corrective and preventive measures for optimal utilisation of available land and water resources for sustainable development of irrigated lands.

**4.6 Floods, Himalayan Rivers, Nepal: Some Heresies, R. Ramaswamy Iyer, *Economic and Political Weekly*, Vol. No. 43 (46), pp. 37-40, 2008.**

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**Key Topics:** *Kosi Floods, Dams and Flood Control*

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The article attempts to find out the causes for the floods of 2008 which resulted in a tragic loss of lives, livelihoods in Kosi in Bihar, and gives policy recommendations.

Probing into the causes, the paper finds that there was no timely information about the floods to the people likely to be affected, no precautionary evacuation, no state of preparedness for disaster, and no prompt response when the disaster struck. The breach itself can be attributed to poor maintenance. The charge of poor maintenance has led to mutual recriminations between Indian and Nepalese officials. Considering that the barrage and embankments were Indian structures on Nepalese soil, and that the responsibility for maintenance was clearly that of India, in terms of the old Kosi agreement, it appears *prima facie* that the failure here is largely that of India. If cooperation from the Nepalese side had been wanting, the question arises whether the Indian officials brought it to the notice of higher levels in both countries and highlighted the dangers involved. These are matters to be gone into in a proper inquiry in consultation with Nepal.

According to the article, as a result of the breach and the subsequent floods in Bihar, some 30 lakh people have been affected. But, if the embankment had not breached and the flood-waters had travelled along the earlier course, some 15 lakh people, living between the embankments, would have been affected. The protected area beyond the embankments had got waterlogged and so the people who had moved there had gone back to their original habitations. This only goes to show that the decisions to build a barrage and embankments on the Kosi were probably wrong.

Drawing attention towards the wrong thinking on embankments, the paper points out that the engineering assumption in the Kosi case and elsewhere was that the jacketing of the river would increase the velocity of the waters leading to a scouring of the river-bed, and that the river would find extra space for itself. Experience has not borne out that assumption. The jacketed river might proceed to attack areas further downstream. The embankment that prevents the river from spreading also blocks drainage from either side into the river, leading to the emergence of water logging and even flooding in the areas 'protected' by the embankment. Sluices are no answer because the deposition of silt leads to a rise in the level of the river-bed, with the river flowing above the level of the ground on either side; instead of waters from outside flowing into the river through the sluices, the river waters will tend to flow out. While it might be possible to cite some specific instances in which embankments have done some good without doing much harm, they are in many cases remedies worse than the disease.

The article argues that even if a multi-purpose dam is operated, with due regard for flood-control, and the flood cushion is maintained, the flood moderation that this can offer is very limited. The contingency of heavy floods posing a danger to the dam and compelling the opening of the gates is ever present. Thus, the paper rules out the possible option of constructing dams. The ideas of flood-control and hydropower potential have led to the formulation of a number of large projects to be located in Nepal, such as Karnali, Pancheswar, and Sapta Kosi, and these have been the subject of talks between India and Nepal for several decades. However, the study argues that the India–Nepal relations have been badly mismanaged on both sides.

While the article notes that a new chapter in Indo–Nepal relations seemed to open with the Mahakali Treaty of February 1996, unfortunately, that treaty, signed after extensive consultations with a view to avoiding the mistakes of the past, has remained a dead letter, contributing to a worsening of India–Nepal relations rather than a dramatic improvement, as had been hoped. The old acrimony has now been revived by the Kosi floods. Regarding suggestions for future, the article points to scrap the old Kosi and Gandak agreements and the 1996 Treaty on the Mahakali, all of which are unpopular in Nepal; stop talking about Karnali, Pancheswar, Sapta Kosi, etc.; do not try to enter into any more treaties on large projects on the Himalayan rivers; and do not seek excessive closeness; let not Nepal feel threatened; aim at friendliness, correctness and a reasonable distance. Nepal has felt smothered by excessive closeness, so let us try distance for a change. It may pave the way for a new and better closeness in due course.

As for cooperation with Nepal, the paper contends that there are many possibilities other than big projects on the Himalayan rivers. We can learn to live and cope with floods and, perhaps, even benefit from the silt that they

bring. The floods should be predicted, anticipated, and prepared for. There should be timely information, a state of preparedness for disaster, the minimisation of damage, and prompt and adequate response by way of rescue and relief when the disaster actually strikes. It may be added that whatever we do must be done in an open, consultative, participatory manner, fully involving the people concerned right from the beginning.

The study concludes that the strategy of building embankments to constrain river flow and to prevent floods in north Bihar has proven to be questionable and flawed. Reliance on a dam-and-reservoir system for that purpose only offers limited protection and even greater risks of flooding in case of damage. Learning to cope with floods and managing a transition to a system that does not rely upon the embankments any more, seems to be the rational course of action.

**4.7 *Management of Floods – A Case of Bihar*, V. K. Jha, Indian Institute of Public Administration, New Delhi, 2008.**

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**Key Topics:** *Flood Management*

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This study aims to analyse ways of better management of floods in Bihar. Both primary and secondary data has been used for the study. The study categorises various approaches to flood management as, first, modification of the drainage system in order to keep the flood waters away from developed and populated areas by decreasing runoff, or by increasing channel capacity, or by containing, diverting, or storing flood waters. Second, modifying the susceptibility of flood damage by keeping people and flood prone areas subject to damage out of the flood hazard areas or by making them resistant to damage, and thirdly, modification of the loss burden by reducing the financial and social impact of floods through such measures as post flood assistance and insurance.

The study argues that flood control measures, so far adopted, are structural measures like reservoirs, embankments, drainage improvement works, anti-erosion works, etc., and non-structural measures like flood plain zoning, flood forecasting, flood proofing, flood insurance, etc. Though a combination of structural and non-structural measures would be required to provide a reasonable degree of protection, it would become imperative to depend more on non-structural measures. It is also important to take into account the community approach to flood management, which would include passive information giving, providing consultation, functional participation, and interactive participation.

According to the study, the scientific approach is of critical importance. This includes communication tools and technology, remote sensing, GIS application, flood inundation mapping, flood plain zoning, river morphological studies. It also suggests that the study of river configuration will be useful in understanding the behaviour of the rivers and can be used for laying physical models. Some of the recommended flood management practices are long term measures such as construction of high level dams and storage reservoirs in hilly reaches, inter-river transfer of water, flood forecasting network, afforestation, etc. For capacity building short term measures, the study recommends embankments, other structural measures, and deepening of river channels. The study concludes that emphasis should be on developing long term measures for flood management.

**4.8 *Gerrymandering, Poverty and Flooding: A Perennial Story of Bihar*, J. Albert Rorabacher, *Economic and Political Weekly*, Vol. No. 43(7), pp. 45–53, 2008.**

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**Key Topics:** *Flood Control Strategy, Flood Management*

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This article presents an overview of Bihar government's development strategy, links it with its strategy to control floods and its emphasis on embankments, the impact of embankments on flooding, and the failure of the state government in Bihar to provide adequate compensation to victims of floods. The study argues that while there is little debate about Bihar's poverty, there is much debate concerning the causes of that poverty. The World Bank rightly characterised Bihar's poverty as complex and there is no doubt that much of the state's poverty stems from its complex social stratification, insufficient infrastructure, lack of investment strategies and incentives, low rates of productivity, especially in agriculture, poor urban–rural differentiation, and weak governance.

Agriculture is the foundation of Bihar's economy and employs roughly 80 per cent of the state's workforce, but generates only 40 per cent of its gross domestic product (GDP). Much of the state's agricultural production is largely at subsistence levels, due to productivity levels that are well below the national average. Basically, there is little surplus available for the peoples' participation in the cash market.

According to the study, the future of Bihar and its economic resurrection has to build on its existing foundation – agriculture. There are no quick-fixes for Bihar. Things have unravelled so quickly and so completely, that it will take time to mend. Agricultural performance and productivity have been declining since the 1970s and this decline seemed to accelerate in the 1980s and 1990s. Crop productivity rates are well below the all-India averages. This low productivity has been attributed to a plethora of causes; among the primary causes are: (1) A breakdown in governance, (2) the perpetuation of a subsistence farming dependency, (3) severe fragmentation of landholdings, (4) low investment rates, and (5) lack of water management.

The study argues that importance of flooding in northern Bihar has proven to be one of the most detrimental factors confronting cultivators. Of the 38 districts in modern Bihar, as many as 24 have experienced reportable flooding over the last 7 years, the worst occurring in 2002 and 2004, with no district claiming to be flood free. However, the 18 northern-most districts (the heart of Mithila) are regularly flooded.

According to the study, the dynamics surrounding these annual floods are quite simple. Most of the rivers of northern Bihar have their headwaters or catch basins in Nepal, and to a lesser degree, Tibet. Therefore, the problems of flooding in Bihar are the result of problems of water management and control in Nepal, not in Bihar. Bihar is the hapless recipient of Nepal's water abundance.

Thus, the study asks if there is little wonder that Bihar, besides being India's most flood-prone state with more than 75 per cent of the population living under the threat of floods, is also one of the most destitute areas in all of India? Annually, hundreds of villagers lose their lives to the floods; if not from drowning, then from waterborne diseases and threats, and even starvation. For many, relief is a way of life, along with government-paid compensation. The word relief was not a part of the average villager's vocabulary in the mid-1930s. However, when relief became available for the first time in 1938, things began to change. Initially, many villagers felt that these handouts were degrading and made them feel like beggars. These were a proud people. Many refused the assistance. That was then. Now, a new generation with a different set of values and a different work ethic occupies the embankment.

The study argues that poverty pervades the lives of the new generation. They lose their homes, most of their belongings, their fields are contaminated or waterlogged, and they lose valuable cultivation time. Everyone is pointing their finger at someone else regarding the source of the problems. Year after year, nothing is achieved and nothing changes. It notes that the scope of flooding in northern Bihar is life altering. It is repetitive, and for many people, an annual event. It is also expensive in terms of lives lost, in terms of lives uprooted, and in terms of rupees.

The study concludes with raising several questions, including, would agricultural production increase if the people do not have to contend with catastrophic flooding, waterlogging and sand and gravel casting? If catastrophic flooding could be reduced to anticipated and planned-for flooding, would not repetitive road, bridge, and railway replacement costs decline? Would not rapid relief efforts and costs be reduced significantly? There are a lot of questions. Maybe it is time to begin experimenting with entirely new approaches to change in Bihar. The old ways have only led to Bihar's destruction. Is it now time to change old ways of thinking?

#### **4.9 Flood Risk Analysis in the Kosi River Basin, North Bihar Using Multi-Parametric Approach of Analytical Hierarchy Process (AHP), R. Sinha, G. V. Bapalu, L. K. Singh, and B. Rath, *Journal of the Indian Society of Remote Sensing*, Vol. No. 36, pp 293–307, 2008.**

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**Key Topics:** *Kosi River and Floods, Flood Risk Analysis*

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The present paper investigates the hydrological characteristics and geomorphological controls of floods which may be important for long-term mitigation of floods in the Kosi river basin. The study has also carried out flood risk analysis of a part of the Kosi basin based on remote sensing and GIS techniques, which may be of immense value for planning flood management strategies.

The study aims to create easily-readable and rapidly-accessible flood risk maps based on morphologic, topographic, and demographic data. A combination of different data sets such as remote sensing images (IRS LISS-III data), census data (1991), and topographic maps obtained from government agencies have been used to compute a composite index of flood risk based on multi-parametric analysis. All data was then integrated in a GIS environment to prepare a flood risk map, using the Analytical Hierarchical Process (AHP) method, which is a multi-criteria decision making technique based on a 9-point scale. This method involved a pair-wise comparison of the relative preferences of a small number of 'decision factors' for flood risk assessment after constructing a 'decision hierarchy'. The next step involved the determination of Relative Importance Weight (RIW) for each hierarchy element by normalising the Eigen vector of the Decision Matrix. Finally, a Flood Risk Index (FRI) was computed using overlay analysis in Model Builder of ArcView 3.2 software.

For hydrological analysis, data obtained from Central Water Commission (CWC), Government of India, has been used corresponding to three gauge/discharge stations along the Kosi River namely, and Barakhshetra, Birpur, and Baltara. The monthly average data was available for Baltara station only for a period of nearly 20 years (1980-2002). The inundation depth (water level above the danger level) data have also been used to study the trend and severity of floods.

Floods are a natural phenomenon and they play a vital role in maintaining the river form. Mechanics of river formation demands that highest discharges should not be confined within the channel to prevent over bank flooding. As the population in the floodplain increases, it becomes increasingly important to reduce flood risks.

However, the study reveals that providing complete protection against floods may not be possible. All flood management programmes have to be designed in such a way that they do not give a false sense of security to the people living in the region, as is normally the case in India. The basis for selection of an appropriate method has to be based on a careful analysis of hydrological data to understand the processes involved and then to extrapolate the changes in the hydraulic regime after applying the flood control measures.

The paper reports that Kosi river shows extreme variability in terms of flood magnitude and frequency, both spatially as well as temporally. The study points out that the average annual discharge ( $Q_{av}$ ) of the Kosi at is 2236  $m^3/s$ , with the average monsoon discharge (5156  $m^3/s$ ) being almost 5 times higher than the non-monsoon discharge (1175  $m^3/s$ ). Such a large difference between monsoonal and non-monsoonal discharge makes the river vulnerable to flooding as the shallow river sections cannot accommodate the excess discharge.

The annual discharge at Baltara shows an overall increasing trend contrary to the decreasing trend reported in the mountainous catchments of Nepal. Peak discharge variability at Birpur and Baltara is relatively lower. It is observed that the upstream stations (Barakhshetra and Birpur) show higher peak discharges than that at the downstream station (Baltara) for the same return period. The possible reasons for this are the diversion of water for irrigation (East Kosi Canal System and Chatra Canal System) and also the embanking of the river, which prevents the tributaries from joining the Kosi. The study states that high peak discharges in 1984-85 at Barakhshetra are perhaps local events caused by the massive breach of the eastern embankment upstream of this station, and, therefore, they are not reflected at downstream stations.

The data clearly distinguishes several periods of flooding at all stations. While the period 1957-67 indicates no major flooding at all stations, the period 1968-75 has seen regular flooding at most stations. The period 1976-86 shows sporadic flooding at Barakhshetra. The worst period has been 1987-90 which records extensive flooding at all stations. In subsequent years, Barakhshetra and Birpur stations have not seen any major floods but Baltara has recorded two significantly large floods in 1998 and 1999.

The study points out that the Kosi River has a lower concentration of suspended bed load. The increase in sediment concentration in the Kosi river with the increase in discharge, particularly in terms of 'wash load' (fine fraction), shows that the basin is prone to bank erosion at the initial increase but at higher discharges, bank erosion decreases. Although a large part of the upper catchments of the Kosi is glaciated and a large amount of sediments are intercepted upstream of the Kosi barrage, the average annual sediment flux for the Kosi at Baltara is still quite high, which results in rapid and extensive aggradation within the channel as well as the flood plains. This, in turn, alters the channel-floodplain relationships and makes the river susceptible to avulsion and large scale flooding.

Sediment budgeting for the Baltara station for the period 1980-97 indicates that the annual load for the Kosi is extremely variable over the years. A sharp decline in suspended load (all fractions) is noticeable after 1980 which

suggests a significant reduction in bank erosion and channel bed aggradation of the reaches upstream of Baltara. The reduction in coarse fraction is particularly noticeable from 1980 to 1989 and this entire period is interpreted as aggradation period. There is a data gap between 1990 and 1992 and a sharp rise in suspended load between 1993 and 1995 is interpreted as a degradation phase which again returns to an aggradation phase after 1995.

The western parts of the study area, namely, Alauli, Hasanpur and Kusheshwar west blocks are mapped as 'very high' risk zone. More than 50 per cent of the area of these three blocks falls in the very high zone. Three other blocks namely, Bilaul, Gourabouram, and Alinagar have more than 50 per cent of their area falling in 'high' risk zone and many of them have patches of very high risk zones. The main factors which have contributed to their classification as very high and high risk zones are very low elevation, proximity to active channels, and a moderate population density. Frequent flooding in this region is caused more by the smaller tributaries rather than the Kosi itself. The Baltara station falls in this region where flood peaks often cross the mean annual flood (Qmaf) value. Further, the Baltara station also shows very high concentrations of wash load which is mainly contributed by bank erosion and sheet wash from the floodplains. Such high sediment load also tends to raise the bed level and encourage overbank flooding.

The central part of the study area, mainly covering Nau Atta, Mahisi and Salukha blocks, has been classified as moderate risk zone but has frequent patches of high risk zone. A large patch of high risk zone at the SE corner (Salukha block) of the study area happens at the lowest elevation in the entire window. Although there is no major tributary joining the Kosi from the eastern side, several paleochannels of the Kosi seem to be converging in this region, which is causing drainage congestion and inundation.

The eastern parts of the study area, covering Kahara, Madhepura, Singeshwar, Supaul, Sour Bazar and Simri Bakhtiyarpur blocks, fall under 'low' risk zone with parts of Supaul and Simri Bakhtiyarpur falling in the moderate risk zone. Supaul and Simri Bakhtiyarpur are also the two blocks, the western edges of which have been flooded in 2005 and 2003 although most of these areas have not been inundated for more than 10 years. This is perhaps a manifestation of gradual migration of the Kosi River towards the west during the last 200 years and a sloping sandy bed which does not allow any drainage congestion. These areas also have the highest elevations (40-47 meters) in the study window due to positive build-up of the Kosi plains and the population density is also low.

It concludes that more efforts should be a part of non-structural measures of flood management to reduce short-term and long-term damages and to bring awareness among communities on the potential need of this research.

**4.10 Groundwater Marketing in Nalanda District of Bihar State: A Socio-Economic Appraisal, Anish Kumar Singh, A.K. Chaudhary, and D.K. Sinha, *Agricultural Economics Research Review*, Vol. No. 20, pp. 333-44, 2007.**

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**Key Topics:** *Groundwater Marketing*

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This study was undertaken to examine the financial viability and cost of groundwater through tube wells in the Nalanda district of Bihar, given the importance of groundwater in increasing agricultural production.

The study was based on primary data obtained from two randomly selected villages, namely Ranipur and Vishnupur in Islampur block of the Nalanda district. A sample of 60 farmers comprising 9 from marginal, 18 from small, 21 from medium, and 12 from large farms were selected through the stratified random sampling technique. The Probability Proportionate to Size (PPS) method was adopted for the allocation of sample size among different categories of farms. The survey method was used to collect the data and information from the respondents relating to the agricultural year 2001-02. The Benefit Cost ratio (B:C ratio), Net Present Value (NPV), and Internal Rate Of Return (IRR) techniques were used to examine the financial viability of tube wells in the area.

The study found that a majority of tube well owners fall in the area in the category of small and medium farms, who use their tube wells mainly for hiring out purposes. The large and medium farms use them for their own purposes. Among different categories of farms, the cost on installation of tube wells has been found higher by large farmers because of deep drilling. It has also been observed that only the marginal farms in the study area could not generate sufficient cash inflow so as to meet the installation and operation costs.



Financial analysis like B:C ratio and IRR has confirmed the economic viability of the tube well groundwater irrigation system in the study area, except in marginal farms. Water marketing analysis has revealed that the surplus water and vicinity of the buyer's land to tube wells play an important role in influencing the sale of irrigation water. The study has revealed that owners-sellers category of farms predominate the water market in the area.

Since, it is the small and marginal farm category that participates in the water market on a large scale, there is a need to provide cheaper and assured irrigation water supplies through either surface irrigation or assured electricity supply to these weaker sections of the rural society.

The study concludes that providing subsidies for tube well installation to these farmers would further reduce their dependence on large farmers for irrigation of their crops. A serious effort is, therefore, needed at the policymaking level for reducing the irrigation cost through providing subsidised electricity/diesel, subsidy for tube well installation to small and marginal farmers, or development of a canal irrigation system. It will help in increasing agricultural production and securing the livelihood for marginal and small farmers.

#### **4.11 Water Resource Management, R. B. Mandal, Indian Institute of Public Administration, New Delhi, 2006.**

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##### **Key Topics:** *Water Management, Floods, Wetlands*

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This book, an edited compilation of scholarly articles written by academicians and scholars from diverse fields, aims at analysing water resource management in Bihar. While some of the chapters are generic, and have taken up relevant issues at the national level, about a third of the 37 chapters of the book are devoted to Bihar.

A. K. Sinha and Tulika Sinha in their chapter have discussed issues related to the importance, uses, problems, and management of water, particularly its significance in the maintenance of all forms of life, as well as its role in the movement of the biosphere. M. .N. Pandey in his chapter on management and utilisation of water resources highlights that the world is under stress due to lack of fresh drinking water. About 2 billion people, living in 80 countries of the world, suffer from chronic water shortage. Naseemuddin and Sanjay Kumar Jha, in their chapter on policies and programmes related to water resource management, emphasise that efficient use of water is increasing due to high demand from sectors such as agriculture, industry, and power. In his chapter on integrated watershed management, A. Mishra argues that watershed management is essentially management of rain water, surface water, and groundwater resources.

Anil Kumar Gupta studies water crises with a focus on emerging hazards and management of water crises. Rashmi Prakash throws light on the inter-state water disputes in India and opines that the combined efforts of various state agencies is required for the development of river water resources and the resolution of conflict. Devendra Kumar discusses the growing challenges of water pollution and suggests remedial measures.

Sumit Dhanuka studies the use of GIS and remote sensing in water resource development in India and argues that the GIS approach is playing a vital role in the field of hydrology and water resource development. Its advantages include checking water pollution, water utilisation, flood control, surface and sub-surface water management, river basin development, and sustainable development of water resources. Deepak Kumar analyses the application of remote sensing in groundwater investigation and argues that remote sensing utilises the interaction between electromagnetic radiation for water, water vapour, ice, snow, and that water bodies appear in the satellite images as dark regions.

Specifically related to Bihar, the pressing problem of pollution in Ganga water is studied in the chapter by L. Rana Pratap. He argues that urban waste disposal in the peripheral areas is the key cause of pollution of the river. Anil Kumar Choudhary analyses the various issues related to the pollution of lakes in Darbhanga. In his chapter on river management of floods, drought, and power shortage in Bihar, Sharda Nand Choudhary specifically studies the case of North Bihar. V. N. Jha, again in a study of North Bihar, emphasises on the conservation aspect of water resource management. Anuranjan discusses water crisis and integration of river systems in North Bihar in his chapter. In her chapter on impact of floods on land use in Muzaffarpur district, Shobha Kumari analyses the changing nature of land use, specifically focusing on seasonal changes. Girija Nandan Singh and Sudha Kumari, in their chapter about food security management during floods in Bihar, highlight that this is an annual concern in the state. Jayant Kumar

gives ideas on sustainable management of land and water resources and specifically studies the case of Barahiya CD Block in Bihar. Manju Kumari, in her chapter, highlights the immense ecological value of wetlands. She cites the case of North Bihar, where more than 250 wetlands are found. The editor of the book, R. B. Mandal, emphasises on the management of wetlands in North Bihar, as these wetlands occupy a large geographical area and are crucially intertwined with the economy and regional development of the area.

The book concludes that ground water utilisation can maximise produce in diara land, and the establishment of a *diara* land development authority may develop better water use plans and promote fisheries. It recommends that a flood prone area programme should be developed in order to mitigate the adverse effects of floods on humans, animals, and also on crop production. It finds it necessary to provide adequate source of energy for pumping water, wind energy or solar panels may be used for pumping water in *diara* areas. It argues that better and modern measures for water conservation to fight water borne diseases are required. It suggests that developing water harvesting and creating better drainage and sewage systems, in order to avoid water pollution, is essential. It also finds that providing safe drinking water as per UN guidelines is urgently required. It highlights that there is an urgent need to make water available for irrigation and, at the same time, to conserve forests. Lastly, it advocates greater awareness and infrastructure for recycling of used water.

#### **4.12 Participatory Irrigation Management in Bihar: Status and Issues, K. V. Raju, Centre for Ecological Economics and Natural Resources, Institute for Social and Economic Change, Bangalore, 2006.**

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**Key Topics:** *Water Management, Irrigation.*

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The study presents an overview of the irrigation sector in Bihar. It reviews the existing institutional and legal framework, especially those for Irrigation Management Transfer (IMT), compares this with other states, and, finally, identifies emerging issues to facilitate the development of strategy, especially to strengthen and expand participatory irrigation management in the state. The study of IMT and its impact was conducted in collaboration with the Water Resources Development Department (WRD) and the Water and Land Management Institute (WALMI).

Between December 2005 and February 2006, a total of 12 Water User Association (WUAs) and nine Non Water User Association areas were visited to understand their functions, constraints, and achievements. The visited areas largely covered the Sone command area in Southwest Bihar, covering Sasaram, Arrah, Aurangabad, and Patna districts, and the Gandak command areas in Northwest Bihar, covering Chhapra, Siwan, Gopalganj, and Muzaffarpur districts. Extensive discussions were held with office bearers and ordinary members of these WUAs and non-WUA areas, senior officials of WRD at Patna, and its various field offices and senior officials of WALMI on its capacity building activities and field interventions.

Bihar has successfully adopted an irrigation management transfer policy for the surface irrigation systems. These policies are clearly being driven by the state's financial conditions and not by the state's long history of farmer developed and managed irrigation systems, nor by other factors, although the other factors are being used to justify the transfer policies. The Paliganj experiment carried out by WALMI is the current model for irrigation management transfer in large surface systems. Several government orders have been issued in recent years to facilitate formation and function of WUAs in Bihar. The study identifies the following key differences between WUAs in Bihar and in other states: a) WUA formation at distributory level, b) water fee collection by WUAs and retention of 70 per cent and payment of the rest (30 per cent) to the government, c) license to procure paddy and wheat at the WUA level on behalf of the Food Corporation of India, d) lead role being played by WALMI in providing training to planned WUAs in their region, e) setting up of PIM cell in WRD office, f) keen interest of field staff and senior staff of WRD to transfer the irrigation systems to WUAs, and g) experienced WUAs at the distributory level are willing to shoulder the responsibility of the system management, for which they would like to have capacity building help from WALMI and other organisations. For command area level management by WUAs, an informal federation of WUAs has been formed and so far it has held a few meetings. However, the response of the WRD has not been as positive.

**Improved Revenue:** Water fee collection levels have improved in the post-IMT scenario. This should act as incentive for the WRD to support and promote more WUAs in the state. What is significant in this process is savings to the government in revenue collection. Revenue collection is handled by WUAs without any costs to the

government. In addition to these savings in collection costs, the government is receiving a water fee from WUAs. These positive outcomes are likely to improve further as WUAs are strengthened.

**Better management of the canal system:** Across the various divisions and subdivisions of the irrigation department, field staff have realised that WUAs are going to help them in a different ways: a) WUAs have largely reduced their burden in water distribution and conflict resolution, b) water fee collection levels have improved in WUA areas, c) obstruction to canal flows and damages to canal systems have largely reduced, and d) WUAs are taking care of canal system maintenance and repairs on a regular basis from their own funds. Both sub-division and division level, and even circle level staff are demanding more WUA formation and transfer of canal systems to WUAs. Their major gain is reduction in workload, in view of existing situation of severe shortage of field staff and resources for maintenance and repairs.

**Lesson for other states:** The experiment at Paliganj, Manjauli, and a few more WUAs differs in some crucial ways from experiments and programmes in other states. Three such differences may provide the following important lessons for other states. The Paliganj, Manjauli, and other WUAs suggest that farmer organisations can possibly be entrusted with management of larger commands than are now being considered in other states.

In virtually all other states, the states have adopted the principle that they must repair or rehabilitate the channels to be transferred before transfer. In Bihar, for lack of funds, no such repairs have been carried out. The success or lack of it at Paliganj, Manjauli, and other WUAs, where the channels and structures are severely dilapidated, should provide evidence concerning the need for such repairs after transfer.

Bihar has successfully implemented the policy of water fee collection by the WUAs and retaining 70 per cent of the collected fees by WUAs. The remaining 30 per cent has been paid by all functional WUAs to the government.

Some of the senior officials of WRD speak enthusiastically of transfer of large parts of major irrigation systems to farmers. However, the official documents still speak only of transferring management of distributaries to WUAs. Also, the decision to monitor the Paliganj experiment for three years before taking any further action is a rather cautious decision, particularly compared with the policies and activities in other states. One item, however, when compared with transfer programmes elsewhere, is quite ambitious. Very few transfer policies or programmes envisage the transfer of such large subcommands to WUAs. The Paliganj distributory command is 12,000 hectares and they are envisioning transfer of sub-commands of 5,000 hectares up to perhaps 30,000 hectares. The state generally transfers at distributory or sub-distributory level systems, unlike in other states, transferring only minor and sub minor level systems. WALMI has projected the financial requirement of Rs 613 crores to transfer 12 lakh ha to WUAs. The system rehabilitation cost alone takes away 98 per cent of the estimated total costs. These cost estimates were worked out to meet the 12th Finance Commission's targets of 50 per cent of its total irrigation potential area (27 lakh ha) by 2012. Several plans are being chalked out to move on that path. But, the growing financial crunch and severe staff shortage is withholding all those efforts. The state needs to mobilise huge funds to take care of these inadequacies and to move towards embracing the turbulent water economy of the state.

#### **4.13 Economics of Bamboo Boring: A Study of the North-East Region of Bihar, Government of India, 2004.**

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**Key Topics:** *Bamboo Boring, Alternative Irrigation*

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The major objectives of this study are to gauge the importance of bamboo boring with particular reference to the area of land irrigated, number of labour employed, and the amount of capital invested in selected farms, quantify the costs and benefits accruing to sample farmers, identify the season-wise suitability of bamboo boring in selected farms, pin down the main constraints in regard to the installation, lifting of ground water, maintenance and operation; assess the feasibility, suitability, sustainability and desirability of bamboo boring in the sample area, examine the impact of bamboo boring on income and employment of sample farmers, and suggest measures for the consideration and implementation of the findings by the government and policymakers.

A multi-stage sampling design has been followed for the selection of the bottom unit of the sample. At the first stage, the district of Saharsa has been selected purposively. It is to be pointed out here that the Bamboo Tube Well (BTW) was first introduced in Saharsa district, which had both feasible conditions and larger potential for bamboo boring. Subsequently, at the second stage of sampling, two blocks, namely, Kahra and Saur Bazar were selected on

the basis of larger concentration of bamboo boring devices for irrigation. At third stage of sampling, a selection of 5 villages was made on the same basis as adopted in case of selection of sample blocks. Under Kahra block; Bangaon, Baryahi Basti, Kahra, Mani Rahua, and Parari villages and under Saur Bazar Azgaiba, Bhawanipur, Chandaur, Kanp, and Raghunathpur villages were selected. This way, 10 villages, 5 each from the sample block, were covered under the study.

Bamboo boring is a very cheap source of irrigation. It is a very unique device of irrigation under the minor irrigation system. It was introduced in Bihar in 1968. At present, about 157,629 hectares of land are being irrigated through this source of irrigation. The estimated capacity of this system constitutes 3.15 per cent of all the sources of irrigation in the state. Thus, bamboo boring is being regarded as a breakthrough in the exploitation of ground water in Bihar. Inputs required in bamboo boring are locally available. The village blacksmith is the technician and is armed with necessary knowhow. The sinking process is very easy and takes a very short span of time. It starts to supply water immediately. It is free from defects like alkalinity, water logging, and silting. In this way, there are a number of advantages of bamboo boring which have made this cheapest and easy source of irrigation popular.

It was observed that farmers of the study area used a local method for bamboo boring. They reported that after boring up to the desired depth, boring pipes were taken out. After that plain pipes and strainers were put in the bore. Then, gravel packing or sand packing was done around the strainers and pipes. At the top of the pipe, one check valve (reflex valve) and a bottle tee were attached to facilitate connection with pumping sets. At the local level, materials used for bamboo boring were: (i) iron sheet of 1.5 mm, (ii) bamboo of about 20 feet length, (iii) coconut coir, (iv) G. I. wire, (v) blank pipe, (vi) bottle tee, (vii) check valve, (viii) iron nails, (ix) sockets and nipples, (x) sand and gravel, etc.

The estimates indicate that the total cost of establishment of boring was found lower at large categories of farmers as they possessed larger land area as compared to other categories. They sunk comparatively higher number of borings as compared to small land holding size categories of farms. Therefore, the cost for establishment of boring was also found lower in large categories of farms as compared to other farms. Across farm size, costs for establishing bamboo boring were found to vary with the variation in the farm size. Because it was for those farms which possessed lower number of borings and whose establishment costs were higher than larger number of boring owners.

After establishment of the borings, farmers were to lift the water through pumping machines. Therefore, it is necessary here to work out the pumping costs. Operational costs constitute the major portion of the cost of pumping. But the cost of pumping varies across the farms. It is estimated at Rs 17,963.93 per farm on large farms, Rs 21,436.60 per farm on medium farms, Rs 23,418.77 per farm on small farms, and Rs 21,780.14 per farm on marginal farms. It clearly reveals that the smaller the farm, higher the cost of pump and larger the farm lower the cost of pump. It is due to the fact that large farm uses the pump on a larger scale. It can be concluded that the return from pumping is always more than double to the amount of investment, which testifies that this device is economically viable.

The impact of bamboo boring on the gross cropped area and the cropping intensity shows that, on an overall basis, the gross cropped area and the cropping intensity of the sample farms have increased by 59.52 per cent. But this varies across farms. The income accrued to the sample farms after installation of the BTW is a positive sign of the benefits of BTW in the study area.

The study concludes that BTW is a very successful irrigational device in the study area as the soil and water table available in the project area are most suited for this device. Hence, the suitability of bamboo boring is justified in the project area. As regards the feasibility, the returns were found always higher than the investment. Therefore, it indicates that the device is economically feasible in the project area. In regard to its sustainability, the study finds that the life of boring is not long due to the traditional method of sinking and usage of cheaper materials. But its sustainability may be ensured by making some modification or adoption of a scientific method of sinking as well as the usage of quality materials. Moreover, its desirability is unquestionable on account of being a low cost device and having a positive impact on income, employment, and production of crop in the study area, which is agriculturally a slow and backward region of the state. The study also point out the major challenges in implementing these devices, which include various constraints with regard to installation, lifting of ground water, and maintenance and operation of the bamboo boring.

#### 4.14 Alternatives to Micro-Irrigation: Evaluation of the Treadle Pump, S. N. Srinivas and C. K. Jalajakshi. *Economic and Political Weekly*, Vol. No. 39 (38), pp. 4271–75, 2004.

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**Key Topics:** *Treadle Pump and Micro-Irrigation, Alternative Irrigation*

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This paper reports the results of a survey conducted to assess the comparative performance of the treadle pump (TP) vis-à-vis other water-lifting options, including diesel pump, for varying field conditions in villages in Uttar Pradesh, Bihar, and Orissa, where the study was conducted. The sample selection was done for two purposes. One was to conduct the evaluation through feedback from beneficiaries and other was through actual field testing. Sample selection was through a short-listing procedure based on secondary information and suggestions from local IDE (International Development Enterprises) officials and NGOs. Random sampling was followed to evaluate the TPs using questionnaires, which involved getting a response from the users. The sample size was 54 households in Bihar, 51 households in Uttar Pradesh, and 39 households in Orissa. The questionnaire was, thus, administered in 144 households. This was basically for interaction with the owners to get a feedback from the beneficiaries. The sample was suitably stratified across the districts depending on the population size of TPs. Of the sample, 10 per cent was selected for detailed pump-testing and performance evaluation.

Installations of TPs have been carried out in the *terai* areas of Uttar Pradesh, plains around Varanasi, Bihar and areas in Orissa. In Uttar Pradesh, the bamboo version is common. In Bihar, metal pumps have also been installed along with the bamboo version. In Orissa, mostly metal pumps have been installed but the recently developed concrete version has also been introduced.

A suitable number of pump sets from each category were selected for evaluation. The traditional device, *dhekuli*, and diesel pump set were selected for testing. The sample was drawn from all three states. The tests involved the measurement of a number of parameters such as water discharge, volume of water pumped in a typical cycle, and effective utilisation time frequency.

The study finds that the TP is a low-speed, foot-operated reciprocating pump, which originated in Bangladesh during the late 1980s. The device can be operated by standing on two bamboo levers and depressing them alternately using the feet. On an average, it is able to provide a discharge of 1-2 litres per second. In India, there are a large number of small and marginal farmers and the landholding is characterised by increased fragmentation. These are some of the factors that favour use of the TP. The study found that in India, most of the TP installations are in Uttar Pradesh, Bihar, Orissa, and Assam. Generally, the bamboo versions of TPs can pump water from a depth of about 4.5 m to 5.75 m and the metal version up to 4.5 m. TPs have been adopted for application in landholdings of less than one acre.

It was observed that usually all members of a family operate the pump. However, the head of the family operates it more. Women generally operate only on a stop-gap basis. However, in a few cases, labour is being hired to operate the pump. The wages of hired labour varied from Rs 15 to 25 per day. It was felt that TP operation is much easier than other types of manual irrigation systems in the study area. On an average, a TP is operated for about 100 days in a year. More than 60 per cent of the households owning TP have been using it for more than or equal to three hours on an operating day. It was found that the discharge from all types of TPs is higher than other manual irrigation systems like the swing basket, *tenda*, and *dhekuli*, which are common in the study area. On an average, well maintained TPs give a discharge of about 50 to 90 litres per minute at a depth of about 4.54 m. The highest noted for a bamboo type was 56 litres per minute at a depth of 4.54 m, 89 litres per minute for a metallic pump at a depth of 3 m, and 79 litres per minute for a concrete pump at a depth of about 5.54 m.

TPs were found to be effective to operate a command area of about one acre. It is most suited for marginal and small farmers. The design of the TP is better and more convenient to operate in comparison to other types of devices using human power. A comparison of system efficiencies indicates that it is more efficient than a diesel pump. It also scores over other manual irrigation devices with much higher system efficiencies. The study results show that the system efficiency for a diesel engine, in a comparable field situation, has been only 3.64 per cent, whereas, for TPs, it was over 40 per cent. The system efficiency of *dhekuli* was over 6 per cent. However, *dhekuli* generally cannot be operated for long duration because the operator gets too tired and the water table in the well goes down. Among the other devices, the swing basket can only lift water from surfaces such as channels. In addition, it requires two persons to operate. *Tenda*, common in Orissa, can lift water from the surface and the operation is also strenuous.

Thus, the study concludes that the treadle pump is easier to operate than other types of manual irrigation systems and that its efficiency is also greater. Its range of command area makes it especially suitable for operation on small and marginal farms. Moreover, it is more efficient than even a diesel pump.

**4.15 Living with Floods - People's Perspective, Dinesh Kumar Mishra, *Economic and Political Weekly*, Vol. No. 36(29), pp. 2756-61, 2001.**

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**Key Topics:** *Kosi Flood, Flood Control*

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The article tries to portray the problems of the flood affected areas of Kosi, with special reference to Bihar, and tries to draw solutions from traditional practices and learn from the experiences of other states. The study looks into the various flood control strategies and attempts to make valuable suggestions for coping with the floods. The study argues for the need for serious research, given a context, wherein, attempts are made to control rivers in spate, flood waters are not used in the best possible way, and, wherein, modern flood control technologies have neither been very successful nor people friendly.

The paper points out that as the flood water stays for a longer duration in the countryside, often till November, the sowing for the *rabi* crop gets delayed. Paddy is at risk in case of early floods but cultivation of green gram and maize, which are harvested before the rains, will not leave a farmer empty handed. Some attempts have been made in Bihar and Eastern Uttar Pradesh to cultivate *rabi* crops in *chaurs* (the areas to which the accumulated water recedes) at the time most suited for sowing, with positive results. Some experiments with new varieties of paddy in the *rabi* season (like Gautam) have yielded good results. However, the study points out that there is a need to consolidate these efforts.

In case of repeated floods, the paddy seedlings get drowned and spoilt. It takes about three weeks to sow the seeds again and rear them to transplantation level. This delay has an impact on the output. In case transplanted paddy is drowned, re-plantation becomes easy with the use of floating seedbeds. There is good scope for crops grown over sand-cast lands like watermelons, cucumbers, etc. The present study suggests that traditional growers of these crops can be of help in such ventures.

An examination of the traditional housing in the flooded areas reveals that bamboo is a wonderful building material. Whenever a village experiences floods or is exposed to breaches, almost the entire village may be wiped out but bamboo structures remain intact. People in the North-East use bamboo in admirable ways, in the construction of floors, roofs, and walls. They use bamboos as stilts to support houses. Small floods pass under the floor of the structures, without causing any damage. Lofts, within the homes, provide space for storing essentials that include fodder and fuel. Bamboo floors are plastered with mud and that is how the space for cooking is carved out within the home. Hence, the paper suggests that bamboo cultivation should be encouraged wherever possible in the flood-prone areas. Not only does it prevent damage to the human settlements, it comes to the people's rescue after the floods in constructing houses.

Some raised ground within or near the village will be of great use for people and cattle to move in emergencies. Embankments along the rivers are replacing these structures very fast. Following the 1987 floods in Bihar, the government had announced that it would build such raised mounds in the villages, but the study exposes that this as a forgotten promise.

In the stilted houses of the North-East, the provision of latrines is made on the raised floor and the pigs are kept on the ground floor. People in flooded areas of North Bihar must climb trees, sit in shallow water, or look for some hideout to defecate during the floods. The plight of women under such circumstances is pathetic. Sometimes, the flood victims take shelter on high ground, be it an embankment, a road, a railway line, any raised ground or hillock, or any such place, and it takes little time for the place to get dirty. At this juncture, the terra-cotta squatting pans made by some organisations in Orissa and Maharashtra can be opted for. They are inexpensive to make, can be manufactured locally, and be put to immediate use.

Pollution in drinking water sources is a major problem in flooded areas. Wells have become obsolete, hand pumps get submerged, and the flood water, which most people are compelled to consume, is highly polluted. However, floods are accompanied with rainwater which is safe to drink. The study suggests that research be conducted on devising some cheaper methods of collecting rainwater in such places for the consumption of water.

The study points out that planning well ahead for annual holidays of schools, colleges, and all other educational institutions during the flood period can also be a remedy. Students of medical and veterinary colleges can be deployed in the flooded areas for treating minor ailments and given some credit for their involvement. This is a practice in Assam and some other states, where the flood victims do get the medical assistance at the time of their need.

Cattle are often ignored in any flood related planning. Fodder and medicine for cattle is an important emergency input. Natural floods occur only if the natural drainage mechanisms are not tampered with. Structures like embankments, roads, railway lines, and canals, etc, block the fold plains. Though it may not be possible to imagine life without proper means of communication, it is always possible to provide for smooth drainage through these structures and, thus, give least resistance to the flowing water.

Educating the people on flood by facilitating a dialogue between the engineers and the common man in flood prone areas can be a solution. Breaches in the embankments should not occur and this requires their careful maintenance. This is the job of the concerned departments. It is, therefore, essential that inundation maps of the area are prepared for every possible breach along the length of the embankment and also for every depth of flooding within the embankments. For the sake of convenience, this mapping can be done at an interval of every three km of the embankment. Once this is done, it will be possible to identify locations which could act as a flood shelters. The necessary infrastructure may have to be developed here providing all the essential facilities like drinking water, sanitation, food, fodder, fuel and first aid, etc., for people and cattle that are likely to come to these centres. Inundation maps are also needed for communities living within the embankments. If the embankment is firm and sturdy, the flood levels within the embankment would rise and people may have to shift to safer places. When the flood waters strike without much prior information then the first thing that a householder has to do is to move his family and cattle to some safer place and then, immediately, arrange for essential commodities like food and some roof cover.

The use of electronic media, the TV and the radio, is of immense importance and loudspeakers have also been used for flashing messages. A number of temples and mosques have loudspeakers installed in them and priests or the imams can issue warning in emergencies.

The study argues that relief is a political weapon and a double edged sword. It is a political weapon because by running relief operations, those who are favoured can be obliged and by not running relief, the opponents can be punished.

The study recommends that awareness campaigns have to be preceded by committed action research concerning all aspects of floods, irrigation, and power production. A dialogue has to be started at all possible levels, that is, at the level of the common people, village level workers, engineers, bureaucrats, and politicians. All efforts should be diverted towards making floods bearable and attempts should be made to convert water, which has become a liability, into an asset.

#### **4.16 Development Strategies for Flood Prone Areas, Case Study: Patna, India, Vinod K. Sharma and Tanu Priya, *Disaster Prevention and Management*, Vol. No. 10(2), pp. 101–109, 2001.**

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**Key Topics:** *Flood Management, Flood Control Strategies*

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This article gives a brief account of the city of Patna, a flood-affected city of India, where strategies were developed to link the process of urban planning to the risk and damage of flooding in the area. The study explains the various concepts of floods, the general causes for floods, and then details the flood situation in the city of Patna, and makes recommendations for flood management in urban areas.

According to the study, there are two main causes for floods – natural and man-made. The natural causes of flood include silting of river beds, inadequate capacity within banks, river bank erosion, flow obstruction and change in river course, poor natural drainage, cyclones, retardation of flow and back water effect, and heavy rainfall. The major man made factors of flood are deforestation and increased urbanisation.

The study states that urban planning without any effort to associate the component of floods the city faces, is the prime reason behind Patna's acute annual damages due to floods. Areas along the banks of the river Ganga and other low lying pockets of Patna are flooded every monsoon, as the natural channels are found to be inadequate to carry surface runoff due to rapid increase of built up area. The study finds that though the drainage basin is a creation of the

river itself, unplanned land uses can change its hydrological characteristics. Runoff increases due to the increase of built up area in the city. Urban areas have more than 50 per cent of impervious covering, leading to rapid runoff resulting in a change in the hydro-meteorological character of the streams. Thus, the peak discharge may increase by several hundred times that of natural conditions making the channel incapable of handling this discharge. The inhabitants of such areas face flooding more than usual when the flow in the channel exceeds its capacity. Poor drainage leads to water logging and flooding, thus, paving the way for a polluted environment and health hazards. So, there should be proper planning and zoning regulations to steer developments of a flood-prone city into more advantageous patterns.

The study notes that it is often said that the way to prevent flood damage is either not to build anything in the path of floods or to evacuate to higher ground. Since it is almost impossible to prevent or remove all development in the flood plains, intelligent planning and regulating of development in these areas are imperative so that damage from floods can be minimised. Flood plain regulations typically include a zoning ordinance that regulates the use of private land in the public interest, a land division ordinance that regulates the division, conveyance, and marketing of land, a sanitary or health ordinance that regulates facilities such as on-site water supply and septic tanks systems, a building ordinance that regulates construction, alteration, repair, extension, or conversion of buildings.

The study also finds that in Patna city, all channels are below their expected level of efficiency with the City Moat *Nala* and the Kadamkuan *Nala* being the most seriously ineffective. If the catchment areas of these two are analysed, it is seen that most of the slum pockets are located here, thus, rendering the slums to severe problems of flooding during rainy seasons and local flooding due to *nala* overspill even in the post rain periods.

The study explains that due to low land values and nearness to work centres, most of these slums are located in the low-lying areas of the central and eastern part of the city. Adding to the severity of the problem is the existence of extremely high-density residential areas in these parts of the city as compared to the western and southern zone of the city. In order to have a clear and in-depth understanding of the problem, a case study slum pocket was selected in the eastern part of the city called the Garbhua *Tola*.

The paper states that at the city level, the residential density of the Eastern Zone is on the increase. The inadequacy of the City Moat *Nala* and lack of a proper drainage system accentuates the problem further. Hence, the study suggests that there should be a strict control on the residential density of this zone. Since all the major drains have shown low capacity to drain out storm water into the river, the capacity of the drains should be adequately increased. Major drainage channels and conduits should have sufficient capacity to contain a 50-year frequency flood runoff. Secondary drainage channels and conduits should have sufficient capacity to contain a 25-year frequency flood runoff. Minor drainage channels should have sufficient capacity to contain a ten-year frequency flood runoff.

Flood plain zoning/zoning ordinance depends on factors like frequency of flooding in the area zoned, topography of land, the permitted uses in the adjacent areas, etc. Priorities according to level of inundation can be assigned to different areas.

The study recommends that in the high risk zones it is necessary to prepare detail contour/slope analysis maps, area level strategic plans for flood management, identification of the low lying areas and lowest points for immediate evacuation, utilising these lowest points as retention areas, playgrounds, parks, etc., improving of existing drains and channels, identification of the high areas and ensuring proper usage for such areas. All vacant land in this zone should be restricted for future usage as parks, playgrounds, and other water front development proposals to be developed by the PRDA. Any residential development, commercial areas of high usage like CBD, district centres, etc., or any major transportation interchange or nodes attracting commuters should be prevented.

It argues that in the absence of strict adherence to specific drainage augmentation, the medium risk zones can eventually be transformed into high-risk areas. Hence, the study proposes that building codes should be strictly adhered to in this zone. There should be control on population density in such areas. Land use of such areas can ideally be low-density residential, commercial, other public–semi-public facilities, community centres, exhibition grounds, public library, etc. High density residential, public utilities like ESS, drinking water pumping stations, telephone exchange, TV centres, etc., or hospitals should be discouraged in those areas. The study then suggests that the lowest risk zones, which rarely suffer flooding conditions, should be utilised for any form of development preferably high-density residential, administrative buildings, major commercial nodes, TV centres, etc.

The study also proposes that no street should be approved if its surface is more than two feet below the maximum



flood level. No building or structure for residential use shall be erected unless the main floor of the building is at least three feet above the maximum flood height and no basement or other floor shall be constructed below or at a lower elevation than the main floor. Since this area is an environmentally degraded pocket, all the existing slum upgradation schemes can be directed towards its improvement. Since the Environment Improvement Scheme aims at improving conditions of drains and streets, it should be immediately applied to this area to develop the drainage conditions.

The study suggests for structural improvements in the area. These include widening of the City Moat *Nala*, promotion of roof top storage in *pucca* houses, construction of detention reservoir in the lowest pocket, conversion of major roads into porous pavements and desilting of the *nala* bed. Non structural measures suggested by the study include an efficient warning system, creation of vegetative cover along the banks with the help of public participation, provision of appropriate number of health camps and provision of training and awareness programmes.



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SECTION 5

**Industrialisation and Urbanisation**

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## Overview

This is the shortest section in the Compendium, and has eight diverse studies. Both industrialisation and urbanisation are phenomena which do not touch the lives of most of the population of the state and, as a consequence, ironically have not been much studied.

There is some focus on urbanisation and urban issues. A very recent book chapter which compares urban reforms in Patna, Bangalore, and Ahmedabad (Mahadevia, 2010) and a working paper (Pangotra and Govil, 2008), which suggests a four-stage strategy of urban development, are the only inclusions in this very important and neglected category. Another article (Mandal and Dutta, 2009), in the context of Patna city, discusses waste management (or the lack of it) with a special focus on biomedical waste (BMW). It makes recommendations for a sustainable and effective BMW management system aimed at making Patna city a front-runner in BMW management practices by the year 2021. Anand (2004) examines the association of urbanisation and violence, which, at the global level, is found to be positive. Paradoxically, for Bihar, in a comparison between Bihar and Kerala, it is not found to be so. Pant and Pant (2004) dwell on the process of urbanisation and rural-urban linkages in the state. This is also dwelled upon in Guruswamy (2007), in a book chapter in an edited book, where it is argued that low urbanisation has led to out-migration and this problem is attributed to the lack of employment opportunities and other civic amenities. The study also underscores that the state has received minimum grants as a part of the urban development programme of the Central government.

Industrialisation is even more scantily studied than urbanisation in the state. A thesis (Kumar, 2010) examines if the change in political regime in the state in 2005 brought about any change in industrialisation in the state and argues that cluster-led agro-based industries should be the way forward for industrialisation in the state. An important document related to the industrialisation in the state is a report of the Bihar Industries Association, which was written under the chairmanship of J. J. Irani of Tata Steel in 2000, and it identifies key areas of intervention for industrial development in the state.

Needless to say, there is a major lacuna in research on urbanisation and industrialisation in the state. This lacuna in research needs to be filled and studies are required, especially in the areas of industrialisation, agro-based industries, agricultural transformation, as well as pattern of urbanisation, urban poverty, slums, health, and education.



## 5.1 *Industrialisation in Bihar: Did 2005 Bring a Change?*, Abhishek Kumar, MS Thesis, Madras School of Economics, Anna University, 2010.

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### Key Topics: *Industrialisation, Industrial Development*

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This thesis attempts to analyse the complex interplay of various economic and non-economic forces that have always been deterrents to industrialisation in Bihar in past and continue to do so at present, and also whether industrialisation drive in the state has made a turnaround in the post-2005 era.

The study compares important policy dimensions such as industrialisation policies, investment climate, private investments, infrastructure (both physical and social), governance, etc., and sees if there has been a change from the past and implications for future performance. The study then provides a tentative analysis of the present as well as future problems and prospects that the industrialisation drive in Bihar faces. The study attempts to compare across the three main indicators of industrialisation, viz., the policy indicators, comprising mainly of industrial policies and investment climate in the state, the outcome indicators such as the share of manufacturing in the  $SNDP_{FC}$  and the amount of private investment received, as well as the intermediate indicators such as physical and social infrastructure, governance, credit access, etc. By giving an overview of the historical analysis of Bihar's underdevelopment during the colonial times, the study explains that there were various institutional and infrastructural barriers to non-agricultural investment during the Colonial period.

The study examines the failed policy measures of the central as well as the state governments in the post independence era, and the industrial stagnation that Bihar has witnessed for the last few decades. Most of the regimes that have ruled the state in the post independence era were myopic about their petty political gains and did not pay much heed to the development woes of the vast majority of people. Industrialisation became from bad to worse with most of the units turning sick and eventually getting closed. (e.g., sugar mills, other agro-processing units, cement factories, etc.). The poor law and order and security issues led to a massive capital flight in the 1990s. Among the things that were still left with Bihar, the bifurcation of the state in November 2000 took away most of the resource rich mineral areas and further aggravated its industrial woes.

Coming to the most important aspect which is to examine whether the year 2005 marked a structural shift in the industrial base of Bihar, the study started off with the most important of all policy indicators which are the industrial policies of the state government. The previous industrial policies of the state government, such as Bihar Industrial Policy of 1995 (in effect till the bifurcation in the year 2000) were outdated. Also, due to complete apathy of the state government coupled with other infrastructural and governance problems, they had failed in attracting capital.

The major industrial policy initiatives which were undertaken after this incumbency came to power contained many new policies to improve the investment climate in the state. The study points out that some of the common reasons for the poor investment levels in Bihar in the past have been its inhospitable investment climate marked by a poor infrastructure, weak financial markets and low access to credit, shortage of skilled labour, lack of political support for investment, poor law and order situation, etc.

However, in the post-2005 era, once some of these problems were taken care of, there was a quick improvement in the investment climate. Some of the leading business houses paid a visit and showed interest in renovating the sick sugar mills and other agro-based industries in Bihar. The annual Doing Business Report, which ranks countries around the globe on the ease of doing business, for the first time, gave Patna a 14th rank among all major Indian cities in 2009.

The keyword for an industrial success in the developing countries is to balance endogenous economic development with integration in wider markets. The most promising way is to strengthen the local supply side to make the respective region more attractive to external investors and to encourage regional learning through knowledge transfer, and measures to enhance absorptive capacity for new technologies. Thus, the focal point of the regional industrial policies should be to build on comparative advantages.

Among the set of industrial policies that the state government came up with, separate incentive policies were framed to boost up the sugar industry, the traditional comparative advantage of Bihar. Later, the state government had amended The Sugarcane Act, 2006, by allowing the direct conversion of sugarcane juice into ethanol, which again had a huge scope for private investment. Initiatives were taken for the development of cluster based agro-processing industries as well.

As regards the intermediate indicators, the study attempts to see whether the state has invested heavily in physical and social infrastructure, and whether it has been successful in improving governance or not. In fact, the roads and bridge constructions, education, health has shown clearly a large improvement in the post- 2005 years compared to the prior pre-2005 period. However, as a result of bifurcation, the power generating capacity in present Bihar was substantially reduced. Only 29.6 per cent (that is, 584.1 MW) of the total generation capacity remained with Bihar, the remaining 70.4 per cent (that is, 1,390 MW) went to Jharkhand. This is perhaps the only sector in Bihar which has witnessed a further deterioration in the post-2005 era (the deficit increased from 15.1 per cent in 2005-06 to 33 per cent in 2008-09). The study points out that there has been a marked improvement in the governance indicators in the post-2005 period. The restoration of law and order has been cited as a prime reason for the high economic growth since 2004-05.

Coming to the outcome indicators, the study makes a comparison of the amount of private investments that Bihar has received since 2005, that is, after the formation of the State Investment Promotion Board (SIPB). The private investments approved by the SIPB have been concentrated across a wide range of industries which include food processing, thermal power plants, sugar mills, ethanol and co-generation of electricity (in new sugar mills, expansion of already working sugar mills, and the sick sugar mills), ethanol plants, steel processing and cement plants, technical and medical institutions, etc. There has been regional concentration at the already existing small industrial agglomerations of Patna, Vaishali (Hajipur), West Champaran, Bhagalpur, Muzaffarpur, Rohtas, etc. However, the real problem has been the fact that a significant amount of these investment proposals have either failed or are yet to take off.

Also, the present study looks at whether the percentage contribution of the manufacturing sector to the SDP has shown a distinct increase since 2005 or not. However, the study finds that five years is too short a time period to measure benefits of industrial prosperity. It would take us a few more years to get a clearer picture of whether 2005 marked a structural change or not.

Industrialisation depends on both short and long term factors. The short term factors are basically facilitating practices that provide attractive tax concessions, subsidies, and other exemptions (e.g., cheap or free land and electricity), minimising the bureaucratic hassles, etc. On a long term basis, the state must invest in both physical infrastructure and human capital. Improvement of law and order situations, especially minimising property crimes, is also imperative.

Following this, the study has also focused on analysing political factors which have not allowed a major chunk of SIPB approved proposals from having materialised. Especially centre-state relations, limitations on the jurisdictions exercised by the state government, and the affordability issues which constrain the resources of state economy in various ways.

The study has analysed as to why cluster led agro-based industries are the most preferred and feasible mode of industrialisation in Bihar. The study suggests that there is a need for the policies to be tailored to develop local specialisation in niche industries that do not require strong agglomeration economies, or in industries that draw natural advantages (agro-based industries such as sugarcane, ethanol, textile and leather industry, etc.). The study has also examined a recent case study of a successful entrepreneurship in Bihar, the Shakti Sudha Industries model, and examine as to how this model can be replicated elsewhere and made more widespread.

## **5.2 *Urban Reforms in Three Cities: Bangalore, Ahmedabad, and Patna, Darshini Mahadevia in Vikram Chand (ed.) Public Service Delivery in India: Understanding the Reform Process, Oxford University Press, 2010.***

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**Key Topics:** *Urban Reforms, Basic Delivery of Services, City Level Development*

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This study on the reforms of public service delivery in India presents a comparative overview of urban reforms in the cities of Patna, Bangalore and Ahmadabad. It studies whether Jawaharlal Nehru National Urban Renewal Mission (JNNURM) reforms, their content and their mechanisms of implementation bring about necessary urban reforms in India; would these then take Indian cities closer to an idea of Inclusive Cities and, conversely, could Indian cities have met their development and governance challenges and be more inclusive without the JNNURM reforms? This



study covers three different cities, with different institutional systems for urban planning and service delivery, as well three different state and city level development paradigms for a detailed investigation of processes of reforms.

In this summary, the focus is specifically on the city of Patna. The study notes that Patna, vis-à-vis urban reforms, is the case of a city which starts from scratch. The State, the private sector and civil society are all very weak and inactive. The pre-eminent concern in the state and the city has been 'law and order' and security of the residents. The condition of Patna is so poor that it was not in a position even to pay the salaries of the Urban Local Body (ULB) staff.

It emerges from this study of these three cities that historical trajectories matter and that success of reforms depends on the development paradigm, capabilities created by the state institutions, and activism of the civil society. While Bangalore's case shows that it had gradually implemented reforms on its own within the structural constraint of the state government dominated institutional structure, Ahmedabad did not have to do much to implement JNNURM reforms, as all the urban functions listed in the 12th Schedule of the 74th Constitution Amendment Act (CAA) have been performed by the ULB. It also had a strong welfare orientation, originating from all the three pillars of urban governance, the state, the private sector and the civil society.

In the case of Bihar, the study notes that the agenda of urban development has been pushed ahead by the JNNURM projects as well as reforms. The reforms, pushed from above, have succeeded in the development of a new policy framework for urban reforms. The state has begun to pass on the planning and service delivery functions to the city and has also become conscious of the need to raise local financial resources. In this context, the study throws light on accounting reforms and finds that the Patna Municipal Corporation (PMC) and the three municipalities in Participatory Urban Appraisal (PUA) are not in place yet, and neither have they shifted to the Double Entry Accounting System because they did not have technical staff to do so. It also notes that in Bihar, the tenures of the chief officers are very short, coupled with a gross inadequacy of staff. It argues that while the JNNURM reforms depend on the overall reforms in the administration, they will not bring about administrative reforms.

The study raises the concern that increased financial allocation from the central government to the state for development purposes does not mean that the state would be able to deliver the projects. While the state government continues to play an active role in the affairs of the cities because of the lack of capabilities at the ULB level, the progress towards making ULBs autonomous in functioning is slow.

The chapter notes that in case of Patna's governance, individuals matter and this begins from the state government leadership down to the ULB leadership. Certain reforms, such as the property tax collection and e-governance portals, have been successful where the Chief Executive Officers have taken interest (as in case of Khagaul and Phulwari Sharif). Patna and the other ULBs have also not been able to implement Basic Services to the Urban Poor projects because the lands are not made available for the purpose.

The study finds that across all the three urban locations, state governments continue to have dominant role in the affairs of the cities. The reforms would have been more successful if these had come indigenously rather than being imposed by the centre through conditionalities as in case of JNNURM. It recommends that the Central government could indicate the contents of such reforms, and the states could come up with their own packages and programmes of implementation.

It is argued that JNNURM reforms provide only limited mechanisms to achieve the goals of an Inclusive City. For example, it does not have mechanisms of public participation and stakeholder involvement except stating that the ward committees should be formed and there should be stakeholder consultations for City Development Plan. According to the study, JNNURM reforms also do not provide mechanisms for operationalising the building of a democratic culture, institutionalising participatory processes in planning, improving service levels through setting service standards, codes of conduct for the leaders and officials, as well as ensuring equitable resource allocation.

The study recommends that cities be given more flexibility in implementing reforms. For instance, the central government could ask states and cities to prioritise reforms based on their own assessment of their respective issues and ask them to set their own deadlines for achieving the reforms. It argues that reforms have to be seen in consonance with other development processes observed within the cities. Reforms such as repeal of the Urban Land Ceiling and Regulation Act (ULCRA) have been introduced without a thought on how the cities would make land

available to the poor. It argues that more thought needs to be given now to the relationship between cities and state governments. The latter needs to pass on more powers to the cities since the functions have devolved through the 74th CAA and now mandatory JNNURM reforms.

Regarding the use of modern technologies, the study argues that sound and robust urban data systems, which give spatial as well as temporal data, are important as are sound financial resources as well as the technical expertise of research institutes which are a prerequisite for their successful adoption.

### **5.3 Violence and Urbanisation: The Kerala Bihar Paradox and Beyond, P. B. Anand, Department of Development and Economic Studies, Working Paper No. 4, University of Bradford, July 2009**

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**Key Topics:** *Urban Violence, Urbanisation*

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The study explores the 'urbanisation of violence thesis', (the alleged relationship between urbanisation and violence) in order to understand what steps can be taken towards reduction of violence. The role of trust in improving urban governance has also been explored, which could also go a long way in reducing violence. It compares the two states of Bihar and Kerala as although the former is ranked low in HDI while the latter is ranked number 1, Kerala is more criminalised than Bihar. This is considered paradoxical given their respective socioeconomic indicators. However, it does mention the role that reporting and income factors play in this.

According to the study, in a rapidly urbanising context, failure of governance and institutions are common features that affect security and lead to active (direct violence such as protests and riots) and passive (lack of essential services and accountability) violence that affect the poor disproportionately. Although the study regards social governance, or the role of civil society organisations that are growing in large numbers in cities, to be a positive force, governance in the traditional sense is experiencing a decrease in trust among the people due to lack of accountability. Even though there are several accountability initiatives being implemented, expectations have not been met leading to a 'democratic deficit'.

In the above context, the study attempts to examine the association between urbanisation and violence using rate of crime as an indicator, the role of governance in the form of voice and accountability in reducing violence and, the role of trust in urban governance in reducing violence. Secondary data sources from international cross country data sets from UNDP Human Development Report, UN Office of Drugs and Crime (UNODC), International Crime Victim Surveys, Asia Barometer, and for India, government data from the Ministry of Home Affairs and other data from the Centre for the Study of Developing Societies were used.

Using data from UNODC for 61 countries, the study finds a positive association between the level of urbanisation and rate of crime. Although in the data set, there is the reporting effect and income effect found in high income countries which are more likely to have an efficient policing and justice system that report crimes, as opposed to a low income country which may not, thus, indicating bias. Moreover, the crime rate seems lower in countries where these systems are efficient and populations are large resulting in the population effect. Using governance indicators like Kauffman et al., the study also finds a positive association between urbanisation and voice, and urbanisation and political stability. It observes a negative association between voice and accountability and homicide rate, and also a negative association between political stability and homicide rate. It also notes that there is lack of a gender perspective in this discussion and that these relationships are preliminary.

The study notes while Kerala has ranked number one in the human development among Indian states for two decades (1981-2001), Bihar has ranked 15th during the same period, but the number of cognizable crimes in 2006 in both states were close to each other. With only 10 per cent of Bihar staying in urban areas against Kerala's one-fourth urban population, this case seems to confirm the paradox and the 'urbanisation of violence thesis', but such a view is preliminary. There is significant difference in the population of the two states, with Kerala having one-third the population of Bihar, as well as the latter having a much higher per capita income as compared to the latter, which brings out the above biases which might influence these associations. Moreover, more people reporting crime could be an indicator of more trust in the policing and judicial systems, hence, governance and accountability. At the same time, police high handedness and high conviction rates could also indicate the stringency of such structures, meaning lack of accountability. Hence, examining the interaction of these different indicators becomes important

to see whether the direction is 'virtuous or vicious.' Apart from the incidence of crime, nature of crime is also important. The nature of crime is also different in the two states with heinous crimes such as murders and dowry deaths being more in Bihar than in Kerala, which experiences more riots and protests.

According to the study, trust is also a complex yet important indicator of quality of governance. An increase in voice and accountability does lead to reduction of violence according to the cross-country data. Thus, enhancing local governance and improving people's participation could go a long way in reducing violence. The role of civil society organisations could also be important in increasing the trust in governance structures by providing avenues for voice and political participation.

#### **5.4 Integrated Bio-Medical Waste Management Plan for Patna City, Shailendra Kumar Mandal and Joydeep Dutta, *Institute of Town Planners, India Journal*, Vol. No. 6-2, 2009.**

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**Key Topics:** *Solid Waste Management, Biomedical Waste*

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In the context of Patna city, this article discusses waste management, or the lack of it, with a special focus on biomedical waste (BMW). It makes recommendations for a sustainable and effective BMW management system, aimed at making Patna city a front runner in BMW management practices in the year 2021.

Primary and secondary data from various sources including government departments, staff of Patna Municipal Corporation, Bihar State Pollution Control Board, healthcare personnel and workers, NGOs and residents, as well as newspapers, books, and the internet was collected for the study. A survey of 42 people which included doctors, nursing staff, paramedics and unskilled service personnel, and others concerned with health and waste management was also conducted.

The paper describes minor and major sources of BMW such as hospitals, other healthcare establishments, related laboratories and research centres, mortuary and autopsy centres, animal research and testing institutions, blood banks and blood collection services, and nursing homes for the elderly. It notes that many of the dangers or hazards associated with BMWs are hidden and injuries may not occur right away, but might build up or lie dormant in the body's system for years. These include hepatitis B and C and cancers. Therefore, it is argued that all suspect and unknown substances should be considered hazardous.

The paper then explains the system of BMW management in India, emphasising that waste generation depends on various factors such as type of healthcare establishment, hospital specialties, proportion of reusable and disposal items, and implementation of national and hospital waste management policy. It is estimated that on an average 0.5 kg waste is generated per patient per day in Indian hospitals, of which 80 per cent is general healthcare waste, which may be dealt with by the normal domestic and urban waste management system; 15 per cent pathological and infectious waste and 1 per cent sharp waste; 3 per cent chemical or pharmaceutical waste; and less than 1 percent special waste, such as radioactive or cytostatic waste, pressurised containers, or broken thermometers and used batteries.

It then goes on to discuss the current BMW scenario in Patna, which it finds highly deficient. Storage of wastes, at source, is generally not attended to, households, commercial establishments, industries, hospitals, nursing homes, and other medical establishments, keep on throwing the waste on the streets, footpaths, drains, etc. The study finds that there is little awareness about how critical it is to dispose BMW properly. It is argued that any effective BMW management plan should give careful attention to waste generation, segregation, storage, collection, transportation, treatment, and final disposal.

The study finds that a large number of hospitals, nursing homes, healthcare centres have been identified by the State Pollution Control Board in Patna who do not take any measures for safe disposal of BMW. BMW gets mixed up with the municipal solid waste and deposited at the common disposal site. Only few incinerators have been installed in Patna.

The paper estimates that in Patna city, 1.3 to 1.5 kg per bed, per day, is the solid waste generation and 450 litres per bed, per day, is the wastewater generation from healthcare institutions. Therefore, about 130–150 metric tonne of solid waste is generated from the city's hospitals and other healthcare centres daily. This adds up to approximately 3.6 metric tonne per day. The study predicts that the total quantity of waste generated may increase considerably in the future.

The paper also throws light on problems faced by healthcare institutions. Most commonly, they have no space for waste disposal making it difficult to treat BMW. It is found that there is a general overemphasis on the incinerator type disposal systems, institutions are unable to adopt new waste management systems, and non compliance of rules laid down by the government is widespread. Unlike the private institutions, public institutions do not have sufficient funds to develop BMW systems and reliance on unskilled workers to manage BMW is the general practice.

The primary survey showed that relevant health sector rules are being followed only by very few healthcare institutions in Patna. There is a general apathy towards the practices of waste segregation. The study found that not a single incinerator in the city met the specifications prescribed by Central Pollution Control Board. Although 60 per cent of the respondents showed some awareness regarding recycling, reuse, and incineration of hospital waste, only 21 per cent said they were currently segregating BMW. At the same time, almost all respondents were aware that untreated BMW is a potential medium for communicable diseases like Hepatitis. All respondents except two said they were not satisfied with the present levels of hygiene and that enough importance is not attached to BMW. More than 71 per cent of the respondents were not aware of Government of India policies regarding BMW and the BMW Handling Rules framed in 1998.

The study finds that there was a marked lack of awareness among doctors interviewed in the survey. Many healthcare professionals who were aware of the existing rules paid scant regard to them. Only around 31 percent of health care institutions said that they were regularly submitting the mandatory Hospital Waste Management Report to the Bihar State Pollution Control Board using the prescribed format. Most respondents recognised the importance of placing colour coded containers at appropriate places within the healthcare institutions and also the importance of generating awareness among the concerned staff. It also emerged that most respondents were of the opinion that there is general irresponsibility amongst the public as far as carrying out of civic responsibilities is concerned. To this end, the study found great demand for strong law enforcement measures and public awareness campaigns through the media.

The paper also records that awareness among the doctors was not satisfactory. They seemed to be the least concerned about the issue of BMW management. It is found that there is a general tendency among qualified healthcare professionals to think that the onus of maintaining hygiene within the healthcare institutions lies only with the unskilled service personnel.

The paper argues that strategic goal of BMW management aims at developing a system with due consideration to local climate, physical, economic, and social factors, with an objective to improve the environment for a healthy living through sustainable means. In this backdrop, the paper recommends six actions. First, a common bio-medical waste treatment facility, which has been long proposed, should be set up with services such as incineration, autoclaving/microwaving/hydroclaving, shredder, sharp its, vehicle/container washing facility, and effluent treatment plant. Second, all hospitals should appoint a core group headed by the chief executive of the hospital to lay down systems for BMW and these must be regularly monitored. Third, every hospital should make an inventory of qualitative and quantitative waste. Fourth, waste should be kept in the assigned colour coded buckets. The colour bags handed over by the healthcare units should be collected in similar coloured containers with covers. The BMW collected in coloured containers should be transported in fully covered vehicles. Fifth, healthcare institutions, which have incinerator and treatment facilities, should follow the BMW rules in disposal of the wastes. Spare capacities of incinerators in health institutions should be used by nearby hospitals, nursing homes, laboratory, etc. And sixth, the paper proposes a BMW management plan in the light of the problems identified.

The paper concludes with stressing on the importance of making all stakeholders aware of the significance of management of BMW. It suggests relevant workshops and training camps for local citizens, financial institutions, environmentalists, NGOs, Municipal Corporation, and state pollution control board for creation of awareness related to the issues of urban environment, global warning, and depletion of natural resources, among others.

## **5.5 Urban Development Strategy for Bihar: A Management Perspective, Prem Pangotra and Astha Govil, Working Paper No. 2008-04-02, Indian Institute of Management, Ahmedabad, 2008.**

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**Key Topics:** *Urban Development, Management Strategy*

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Bihar is among the least urbanised states in India with a level of urbanisation just above 10 per cent in 2001. The present study focuses on the current situation, issues, and policy implications for the state of Bihar.

The study suggests a four stage strategy for the urban development of Bihar. With this background, the first section presents the rationale of the strategy. The following section throws light on the current state of finances of urban local bodies (ULBs) in Bihar. The next section evaluates the quality of services currently provided by the ULBs in Bihar. The last section deals with the current employment profile of the cities in Bihar.

An urban development spiral introduced in the study explains that an increase in the revenues of ULBs would facilitate resource mobilisation and, therefore, infrastructure and services in the area. This would improve the quality of life in the cities. These, in turn, would attract investments and create employment opportunities. Economic growth thus leads to urban development. Urban growth and development would in turn generate revenues to the ULBs with widening of the tax base.

To analyse the fiscal powers and capacity utilisation by municipalities in Bihar, internal resource generation by the ULBs is analysed in the study. It includes both tax and non tax revenues generated by the municipalities in Bihar. The study reports that average per capita own resources generated by municipalities in Bihar is more than ten times lower than that of India. The capital city Patna has a higher per capita own resources figure, however, it has a negative growth rate. The higher average for Bodh Gaya, as compared to Bihar as a whole, indicates that the situation is still worse in other urban local bodies.

In India, the growth rate in tax revenue of municipalities is only 6.41 per cent as compared to that for non tax revenue, which is 12.14 per cent. Bihar has 3.56 per cent growth, both in tax and non tax revenues. Bodh Gaya shows a rapid growth in both tax and non tax revenue sources.

The study points out that municipalities in India are heavily dependent on state government fund transfers to fulfil their revenue requirements. Municipalities in Bihar also show the same dependence; however, the per capita level of transfers is low as compared to average transfers to ULBs in India. Patna has a very low figure for transfers as a percentage of revenue receipts. However, the study found that figures for Bodh Gaya show a gradually increasing trend.

Dependency of Bodh Gaya on state transfers is 45 per cent, whereas for Bihar it is 63 per cent, almost double of that for India. This represents a pessimistic situation for the municipalities in Bihar as they have low revenues and transfers from state governments is growing at a very low rate, although the dependency of municipalities on these transfers is high. This indicates the failure of the objectives of devolution of power to municipalities.

For municipalities across India, the average per capita revenue expenditure for the period 2001-05 is Rs 646, whereas, this figure is only Rs 95 for Bihar. Annual growth rate of per capita expenditure is also lower for Bihar than India taken as a whole. On the other hand, Patna has performed much better than rest of Bihar, though still very low as compared to rest of India. Bodh Gaya has a higher average than that of Bihar as a whole, reflecting a still worse condition of other municipalities in Bihar.

In India, on the average, the municipalities spend 43 percent of their revenue receipts on establishment and salaries, whereas, this figure is 30 per cent for Bihar. The study points out that one possible reason could be that small municipalities do not maintain separate capital and revenue accounts. Patna spends 90.5 percent of its revenue on establishment and salary expenditures. Other revenue expenditures such as operations and maintenance are taken care of by capital receipts. Indian municipalities, on an average, spend more than half of their own revenues on non discretionary work. However, the study unveils that municipalities in Bihar have less autonomy as compared to the Indian average. Indian ULBs show on an average Rs 272 annual expenditure per capita on operations and maintenance activities, whereas, Bihar spends only Rs 79 on this head, which clearly reflects the poor quality of infrastructural services being provided in the state. This makes it clear that ULBs in Bihar are not able to provide sufficient and good quality services to the citizens. The study highlights that small ULBs do not maintain proper

separate capital and revenue accounts, which leads to unavailability of authentic data. Therefore, sometimes ULBs are able to show surpluses in their accounts.

It is clear from the findings of the study that Patna spends less than cities in other BIMARU states on urban services. Capital cities situated in BIMARU states, such as Lucknow in Uttar Pradesh and Jaipur in Rajasthan, perform better than Patna on providing quality infrastructure, as is evident by the per capita expenditure figures for these cities.

Another finding of the study is that total resource requirement for Bihar, for the year 2000 is Rs 52,898 million, whereas, the actual revenue income of ULBs in Bihar in 2000 was only Rs 8,720 million, fulfilling only 16 per cent of the requirements.

The analysis for North Bihar shows that in Class I cities, primary activities such as agriculture, mining, quarrying, etc., are main resource absorbers, with cities such as Purnia, Chhapra, Bettiah, Motihari, and Saharsa still having primary activities as their basic sector.

Some of the cities show deviation towards trade and commerce, for example, Darbhanga, Siwan, and Muzaffarpur. Katihar is mainly occupied with services. Most of these cities also have a larger share in services as compared to the reference economy of Bihar. Among Class II cities, 7 out of 9 show preference towards primary activity, only Sitamarhi and Samastipur have trade and commerce as their basic activity. Among Class III cities, 26 out of 28 cities examined are primary activity based, only 2 have trade and commerce as their basic employment sector. Same is the case with Class IV cities, where 9 out of 10 examined cities show preference towards primary activity as their basic sector. It is clear from the analysis that the industrial sector has a very low proportion of employment among cities in North Bihar.

South Bihar also has a strong presence of primary activity in almost all the cities and towns. However, the situation is slightly better for other sectors as compared to North Bihar. Among Class I cities, 3 largest cities namely, Patna, Gaya and Bhagalpur have services as their basic sector. These cities serve 30.78 per cent of the urban population of Bihar. Dehri Dalmianagar employs a larger share of people in trade and commerce as compared to Bihar as a whole. Rest of the Class I cities, namely Bihar Sharif, Arrah, Munger, Hajipur, and Sasaram in South Bihar indulge largely in primary activity. However, Bihar Sharif has industry as its second basic sector, being the only large city in the whole of Bihar to show such a trend. Among Class II cities, 4 out of 8 examined have primary activity as their basic sector, 3 indulge in trade and commerce and 1 specialises in services. Many of the Class II towns also have services as their basic sector, showing growth and alignment with the national economy. A total of 35 Class III cities are analysed in South Bihar, out of which 33 specialise in primary agriculture oriented activities. Only 2 have services as their basic sector. All 7 Class IV cities specialise in primary activity. These results clearly show a low contribution of the industrial sector in the employment profile in Bihar, as none of the cities there specialise in industrial activities.

A strong negative correlation between share of primary activity in urban employment and level of urbanisation in the district was also observed in the study. Negative correlation implies that this dependence on primary activity must be reduced in order to improve the level of urbanisation. Analysis also indicates that an increase in the share of services would increase the level of urbanisation. Investment in services such as financial, educational, and recreational should be promoted. The correlation between share of primary activity in employment and per capita Gross District Domestic Product (GDDP) is again negative. This implies that the districts with higher share of agricultural activity in employment have performed poorly on the GDDP parameter.

The study recommends for development of cities as urban hubs, providing employment opportunities, attracting migration, and providing facilities. Mechanisation and specialisation in primary activities are essential to increase productivity so that the sector can contribute positively towards economic growth and urbanisation. The study views that efforts to develop the services, trade and commerce, and transport sectors will certainly provide impetus for development of the state.

## 5.6 *The De-urbanisation of Bihar, Mohan Guruswamy, in India: Issues in Development, Hope India Publications, 2006.*

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**Key Topics:** *De-urbanisation, Urbanisation, Tenth Plan, Urban Development*

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This book chapter from the book *India: Issues in Development* discusses in detail the causes of low rate of urbanisation in Bihar. It argues that low urbanisation has led to out-migration and this problem is attributed to the lack of employment opportunities and other civic amenities. The study also underscores that the state has received minimum grants as a part of the urban development programme of the Central government.

According to the study, Bihar is the poorest and most backward state in India. It has the second highest density of population, despite being the least urbanised. Urbanisation, which is fast rising not only in other parts of India but also the developing world, is actually having a reversal in Bihar. Urban Bihar contracted from 11.4 million in 1991 to 8.7 million in 2001, a decrease of 23.6 per cent, though the state's decennial population growth rate of 28.4 per cent was among the highest in the country. One reason for this could be the loss of Jharkhand with large industrial towns like Ranchi, Dhanbad, and Hazaribagh accounting for an urbanised population of 6 million of its 26.9 million. A distinct trend against urbanisation is seen in Bihar as among the principal cities in India, Patna registered the lowest growth (19.7 per cent) in the decade 1981-91.

The study argues that economically weakest sections, mostly landless labour, and educated youth are most likely to migrate from rural areas. The former finds employment mostly in the construction sector that requires unskilled labour. Those with vocational training and technical education gravitate towards industrial centres. Quite clearly, neither of these migrations is taking place within Bihar, the study avers. An emerging trend is the youth from Bihar seeking education in other states due to lack of higher educational facilities in the state. In addition to low industrialisation, the study mentions that little urban construction or renewal has happened in Bihar. The state, which is the main player in urban development, has played very little role in creating development in Bihar, which will not only make the towns better places to live in, but also provide employment to the least advantaged sections of the population. Although the population density is as high as 880 per sq. km. in the state yet, in terms of urbanisation, the state has the least number of people living in towns with 15.2 per cent as compared to 28.8 per cent in the rest of India. This gap is projected to widen and in 2016, the corresponding figures will be 18.6 per cent and 33.7 per cent, respectively.

The study finds that as per the classification of towns in India into Class I to VI categories in accordance with their population, there are 5,161 towns in India in Class I to III categories. Of them, Bihar accounts for only 130 towns. It has ten Class I towns, 23 Class II towns and 97 Class III towns. Wide variations in infrastructure and quality of life are seen among these towns in the state. The study pinpoints to lower central government and financial institutional assistance as the major reason for almost no development in urban areas of the state, which has led to declining rate of urbanisation. Low industrialisation in urban areas is another cause which has discouraged youths from rural areas in quest of employment. Moreover, students migrate in large numbers to other states owing to lack of educational facilities in the urban areas in the state. Till 1991, in terms of basic urban facilities like safe drinking water and electricity availability, Bihar was worst off among all states. The combination of little major construction activity, poor roads and urban infrastructure, and abysmal sanitation has made Bihar towns dirty, congested and overcrowded.

The study further looked at the trend of Central government allocations to Bihar for urban development. The Ministry of Urban Development renders assistance to states through three main programmes – Integrated Development of Small and Medium Towns, National Slum Development Programme, and SJSRY. The total funds released under the three schemes in 2002-03 were Rs 3,714.91 crore, of which Bihar received only Rs 174.24 crore (4.69 per cent). Another exception is the Tenth Plan allocations for urban development. The Tenth Plan allocation for integrated development of more than 1,500 Class II and III towns in India is only Rs 1,305 crore. The Plan has additionally provided a meagre Rs 1,231.32 crore for basic needs of the urban areas in major states of the country. Of the Rs 12,168 crore allocated to improving the living conditions in urban India, Rs 6,388 crore or almost 52.49 per cent is just for Delhi and the National Capital Region. Even institutional finance, specifically by the Housing and Urban Development corporation (HUDCO), is practically non-existent in Bihar. From 1996-2002, the state received

only Rs 100 crore for development of housing in its 130 towns out of Rs 31,402 crore sanctioned by HUDCO. This amounted to less than 0.33 per cent of the total HUDCO sanctions. Moreover, in the two million housing scheme of the Central government, Bihar did not receive anything from HUDCO in 2003.

The study reveals that the Tenth Plan allocation for urban development and urban employment was Rs 17,551 crore, of which Bihar was allotted only Rs 211.08 crore. These figures clearly show that de-urbanisation in Bihar is not a sign of balanced development between rural and urban areas, but a result of failure of urban areas to offer much attraction in terms of opportunities for migration. So people from Bihar migrate to other parts of the country.

### **5.7 Process of Urbanisation and Rural–Urban Linkages, J. C. Pant and Pushpa Pant, *Journal of Social and Economic Studies*, Vol. No. 15 (1), 2004.**

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**Key Topics:** *Rural–Urban Linkages, Migration, Urban Planning*

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The article describes urbanisation as a transformation of total way of life of a particular community, with respect to four key dimensions; demographic, ecological, socio- technical and economic. With a focus on the economic dimension, the article views urbanisation as an increasing shift from agricultural to the industrial and services sector, meaning, thereby, into distributive occupations.

According to the article, rural-urban links have four key components, viz., mobility of population from the agricultural and rural sectors to non agricultural and urban sectors; concentration of population in a new place and characterised by a new way of life; continued mobility of people into professions other than agriculture and into the non agricultural economy. The article argues that migration has been the major force shaping the process and extent of urbanisation. Rural–urban migration is mainly due to the disparity in the level of development and ‘higher the disparity, higher the migration.’ Therefore, any urban development policy cannot afford to neglect the implications of widening rural urban disparity.

According to the article, some important rural–urban linkages may be grouped as demographic, economic, religious or socio-cultural linkages. The first important issue relates to the relationship between man-land ratio and propensity to migrate. Positive relationship exists between high man-land ratio and propensity to migrate or an inverse relationship between cropped land per capita and the number of off-farm migrants. However, in this approach, productivity of land needs to be taken into consideration. Secondly, people generally migrate more from less fertile areas or areas where single crop is grown. However, the relationship between cropping patterns and migration is misleading because well off farmers of double cropped areas too shift to urban places to make good use of their surplus funds.

According to this article, rural–urban migration is determined by the income disparity between the rural and urban regions. As such, rural wage rate has a very important bearing on rural–urban migration. Also, unequal distribution of resources (usually land) encourages migration. The rich and the poor, both migrate more than the medium resource holders. However, the poor migrate temporarily, whereas the rich shift permanently. In such circumstances, the increased value of marketable surplus of agricultural produce may reduce migration as it may help to improve agriculture and, thereby, widen local job opportunities.

The article finds a symbiotic relationship between the rural hinterland and the urban areas. For example, a good harvest in rural areas increases the purchasing power of the villages, which in turn leads to more purchases of urban manufactures, ultimately leading to urban prosperity – which leads to greater demand for rural products. Conversely, the case of Kolkata is highlighted, which declined because of downfall of economic activities in the rural hinterland. As for socio-cultural linkages, the villages near the towns are far more developed. But an emigrant is a marginal man, in whom the conflict of rural and urban ways of life is most pronounced, and who is tossed between the village and city without feeling at home in either of the two, the article argues. Hence, the stress on them is immense. However, the recent urban demographic trend of declining fertility and rapidly growing proportion of elderly persons may reduce urban growth.



The article concludes that India's national development strategy favours urban areas. The demographers link city growth rates closely with national population growth rates implying that municipal authorities and planners have virtually no role in controlling the future size of their cities. It cautions that an emphasis on purely civic issues such as provision of safe drinking water, waste disposal, etc., dominates the thinking of the planners. They ignore the role of urban centres as a focal point for regional and rural development.

## **5.8 Industrial Development Imperative for Bihar and Jharkhand: A Report, Bihar Industries Association, Patna, 2001.**

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**Key Topics:** *Industrial Policy, Industrialisation*

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An Industries Commission was appointed by the state government in July 2000 to prepare a road map for industrialisation in undivided Bihar, with J. J. Irani of Tata Steel as Chairman and 11 other members. Before the finalisation of its report, the state was divided. The Commission had, therefore, so structured the report that the respective governments of both the states (Bihar and Jharkhand) find it useful.

There are 15 Chapters in the report. The first chapter, titled, 'Bihar Industries Commission', delineates the terms of reference of the Commission, the first being to evaluate the industrial policy of the state, and study why it has lagged behind. It gives a vision for 2020, such that, economic development in Bihar and Jharkhand will create employment opportunities and generate additional resources for the government. Chapter two, 'Achieving the Vision – Core Issues' argues that areas such as perceptions, images and attitudes about Bihar, law and order, dynamic and efficient governance, deregulation of business environment, infrastructure development, developing growth centres and growth corridor, revival of sick industries, training and skill development of human resources, economic resource building, environment management and laws, policies and regulations are the core issues which emerged as critical in analysing the imperatives for the various industry sectors.

The next 11 chapters take stock of key sectors and issues, such as Infrastructure Development, Power Sector, Agriculture and Agro-based, Sugar and Related Sector, Information Technology, Mineral-based Industries, Tourism Sector, Entertainment Sector, Small-Scale Industries, Textile, Handicrafts, etc., and Revival of Sick Industries, and highlight the main concerns therein.

For each of the sector-specific chapters (3 to 13), specific remedies are suggested for the sector, after presenting its current profile and attending constraints in Chapter 14. In essence, this chapter gives as summary of recommendations for achieving the vision; for infrastructure development, specifically related to the development and maintenance of roads, transport, inland waterways, railways, airports, air cargo complexes and telecommunications); for power sector, which include modernisation and renovation of generation, transmission and distribution systems, introduction of power balancing system to check thefts, stress on use of non-conventional energy sources, among others; for agriculture, horticulture, dairy, food processing, fisheries and leather industries; for sugar industries, which include ensuring supply of water in the required months, desilting, formulation of a fair price policy, and review of laws, among others; for information technology sector, such as building a world class IT habitat, developing data communication infrastructure, tax holiday for the sector, and exemption of custom duties for mineral based industries, a transparent mineral policy setting up a Mineral Development Board in Jharkhand, setting up a land bank, among others; for tourism, formulation of a tourism master plan, a tourism policy, development of model villages and picnic spots, among others; for entertainment sector; review of outdated laws, development of new entertainment centres, rationalisation of entertainment tax, among others; for small scale industry, formulation of a single uniform legislation for SSI, improvement of market potential, effective incentive policy, exemption from specific duties, among others; for textile and handcraft sector, specific recommendations for the handloom sector, sericulture, specifically, mulberry pre-cocoon, post-cocoon, tasar, and ERI, and the handicrafts sector, such as development of model crafts villages, and retail outlets; and for revival of sick industries, formulation of state policy, R&D support, technological upgradation, among others.

Chapter 15 of the Report presents the suggested Industry Policy for undivided Bihar in great details covering the dimensions of — Creating an Enabling Environment of Change, Image Building Imperative, Building

Partnership with Private Sector, Human Resource Development, Technology Upgradation, Financial Institutions/Resource, Economic Resource Building, Clean and Green Environment, Development of Information Database, Incentives/Concessions and Monitoring and Review, apart from many sector-specific recommendations. Based on the local resource endowment, the Report also identifies 23 thrust areas for undivided Bihar. In addition, it also proposes a classification scheme of districts, yielding 4 zones for the purpose of various incentives, subsidies and concessions.

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**SECTION 6**

**Labour Markets, Employment and Migration**

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## Overview

The study of labour markets helps us to understand the demand and supply of labour services, the interactions between workers and employers, the patterns of employment, and income and wages. These tell us much about the level of economic development of a society. However, there are very few studies on the nature and characteristics of the labour markets in Bihar as they have been scarcely studied.

There is a clear preponderance of migration studies in this section. Migration from the state to both rural and urban destinations is very high and it is believed to have increased over the last decade, and the rural people have become more mobile (Deshingkar et al., 2006). Choudhary et al., (2004) focus on seasonal migration from the backward areas of the state, and argue that migration is high due to lack of employment and agricultural development. The migration scenario in Bihar is undergoing a dramatic change due to rapid changes in the socioeconomic landscape of the state (Kumar, 2001). The intensity and patterns of migration in rural Bihar have considerably changed (IHD, 2001). Social networks play a major role in the process of migration (Kumar, 2004). From the studies in the Compendium, it clearly emerges that the impact of migration on the rural economy are substantial. Remittances from migrants have significantly contributed to increased incomes in the state (Kumar and Banerji, 2010, Deshingkar et al., Kumar et al., 2010). At the same time, migration has also been the key driver of social change in rural Bihar.

Studies in the Compendium focus on the historical and longer term dynamics of migration from the state. De Haan (2002) questions the undue stress on the distress nature of migration and sees migration as a household strategy that builds on existing migratory links and traditions. In this context, Diaspora studies are also relevant. Bihar is the home of Diaspora who migrated to various parts of the world, and especially to European colonies. Eldering (2005) argues that the Bhojpuri Diaspora provides a promising field for interdisciplinary comparative acculturation research.

An important study in the Compendium looks at the employment-unemployment situation in Kerala and Bihar (Srinivasan and Treb, 2007). Using NSS data, the study finds that in Bihar there is no case of a positive trend in employment rates and a statistically significant downward trend for rural males, rural females, urban males, and urban females. It finds that the labour force participation rates in Kerala of males and urban females are higher than the all-India average, while participation rates in Bihar are below the all-India average. While Kerala has higher levels of unemployment, the persistence of unemployment is lower in the state and this is a positive feature. The authors find the trends in Bihar are extremely disturbing and argue that in many ways, Bihar typifies many of the disadvantages of a land-locked country in not benefiting significantly from India's globalisation.

Other studies in the Compendium include one on labour use pattern in family farms in one block in Bihar (Kumar and Sen, 2002), the role of social networks in the rural informal economy (Sarmistha, 2009), the status of youth artisans in the state (Bihar Institute of Economic Studies, 2009).



**6.1 Poverty and Migration: Some Insights from a Study on Bihari Migrant Labour, Girish Kumar and Pranab Banerji, Paper Presented at International Seminar on Poverty in Bihar: Pattern, Dimensions, and Eradication Strategies, organised by Institute for Human Development, Asian Development Research Institute and United Nations Development Programme, 2010**

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**Key Topics:** *Migration and Poverty, Migration and Economic Development*

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The basic objective of the study is to map out the phenomena of labour migration from Bihar from all its possible angles and study its ramifications. This includes investigation of the issues related to the causes of migration, incidence of migration, and the destinations of migration.

It attempts to understand the pattern of migration; to identify those districts where out-migration is more prevalent; to undertake an occupational groups/skills mapping of migrants; to understand the operationalisation of migration including the role of agencies/intermediaries involved, transportation and financing migrant labour; to locate the destination of migrant labour; to study the working conditions and payment of wages, the provision of deposits and savings, mode of sending remittances, quantum of and problems associated with it, living quarters arrangement, including in-house cooking, drinking water and toilet facilities at migrant destinations, and to look at consumption patterns and asset creation.

As the basic objective of the study is to reconstruct the life cycle of contemporary Bihari migrant labour, in an all encompassing manner, starting from their household attributes, the long and tedious journey to distant lands in their quest for gainful employment, harassments they are subjected to en route, to their long working hours and miserable living quarters in unfriendly cities, their loneliness, savings, remittances, and their use back home, it necessitated data collection from various sources. The relevant information was collected at both ends: origin of migration and destination points of labourers. Therefore, a variety of methods, essentially complementary in nature, were employed. First of all, Census 2001 data, more particularly those tabled in its D-13 section were analysed. This provided us the incidence (till then) of labour migration from Bihar with details of both exit (district-wise source/origin of migrants) and entry points (destinations of migrants), and their country-wide spread. The exercise was repeated with reference to the NSS 54th round data on migration and published materials. A rereading of both these sets of data informed the choice of selecting the states and districts therein for surveying individual migrant labour at the entry points.

Interactions with migrant labour based in Delhi, and concerned railway officials and journalists were also enriching towards this end. A preliminary visit to the districts in the identified states at destination points and interview with former employers/agents, landlords, as well as officials of labour department in selected districts of Punjab, Haryana, and Delhi-NCR were undertaken. The following three states were selected as destinations: Punjab, Haryana, and Delhi-NCR. In Punjab, the *Doaab* region is considered to be the most prosperous and this is true of the Jalandhar district of the region. The second district identified from Punjab was Ludhiana, and the city is dotted with hundreds of small and medium-sized industries, drawing migrant labour from several states, including Bihar. Following the same procedure and for the same reason, Panipat in Haryana, Delhi and NCR, including NOIDA, Ghaziabad, Faridabad, and Gurgaon were selected. In the Delhi-NCR region migrants working only in urban areas were covered.

The selection of districts, blocks, and, further, the villages in Bihar was also purposive, based on the multi-stage interactions with the cross section of the society, including stakeholders. This included the apex level officials of the Labour Resource Department (the very first meeting at Patna), Government of Bihar, experienced observers of developments in the state including journalists, political and civil society activists, etc. This was followed by a preliminary visit to some of the district towns, discussions with the officials of the labour departments, particularly Labour Enforcement Officers (LEOs) posted at the block level and also with some of the seasonal migrant labourers then at home, ex-migrants, elected *gram panchayat* members, and people at large with or without firsthand experience of out-migration but aware of the phenomenon. Within Bihar, in terms of the population density, the north Bihar is denser causing more desperation and driving labour out from home, it is believed. Thus, the following six districts, four from the north and the remaining two from the south Bihar were identified: Sitamarhi, Saharsa, Khagaria, Katihar, Nawada, and Kaimur. Discussions with LEOs/ NGOs/ key informants were helpful in selecting blocks, one each in all the selected districts, and three villages from each identified blocks were finalised.

The key findings of the study can be summarised below:

- **Labour out-migration:** Based on *Panchayat* level data, it was found that around 32 per cent of household come in this category. Seohar (47 per cent), Araria (53 per cent), and Gaya (44 per cent) show very high percentage of migrant labour households.
- **Social Profile:** The social profile of the migrant seems to reflect the social profile of the area. In Katihar, for example, 93 per cent of the migrants are Muslims and in Kaimur the figure is 15 per cent. In all other districts, almost all migrant households are Hindus. The religious affiliation does not significantly vary between migrant and non-migrant households within a district. The migrant households generally belong to the backward castes, with well over half the migrant households belonging to this category, and most of them also belong to the most backward castes (MBCs).
- **Occupation structure:** Ownership, or even usury rights, over land also emerges as a major factor in mitigating migration. Nearly 48 per cent of the migrant households were agricultural labourers, whereas, the percentage is only 3.21 for owner cultivators and 5.43 for tenant (crop sharer) cultivator. Conversely, among the non-migrants, the proportions of owner cultivators and tenant cultivators are 24.4 and 15.6, which are substantially and significantly higher. Compared to 48 per cent of migrant households, only 38 per cent of non-migrant households were agricultural labourers. Interestingly, the proportion of 'others' is also high among migrants as compared to non-migrants, perhaps indicating that the demand for skilled labour like artisans, etc., is low in the state, forcing many to look for employment opportunities elsewhere.
- **Land ownership:** The negative relationship between land ownership and migration is further reinforced by examining the land ownership pattern of respondents. Nearly 61 per cent of the migrant households reported nil or negligible land ownership, whereas, 81 per cent of the non-migrant households reported owing land. The migrant households, on an average, tend to be larger, also indicating greater pressure on land as well as their links to poverty. The importance of land is further brought out when it is noted that the reported average earning from crops among non-migrants is higher in all the districts for which data was obtained. The intensity of cropping, however, was higher for non-migrants in only half the districts. Possibly, the non-migrant families go in for higher value crops or have higher yields, that is, better land.
- **Indebtedness:** The migrant households are, in general, more indebted. A little less than three-fifths of the migrants (58 per cent), in all the six districts covered under the study, and 47 per cent of non-migrant households reported being indebted. But there is also considerable inter-district variation.
- **Reasons for migration:** When the migrant households were asked to state the reason for migration, 77 per cent responded that it was in 'search of employment.' Employment and additional income to meet bare necessities seems to be the dominant theme of migration. To maintain the family, an average monthly consumption expenditure of about Rs 2,500 is necessary. For an average household size of over 5, the per capita expenditure works out to be rather low of less than Rs 6,000 per year, i.e., Rs. 30,000 per household. This is of course the cash outflows. The cash inflows for the household from crop earnings are, on an average, less than Rs 10,000, annually. Further, income from cattle is low and the reported incidence of commercial usage of cattle is low. The income from cattle is usually less than Rs 2,000 per annum. Thus, the average household has a huge deficit which must be met by labour earnings. In more than 80 per cent of sample *gram panchayats*, employment was the major reason for out-migration.
- **Remittances:** The critical role of remittances in the survival of the households in rural areas is highlighted by the fact that nearly 99 per cent of the migrant households stated that they received remittances from a migrant member working outside. In the survey of migrant workers at their destination, the proportion of respondents replying in the affirmative to the question of sending remittances to their families was 90 per cent. The average amount received as remittances by a migrant household is Rs 15,622 annually. There is of course considerable inter-district variation from Rs 11,346 in Khagaria to Rs 20,111 in Nawada.
- **Trends:** Given the pivotal nature of remittances to the subsistence of rural families in Bihar, it would be naïve to expect that migration would be easily controlled. In fact, despite press reports and other casual reports, the overwhelming perception of the households themselves is that migration has increased over the last 2-3 years. About 73 per cent of both migrant and non-migrant households perceived an increased in the trend of migration. Similarly, the data from the survey of migrant workers at their destination also revealed that over 83



per cent of the respondents believe that migration has increased in recent years. It is salutary to note that floods have not been mentioned as an important reason for migration. Nor does law and order or caste, and other oppressions figure as important considerations. Temporary disturbances like floods and droughts do not seem to affect the basic structural problem which has given rise to and which sustains interstate migration of rural workers from Bihar.

Out-migration of labour from Bihar is not a minor phenomenon and may be affecting about a third of the rural households, which is much higher than what official estimates suggest. Further, migration is an important coping mechanism for the poor and is essentially a response to a structural problem and not a result of floods or droughts. The migrant labour has a low reservation wage because the family remains in the village. He is prepared to undertake longer hours of work and accept poor living conditions in order to remit money to his family, which is perhaps the most important cash inflow for them to maintain their low levels of consumption. Remittances are, therefore, the life-line for survival and little of it is used for capital formation. Bihari migrant labour, by keeping wages low in the destinations, seems to contribute substantially to surplus generation and development in these areas.

## **6.2 Tracing Migrants in Delhi from Bihar – An Enquiry on the Role of Migration as a Development Facilitator in Poor Origin Areas, Resmi Bhaskaran and Balwant S. Mehta, Institute for Human Development and South Asia Network of Economic Research Institutes (SANEI), 2009.**

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**Key Topics:** *Migration and Development, Remittances*

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This study attempts to understand the role of migration in economic and non-economic development of a poor origin location. The core objective of the study is to understand the role and nature of migration in facilitating development of the poor and rural sending regions. The sub-goals of the study are to understand: (a) Who is migrating and why do people migrate? (b) What is the migration process and subsequent livelihood search at the destination? (c) What is the character, process, and intensity of continuing links with origin location? (d) What is the nature and level of change witnessed at the origin due to migration (both economic and non-economic impacts)? and (e) Whether migrants act as development awareness creation agent at the origin and how migrant and migrant households perceive development requirements at origin?

The research mainly uses a primary survey for this study along with secondary sources of information to contextualise the issues. A primary survey was conducted in sending and destination locations. It included structured questionnaire schedules, village schedules, and focused group discussions with key people in the sample villages. In both locations, a few cases were analysed in detail to understand the migration process in its entirety.

The study hypothesised that the persons who moves to a city keeps constant contact with the sending location and, to a certain extent, facilitates development at the sending location. Therefore, it has very systematically chosen the location and the destination regions, based on secondary data and panel data with the Institute for Human Development. The study traced migrants in Delhi from their households in six villages (Paroria, Chand Chaur, Madhopur, Bhagwatpur, Jhakhra and Sarairanjan) in Samastipur district in Bihar.

The study notes that Bihar has the second highest out-migration population in India after Uttar Pradesh. The proportion of migrants has approximately doubled and the destinations of migration have now become widespread and shifted towards long-term rather than short-term. It is also largely rural to urban focused rather than rural to rural migration. The migration of workers is fairly distributed across all castes and classes.

The study reveals that Delhi is the second or third destination for nearly 85 per cent of migrants. They migrate mainly for better jobs and wages. Prevalence of long-term migration is comparatively higher. Nearly 60 per cent of the total migrants belong to 14-44 age-group and they are generally male, leaving reflections on the male-female ratio in the sending households. Nearly 80 per cent of the migrants are literates. The migrants are, in general, labourers (24 per cent), students (26 per cent), self-employed (14 per cent), or domestic work (19 per cent). The survey shows that family plays a major role in migration decision as well as financing the migration process. The role of social network is also very significant in the migration process as also in maintaining strong links with the origin, remitting money, etc.

The study found that nearly 80 per cent of migrants send remittance at least once every three months. It is mainly the saving from their income. Majority of the migrants save money in a very insecure manner. Marital status,

caste, land holding, long term migration, household income, and sex have a significant impact on the remittance pattern. Remittance constitutes nearly 50 per cent of total household income, indicating a major dependence on remittance. It is mainly spent for food consumption followed by debt clearance, investment in health and education, and, then, asset creation.

Survey findings show that migrants shift their job and location at the destination over time seeking better opportunities. This is reflected in the wage structure, the average monthly income has doubled from Rs 2,162 at the time of migration to Delhi to Rs 4,503 at present. To get better wages, 43 per cent enhanced their skills while working in Delhi.

Nearly 78 per cent of the respondents visit their place of origin more than once in a year, especially during the festival season. They also have regular telephonic communication with the family. The migrant maintains strong links with the origin location and household, a case of high incidence of circular migration.

Nearly 85 per cent respondents asserted that migration led to a positive impact on the household income. In a descriptive sense, food intake of nearly 62 per cent of the households has increased to more than two meals in a day. The dependence on landlord for work and wage, on income from agriculture, and on income of female members, and sending children for work has decreased after migration. In brief, nearly 97 per cent of the migrants and their households believe that migration helped to improve the standard of living of the sending households which is a direct income impact of migration.

### **6.3 Status of Youth Artisan in Bihar: Assessment of Potential of Artisans Sector for Generating Large Scale Self Employment in Bihar, Bihar Institute of Economic Studies, Patna, 2009.**

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#### **Key Topics: *Artisan Employment***

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This study was initiated for exploring the status of youth artisans in Bihar and it assessed the potentiality of the artisan sector for generating large-scale self-employment. The study aims at exploring the real picture about the status and working conditions of artisans in Bihar. Problems, impediments, and solutions for the betterment of the artisans in Bihar have been dealt with.

For the purpose of the study, 400 artisan families have been surveyed from 8 sample districts of Bihar. The primary sources for the data collection were questionnaires for artisan households, government officials, and opinion leaders and, in addition, four case studies were done. The secondary sources were official data, census report and Gazetteer, etc.

The study finds that Bihar has been home to numerous handicraft varieties, each one of them is unique and unmatched since a long time. Bihar is known to have a special knack for handicrafts and artistic work. The most renowned, of course, are the Madhubani paintings which have been a part of Bihar lifestyle. Villages around Bodh Gaya create fascinating handicrafts. Fantastic bamboo articles, leather work, statues made of white metal, wooden toys, and baskets made from cane and bamboo are available in plenty. Silk industry, *sujani* embroidery, lac bangles, etc are the important artisan sectors in Bihar.

The study reveals that the representation of females in artisan work was less than males. It is due to socioeconomic and cultural factors as well as the lack of training and finance. Regarding training, hardly 2 per cent of the sample artisans were trained under the SGSY. The literacy scenario gives a dismal picture about the artisans. About one fourth (22 per cent) sample artisans were illiterate. This limits the use of information technology by the artisans. Human resource development has not been paid much attention which is visible through the inadequate training programme by the government schemes like SGSY/SJSRY. Majority of them did not get toolkits for their work.

The study finds that no efforts have been made for the institutional arrangements for the promotion of artisan sector in a big way. A majority of the artisans reported that they were lacking institutional micro-finance and marketing facilities, as well as technological problems in the artisan sector. A majority of the artisans were not interested to form Self Help Groups/Co-operatives and other societies due to the unawareness regarding how to form and operate them.

The comparative picture of changes has also been studied. The changes in the places of production, which took place over the reference period (1987-88 and 2007-08), show that that the place of production of goods began to shift from native place to district and state level.

A majority of the sample artisans expressed their views for the betterment of the artisan sector for facilities like loans, subsidy, marketing, training, electric machines, availability of raw material at cheaper rates through the government. Villages or towns where more and more artisans are engaged in their traditional occupation should be announced as *Shilpi Gram* or *Shilpi Nagar* and such places should be provided facilities like Special Economic Zones (SEZs). There should be efforts by the government to form Self Help Groups (SHGs) under SGSY and Swarna Jayanti Shahari Rojgar Yojana (SJSRY).

Besides this, it was also felt that there should be formation of co-operatives and unions among youth artisans so that they can avail the facilities for funds, capital, raw materials and other required facilities for micro-enterprises.

The study recommends that facilities like SEZs should be used in the context of artisans. Agencies such as Export Promotion Councils need to focus on specific areas and there is need to explore marketability of certain products to overseas markets as virtually all Indian arts and crafts are very much appreciated in the West. It will not only be helpful for the artisan sector alone, simultaneously, it will be instrumental in promoting Indian exports; arrangement of Micro Financial institutions for the artisan sector; and, arrangement of Common Facility Centres for the artisans.

#### **6.4 *Ties That Bind: A Study of the Rural Informal Economy in India*, Uma Sarmistha, MA Thesis, Department of Sociology, Anthropology and Social Work, College of Arts and Sciences, Kansas State University, 2009.**

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**Key Topics:** *Women and Informal Sector, Social Networks*

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This study explores the functioning of the rural informal sector in Bihar. Based on case studies of two sectors, textiles and food processing, and using both quantitative and qualitative data, this study profiles the nature and characteristics of the sectors and examines the roles of social networks and institutions in its functioning. Drawing from the economic sociology literature, it tries to understand how social networking in the rural labour market can affect economic outcomes.

The study is based on a field research conducted under the aegis of a larger project, Impact of Globalisation on the Unorganised Sector, sponsored by the Indo-Dutch Programme on Alternatives in Development. For this thesis work, the study draws a rural sample, comprising 290 workers, of which 142 belong to the food processing sector, and 148 to the textiles sector. Apart from the questionnaire survey, some face-to-face personal and group interviews with the participants from both the sectors were conducted to build case studies. The selection of the participants for the interviews was done on a random basis. Further, according to the specialty of the region, the two sectors were further divided into two sub-sectors.

The major research questions which the study addresses are how to characterise the rural informal economy in Bihar, a state in eastern India, what are the factors affecting the functioning of informal sector and how does social networking help in the functioning of the rural informal sector in Bihar.

The study finds that the demographic profile, for a majority of the informal sector workers surveyed, was more or less similar to any other kind of informal work in any part of India. A majority of the workers in the informal sector were either illiterate or educated only up to the primary level. The earnings of the workers in all the sectors surveyed were low, in general, and had been stagnating in the recent past. The workers, irrespective of where they worked, had to put in long hours of work and accept heavy workloads. The long hours of work with low income acts as constraints and prevent the workers from taking other part-time jobs for enhancing their earnings. In addition to the non-availability of additional work, the lack of education, work-related and other health problems, and the indifferent behaviour of the employers and middlemen were some of the other problems confronting the workers.

The study explains that the case of the rural textile industry in Bihar provides more data for studying the nature of the rural informal economy. From the rigid imposition of caste and religion in the work profile of the artists engaged

in Madhubani painting to the notion of circular migration among the handloom weavers, the study of the textile sector adds a distinct dimension to the extant research on the rural informal economy. The handloom industry, which is primarily operated by Muslim and lower-caste Hindu weavers of the village, demonstrates the prevalence of a rigid hierarchy of religion and caste. Also, the circular migration of weavers from these villages has created alternative relationships between the producer and the product, wherein weavers go out of their villages to work in factories in the summer and return to their villages in winters for working on their own looms. Another noticeable aspect pertaining to the migration of weavers is the trend of migration to work in wool or leather factories. Migrants often face institutional barriers within an inter-cultural context, which affect the ability of the migrating population to engage in economic activities. Further, the cohesion of the weavers toward their art and their fellow weaving community motivates them to migrate and work for a similar industry outside their villages. The adults migrating from these villages of weavers migrate for work and most of them take up work in firms working under the aegis of the textile industry like the woollen, leather, or carpet weaving factories. Further, circular migration, which occurs despite better working and earning prospects in the factories in the city, offers another picture of embeddedness. The trend of workers moving out of the village to work in a similar industry can, thus, be related to social networks, social capital, and the kinship ties prevalent among the villagers. However, the phenomenon of reverse migration or circular migration to work on their inherited form of art can be described as a form of social or structural behaviour that functions against or beyond the conventional neo-liberal economic principles of the market.

The study argues that the existence of strong ties and networks, both within and outside the village, demonstrates the existence of a caste and religion hierarchy at the community level, as production is an important aspect of the rural traditional textile sector of Bihar. Further, the migrating weavers, working for a similar line of industries that operate in the village, even in the destination state and the notion of circular migration reiterate the role of caste and religion in forming strong kinship ties within an embedded economy.

The solidarity among workers in the food processing sector, especially in the honey beekeeping sector, in Bihar is the result of village networking and plays an important role in the production process. The results from the survey in the food processing sector show a unique form of social networking and ties that bind the socio-economic structure of the industry. Social networking in this sector begins with the head beekeeper recruiting people from his community and teaching them ways to maintain the hives for one season. Thus, the embeddedness in the operation of this industry arises out of caste networking.

Another type of food processing sector in this region is the traditional industry of making perishable home-made processed food for local consumers. This industry is a major source of employment for unskilled workers of the rural areas in this region. The women and children of the household constitute an important part of this sector, but are low profile and hardly visible while quietly going about their household chores. The industry is historically owned and managed by lower-caste Hindus, who were not allowed to own land. Thus, even today, the industry exhibits the same hierarchy and is mostly managed by the lower-caste Hindu families.

Another important finding emerging from the survey results was the existence of stratification based on factors like caste and religion, which, on the one hand, provide opportunities to some workers while, on the other hand, place a barrier to the entry of others.

Thus, the finding of the study shows that the functioning of the rural informal sector is governed to a large extent by the traditional institutions of caste, religion, and gender. The social networks formed on the basis of these traditional institutions have not shown signs of much decay over time. These insights of this study have some important implications for policy. The state policies for the rural informal sector can be more effective if these social networks are used for delivery of services and support system. Measures like the National Rural Employment Guarantee Programme may be very important in enhancing the livelihoods in these areas. Here again, the role of social networks may be very important in its effective implementation.

The study recommends that the state should recognise and respect the nature of embeddedness of the rural informal sector and that the efforts of workers in the rural informal sectors go beyond merely functioning

as components of a market economy, but actually dedicate themselves to saving their hereditary art forms. The State should encourage these workers to continue working in their traditional forms and provide them a decent environment for work along with social and health securities. In this context, it should first create livelihood opportunities for rural workers, which can provide them a regular income in the sector wherein they are working. The State should reorganise the embedded nature of rural India and try to provide better living conditions for the workers by encouraging them to work in the sectors. A certain kind of equity programme should be introduced to help the workers augment production as well as to provide better working and living conditions, and rural non-farm cultural tourism may be one way to promote the development of this region and to help preserve its cultural art.

#### **6.5 Some Aspects of the Trends in Employment and Unemployment in Bihar and Kerala since the Seventies, T. N. Srinivasan and Allen Treb, *Working Paper No. 324*, Yale University: Stanford Center for International Development, 2007.**

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##### **Key Topics:** *Employment and Unemployment*

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The present study is an attempt to unveil and compare the employment and unemployment trends in Kerala, Bihar, and all-India. Kerala differs from most other states in India in its superior performance with respect to social indicators relating to education and health. The study analyses the Kerala employment situation in some detail, comparing the findings from NSS data.

The focus of this paper is the Employment and Unemployment Surveys (EUS) of the NSSO since it is the only comprehensive source of data using the same concepts and methods of data collection over more than three decades. The study fits a simple trend regression to the data, from 32nd Round (1977–78) to 61st Round (2005) for Bihar, Kerala, and India. Since the data for Bihar and Kerala is not available for the 27th round, this paper focuses on comparable data for 1978–2005 for Bihar, Kerala, and all-India. The time series analysis in the study is basically descriptive. The labour market trends are best viewed as trends in labour market equilibria in a loose sense. The study also analyses the time patterns of employment, unemployment, and being out of the workforce within the seven day reference period at the all-India level.

The study finds that the trends in Kerala and all-India are similar except for two aspects. Among the rural males, the employment rate in Kerala is increasing, while it is decreasing for all-India, with both trends being statistically insignificant. For urban females, Kerala employment rates show a decreasing, but insignificant trend. All-India data shows an increasing and also insignificant trend. On the other hand, the trends in Bihar are quite different from the all-India trends. There is no case of a positive trend in employment rates and a statistically significant downward trend for rural males, rural females, urban males, and urban females.

The study states that the level of unemployment is distinctly higher in Kerala as compared to all-India and Bihar. However, there is no evidence of a significant upward trend in unemployment rate in Kerala. The trends in Bihar show no evidence of a significant downward trend in unemployment.

Labour force participation rates in Kerala of males and urban females are higher than the all-India average, while participation rates in Bihar are below the all-India average. For rural females, both Kerala and Bihar participation rates are below the all-India average, with Bihar being the lowest. In terms of trends, at the all-India level there is a significant upward trend in participation rates according to CWS (Current weekly Status) of males in rural and urban areas and also of females in rural areas. Except in the case of urban males, where it is positive and significant, all other US (Usual Status) rates show no trend. In Bihar, both US and CWS rates for males and females shows downward trends, with the trend in US rates for all demographics except urban males being statistically significant.

In Kerala, trends in all CWS and US rates are upward except for urban males and rural females, but only the CWS trend for rural males is significant. Thus, Kerala and all-India show stable or increasing labour force participation rates, while Bihar shows a disturbing downward trend in some of the rates. Participation rates reflect, in part, the differing trends in age distribution among Bihar, Kerala, and all-India.

At the all-India level, self-employment continues to be the dominant mode of employment for employed persons, with more than 50 per cent of males and females being self-employed in rural areas and slightly less than 50 per cent

in urban areas. In rural areas, self-employment shows a significant downward trend for all-India, for both males and females, with no significant trend for either Bihar or Kerala. In urban areas, there is a significant upward trend for males and no significant trend for females. In Kerala, there is no significant trend for males or females, while in Bihar there is a significant upward trend for both.

Regular wage/salaried employment rates shows a significant downward trend for males in Bihar and all-India in rural and urban areas. For males, in Kerala, there is a significant upward trend in rural areas and no significant trend in urban areas. For females, there was a significant upward trend in both rural and urban areas in Kerala and all-India, but a downward trend in Bihar (albeit not significant for rural females). Casual labour employment rates at the all-India level show a significant upward trend for males in both rural and urban areas. Females also show a downward but insignificant trend in casual employment, in both rural and urban areas. Interestingly, both in Bihar and Kerala, there is no trend for either males or females in either rural or urban areas.

Unemployment rates in Kerala have continued their historic trend of being much higher than the all-India average. According to the study, unemployment reflects the outcomes of two distinct processes. The first is the labour supply process, that is, the *ex ante* choice by individuals whether or not to participate in the labour force. The second is the labour demand process that, conditional on the *ex ante* choice of individuals to participate in the labour force, determines whether or not they are able to find employment. Because the unemployment rate is calculated as a proportion of the labour force, it depicts the outcome of the second process.

While the proportion of the general population unemployed in Kerala is still higher than the national average, the ratio falls substantially for all demographics after accounting for the higher than average labour force participation in Kerala. Hence, part of the explanation of the distinctiveness of Kerala's unemployment problem is simply a greater proportion of the population willing to work.

The study states that unemployment has increased substantially (55 per cent for males and 115 per cent for females) in Kerala between 1998 and 2003. The increase was caused by an influx of women into the workforce, an ageing of the labour force, an increased proportion of persons with higher education, and emigration. Since these factors are all gradual demographic changes and are unlikely to show substantial jumps over short periods, the study expects that unemployment should be rising gradually over a long period.

The study also reports that not only are female unemployment rates substantially higher than those for males but the difference between the two is increasing, is indeed distressing. The employment trends are similar: while rural males show a significant increase in employment rates over time (as measured by CWS), rural females show a significant declining trend.

Kerala is commonly considered one of the superior achievers in regards to education. Partly because of this, the problem of unemployment has largely been interpreted as a problem of the educated. The study found that those with secondary and higher levels of education have higher than average unemployment rates in Kerala for all demographics, with the exception of very well educated urban males. However, there is no clear trend for higher educated females. The proportion not literate in Bihar exceeds that of Kerala and all-India. Surprisingly, the proportions with higher secondary and graduate and above levels of education of urban males in Bihar, consistently exceed those in Kerala while being roughly the same as in India as a whole.

An examination of the unemployment rates for Kerala youth (ages 15-29) confirms that their rates are substantially higher than any other age category for all demographics. In India, as a whole, young persons in the workforce also have high unemployment rates. Therefore, it is not clear that Kerala has any more of a problem with unemployed younger workers than the rest of India.

Persistence of unemployment in Kerala is substantially lower than the national average for all demographics, suggesting that movement in and out of employed status is more common in Kerala. However, the persistence of unemployment during the reference week in Kerala is slightly higher than the national average for all demographics, indicating that unemployed persons in Kerala are slightly less likely to move out of that status. It is necessary to emphasise the importance of emigration, particularly to the Gulf States, to the employment story in Kerala. Kerala has a larger proportion of migrants than either Bihar or all-India.

Turning to the states of Kerala and Bihar, the findings show that the trends in Bihar are extremely disturbing. On the other hand, the trends in Kerala are much more in line with the all-India picture. In many ways, Bihar typifies many of the disadvantages of a land-locked country in not benefiting significantly from India's globalisation.

**6.6 *The Role of Migration and Remittances in Promoting Livelihoods in Bihar*, Priya Deshingkar, Sushil Kumar, Harendra K. Chobey, and Dhananjay Kumar, Overseas Development Institute, London, 2006.**

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**Key Topics:** *Migration and Remittances, Livelihoods*

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This report provides an assessment of migration and remittance patterns in six districts of Bihar covered under the World Bank funded Bihar Rural Livelihoods Project (BRLP) and the IFAD funded Women's Empowerment and Livelihoods Project in the mid-Gangetic Plain (WELPMGP) with a view to identify practical steps that can be taken by the two projects to maximise the benefits and minimise the negative impacts of migration.

The study was conducted in six districts of Bihar through interviews and discussions with the inhabitants. In the course of the report, it highlights the positive and negative impacts of migration and its differential effects on the various strata and sections of the rural populace. The study then suggest some specific steps that projects like BRLP and WELPMGP can take to maximise the benefits and minimise the negative impacts of migration.

The discussions and interviews conducted for this study show that rural people have become even more mobile in the last five years, with deteriorating employment prospects locally and emerging opportunities elsewhere. The choice of destination is strongly determined by social networks, people from a particular caste and village tend to go to the same destination and into similar occupations. Scheduled Castes (SCs) and Extremely Backward castes are engaged in both short distance and long distance migration, but usually in the lowest paid jobs. Migrants belonging to the broad and diverse category of OBC are graduating from farm work to working in a variety of industries where earnings are higher.

The study points out that migration and remittances have improved the standard of living of thousands of families in the poorest districts of Bihar. In the case of the poorest unskilled labourers, migration helps to smooth incomes and improve food security. For the better educated and connected migrants working in industries, income from migration is an important way of financing agriculture and accumulating assets. Many migrants have brought back skills, which in some cases have helped to establish remunerative businesses. But these are limited opportunities. Most of these skills cannot be used locally due to poor infrastructure and marketing links. Accumulation of assets is also minimal and the costs in terms of children's education are high. There has also been an increase in child migration, especially from the northern districts, and this has many exploitative aspects (that are akin to trafficking). The costs of such migration may also be very high in social and health terms.

The study argues that though more employment opportunities will become available in rural Bihar as new policies like the NREGS comes into force, it is imperative that projects aimed at the improvement of rural livelihoods should recognise the importance of migration as a deliberate household strategy. Projects like BRLP and WELPMGP should consider: a) Developing a clear conceptual and operational framework for migration (a strategy and work plan); b) Developing migrant support initiatives in partnership with other World Bank funded projects and NGOs who have experience in the area; c) Improving the understanding of migration in terms of its patterns, drivers, and impacts by building up a comprehensive database on migration by caste, gender, asset holding, occupation, duration, and returns in their own project districts; d) Helping the poorest migrants to save and remit money to their families safely and efficiently; e) Helping in creating the conditions for better investment of remittance in agriculture; and f) Taking steps towards convergence with government and donor funded projects on health and education, bringing migration concerns on to their agendas.

In addition to the above, the study recommends that both projects should also address the problems faced by female migrants and women in households where the adult males have migrated. These projects can also indirectly create flexibility in pro-poor programmes, improve infrastructure, improve the implementation of labour laws, and monitor the implementation of the NREGS to improve transparency and accountability. The study, on the whole, presents a holistic understanding of the impact of migration in these districts.

**6.7 The Bhojpuri Diaspora: A Rich Field for Comparative Acculturation Research, Lotty Eldering, *Psychology and Developing Societies*, Vol. No. 17(2), pp. 237–48, 2005.**

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**Key Topics:** *Bhojpuri Diaspora, Acculturation*

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The article outlines why the Bhojpuri Diaspora provides a promising field for interdisciplinary comparative acculturation research. It begins with a few remarks on the facets and process of acculturation and the way acculturation is currently studied. Then, some facts and figures on the Indian Diaspora are given. It concludes with a few examples of comparative research that could be undertaken. Illustrations are drawn from anthropological and historical research among Indian immigrants in the West Indies, Guyana (the former British Guiana) and Surinam, of peoples with a shared past in the era of indentured labour.

It describes acculturation to be a process of cultural change that is initiated by the conjunction of two or more autonomous cultural systems. The phenomenon of acculturation has four principal facets: the characterisation of the properties of the two or more autonomous cultural systems in contact; the nature of the contact situation; the conjunctive relations; and cultural processes which flow from the conjunctions of the systems.

According to the article, three variable properties of cultural systems appear to affect acculturation. These are boundary-maintaining mechanisms, for instance the use and awareness of in-group versus out-group distinctions; the relative rigidity or flexibility of the internal structure of a cultural system, for example the predominance of 'achieved roles' or 'ascribed roles', and the nature and functioning of self-correcting mechanisms in cultural systems, that is, social control mechanisms that suppress diverging tendencies among subgroups.

The article argues that India has a more than 2,000 year long tradition of emigration and notes three kinds of migratory flows, viz., emigration of high caste members: In the first millennium CE, it was predominantly the members of high castes who emigrated, mainly for religious reasons, from India to China, Cambodia, Burma, Borneo, Java, Sumatra and Ceylon; emigration of indentured labourers: A second massive wave of emigration from India started after the abolition of slavery in the British colonies in 1834. This time, mainly people from lower castes and classes migrated from India to European colonies; and migration from former British and Dutch colonies to European countries: The third wave of emigration evolved as a consequence of the process of decolonisation after the Second World War.

This article concentrates on emigrants of the second and third waves of migration, the indentured labourers who were shipped to European colonies, in particular to Surinam. Most of the indentured labourers originated from the current states of Uttar Pradesh and Bihar. They spoke the *Avadhi* or *Bhojpuri* dialect and a majority was proficient in Hindustani too. Indians from Uttar Pradesh and West Bihar (the *Bhojpuri* region) had similar socioeconomic and cultural backgrounds.

Many East Indians in Trinidad purchased or rented small plots of land after their contracts expired and they developed their own settlements near the plantations. This gave them the opportunity to reconstruct the extended family structure with patrilocality and hierarchical work relations in the home, field, and gardens. In British Guiana, on the contrary, co-residence of parents and married sons was discouraged on the plantations. Each couple was assigned a separate house or hut and, as a consequence of this, a nuclear family structure developed and the extended family structure among the Indians in that country disappeared. A similar development occurred in Dutch Surinam.

Many East Indians arrived in the West Indies with strong notions about the caste system and caste rules (for example, notions of purity, hierarchy, and caste endogamy). The densely populated ships from India to the West Indies and ecological circumstances on the plantations, however, hampered the Indians from behaving properly according to caste rules. The Hindustanis in Surinam only partly succeeded in reconstructing the caste system. Instead of a complex system of castes and sub castes, a global *varna* system developed, distinguishing Brahmins as the highest caste and the 'depressed castes' with the lowest status.

An interesting finding of this study is that Indian immigrants do not necessarily continue to identify with their region of origin in India, but that they may broaden their identity to India, in general, or to a particular social or religious category in India.



**6.8 Seasonal Migration of Labour in Bihar: A Socio-Economic Analysis, J. N. Choudhary, Om Prakash, O.N. Jha and P. K. Jha, *Journal of Social and Economic Studies*, Vol. No. 16 (1), Jan–June 2004.**

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**Key Topics:** *Seasonal Migration, Migration and Socioeconomic Change*

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This article draws attention to the practice of migration prevalent in the agriculturally predominant state of Bihar, particularly seasonal migration from the backward areas of rural Bihar. It argues that no efforts have been made to ascertain the extent and causes of migration in different agricultural settings of Bihar as the extent of migration varies with the different levels of agricultural development. It explores four aspects of seasonal migration stream, viz., the socioeconomic characteristics of seasonal migrants, the reasons for migration, the technological changes in the origin area due to migration, and the resultant problems at the destination area.

The article explains the methodology used for the selection of study areas and households for the aforesaid purpose. The selected districts with highest, moderate and lowest level of agricultural development, on the basis of selected parameters like area under HYV seeds, irrigation, fertiliser use per hectare, and productivity of major crops, are Nalanda, East Champaran, and Madhubani, respectively. With the help of sampling and classification of households into four farm categories, namely, landless, marginal, small and large; households with seasonal migrants were sorted out (32 in Nalanda, 21 in East Champaran, and 24 in Madhubani).

Regarding the characteristics of seasonal migrants, the article points out that the literacy of seasonal migrants (62.34 per cent) is high in comparison to literacy of the non-migrants (38.14 per cent). Maximum migration reported is in age group 25-40 years, followed by age group of 15-25 years. This points to the fact that the extent of seasonal migration is pronounced in the educationally advantaged younger migrants. Whereas, higher migration is found in the intermediate castes, it is the lowest among the upper castes with the scheduled castes falling midway. For the intermediary castes, migration is a means to supplement family income while for the scheduled caste migrants it is a question of survival. Daily wage labourer migrants return home twice in a year, but those working on salary/contractual basis return home once. The destination of migrants is usually the stay place of earlier migrants. The destination is also chosen on the basis of wages and regular employment. As far as income is concerned, migrants in the non-agriculture sector remit a higher amount than those in agriculture sector.

The article details the motivating factors behind migration; the first being unemployment or underemployment followed by low wage rates. It is argued that greater agricultural development can reduce migration as it has an inverse relationship with the agricultural development of the area.

The article points out that a discernible technological change taking place in the agricultural setting as a result of migration is the use of HYV seeds as migrants are bringing such seeds to their native place, which has increased the crop production. However, due to factors such as resource inadequacy and fragmented land, other improved agricultural practices like use of fertilisers, pesticides, mechanisation is limited. The situation worsens in the flood prone areas like East Champaran and Madhubani.

Although migration is a resort for many and solves immediate problems of the migrants, it also creates certain problems for the seasonal migrants as this article explains. The major problem is in finding a job as, on an average, each migrant remains unemployed for two weeks from the time of arrival at the destination. They also report bad treatment at the hands of employers and being cheated with regard to payment and duration of working hours. Accommodation is generally not a problem and is free for agricultural labourers.

The article reiterates that the underlying cause for migration is unemployment which needs to be addressed at its earliest. If the increase in population continues, employment opportunities will decrease. To prevent this, the employment programmes of the Central and the State governments should reach the intended population. The article takes special note of SHGs, a self employment programme, in tackling the socioeconomic problem of migration afflicting Bihar.

**6.9 A Geographical Analysis of Rural Male Out-Migration – Case Study of Bhagalpur District, S. Kumar, PhD Thesis, Centre for the Study of Regional Development, Jawaharlal Nehru University, New Delhi, 2004.**

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**Key Topics:** *Male Migration, Migration and Development*

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The objective of this thesis is to analyse the process of rural male out-migration from several angles so that it may help in understanding the problems of a backward economy as in Bihar, in general, and Bhagalpur district, in particular. Moreover, the study aims at examining the quantum, demographic, socioeconomic aspects, etc., of the rural male out-migration, referring especially to the trends, patterns, and determinants of rural male out-migration and the effects of rural male out-migration on the villages of Bhagalpur district. The specific objectives of the study are to find out the spatial patterns, magnitudes, and determinants of out-migration from rural areas of the district; to study the demographic and socio-economic characteristics of rural male out-migrants; to evaluate the impact of male out-migration on rural areas of the district; and to ascertain the factors which affect the variance with the above mentioned objectives.

The data has been collected through a field survey. The information covers the number of migrants, characteristics of migrants, pattern of migration, linkages of migrants, impact of migration on the place of origin, etc. The study is mainly based on primary data collected from sample households with the help of structured interview schedules. For primary sources of data, one of the important features of the present study is that most of the analysis is presented taking into consideration the characteristics of the village households and of individuals. Two types of schedules were used to obtain the data for the present study. These are 1) the village schedule and 2) the household schedule. The village characteristics, such as facilities of education, medical services, transportation, distance from the nearest town, etc., are noted in the first schedule. The household schedule is used for collecting detailed information regarding households and persons therein. The purpose behind the selection of Bhagalpur district as an area of study is that it is one of the highest male out-migrating districts in the state of Bihar. Secondly, it includes all the three major physiographic regions of the state, the North Ganga Plain, the South Ganga Plain, and the Chotanagpur Plateau.

The analysis of patterns and magnitudes of rural male out-migration in Bihar shows that the highest level of intra district or local mobility of rural males is found in the industrial cum mining belt of the Chotanagpur Plateau, whereas, the lowest level of such mobility is observed in the North Ganga Plain. So far as the inter-district mobility is concerned, there are two attractive shelters of out-migration vis-à-vis industrial cum mining region of Chotanagpur Plateau and the Kosi region characterised by a higher size of landholding.

Rural males in Bihar generally drift from north to south and west to east. This west to east migration is clearly reflected from rural to urban out-migration. Lastly, inter-state or long distance migration clearly demonstrates that the state of Bihar loses its male population to every state of India and urban males are more migratory than rural males in this pattern of out-migration.

Extremely large level of differences exists in the basic demographic and socioeconomic characteristics of out-migrants and also among their households. It has been observed that the highest concentration of out-migrants is found in the age-group of 15–35 years, in general. So far as the size of the household is concerned, out migrants' households are relatively larger than non-migrants households and the intensity of out-migration is also directly related with the large size of households. It can safely be said about the type of the family that out-migrants come on a large scale from cohesive extended family.

Significant levels of disparities are also noticed in the pattern of employment and earning distribution among the out-migrants. In connection of the size of landholding, it is observed that around two-thirds of rural male out-migrants have either none or very small size of landholding and, thus, economic hardship pushes them out from the rural areas of Bhagalpur district.

The presence of dependent family members of the out-migrants at the native place appears to be an important factor behind maintaining links with their places of origin. It is further accentuated when the migrants are also attached to their parental house, land, and property at the native village.

Considering all the factors of economic and non-economic nature, pull factors seem to be more important than push factors in terms of sending rural male out-migrants from Bhagalpur district, whereas, push factors seem to be

more important for exclusive economic reasons of out-migration. Among demographic variables, the role of age component with relation to out-migration has been analysed and among the social variables, various parameters like the role of caste, education, type of family, and size of households have been examined. Among economic variables, the size of landholding plays a vital role in the process of rural male out-migration.

Chain migration, where friends and relatives previously migrated from the village play a very important role in deciding whether and where to migrate. This way, distance fails to act as a deterrent factor in location pattern of out-migration.

Rural male out-migration does not seem to offer a reliable strategy for rural development and it has created vicious circles of poverty and out-migration in the district. Alternative approaches aimed at retaining unskilled labourers in the rural area for its development may perhaps be preferable. The need is to develop programmes for the betterment of indigenous opportunities of employment both in agriculture and industry, and provide adequate facilities.

**6.10 Migration and Livelihoods in Historical Perspective: A Case Study of Bihar, India, Arjan de Haan, *Journal of Development Studies*, Vol. No. 38(5), pp. 115–42, 2002.**

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**Key Topics:** *Migration and Livelihoods*

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This article attempts to understand the complex relationship between migration from the western part of Bihar, in particular the district Saran (formerly Chhapra), part of the Bhojpur area, and the wider socioeconomic developments over an extended period of time. The focus is on the situation of the poorer sections of the population.

The paper is presented in seven sections. First, it looks at some theories that aim to explain the growth-migration relationship. Second, it presents some general socioeconomic data, on Saran and Bihar, in comparison to the all-India level before discussing, in section IV, data on migration from Saran and Bihar. The fifth and sixth sections look into the complex relationship between migration, on the one hand and livelihoods including poverty on the other. Migrations and livelihoods are gendered, however, and section VI tries to look inside the household, to consider different trends in male and female migration, and the changing gender relations over time. Section VIII concludes.

The study interviews migrants at both sites, or origin and destination. This study has made a start in understanding migration as a central feature of the socioeconomic structure of a particular region, the western part of Bihar, in northern India. This has been done from an historical perspective, which, by emphasising the long tradition of out-migration and stressing that migration there may be less important now than it was a hundred years ago. It indicates that migration should not be seen as a transitory phenomenon, but as a central element of this area's history.

The study tries to go beyond seeing migration only as a reaction to conditions in the area of origin and emphasises how migration affects and reinforces these conditions, including the different ways men and women are disposed.

It asserts that, in the first place, the early out-migration was not necessarily the result of underdevelopment, rather, there is historical evidence to suggest that it was its early development which contributed to out-migration. Conversely, the income that was derived from this migratory work helped to maintain a high population density. In this sense, high out-migration and population density reinforced each other.

The study questions literature which lays emphasis on the distress-nature of migration from this area. In contrast, the study suggests seeing migration as a household strategy that builds on existing migratory links and traditions. It emphasises that migration at the beginning of the last century, for example, was a strategy not only of the poorest but also of landowners whose sons looked for 'service' elsewhere.

For many of the migrants interviewed in the urban areas and those interviewed for colonial reports, migration was a way of maintaining the family back home, and a way of aiding agriculture, of keeping, in other words, a foot in the rural areas. To understand migration, therefore, one needs to see this from the perspective of the rural base, of households employing diverse strategies.

This brings us to the paradoxical situation of a society of small (and declining) landholdings of households firmly based in their rural origin, but of being simultaneously a very mobile population. The study argues that the legal changes around land ownership during this century have enhanced this. With the changes in legislation early

in the last century under colonial rule and with the *zamindari* abolition after Independence, the peasant has become more firmly rooted in the rural area. However, it is a peasant with, as it used to be in the eighteenth century, diverse livelihoods.

To understand districts such as Saran, much more attention needs to be paid to migration, not only as a consequence of poverty and high population density, but also in the way it defines these areas in economic, social, and cultural terms. More research needs to be done regarding the effects of migration on, first, development and agricultural change. Second, more knowledge is needed about the effects on poverty and inequality since the evidence, such as the diversification and non-farm employment, suggests that some forms of migration lead to rapidly rising inequality. And, finally, since migration is a strongly gendered process, research is required to learn about the implications of this pattern of migration for the women who usually stay behind. This study has made a start with this analysis emphasising the dynamic and historically changing interactions between migrations and the migrants' home society.

**6.11 A Study of Labour Utilisation and Demand Function of Family Farms in Sabour Block of Bhagalpur District (Bihar), Rakesh Kumar and Chandra Sen, *Indian Journal of Agricultural Economics*, Vol. No. 57(1), pp. 104–110, 2002.**

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**Key Topics:** *Agricultural Labour Demand*

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The article analyses the labour use pattern and demand function of various size groups of family farms in Sabour Block of Bhagalpur District in Bihar. It points out that an in depth micro level study of the pattern of labour use in agriculture is necessary as agricultural labour remains unemployed for the major part of the year and could be mobilised for development.

The study was undertaken in four villages, two from the rice-wheat cropping system areas and two from maize-wheat cropping system areas which were selected at random from Sabour block. Thirty farmers were selected from the rice-wheat cropping system areas, ten each from small, medium, and large farms. Similarly, thirty farmers were selected from maize-wheat cropping area. In all, 60 farmers were selected, comprising twenty each from small, medium, and large farms. Personal interviews were used and data was obtained both on the basis of their recall and through specially designed pre-tested schedules. Data collected was summarised and analysed first by simple tabular model. Cobb–Douglas production function was used to estimate the demand function. The function was fitted separately for each group and the entire sample.

Among the three size farms, the medium size group had the largest irrigated area. On an average, the number of people working on a farm was 5.34. This was the highest on large farms, followed by small and medium farms. According to the study in all farms, major contribution was by male members (61-69 per cent). In all size group males contributed two-third of their available man-days on the farm and females contributed half. Labour utilisation was maximum (71 per cent) on medium farms. In both seasons, modern crop cultivation utilised more man-days when compared with traditional crop cultivation. The study also presents data on the labour demand function for small, medium, and large farms in separate sections.

One of the key conclusions of the study is that the percentage of irrigated area on small farms has significant positive effect on labour demand. For medium farms, it is total cropped area and labour wage. On medium farms, for example, during *kharif* with modern crop cultivation, labour demand was negatively affected by the wage rate and positively by the number of hours of mechanical labour. None of these is seen to impact large farms to a significant extent. Finally, it is seen that wage rate affects labour demand negatively in the *kharif* season in traditional crop cultivation in all categories and medium and large farms in *kharif* modern crop cultivation.

## **6.12 Rural Labour Migration from Bihar, Institute for Human Development, New Delhi, 2001**

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### **Key Topics:** *Migration and Rural Labour*

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The objective of this study is to examine the socioeconomic factors behind labour migration from rural areas of Bihar and its impact on individual migrants, their families, as also on the village society and economy.

The study is based on the primary data collected from the 18 villages from 3 districts, Purnia, Madhubani, and Gopalganj of North Bihar. The data was collected in two rounds. In the first round, a census survey of all the households in the village was carried out. It provided information regarding the household structure, demographic features, extent, and nature of migration. Altogether, 6,433 households were covered by this census survey. In the second round, a more detailed questionnaire was canvassed in 544 households in 6 villages. It collected detailed information on various aspects of labour migration and migration. A small survey was also carried out in rural as well as urban areas in Punjab. Apart from primary data collection, the study also collected village level information from these villages.

The study notes that during the last two decades, the intensity and pattern of migration in rural Bihar have considerably changed. The proportion of migrants has approximately doubled and become widespread. Besides, the nature of migration has largely changed from short-term to long-term. The migration of workers is fairly distributed across all castes and classes, and now upper castes and Muslims report more long-term migration compared to others.

The study finds that in terms of the choice of destination, migration is now observed to be more widespread. In fact, there has been a general change in the destination of migrants from rural-rural to rural-urban. Also, the overall dependence of migrants on middlemen/agents has declined over the years and people have started migrating on their own.

The study reveals that migrant workers from lower castes and classes are largely illiterate or less educated and are absorbed in low quality occupations in the urban informal sector. Migrants account for nearly one-third of the total household's income, and the proportion is much higher among the landless and small landholders.

According to the study, the overall impact of migration on the village economy in Bihar is wide ranging and substantial. The large scale migration of rural workers from the state has resulted in a shortage of labour in the villages of Bihar, particularly during the peak agricultural season. Accordingly, there have been changes in the internal employment relations as well as real wage rates during the last two decades. Also, there is an increasing trend in non-farm activities in the villages of Bihar.

The study recommends that there is a need for ensuring the stringent implementation of Inter-State Workmen (Regulation of Employment and Conditions of Service) Act 1979 and it is imperative that all the facilities provided under the Act are guaranteed to the migrants. It urges that an institutional mechanism needs to be evolved to document the number of prospective and migrating workers at the local level and appoint authorised agencies so as to eliminate middlemen and safeguard the interests of migrating workers. The study also recommends that migrants should also be informed about the legislation and basic liberties that are meant for them, and special vocational training and other skill development centres should be started at the village level in order to increase the employability of migrant workers at the destinations; and migrants should be provided benefits of proper check up, medical facilities, and transit accommodation in the places to which they are migrating.

**6.13 *Patterns of Out-Migration from Bihar and its Socio-Economic Correlates*, J. Kumar, PhD Thesis, Centre for the Study of Regional Development, Jawaharlal Nehru University, New Delhi**

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**Key Topics:** *Socioeconomic Characteristics of Migration*

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In this thesis, an attempt has been made to analyse the patterns of out-migration from Bihar to other states. The socioeconomic and demographic characteristics of male and female out migrants from Bihar have been studied in great detail to establish a correlation between pattern of out-migration from Bihar and its socioeconomic correlates.

The pattern of out-migration to different states has been correlated with different socioeconomic variables. Several sources of data have been used in this study to back any conclusion. There are 23 variables which have been used to find correlation between pattern of out-migration from Bihar and its socioeconomic correlation. Twelve variables are related with patterns of out-migration from Bihar and 11 variables are related to socioeconomic indicators of the states.

Looking at the position both for urban and rural areas, it is seen that the main reasons for migration among males in urban areas is employment and movement of family. Among female migrants in both urban and rural areas, marriage is the main reason for migration followed by movement of family.

The migration scenario in Bihar is undergoing dramatic change due to fast changes in the socioeconomic landscape of Bihar. Based on migration by place of birth, there are 213.12 lakh migrants in Bihar comprising 23.44 lakh males and 189.68 lakh females. These migrants constitute 24.67 per cent of the state's total population. Among male migrants, the proportion is 55.18 per cent and among female migrants it is 46.09 per cent. While comparing these figures with the 1971 figures, the study observes that the proportion of intra-state migrants has slightly increased, while there has been a decline in the proportion of inter-state and international migrants.

The study points out that out-migration from Bihar is migration under distress. Bihar, although self-sufficient in land, forest, and water resources, is considered as the least developed and poorest state even after 50 years of independence and completion of 8 Five Year Plans (at the time of the study). To reduce massive migration (within and outside Bihar), the central as well as state government should revise their policies for generating overall development.

On the basis of the research findings, the study suggests some policies to alleviate regional disparities and reduce migration, such as identification of backward districts in Bihar and implementation of effective policies and programmes. Here, it argues that the basic approach should be integrated rural development to generate employment opportunities. It recommends that more bank credit should be given in rural areas to set up agro-based industries like sugar industry and the government should be strict in implementing wage rate laws as most of the migrants are landless labourers. Multiple cropping and cash cropping should be promoted to increase the income of farmers. It explains that as most of the raw materials and minerals of the state are drained out to the developed states of the country, the central government should change its policy and localise industries according to the need of the locality. As the northern region of the state is agriculturally backward due to regular floods, the study recommends that the government should take strong initiative to overcome this problem and to fully utilise the potential land productivity. It also notes that there is a great scope for the promotion of tourism industry and handicrafts in many areas like Gaya, Rajgir, Rohtas, Vaishali, Nalanda, etc. Finally, it recommends that family welfare programmes should be implemented effectively to control population growth and to reduce pressure which may help to cut down the rate of out-migration.

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SECTION 7

**Caste, Class and Conflict**

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## Overview

Caste and class are institutions which are embedded in the social fabric of Bihar. The nature of these institutions has historically been defined by a feudal society which prevailed in the state. This section contains 36 entries that deal with diverse issues related to the socioeconomic categories of caste and class. Broadly, five major themes are discussed extensively in the literature in this section – the Naxalite movement in the state, the rise of caste *senas*, the impact of affirmative action, the fluidity of caste categories and hierarchies, and the interrelationship between caste and class.

There is a considerable body of work which critically engages with the Naxalite movement in the state. Bihar, through much of the twentieth century, has been witness to large scale and widespread class conflict in the form of peasant movements in colonial Bihar and, from the 1960s onwards, the Naxalite movement, a Maoist movement led by an alliance of the radical left parties against landlordism in the rural countryside. Kunnath (2006) points out that while the form of the struggle may have changed, it has always involved the repressive forces of the state (police and judiciary) in alliance with the rural rich against poor peasant sharecroppers and agricultural labourers. Bela Bhatia (2005, 2006) examines the Naxalite movement in the state, in particular the movement's inability to realise its social vision practically. Arun Kumar (2003) points out the changes in the ultra left movement's strategies since it first started in the 1960s. Prakash Louis (2002) describes the socio-political conditions that contributed to the emergence of the Naxalite movement in the state. Similarly, Shashi Bhushan Singh (2005) takes the village as his unit of research to examine the rise of the Naxalite movement. While not addressing the Naxalite movement directly, Rakesh Chaubey (2006) examines modes of resistance used by lower castes to counter upper caste hegemony. Kazuya Nakamizo (2010) argues that, in fact, levels of religious, caste, and class conflict have abated in Bihar in the last two decades and attributes this to the relative stability of the state's democratic institutions.

The rise of caste *senas* has also been discussed in the literature and it is suggested that the *senas'* emergence should not be attributed exclusively to the agrarian struggles between the landless lower castes and the landowning upper and backward castes, as their rise has also coincided with a no holds barred political struggle between the upper castes and the backward castes for control of state power (Kumar, 2008). Singh (2005) examines the conflict between caste groups and argues that the non implementation of land reforms and failure to provide minimum wages have contributed to the spiralling violence between these groups. Barik (2007) also reaches a similar conclusion and argues that the failure to implement land reforms has led to an increase in groups and movements that do not believe in democratic politics. Bandyopadhyay (2006) finds that issues around minimum wage and non implementation of land reforms are central to the agricultural workers in the state. Ghosh (2000) points out that the rise of the private armies is interlinked with the collapse of the law and order situation in the state through the 1990s. Research in this section also looks at the role of the state as a perpetrator of violence and examines human rights violations in the state (Jha, 2005; Umakant, 2000).

Several studies examine the impact of affirmative action on caste hierarchies and ask if the slew of public policies geared towards the uplift of lower castes has had any quantifiable impact on these communities (Kalapura, 2008; Sinha, 2007; Kumar, 2006; Ramagundam, 2006, Sachchidananda, 2006, Kumar, 2005; Kumar, 2000; Umakant, 2000). Prasad (2005) cites the case of the *Musahar* community and points out that even though the politics of reservation has allowed lower castes some improvement in their social and economic standing, there has been no visible change in the *Musahar* community which remains educationally, politically, socially, and culturally backward. It is suggested that a bureaucracy steeped in the caste system is not likely to be an agent of change in Bihar. Some studies examine the impact of non state actors like Christian missionaries on the socioeconomic status of *Dalits* in the state (Kalapura, 2005; 2006). Kumar (2009) explores the development of stereotypes about migrants from Bihar to other states in the country.

Several sociological enquiries into the nature of the caste system in Bihar point out that in fact rather than a strict hierarchical ordering of castes as given in the 'hierarchy' thesis, the 'difference' thesis with its contestation of hierarchisation on a continuous vertical scale holds true (Sahay, 2001, 2004; Chakravarti, 2001). These studies also highlight the interrelationship between the categories of caste and class. Studies also examine castes and tribes of the state from an anthropological perspective (Dubey, 2009; Hasan and Kalapura, 2009; and Singh, 2008). Others examine caste from a historical perspective (Kalapura, 2001; Tewari Jassal, 2001; and Narayan, 2001).

## 7.1 *Can Democracy Overcome Violence? An Experiment of Bihar, India, Kazuya Nakamizo, INDAS, August, 2010*

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**Key Topics:** *Democracy and Violence, Naxalism, Democratisation*

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India has suffered numerous violent conflicts starting with religious riots at the time of partition in 1947 to Gujarat riots in 2002, said to be the worst on the scale of violence since independence. Moreover, caste riots with relatively less violence following the implementation of the Mandal Commission report in 1990 and class related conflicts finding manifestation in the Naxalite problem have made deep scars on the Indian face. But at the same time, rightly known as the country marked by contrasts, it also makes the world's largest democracy. It has made a success story of maintaining democratic institutions among developing countries.

But the question is how can we understand the on and off violent conflicts in Indian democracy? To understand the same, the paper makes the state of Bihar a case study. Known until recently as one of the BIMARU states, Bihar has been especially infamous for violence, both before and after independence, right since 1946 to 1989-90. It has suffered violence by way of religion, caste (one of the centres of the Mandal riots) and class (one of the very active seats of Left Extremism) related conflicts. But what the paper tries to emphasise is that the violence, of late, has come to abate. Proof being, no major massacre by private armies after 2000 and no major caste and religious riots since 1990. Though Naxal violence has continued to simmer and has kept erupting time and again, but mainly against the state and its sympathisers.

The paper painstakingly seeks to explain this change. Rightly examining the extreme case of Bihar, the paper tries to unfold the relationship between democracy and violence in India. To do this, it undertakes the analysis of the political process of three types of violent conflicts, namely religious riots, Naxal violence and massacres by landlords' private armies. The paper rightly states that these conflicts are not specific to Bihar only, but are representative of the whole of India.

The paper in its fact-based analysis of these conflicts comes up with a notable observation that democracy has some aspects of invoking violence. In other words, democratic politics does at times require playing an important role in causing such type of conflicts. To substantiate the same, it aptly cites as to how the 1989 election required the BJP (Ayodhya mobilisation) and the Congress (its appeasement policy) to engineer the infamous Bhagalpur religious riot.

Moreover, the paper with the help of focused references is successfully able to make the case as to how dysfunction of democracy has resulted in the spread of Naxalism. The paper explains that even the emergence of the phenomenon of private armies, with Ranvir Sena in particular, was the result of democratisation of Bihar. It further adds as to how this process of democratisation heralded the backward castes at the apex of the power hierarchy, pushing the dominant upper castes to the margin under the Laloo regime.

But, at the same time, the paper attempts to drive home the point that the same process of democratisation in Bihar did not allow these violent conflicts to last long; the politicians and political parties in Bihar have been prompt to recognise that the politics of riots comes with a high cost for the future. That is why the Nitish Kumar government, despite having BJP as its ally, has been extra careful not to invite religious riots and so he firmly said no to his counterpart Narendra Modi in Gujarat for offering to campaign during the elections and be party to the oath ceremony of his government.

Even the CPI (ML) is not likely to return to its strategy of armed rebellion as they have gradually shifted to the view that they can expand the support base for their movement by participating in parliamentary democracy, as is evident from their participation in 1985 Bihar Assembly Elections as independents and, subsequently, winning one seat in the 1989 Lok Sabha election and 5 seats, only 4 less than the Congress Party, in the 2005 state assembly election.

So far as the *Ranvir Sena* is concerned, the paper argues that its leaders are naturally no less ambitious to enter the corridors of the state power. Bihar, and for that matter the whole of India, has witnessed the criminalisation of politics over the decades and, hence, the leaders of private armies would not like to live as exceptions. Its commander Brahmeshwar Singh ran for the 2004 Lok Sabha election from jail and could secure third position.

Thus, what clearly emerges from the paper is that if, on the one hand, democratic politics in India is required to have spawned violence off and on, it has also shown the great potential to absorb and solve violent conflicts, even in one of the most violent states of India. Thus, the case of Bihar, as discussed in this paper, comes out with the strong contention that the Indian democracy has the desired potential to reign in violence, even in the future.

**7.2 Tharu a Unique Tribe: A Social and Cultural Study [Tharu Ek Anuthi Janjati : Samajik Avam Sanskritik Adhyayan], Prakash Chandra Dubey, Xavier Institute of Social Research, Patna, 2009.**

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**Key Topics: Tharu Tribe**

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This book is based on the social and cultural study of the Tharu Tribe, which is found in three states of India (Bihar, Uttar Pradesh, and Uttaranchal) and also in Nepal. In Bihar, the Tharu tribe is found in Champaran, and has a 3 lakh population. The book explores different dimensions such as social, cultural, and economic of this tribe using tools such as active observation, interviews, and collection of tribe related documents.

The book is divided into twelve chapters. It begins with a brief introduction of the *Tharu* tribe who basically belong to Mongol origin and different from the Hindus Aryan origin. *Tharu* tribes are one by heredity but have different sub-castes by social-cultural-geographical reasons. They also practice various social and cultural rituals mainly during birth, marriage and death, as well as other occasions.

*Tharu* society practices the tradition of joint family. The *Tharu* family is based on paternalism but there is no discrimination between a girl child and a boy child. There is a tradition of Mitakakshra rule which protect the equal rights of women in *Tharu* society. *Tharu* society is very liberal for rituals like marriage and the process of divorce is also very easy. Widow remarriage is also a well accepted tradition of this society. *Tharu* society is a very liberal society. They believe in liberty in traditions and rituals, coordination, adjustment, interaction, and transmission of tradition. This is the main reason behind the joyful life of *Tharus*.

The study reveals that *Tharus* believe in polytheism. At least two dozen gods and goddesses are worshipped by this tribe. They mainly believe in the worship of nature, like the worship of earth, trees, birds, animals, etc. They also worship the small corporal body or stone body. *Varana* is the most important and worship of Devi Durga (who they believe is the protector of their agricultural land and crops) by this community is famous. They organise this worship on a large scale in *Tharuhatt*.

The study throws light on the costumes of this tribe. The dresses for women are colourful Lahngha Chunni and jacket/phatuhi/kamij, and lungi/langot/dhoti for the males by tradition. Women also wear a lot of ornaments made of silver in their legs, hand, and neck. They also have a deep knowledge of the rich *Tharu* literature, folktales, folk-dance, and songs.

However, according to the study, the *Tharu* society is very backward, especially in their educational standards. Agriculture is the main occupation and means of their livelihood and the study finds that members of the *Tharu* tribe believe that there is no need to send their children to school because it will not help in their agriculture activity. At the same time, this does not mean that they are uncultured and uncivilised because they have a very liberal outlook towards life.

As already noted, *Tharus* are basically dependent on agriculture for their livelihood. Rice is the main crop which is cultivated. They have a unique art of rice cultivation. The quality of rice produced by *Tharuhatt* is incredible. *Tharu* use a special variety of rice only for their personal consumption which is sweet and extremely nutritious. They do not sell this in the market. In cultivation, they use only four instruments (plough-axe, pick-axe, reaping-hook and weeding instrument) for agriculture activity. Division of labour is undertaken among men and women in the family. Cultivation of land, protection of crops, and construction of house are the major works of men, whereas, cooking food, pounding of grain, and making of pots are the major works of women.

The book concludes that there are tremendous natural resources of *Tharuhatt* and the life of *Tharus* is full of joy and happiness. The *Tharuhatt* land is very productive so it produces sufficient crops. The availability of water resources is also sufficient which ensures sufficient food. However, the land of some *Tharus* was captured by the non *Tharu* by economic exploitation which makes them unhappy. But now, the *Tharu* are trying to get their land again. If non-*Tharus* sold their land again to the *Tharu*, it would fill the socioeconomic gap which has come between the

*Tharu* and non-*Tharu*. Now, the *Tharus* believe that if they were to get the reservation, under Schedule Tribe quota for government jobs, with the availability of natural resources in *Tharuhatt* and the hard working nature of *Tharu* will help to make their life prosperous and full of happiness again.

### 7.3 *Resistance in Dalit Folktale [Dalit Gathaon me Pratirodh]*, Hasan Imam and Jose, Kalapura, Daanish Books New Delhi, 2009.

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#### Key Topics: *Dalit Resistance*

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This book engages with *Dalit* folktales and has adopted a new idea of research with the study of folktale against the traditional research method to evaluate the *Dalit* resistance. Folktales are very old traditions to express desires, dreams and struggle of any community as well as *Dalits*. The book notes that various researchers have studied *Dalit* folktales with a different view and aims to cover three main time periods, namely, Colonial Age, Independence Age, and the Age of Rising of *Dalit* Consciousness (decade of 1970).

The study uses inter-disciplinary methods such as historical, sociological and anthropological methods of research. For the first, it has undertaken a deep study of historical literature regarding the broad study area. For the second, it has undertaken a survey of 10 districts of three important language areas, Maithili, Magahi, and Bhojpuri of Bihar of 284 audiences and 141 Folk artists by two types of structured questionnaire—a close-ended questionnaire with multiple choice questions and item ranking questions, and an open-ended questionnaire. For the third method, i.e., the anthropological method, in-depth interviews of audience and folk artists have been conducted to collect information. The study has also employed non-participant observation methods and has observed the presentation of many folktales such as *Reshma-chuhrmal*, *Raja Salhes*, *Sheet-Basant*, *Bahura Goadhani* among others.

The study defines *Dalits* as the lowest community of people by social, economic, and political standards of the Indian society. Folktale is defined as a part of folklore with a meaning which can learn or express. Resistance is defined as giving a challenge to traditions, policies and behaviour which has been imposed on a particular individual or community in the context of culture and consciousness.

According to the survey *Reshma-chuhrmal*, *Surma-Salhes* and *Deena-Bhadree* are the most famous folktales among the audience of all three language areas. 46.1 per cent folk artists said that they were involved in this occupation for their livelihood because of their own interest and only 2.1 per cent had adopted this occupation as a family occupation. 89.4 per cent artists agreed that they receive fame, love, and honour from the audience. 56 per cent artists agreed that the number of audience is increasing day by day. When asked about the causes of popularity of these folktales, 21.5 per cent audience agreed with the cause of entertainment, 8.5 per cent with the cause of regional language, 2.8 per cent because these are the stories of their community king/leader/*sardar* or god, 16.9 per cent for the reason that these are the stories of the struggle of the poor and common people, and the majority 50.4 per cent agreed with all causes. The data also indicates that a major portion of audience, around 83.3 per cent, were attracted to these folktales because they could relate to the story of the struggle of the poor and common people who are in the age group of 26 to 50 years, who are less educated and the direct victims of socioeconomic exploitation. On the basis of the nature of folktales, 70.1 per cent of the audience agreed that the struggle for honour is the important struggle, whereas, 8.1 per cent audience agreed with the struggle for livelihood being the important struggle, and 21.8 per cent of the audience agreed that both the struggles have the same importance.

The study reveals that resistance folktales developed with socioeconomic and political exploitation of the poor and marginalised. These folktales also addressed and articulated the phenomenon of love between the higher castes and lower castes. Some agreed and appreciated the struggle against exploitation.

The book concludes that *Dalit* labourers are still attracted by their traditional folktales compared to new ways of entertainment such as the electronic media. These folktales still touch their hearts as they portray the struggles of ordinary *dalits* against exploitation and atrocities.

**7.4 Illegitimacy of the State in Bihar, Avinash Kumar, *Economic and Political Weekly*, Vol. No. 44(44), pp. 8–10, 2009.**

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**Key Topics:** *Violence, Politics*

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The article uses the massacre on 2nd October 2009 of 16 villagers of Khagaria, in Bihar, as a background to show that the lack of commitment to land reform and towards ending caste exploitation on the part of the state is responsible for such violence, in which the Dalit landless are invariably the victims.

The study first traces the historical context of the state's response to violence and its entanglement in the politics of identity. Moving on, the article also analyses the responses to such scenarios. The study asserts that land is at the heart of all the struggles, which are sometimes incorrectly and lazily attributed to Naxalite action by the state administration. With its deep feudal character firmly 'embedded in caste', the state has largely demonstrated its inability and unwillingness to carry out land reforms, and started presenting Naxalism as the only reason for the worsening law and order situation in the state. Though it is true that Naxalites, after losing on many fronts, had vowed to conduct an open war against the landlords, in no case were they able to challenge the armed caste militias that were working in several places in connivance with the state machinery.

Thus, the real issue of land has been continually ignored. There was no notice of the situation on how the democratic institutions of the state were being undermined; how they were being used as merely the tools to maintain the status quo; how the dividing line between local government and police, on the one side, and local society of landowning families, on the other, was removed cleverly; and how the state government had been acquiescing in and supporting the local elite. The upper caste army has been harassing the lower castes in the district for decades, but in no case where the Dalits were killed was TADA invoked. The anti terror law was brought into play only when those killed were from the upper castes.

The results of the 2005 assembly elections raised some expectations of change. To consolidate the vote base among the caste groups that felt neglected during the earlier regime, the new government constituted the Mahadalit Commission to look into the status of the Scheduled Castes (SCs). However, the violence against the deprived castes has not declined in many cases.

The study argues that while no government in the state till date has been effectively able to implement land reforms, all have been more or less equally responsible in polarising society along caste lines in the past. The earlier RJD regime successfully galvanised the rural poor and the Dalits by providing them a new sense of *ijjat* (respect) sans development, and brought about a shift in the political base of all parties including his opposition. However, that regime outsourced law and order to the ganglords. The new Chief Minister, too, belongs to the same socialist school of thought and, therefore, one can hope that in search for development and growth (which the earlier government could not achieve), he would not compromise with the hard-earned *ijjat* of the marginalised and the oppressed.

**7.5 A Class Analysis of the 'Bihari Menace', Awanish Kumar, *Economic and Political Weekly*, Vol. No. 44(28), pp. 124–154, 2009.**

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**Key Topics:** *Class, Caste and Migration*

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The primary objective of this article is to de-stereotype Bihar and its society and identify significant analytical asymmetries inherent in the dominant understanding of Bihar. Migrants from Bihar were accused of taking over urban areas and jobs, most recently in Mumbai. Bihar has come to represent a cultural symbol of backwardness, 'dirtiness' and trouble, which is almost impervious to 'development'. This article attempts to understand the class and caste locations of these prejudices and analyses the reasons why Bihar and Biharis are the target of such singular chauvinism.

Taking the backlash against Biharis in Mumbai as the background, the article traces the historical reasons for migration from Bihar to other areas. The study then analyses the 'political' and 'systemic' elements, in the Bihari society, that have contributed to the present image on Bihar, and the resulting backlash against Bihari migrants.

It analyses reasons for migration from Bihar. First, Bihar has a long history of migration dating back to colonial times. The current pattern can be traced to the period of the green revolution in the 1960s and the consequent rise in the real wage differential between the green revolution regions and Bihar. It constituted a major push factor for rural-to-rural mass migration. Second, migration from Bihar forms an integral part of the uneven character of development in India and is not incidental to it. Third, the most important push factor for this kind of mass migration is an absolute decline in employment opportunities in the state in the post-reforms period. Fourth, social reasons play a significant role in inducing migration, particularly for the historically oppressed groups like the *Dalits* and *Adivasis*. And, finally, there has been a profound directional shift in the destination of Bihari migrants from rural-rural to rural-urban and from long-term to seasonal. This shift flows directly from the clear structural shift of the Indian economy in the post-liberalisation period towards the service sectors and a growing trend towards informalisation in the overall employment structure.

The article points out that the overwhelming majority of the migrant Bihari population, who are loathed outside Bihar as representative of a sordid cultural milieu, do not come from the landed and aristocratic classes. A significant proportion of the Bihari migrants belong to lower castes and Muslim communities. It appears that the assertion of cultural superiority against the Bihari migrants and the display of aversion towards them is only a particular form in which the deep caste prejudices of these urban, upper caste and middle classes are exercised against the lower castes and classes in general. Migrant Biharis, given their class and caste locations, stand in opposition to these 'better' classes, hence, the gravity of the trouble.

This article has attempted to counter the disjointed and isolated analyses of Bihar which largely mistake symptoms to be the cause. Most popular-regressive notions about Bihar are justified under the garb of the peculiar character of backwardness in Bihar. This peculiarity consists of the supposed intrinsic repulsion of the Biharis towards what is understood to be the magic wand of 'development'. It is argued that the continued existence of Bihar provides the bourgeoisie an opportunity to reassert its necessity within the class alliance it leads.

Instances of 'unruly Bihar', now and then, in media only reinforce its reactionary class foundations by giving an ethnic and cultural form to what is essentially a class and caste issue. However, none of these methods are a remedy for the state of Bihar which actually needs more politics; democratic and progressive politics. Only a political movement aimed at transcendence from the current form of social and economic organisation can save Bihar. In conclusion, the article opines that the roots of the developmental problems of Bihar lie in the inadequate politicisation of the process of development. The real imperative for progressive movements and social scientists is to save Bihar from both backward looking romantics as well as mindless market-developmentalists. It is only thus that the dilemma of Bihar would be solved in academia as well as politics.

#### **7.6 Bihar's Nishad – On the Margins [Hashiye par khade Bihar ke Nishad], Jose Kalapura, Daanish Books, New Delhi, 2008.**

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##### **Key Topics:** *Nishad and Socioeconomic Change*

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The main objective of the book is to evaluate the socioeconomic changes in the *Nishad* community of Bihar which is undergoing a process of modernisation. Random sampling has been used at three levels, the village, community and the individual. The study has been carried out in 5 villages in Patna district, namely Nakta Diyara of Digha Thana, Nishad Toli, Sabjibag, Banpat Tola, and Machua Toli with 15 families and 25 individuals being interviewed.

The book begins with the history of the *Nishad* community and reveals that the word *Nishad* was used first in the later Vedic Period. There were five castes in *Nirukt*, and *Nishad* is one of them along with *Brahamana*, *Rajayan*, *Vaishya*, and *Shudra*. *Nishad* was known as the child of a Brahman father and a *shudra* mother in the Vedic age. They had a high place in society at early time, but later they appeared as a lower class and slowly they lost their dignity. Fish beating has been mentioned the main work of *Nishad* in *Manusmriti*.

All the caste groups whose occupation were related to catching fish or depended on water for their livelihood were considered to be a part of the *Nishad* community. There were 11 such sub-castes in Bihar, viz., *Kevat*, *Surahiya*, *Mallah*, *Chayan*, *Bind*, *Muriyari*, *Banpar*, *Goanrih*, *Chabi*, *Tiyar*, and *Khulaunt* with minor differences in the social and cultural tradition.

The *Nishad* community is the second largest caste community after *Yadavas* in Bihar but the participation of *Nishad* in the state politics is negligible. The government has provided reservation to the *Nishad* community under backward castes in Bihar. After independence, the *Nishad* community has contributed actively in Bihari as well as Indian politics, but the number of *Nishad* in Bihar Vidhan Sabha and Bihar Vidhan Parishad are very few as compared to their population. Dr. Muktheshvar Sinha was the first member in Bihar Vidhan Parishad (Legislative Council) from the *Nishad* community. Only nine members were in the Bihar Vidhan Sabha (Legislative Assembly) and 3 were in Bihar Vidhan Parishad in the year 2005 from this community. This data shows that they still have not got the proper place in Bihar politics as per the ratio of their population.

The survey, which covers 15 families and 25 individuals of the *Nishad* community reveals that only two families hold land. Government has not provided land to any of these families for agriculture. Not a single family member is in a government job among these 15 families. They all believe in the Hindu religion. Among of 25 people 16 have left their traditional occupation. All of them believe that education is compulsory for their social and economic development.

The book concludes that a large group of *Nishad* are not engaged in their traditional job. Most of them are working as labour and also a large number of them are unemployed. It argues that government policies made for them have failed to protect their rights, and most of the *Nishad* believe that system is responsible for their socioeconomic problems. Thus, social discrimination needs to end and they should be able to benefit from the processes of modernisation and government policies.

### **7.7 Community Warriors – State, Peasants and Caste Armies in Bihar, Ashwani Kumar, Anthem Press India, New Delhi, 2008.**

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**Key Topics:** *Caste, Senas (armies)*

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This book reflects on some fundamental questions on ongoing violent conflicts between the dominant landed castes and the lower castes in Bihar, such as, why and how do the *senas* emerge, proliferate, and endure? Why do the *senas* project themselves as community warriors? And, finally, why do they remain sporadic and limited to one region of Bihar? The book attempts to bring forth answers to these questions through a historical and interpretative analysis of struggles for state power, Maoist uprisings of lower caste peasants and private caste armies in Bihar.

Written in an easy to read narrative format, the book relies on lived experiences, interviews, conversations, observations, hit and run field trips, historical trends, biographical stories, journalistic reports, government records, and scholarly political and cultural analyses of contemporary events in Bihar.

The book suggests that the origins and the reasons for the proliferation of private caste armies in Bihar lie not only in the subterranean structural forces, but also in the vast array of state and societal institutions that influence how political actors define their interests and structure their relations of power vis-à-vis other groups. In contrast to the Naxal inspired account of 'armed peasant revolt', it has been argued here that the *senas* emergence should not be attributed exclusively to the agrarian struggles between the landless lower castes and the landowning upper and backward castes. The evidence from Bihar suggests that the rise of the *senas* has also coincided with a no holds barred political struggle for the control of state power by pitting upper castes against the backward castes. One of the major findings of the book is that the tradition of fierce and unrestrained intra-elite struggles for state power has necessitated the forging of covert or overt relationships with private caste armies.

The recognition and acceptance of private caste armies by many politicians as surrogate arms of the state and as unavoidable and violent political entrepreneurs is motivated by purely political and populist interests. In other words, unmitigated populism and private caste *senas* coincide in Bihar.

While procuring agrarian surplus is not the key means to ensure dominance and a better livelihood, capturing state power as a movable property has been regarded as the ultimate symbol of mobility and prestige in a largely



hierarchical caste society. Under conditions of patronage, democracy, and predatory state power, *senas* are no ordinary criminal organisations challenging, territorially and politically, the state power. They have a comparative advantage in fighting a proxy war against the State's so called enemies and maintaining a semblance of legitimacy of authority.

Faced with the privatisation of state power by the politically dominant castes, the state's tolerance or even recognition of these 'community warriors' lends *senas* the aura of a 'para-state' fulfilling the obligations of the legitimate state power. This is primarily the reason why the state bans the *senas* but does not attempt to eliminate them completely.

It is worth noting that state power in Bihar is no longer monopolised by the traditionally upper or forward castes. Slowly and steadily, the lower castes, chiefly the backward castes, have captured the state power. One of the unintended consequences of this process has been the privatisation of state power resulting in the gradual decline of the state's competence to resolve brutal power struggles in the society, particularly at the grass roots level. In both its avatars as 'violent political entrepreneurs' and 'community warriors', caste *senas* have tremendous power to silence the voice of the resurgent *Dalits*.

The book concludes by arguing that Bihar's salvation lies in remembering, revealing, and resisting growing incompatibility between the exteriors of revolution and the interiors of bondage.

### 7.8 *People of India: Bihar including Jharkhand*, K. S. Singh (ed.), Seagull Books, Calcutta, 2008.

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#### **Key Topics:** *Anthropological Survey, Ethnography*

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The book is part of the Anthropological Survey of India's project on the People of India, started in 1985. The objective of the project was to create an anthropological profile of all the communities of India and to examine the impact of change and development on them. The two editors of this volume, Prof Surendra Gopal and Prof Hetukar Jha present a rich account of the ethnography of communities in Bihar and Jharkhand.

The general editor for the series, K. S. Singh, points out that in Bihar, Mithila has been one of the best researched regions. Two other regions, Angika and Magahi are rich in ethnographic material, as is evident from the People of India series, as well as in literary material. He suggests that these two regions be studied as separate ethnographic spaces.

Bihar missed out on two important developments in the medieval period, first, the Bhakti movement and, second, the rise of different vernacular languages. The editors point out that because Bihar missed out on the Bhakti movement, various castes remained fragmented and there was no space for some of them to develop on the same platform. Because of these two causes, 'the sense of one common Bihar identity at the regional level did not develop and the Biharis remain polarised to this day between the castes and the country with no intermediate identity of the region' (pp. XVI).

In Bihar, there have been phases when one caste has dominated and other main castes combined against it, till the 1970s, when the OBCs emerged as the dominant group and have remain so since, often combining with the minorities to retain their hold over political and social power. Within the OBCs, the *Kurmis* and *Yadavs* have forged ahead of the others. The *Kurmis* have the largest number of professionals and the *Yadavs*, a traditionally cattle breeding community, control land in most of Bihar as intermediate land owners and as big landowners in eastern Bihar.

Bihar is the least monolingual state of India, which explains why Bihar identity is not marked by language. Major languages and dialects in the state include Maithili, Magahi, Bhojpuri, and Angika. Hindi with its regional variants is spoken by the largest number of communities (193) followed by Urdu (35) and Bengali (29). The regional variants of Hindi include Angika, Bhojpuri, Hindustani, Khottha, Kudmali, Laria, Magali, Maithili, Marwari, Nagpuri, Panchpargania, Rajasthani, Sadri, and Surajpuri.

Various morphological types have intermingled in Bihar – the Australoid, the Mongoloid (including the East Asian Mongoloid), and the Caucasoid. The major communities in Bihar according to the 1931 census were: *Ahir*, *Yadav*, *Kochi/Koire*, *Kurmi*, *Bhumihar/Babhan*, and *Kayastha/Karan*. The editors point out that the communities in Bihar have mixed to such an extent that only a few communities today identify themselves by typical and special

community identification markers such as female tattooing (2.6 per cent as opposed to 4.6 per cent, nationally); female dress (1.9 per cent as opposed to 13.3 per cent, nationally), male tattooing (1.5 per cent as opposed to 2.3 per cent, nationally), etc. The regions of Bihar have their own cuisines. However, Bihar cuisine is identified with *sattu* and its preparation in the form of *litti*.

The consolidation of castes is an important feature of the social situation in Bihar, as in other parts of the country. One of the most important examples is of the *Yadavs*, where various sub castes are gradually disappearing. There are also many other examples of the collapsing of sub-castes or endogamous groups within a larger caste, and the emergence of the latter as a larger endogamous unit. Even so, Bihar remains one of the most socially heterogeneous states in India.

Clan/*gotra* endogamy, which is generally prohibited, is permitted in some cases. According to the editors, Bihar reports a larger incidence of clan endogamy (14.9 per cent as opposed to the national average of 4.2 per cent) citing *smritis* in favour of such marriages and by getting the girl adopted by the maternal uncle. Cross cousin marriages, FSD, MBD, uncle niece marriages are practiced on a smaller scale. Most communities are monogamous but polygamy is practiced by 55 communities (21.07 per cent as opposed to a national average of 14.7 per cent). The common symbols indicating marital status for women are vermilion, bangles, nose stud, etc. Bihar reports payment of dowry on a higher side. Payment of dowry in both cash and kind is common. Status of women is perceived as low in most communities (91.2 per cent as opposed to a national average of 72.2 per cent).

While the study looks at communities in both Bihar and Jharkhand collectively, it is a useful addition to the compendium for its rich ethnographic description of Bihar, lacking in numerous other studies.

## 7.9 *Land and Caste Politics in Bihar*, R. K. Barik, Shipra Publications, Delhi, 2007.

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### Key Topics: *Caste, Land, Politics*

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This book gives a theoretical framework binding the facts of Bihar's political economy. It is divided into seven chapters. They are Economy and Society in Bihar, Peasant Movements in Bihar, *Zamindars* in Bihar Politics 1930-1947, Tenancy Reform Act 1937-1939, Land Reform Act after 1957, Agrarian Policy of the Congress after 1957, and Caste Politics in Bihar: The Rise of *Dalits*.

Land is the basis of any agrarian society. The same is true with Bihar. The study reveals that the urban society is not expanding to the extent that it can absorb the surplus people from rural Bihar. Majority of people do not have land, but work as labour on land. These people belong to the *Dalits* and lower OBC. They struggle to work at low wages. Their political struggle centres around land, wage, and respect in society. They sometimes launch a combined struggle against the upper castes and rich peasantry. This study points out that politics is moving from caste to class. Horizontal mobilisation of social classes has created turmoil in the politics of Bihar.

The book notes that the colonial regime has created a class of *zamindars* under the Permanent Settlement Act. The laws of the state helped in creating a class of new landlords belonging upper castes such as the Bhumiards. The conflict between the old *zamindars*, belonging to Rajputs and new *zamindars* became sharp during the 19th century. Tenurial insecurity became the critical issue for the majority of peasantry in the state.

According to the book, autonomy of the state during the colonial rule grew with the national movement led by the Congress party. The peasantry worked under the leadership of the Kisan Sabha, which was a part of the Congress party. With the withdrawal of British rule, the independent state became more autonomous regarding social classes. Implementation of agrarian reforms became the basis for consolidation of the Congress party. The Congress party made a great victory in 1967 and created a power structure at provincial level without accommodating the backward classes. This led to the withdrawal of peasant castes from the party. But the Congress survived with the support of *Dalits*, Muslims and upper castes till the 1989 election.

The book argues that the social base of the political regime changed after the 1989 election. The implementation of the Mandal Commission Report consolidated the backward class in politics. Providing better education, health services and participation in a decentralised administration was the recognised process of empowerment. The book explains that without implementation of land reforms, democracy at grass root level cannot be strengthened and hunger for land remained the main reason behind the militant struggle of *Dalits*. This was tackled on a war footing and has led to large scale violence organised by left wing groups.

It appears that with the age of globalisation, the state has withdrawn from the land reforms policy and this made the issue more acute. There is no discussion of land reforms in the 9th and 10th Plan documents too. This confusion has emboldened the landed elite.

The book finds that caste as an endogamous group has started losing its importance. Various castes having similar occupations join together to form a *jati*. *Jati* politics is working as a form of social liberation. Dialectics of social liberation pushed them in big numbers at the time of election. A situation grew in Bihar where all castes stood on an equal plane without trusting each other. With the government, commitment to social justice has brought back the social trust among diverse social groups in Bihar.

The book is of the view that Bihari identity has evolved by breaking the caste barrier and language barrier. This identity has been reconstructed with the social movements of *Dalits* and backwards. Casteism, generated by a section of middle class who live in urban areas, has given rise to several problems. This is supplemented by the reporting style of the electronic and print media. This study points out that casteism is harming the cultural advancement of the state.

It is argued that land is working as a blockade to the social, economic, and political progress of Bihar. The state is experiencing high levels of violence due to peasant uprisings on the question of land and it needs to formulate a proper policy with the help of various political parties and class fronts which can help the state to formulate a clear policy on land distribution. In conclusion, the book warns that postponing the implementation of a policy of land distribution is pushing Bihar in the hands of militants who do not believe in democracy.

### **7.10 Other Half of the Society: Backward Caste and Politics of Bihar, Sushil K. Sinha, Raj Publications, New Delhi, 2007.**

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**Key Topics:** *Caste System, Backward Castes*

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The book examines the process of social transformation in the context of the backward classes of Bihar. The book is divided into five major chapters; introducing the caste system in India, the processes of mobilisation of the backward castes, the history of the Mungeri Lal Commission setup by the Bihar Government, theoretical and implementation related aspects of protective discrimination in Bihar, and, finally, welfare measures initiated by the government of Bihar.

The introductory chapter presents a broad overview of the Indian caste system including the legal and sociological understanding of backward castes, their place in the social hierarchy of Bihar, and their occupations as well as population in the state. A SWOT analysis has been done to chalk out programmes and plans for the welfare of OBCs in the state. The book also outlines two distinctive features of backwardness as it is understood in the Indian context. Firstly, it is viewed as an attribute of social groups rather than of individuals of which membership is generally acquired by birth. Secondly, membership of the backward classes entitles one to certain advantages and concessions specifically conferred by the government. The book refers to Marc Galanter who opined that a backward community is a community which is backward in the opinion of the Government, pointing out that who determines backwardness is also important.

In the second chapter, 'Mobilization of Backward Castes' the book provides an overview of the different types of backward castes in Bihar, focusing on three upper backward castes—the *Kurmis*, *Koeris* and *Yadavas*—and examines their occupation and position in the agrarian society of Bihar, and the role played by their respective caste associations in achieving higher socioeconomic, educational, and political status, both during the pre and the post independence period. In Bihar, these three castes have been categorised under 'Intermediate Castes'. The Government, however, has enacted protective discrimination legislation in their favour as well. The author writes, 'in many cases these intermediate castes did not resort to sanskritisation as a means to climb higher in the social ladder, may be in the initial stage they have resorted to but later on left it. This may be due to the liberal attitude among North as well as some East Indian societies in comparison of the South Indian society. It also provides sufficient background to think about reformulation of reservation policy. Protective discrimination has also led to polarization of society in the State leading to formation of private armies based on castes.' (pp. 8–9)

In the third chapter, 'Mungeri Lal Commission and After' the book deals with the history of the Mungeri Lal Commission set up by the government of Bihar to identify backward castes in the State and to suggest measures

for their social and educational uplift. It also contains an analysis of the reservation policy for backward castes in the state government services. At the time of the Mandal Commission report, the state government established another permanent commission for the backward castes which devised the guidelines and procedures for inclusion and exclusion (through the concept of the 'creamy layer') of backward castes in Bihar. The book also outlines the key constraints faced by the State Backward Classes Commission and the remedial measures for it. It argues that there is a need for the Commission to coordinate more fully with the National Commission to 'serve the backward communities in the best possible way' (pp. 9). For example, it shows that there is a gap between the state and central backward lists, as 16 castes/sub castes/communities are missing from the central list, which have a place in the state list.

In the fourth chapter, 'Protective Discrimination', the book outlines the theoretical and practical implementation related aspects of protective discrimination in Bihar. It notes that it has become a powerful tool in the hands of the government both to compensate for past discrimination against present day backward castes, and as a measure to improve their socioeconomic and educational status. However, the book also points out that, 'No sincere efforts have been made to use it judiciously in this era of globalization and liberalization where market economy dominates the State of Central economy and where efficiency counts.' (pp. 9) The provision of creamy layer has its own problems, as was demonstrated in the case of Ashok Kumar Thakur vs. The State of Bihar. The book points out that initially, a separate approach had been adopted by the state government on the issue of the creamy layer, which was later modified at the instance of a court order. At present, the concept of 'creamy layer' adopted by the National Commission for Backward Castes is used most widely in the state, with certain additions by the state government. The book discusses the case of Ajay Kumar vs. The State of Bihar to shed light on the issue of 'creamy layer'. In the final chapter, 'Welfare Measures for the Backward Castes', the book examines various welfare measures initiated by the State and Central Governments in their various Five Year Plans.

**7.11 A Visit to Two 'Flaming Fields' of Bihar, D. Bandyopadhyay, *Economic and Political Weekly*, Vol. No. 41 (52), pp. 5302-04, 2006.**

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**Key Topics:** *Agricultural Workers, Land Reforms*

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The article starts with a background that in 1986, a document was published by the Communist Party of India (Marxist-Leninist), CPI (ML), entitled 'Report from the Flaming Fields of Bihar'. Among the flaming fields were the districts of Gaya and Champaran. The chairman of the Bihar Land Reforms Commission had the opportunity to visit Jehanabad (part of the old Gaya district) and West Champaran and he showed that though there were no flames, embers of discontent and resentment over agrarian issues were still smouldering. The present study tries to unveil some realities faced by the agricultural workers in Bihar.

The commission first met the revenue officials of Jehanabad district on 21 September 2006. In response to a query as to how many applications/disputes regarding *bataidari* (sharecropper) under 48 E of the BT Act were pending, the commission was told that there was none. When further asked about the incidence of *bataidari* they all said that it was widespread.

It was also pointed out that the left parties, who had a dominant presence in the area, were levying a charge of 10 per cent of the produce from the landlords to ensure peaceful cultivation. The discussions on the prevailing wage rates for the agricultural workers revealed that wage rates varied between Rs 40 and Rs 50 per day for a full day's work as against the notified minimum wages of Rs 68 per day for unskilled agricultural workers. In the irrigated areas, the wages were around Rs 50 as against Rs 40 to Rs 45 in non-irrigated areas. During the sowing season when demand for labour was high, the wages could cross even the minimum rate to reach Rs 70 with a mid-day meal. The hours of work would be from 8 am to sunset around 6 to 6.30 pm. It would be a long 10-hour stint with an hour's break.

The paper finds it strange that the left parties did not take up the minimum wage issue at all. According to the revenue officers there was hardly any pending dispute regarding minimum wages with the labour department. It seems as if having secured their dominant presence in the agrarian sector and having been assured of a regular levy extraction system, the ultra-left parties were more interested in capturing state power by an occasional show of force,

like the Jehanabad, jail break rather than persistently espousing the cause of *bataidars* and agricultural workers. Having created a niche of political domination and economic extraction, they were happy maintaining the status quo in the current agrarian relations.

The paper explains of a public hearing that was organised in Masart at Jehanabad to get a feel of the actual agrarian relations. Attendance was quite large. An encouraging feature was the presence of a large number of women. This peculiarity showed that women had achieved a fair degree of autonomy as individuals. In the meeting there were no major complaints regarding *bataidari*. Anyone who spoke on the issue was asked whether he had filed any dispute with the circle officer (revenue). The reply was uniformly in the negative. On the issue of minimum wages, the women particularly mentioned that they receive one and a half kg of grain (rice) and half a kg of mixed *sattu*, Rs 15 being the price for one and a half kg of rice and Rs 20 for a kg of *sattu* the total would come to Rs 25 per day. It seemed too low as compared to the statement made by revenue officers regarding daily payment of Rs 40 to Rs 50 for an ordinary operation in an ordinary season. A little probing made them admit that it was the rate for *nikkoni* (weeding) which was half a day's work (8 am to noon). When they had to work for long hours they were given some food.

The study states that there were complaints regarding non-receipt of *parchas* for long occupation of *gair mazarua khas* land and *shikash* land. Two women in tattered *sarees* prayed for old age and widow pension. One old person complained that he suffered from hunger as he was not getting any food due to lack of employment. On enquiry it was learnt that the employment guarantee scheme had not yet been made operational in Jehanabad. It would be operational from 15 October 2006 onwards.

Destitution with all its ugliness was visible to a discerning observer. A large number of petitions were received after the meeting. Those were handed over to the senior officer present, with a request to treat them sympathetically, and a report was sent to the secretary to the commission.

The paper states that two major sets of complaints were heard at the meeting held at Dhanauti village. One set related to non-regularisation of occupation of *gair mazarua* land and *shikast* land, and variations thereof. The other set related to absence of physical possession of allotted land in spite of valid *parcha* given to them by the revenue officials. A very serious complaint related to distribution of *parchas* by ministers for the same land at different points of time. It appeared that the same land was shown as distributed by ministers in 1982, 1986-87, and sometime in the early 1990s. Fraud was perpetrated both on the ministers and the landless peasants by the revenue officials. In fact, 700-odd petitions are related only to these cases.

The study reports that altogether about 1,000 written complaints were received in two hours. All these petitions were publicly handed over to the ADM (LR), who was present, with a request to look into each case properly and to inform the complainants individually the results of the official action. The land reforms commissioner, who was also present assured that he would ensure that all the written complaints would be appropriately looked into and that all the petitioners would be given oral rulings by the officials. The collector would also inform the land reforms commission about the outcome of these enquiries. The commission was a bit surprised to note that no complaint was made about the abuses of the system.

According to the study, print media representatives found that there were three to four other influential land owning families who among themselves controlled the land resources of the district. The study found that the peasants' organisations there were too busy to respond to the acute and instant cases of repression and oppression to find time for the tedious process of gathering evidence, which might help the poor peasants in the long term.

## 7.12 On Armed Resistance, Bela Bhatia, *Economic and Political Weekly*, Vol. No. 41(29), pp. 3179-83, 2006.

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**Key Topics:** *Naxalite Movement, Armed Resistance*

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This article draws attention to some troubling aspects of revolutionary violence – practical organisational problems, serious ethical issues, a tendency to accord precedence to the interests of the party over that of the people, and the inherent failure of putting the movement's social vision into immediate practice.

The article argues that since the Naxalite movement claims to be a people's movement, it has to be accountable to the people and, thus, open to public scrutiny. With this motivation, the article presents the picture of revolutionary

violence, based on the author's experience while studying the Naxalite movement in Bihar and to a lesser extent in Andhra Pradesh. It points out that the Naxalite movement has been a significant political movement of our times. However, she signals that time has come to revive the more humane approach advocated by Bhagat Singh.

The study highlights an array of disturbing issues in the movement. The underground existence of members belonging to an organisation resorting to armed means raises a range of problems. In the face of ever present danger, they have to be on the move all the time and are often forced to lead a nocturnal existence. Squad members face the threat not only of the police and 'class enemies' but also of possible informers in their own fold. Their daily life has its share of deprivations.

According to the article, apart from practical problems, the use of violence also raises serious ethical issues. The armed struggle cannot be confined to particular 'targets', and is bound to engulf other people as well. However, to the organisation 'the end justifies the means'.

The study points out that the Naxalite movement has not always been able to ensure equality in all respects to its 'weaker' constituents: *Dalits* and women. The hard and dangerous work of handling guns is mainly done by *Dalits* or individuals from the lower castes and classes. Therefore, those who get killed are also mostly from these sections of society. Also, the *Dalits* and other disadvantaged communities, who comprise the bulk of the Naxalite support base, are not adequately represented in the upper echelons of the party leadership. Women are almost negligible in leadership positions. The Naxalite movement has also shown that armed resistance in the context of a class war does not always question violence that emanates from patriarchal norms.

The article argues that the spread of violence in Naxalite areas has also exacted a heavy price in terms of development. Naxalite groups often oppose various forms of development, such as the construction of roads, which hamper their activities. In Bihar, too, democratic space for non-violent struggle has been considerably reduced with the spread of armed conflict.

Another downside of armed power is that it has led to corruption in the ranks. There have been instances where individuals have misused such power for private gain. Also, those who implement the party line at the local level are not always 'imbibed' in the Marxist-Leninist ideology. Some of them have formed gangs after running away with party arms, and turned against the party itself (for example, Jagnandan Yadav group in Bihar). Thus, the fact that someone becomes a Naxalite is no guarantee of principled behaviour on his or her part.

According to the article, joining Naxalite politics is basically inviting danger, death, and destruction on oneself and one's family, sometimes even the community. Once one is labelled a Naxalite it is difficult to return to normal existence or even a life relatively free from suspicion, fear, and death. They are constantly harassed by the state, and made to prove their neutrality in various ways. Some of them are also harassed by the party, and this pushes them further into the clutches of the police. Finally, it is concluded that the growing displacement of open mass activity by militaristic action in recent years has been a loss for the movement.

**7.13 *Dominance and Retaliation in the Informal Structure of Authority: A Comparative Study of Madhya Pradesh and Bihar*, Rakesh Chaubey, *Crisis States Program Working Paper Series No. 1, Working Paper No. 81*, London School of Economics Development Research Centre, London, 2006.**

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**Key Topics:** *Depressed Classes, Working of Panchayats*

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The paper focuses on identifying instruments of hegemony and retaliation in the informal arena of authority in the states of Madhya Pradesh and Bihar. In particular, it examines the divergent modes of retaliation used by the depressed classes in both states to challenge upper caste dominance and hegemony, especially in the context of new forms of governance and politics created by India's experiments with the liberalisation of its economy.

Nandgaongli *panchayat* in the Joura block of District Morena in Madhya Pradesh and Chapaur *panchayat* of the Masaurhi block of Patna in Bihar were selected to examine the extent and nature of power that the head of the *panchayat* commanded in the two different settings of Madhya Pradesh and Bihar. These two *panchayats* were selected on the basis of four common factors. First, both were multi-caste *panchayats* but with a heavy concentration of SCs population. While the dominant middle caste in the case of the *panchayat* in Joura was the Kushwaha, its near

equivalent caste, the Kurmis, were the dominant middle caste in the *panchayat* in Masaurhi. The Rajputs, although very few in number, were the main upper caste of the Joura *panchayat* and, similarly, the Bhumihars constituted the tiny majority of the upper caste population in Masaurhi *panchayat*. The second factor that was common between the two *panchayats*, was that both were headed by schedule caste *mukhiyas*. The *mukhiya* in the *panchayat* near Joura was a Jatav, while the one in the *panchayat* near Masaurhi was a Dusadh. Thirdly, both *panchayats* have been witness to agrarian violence of one kind or another in the past. While the lower caste-class population of the *panchayat* in Joura was routinely attacked by bandits, who ironically spared the upper caste landlords of the area, the *panchayat* near Masaurhi underwent a series of atrocities committed by the upper-caste landlords up until the 1960s; and from the 1970s there was an unprecedented retaliation by the lower caste-classes to counter the dominance of upper caste-class hegemony under the banner of Naxalism. Fourthly, in the period since the 1970s both areas had experienced tremendous agricultural growth and prosperity.

However, the paper points out that there is a qualitative difference in the manner in which *Dalit* leadership emerged in the two *panchayats*. In Joura, as is the case with many other *panchayats* in Madhya Pradesh where the *mukhiya* belongs to the Schedule Caste, it was largely a result of the affirmative action of the state through the policy of reservation for the OBCs, SCs and STs. On the other hand, because of the inept handling of the situation by the state government in Bihar, the issue of reservation for the post of *mukhiya* became mired in controversy and ultimately the elections were conducted without the provision for reservation. Nevertheless, nearly, two per cent of the total numbers of *mukhiyas* belong to the *Dalit* castes and they have all come through direct elections.

The paper finds two contrasting situations in the *panchayat* politics in northern Madhya Pradesh and south Bihar. While in northern Madhya Pradesh the government has a history of affirmative action, subalterns in the state are simply not properly equipped to take advantage of the favourable climate for them to assume greater power. More importantly, they still look at the state and the elites as providing the panacea for all their ills. On the other hand, the *panchayat* in south Bihar posits another extreme. Here, despite a largely non-functional state and a prolonged history of atrocities against them, the lower caste-classes have succeeded in mass mobilisation to the extent of empowering themselves, at least at the local level.

Their initial assumption that the lower caste-class population in Madhya Pradesh was never subject to oppression, on the scale it had been in Bihar, was rejected on a closer examination of the tenurial patterns in Madhya Pradesh. This revealed that although *ryatwari* Settlement was operative in large parts of the state, the existence of a large number of princes all over Madhya Pradesh (more so in the Madhya Bharat region, the location of the *panchayat* studied), which created a chain of feudal retainers, the *jagirdars* and other rural notables, the former also enjoying judicial powers in his area putting him on a par with the *zamindars* of the Permanent Settlement area as it prevailed in Bihar. This enabled the class of feudal retainers to command unchallenged authority over vast tracts of agrarian land in the area.

Thus, contrary to the general impression about the condition of the lower class peasantry in Madhya Pradesh, their position remained miserable despite the non-existence of the *zamindari* settlement. The paper argues that most of the arguments encountered in Madhya Pradesh also failed to acknowledge the rather low representation of lower caste-class people in the various layers of the power structure in Madhya Pradesh until recently. Furthermore, this argument also fails to take cognizance of questions such as why, despite their complete dominance, the erstwhile *zamindars* of Bihar have become completely marginalised in the political discourse in Bihar, whereas, the *rajas* and the *maharajas* and other rural notables of the erstwhile order, mostly Thakurs and Brahmins, still manage to hold onto their previous positions of authority on the political scene of Madhya Pradesh.

The paper points out that the response or retaliation by the subaltern groups to their continued domination by the hegemonic, occurred along divergent trajectories in Bihar and Madhya Pradesh. In Bihar, the spur for organised retaliation by the subalterns came from the subalterns themselves and at a much earlier stage. A sizeable section of those now referred to as intermediate backwards had already created a tradition of challenging the authority of traditional hegemonic groups.

In Madhya Pradesh, by contrast, the nature of land holdings in the rural arena, where the tenants could not legally be evicted from their holdings, enabled a substantial number of middle castes to remain in actual possession of their land. In these circumstances, the brunt of exploitation was faced by the extremely backward and the other marginalised communities. Moreover, a perceived identification of socio-political and economic interest by the middle castes (without any actual benefit or political representation) with that of the upper castes, led to a smothering of class

contradictions along caste lines. The several measures by which the state has tried to allot land to the SCs population have further acted as a hindrance in the emergence of unity between the backward caste-classes. In most of the cases the *Dalits* are given *pattas* for land that was earlier cultivated by the middle castes. In these circumstances, the operational antagonism that prevails in the rural society of Madhya Pradesh is between the subalterns and the middle castes – who, ironically, act as the bulwark of ruling caste – classes against the lower caste-classes. In the absence of any organised yearning among the subalterns to counter the hegemony of the traditionally dominant groups, the old tradition of banditry of the Chambal ravines remains the only tool in the hands of the subalterns in the informal arena. Through this they seek to redefine the individual position of their caste in the hierarchy of dominance, not by challenging the traditionally dominant groups, but fighting it out among themselves.

The study finds that in both Bihar and Madhya Pradesh, the struggle of the depressed classes against the feudal system and the dominant and hegemonic upper castes, was often through an assertion of alternative modes of power and authority. On an examination of the phenomenon of rural banditry in northern Madhya Pradesh and the aggression of *zamindars* in south Bihar, the paper finds that in both cases, the prime targets were the depressed castes and classes, while the aggressors invariably belonged to the traditionally dominant castes. The differences in the manner of challenge arose from Bihar's longer history of extensive agrarian activities and the difference in patterns of landholdings in the two states. This also resulted in a broader cohesion among the depressed classes in Bihar as compared to Madhya Pradesh.

The study concludes that, because of this, the lower castes/classes in south Bihar were able to present effective limits to domination by the traditionally hegemonic groups. Thus, while the depressed castes/classes have been the main victim of *zamindari* violence in south Bihar, their constant struggle against the hegemonic groups was reflected in electoral politics, leading to a more democratic agrarian society in Bihar compared to the status quo type agrarian society in Madhya Pradesh. In Madhya Pradesh, on the other hand, despite the enduring system of alternative 'local governance' wherein the authority of the bandits was writ large over a substantial part of agrarian society, the transition in the social composition of bandits – from predominantly upper castes to lower castes - did not result in the formation of a counterculture, independent of the dominance of the upper castes. Banditry in the Chambal ravines of Madhya Pradesh remained, for the most part, an effective medium which was in the hands of organised groups of upper caste-classes in the first phase and which was passed on to the highly polarised backward caste-classes in the second phase.

**7.14 Cooperative and Community Development: A Study of Champaran in Bihar, Jose Kalapura, Jharkhand Journal of Development and Management Studies, Vol. No. 4(1), pp. 1805–18, 2006.**

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**Key Topics:** *Bettiah Christians, Cooperatives*

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This micro study presents an instance of how an initiative in the voluntary sector, successfully functioned and mediated much socioeconomic changes in the Bettiah Christian community in Champaran, North Bihar. The study details on the socioeconomic changes in the community due to the intervention of cooperative credit society which was managed under the Church administration. Through a time series analysis, from 1872 to 1995, divided into four phases, the paper attempts to reveal that caste based occupational structures got altered to non-traditional jobs among the Bettiah Christians in Bihar.

The study finds that in the early days, the Bettiah Christians were engaged in traditional trades, besides agriculture under the *dasbansi* agrarian system of the Mission *zamindaris*. The Christian *lohars* and *barhais* seem to have supplied 75 per cent of the cart wheels and wooden metallic spare parts, as well as maintained their repairs. They were organised under the trade guilds or cooperative societies financed by a bank under the aegis of Bettiah Parish and in which Bettiah Raj had invested. An inquiry revealed that in the 1930s, the Christian blacksmiths and carpenters were many. The income by way of these trades was relatively high in comparison with other occupations. However, the study found a sharp decline in the traditional occupations while the population is growing.

To sustain the supply of a large volume of wooden and iron implements for trade, large investments were necessary and the study details that the Mission might have come to their help. The Mission established cooperative societies for Christian artisans. The Bettiah Credit Union was a cooperative society which taught its members to be thrifty and to save money to make loans among themselves at a very low rate of interest. The credit union was



organised within a group already united by a common bond of Bettiah Catholic Parish. The Bettiah Credit Union was run for the members entirely by the members. The organisation functioned under the management of an elected committee. The committee and members were bound by the rules of the society.

The study records that when non-Christian societies were amalgamated with the Bettiah National Central Bank, the Bettiah Mission met with liabilities. In 1955, a significant financial institution which supported a large number of Christians in Bettiah, known as the Bettiah Parish Catholic Credit Cooperative Society Limited was established. The capital shares of the society were from Christians and non-Christian shareholders. However, this society went into heavy debt due to mismanagement and diversion of funds to uneconomical enterprises. This society was later liquidated in the late 1970s to give birth to Bettiah Parish Credit Union in 1983. The study found that a substantial number of members of the Cooperative Credit benefited from its credit financing.

The study explains that a historic analysis of the data shows that though carpentry, blacksmith and carting occupations among the Bettiah Christians does not show only a slight decline for the period from 1872-1900 to 1901-1924, it shows a drastic fall for the period 1930-1957 and 1960-1995. However, the non traditional jobs of clerks, teachers, and service sector jobs exhibit very high proportions for the period from 1960-1995. Thus, the change has definitely been from traditional to blue and white collar jobs.

The study states that the Bettiah Parish Cooperative Credit Society was one among the several types of material assistance rendered by the mission to the people, in general, and Christians, in particular. The Mission made the members not only financially self supporting, but also inculcated a spirit of the cooperative movement, whereby, the members of such a society learn to manage, pool together, distribute according to each one's need, save and spend their finances judiciously. Through the interventionist role of the Bettiah Parish Cooperative Credit Society, changes can be witnessed in the economic, educational, occupational and social status of the Bettiah Christian community. The study concludes that interventions of the cooperative movement were partly responsible for the construction of the social identity of the Bettiah Christian community.

### **7.15 Culture, Development and the Cultural Capital of Farce: The Musahar Community in Bihar, Arun Kumar, *Economic and Political Weekly*, Vol. No. 41(40), pp. 4281-91, 2006.**

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**Key Topics:** *Musahar, Culture, Folk Songs*

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The article outlines the complex relationship between culture and development, arguing, in particular, that the debate about culture and development, so far, has failed to read the 'denial of development' as a part of culture. It takes the example of the *Musahar* community in Bihar, a landless community often referred to as the '*Dalits* among *Dalits*' to illustrate the point that often development may be denied to some because of dominant cultural norms and values. Using popular folk songs, the paper shows the complicated reactions to development that culture plays a part in creating, both on the part of the community and the state, at the level of the local and state level bureaucracy.

Using the case of village Shri Rampur in Gaya district of Bihar, the paper gives an ethnographic account of the *Musahars*, who continue to work as bonded labourers and highlights the axiom that denial of development to certain groups has been an inexplicable part of the nation's culture of development. In explaining the dismal failure and collapse of many imaginative development schemes, the paper argues that it is the role of state-driven development paradigms led by local elites and former landlords that needs to be squarely addressed. Shri Rampur is a new village, settled exclusively by *Musahars* in the 1950s. Twenty-odd households, all *Kamiyas*, had moved from the nearby Amra, a Rajput dominated village, and settled on common lands, known as '*gair majarua*'. The Rajputs of Amra continue to have large landholdings. They have historically relied on *Musahars* for agricultural labour. Today, the number of households living in Shri Rampur has reached 80. *Musahars* running away from the village of their *maliks* and starting a new hamlet of their own appears to be quite a common phenomenon in Gaya district. In the vicinity of Shri Rampur itself, there are villages like Azad Bigha and Shanti Bigha.

The paper notes that independence and the formation of a free and democratic Indian nation state symbolised hope for change. During the freedom movement, there was a strong upsurge of the downtrodden, peasants, and lower castes, which saw not much sense in prioritising the political (freedom first, everything else later) and campaigned to club political freedom from the British to the social, economic, and cultural emancipation from

the upper castes and landed classes. The struggles of *Dalits*, led by Ambedkar, and of peasants, primarily under Kisan Sabha, symbolised defiance to the Congress hegemony and its vision of the 'nation-to-be'. The realisation of *swaraj* (self-rule) was articulated by many as a colossal opportunity to correct social ills, among others. It must have been an earth shattering realisation for the poor and *Dalits* to see the continuation of earlier evils, drudgery, and subordination even after the attainment of *swaraj*. The development discourse today, especially as regards the untouchables and landless, must engage the question and the processes of the nation formation in India.

Through legislation, *zamindari* was abolished in Bihar soon after independence, in fact, it was the first state to do so. Untouchability was declared criminal. Some steps were taken to settle *gair majarua* lands with the landless *Dalits*. A tenant working on a piece of land for 12 consecutive years was entitled to its ownership. The pace might have been slow but there were sure signs of development. Or, so the landless were told. The realm of lawmaking appears to have its own autonomous space. Unimplemented, a progressive law achieves two things at once. First, it seeks to capture, nullify, and monopolise the discourse of change, and, second, it carries on with the benefit of non-progressive or regressive previous state of affairs, that is, before passing the law. Introduction of radical changes in the realm of law, by the people in power, is recognition of the social forces pressing for those changes. Their repeated non-implementation in the actual social realm, however, is about creating a façade, a state of disillusion, in the name of change and development.

According to the paper, denial of development is also culture, indeed, an essential part of caste-ridden Hindu society. The denial is rooted in what development means to people, or, more specifically, who needs to develop and why, for development also alters power relations. When the cultural world of those put in the place of carrying out development is governed by caste ideology, which in turn rests on the premise of inequality, no genuine development is going to accrue. Those who deny the fruits of state patronage or development to *Dalits*, do not always think that they are doing anything wrong. This is how things are supposed to be, a certain sense of culture informs them. This denial of development, as a cultural attribute of the nation state, that continues to fail its lowered castes. The routine with which development schemes are run aground and the brazenness with which the concerned officials get away with it is really astounding.

In conclusion, the paper argues that there is a need to examine in greater detail the denial of development to certain communities. When the cultural world of those in charge of carrying out development is governed by caste ideology, which in turn rests on the premise of inequality, no development can take place.

### **7.16 Becoming a Naxalite in Rural Bihar: Class Struggle and its Contradictions, George Kunnath, *Journal of Peasant Studies*, Vol. No. 33(1), pp. 89–123, 2006.**

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**Key Topics:** *Naxalism, Anthropology*

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This article presents a detailed ethnographic account of the complex dynamics of the Naxal movement, and its achievements and contradictions are examined through the life story of a Naxalite from the *Dalit* community. In particular, the article examines difficulties that arise for Naxals with families, shifts in the language of the struggle (from caste to class), and the persistence of traditional beliefs and the receipt of pro-poor funding from the state. This is done through in-depth interviews with Rajubhai, a *Dalit* Naxal leader. After providing an outline of the history, politics, and ideology of the Naxalite struggle in Bihar, the author describes the individual's experience in the Naxal movement through interviews with Rajubhai. What emerges is a rich, detailed understanding of motivations, challenges, and shifts that occur within the Naxal movement for the people who form its support base, especially 'organic intellectuals,' who emerge from the movement.

Through a detailed ethnographic study of a Naxalite from a *Dalit* community, the paper presents a picture of what it means to be a rural *Dalit* Naxalite in Bihar. It begins with a detailed history of the Naxalite movement in Bihar, arguing that contrary to the expectations of many observers, the incidence of bondage, workforce exploitation and rural poverty simply intensified in the years following Independence. Long after the abolition of the *zamindari* system of landlordism in 1953, in Magadh and other parts of Bihar, the majority of *Dalits* continued to work in harsh conditions, for low pay as attached labour and subordinated by debt bondage relations. Such oppression did not go unchallenged, however, and from the 1970s the rising incidence of discontent among poor peasants and landless

agricultural labourers found its expression in different Naxalite organisations. To counter this grass roots challenge, the landowning classes in Bihar created their own caste *senas* (militias). Rajubhai's story, which unfolds in this paper, is a product of this struggle, and embodies all its contradictions.

The paper concludes that the story of Rajubhai, underlines both the strengths and the weaknesses of Naxalite struggle in rural Bihar. As a landless 'untouchable' agricultural labourer, he embodied and, thus, represented the collective identity and aspirations of poor peasants and landless labourers in the area. Like them, he sought to transcend the oppressive structure and relations of exploitation (caste, bonded labour, tenancy, low wages, abuse of women, landowner violence against workers, murder/beatings at the hands of police) that were common to the experience of 'being a *Dalit*' in Dumari village. To this end, Rajubhai conducted a protracted war on two fronts. On the one hand, he waged an external conflict against the landowning upper castes, their militias, and the state. He was also critical of official Naxalite policy to accept erstwhile opponents, landowning peasants, as party members, thereby, diluting its programme. On the other hand, Rajubhai conducted a simultaneous internal struggle to challenge and then to recast existing hegemony operating within the *Dalit* ranks. Accordingly, he fought to shift the language (and, thus, the meaning) of agrarian conflict from caste to class, and distributed any land acquired in the course of battle to workers. He also strongly opposed many aspects of *Dalit* community (alcohol production/consumption, wife beating) that were incompatible with a politically progressive outlook. Rajubhai was, in short, a classic example of an 'organic intellectual' as envisaged by Gramsci.

About the contradictions in forming the ideology, practice, and political consciousness of Naxalism, however, the paper finds that the theory of Gramsci was also right. In class terms, there are real problems in categorising Rajubhai's views and actions as radical, in the sense of challenging – let alone seeking to overturn – existing systemic forms. Not only does he wish to purchase a plot of land instead of expropriating the landlord class, therefore, but his desire for private property plus his adherence to religious beliefs/practices, all suggest accommodation rather than revolutionary agency. In many respects, his Naxalite ideology and practice are no different from that of non-Naxalite petty commodity producers throughout Indian history. In subaltern terms, he can indeed be said to be engaged in a defensive action ('resistance') against local landowners. But this is not radical, in the sense that such grassroots agency has always occurred, and – more to the point – when it has, it has usually been unconnected with any Marxist/socialist theory/practice and consciousness of class. Much the same kind of difficulty arises with regard to production relations and, in particular, the continuing prevalence in Dumari of unfree labour. Having outlined, succinctly, the oppressive and unfree nature of debt bondage, Rajubhai claimed that as a Naxalite activist he could not conceive of ever again being bonded to a Kurmi landowner. Although he still worked for the latter, it was now as a sharecropper; despite the fact that Rajubhai was proud of what he regarded as a transition to freedom, this characterisation is nevertheless problematic. In many parts of Bihar (and elsewhere in India), a sharecropping relation such as the *manki* contract is not an exit from but rather the first step into a bonded labour relation. It is perhaps, therefore, significant that in order to perform funeral rites for his father, Rajubhai had to borrow money from the Kurmi landowner with whom he had an annual sharecropping arrangement. Although seemingly respected by the latter, Rajubhai was under constant pressure from this proprietor to enter a more permanent employment relationship. More generally, some 80 per cent of *Dalit* agricultural workers in Dumari remained in attached labour arrangements with particular landlords, as a result of which wage levels have stayed at the same level for two decades.

This element of contradiction extends to Naxalite power itself. On the one hand, there are undeniable achievements and successes, not least in the fact that Naxalites can strike at will anywhere in Bihar. This they have demonstrated in the recent Maoist jailbreak in Jehanabad. Not only does their war against oppressive landowners and the state (especially the police) continue, but Naxalites have managed to roll back powerful upper caste militias. Moreover, they have in the main succeeded in organising grassroots resistance by poor peasants and landless labourers. It is important, however, not to over-estimate both the extent and the durability of these achievements. Rajubhai invoked *janadalats* and village committees as effective programmes of local empowerment and he himself conducted many such meetings where erring landowners were punished. Yet the element of contradiction still surfaces. Although a powerful process of village justice, therefore, the actual punishment (slapping with a sandal), meted out in the case of a lower caste woman who had been sexually assaulted by an upper caste male aggressor, suggests that the punitive role of *janadalats* is symbolic only. As such, it is an insufficient deterrent to prevent this kind of incident from recurring. The paper concludes that the reason for this is not difficult to discern: as long as those who exercise political and economic power in rural Bihar remain unexpropriated, they will continue to be able to do so, the local

existence of parallel *Dalit* institutions notwithstanding. Rajubhai's story simply highlights the contradictions in the ideology and practice of Naxalism, within just such a context, where the class power of upper caste landowners – although challenged – is still largely intact.

**7.17 Is Culture the Culprit?, Rahul Ramagundam, *Economic and Political Weekly*, Vol. No. 41 (47), pp. 4857–59, 2006.**

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**Key Topics:** *Culture and Poverty*

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The study attempts to examine the reasons for the extreme poverty prevailing in a settlement, some hundred metres from Bodh Gaya called Premdasa Nagar, in the village of Mastipur in Bihar. Though, Premdasa Nagar got exceptional support from the local administration in starting many an income generation enterprise; had no dearth of lifestyle motivation; surrounded by monasteries frequented by foreign visitors, the residents failed in converting these advantages into a sustainable prosperity. The paper is based on a field study conducted during a 6 month stay in Gaya district in July-December 2005.

The study unveils that all the residents of Premdasa Nagar were once *kamiyas* or the bonded labourers of the Bodh Gaya *math* and the *math* was an exacting work master. The feudal exploitation of the peasantry was very intense in the administrative blocs of Bodh Gaya, Mohanpur, Barachatti, and Dobhi regions, all under the complete control of the Bodh Gaya *math*. This concentration of the land in the hands of the *math* made it very repressive.

By 5 a.m., people had to be in the fields. By forenoon, they would be given *sattu*, a flour-mix of maize and *khesari*, a coarse crop that is not even grown at present. The *sattu* was mixed with water not in a pot but in a *gamchha*, a multi-purpose piece of cloth that rural folks always keep on their person. In the evening, every labourer was paid the daily wage in grain, which was two kilograms of paddy rice. This was just enough to sustain their bodies, which were barely clothed. Most homes had only the bare necessities.

The study finds that it was against this exploitative life that the people rebelled openly on a number of occasions, but it was only in 1978-79 that a group of youths, fired by idealism and enthusiasm, organised them to fight and win. The struggle, run by the *Chatra Yuva Sangarh Vahini*, was led by youths influenced by Jaiprakash Narayan's inspiring call of a 'Total Revolution' in 1974. The youth camped in villages and ate and lived with them. It fostered solidarity between the activists and the oppressed. By the early 1980s, the movement had succeeded in dismantling the *math's* power.

The paper points out that the residents of Premdasa Nagar witnessed two waves that substantially changed their lives. The first was the struggle against the *math* to get the land distributed among the tillers. The second was to get concrete houses. The *vahini* activists who organised them and led them into a struggle against their former estate-managers supported the first wave of change. The Sri Lankan government that gave them clean concrete houses at the very site where their thatched huts had existed sowed the second wave of change. Both waves brought substantive differences in the lives of the people.

With the dismantling of the *math's* sovereignty and structure that battle was won but the real war began soon after. In the very success of the movement lay the seeds of failure. In the very cause that brought their unity lay the symptoms of fragmentation. The study found that the battle against the *math* was just a prelude to the actual war. After the struggle, land distribution became the first source of conflict. At stake were some 10,000 acres of agricultural land to be distributed among the former tillers and tenants of the *math*. In Premdasa Nagar, new players emerged to stake their claim. And the real players who had led the struggle and borne the brunt receded into the background. The *Vahini* got enveloped with internal contradictions and organisational crises that led to its rapid and eventual disintegration. The bureaucracy as usual colluded with anyone who could influence them or buy them off.

The paper reveals that local the political-bureaucratic nexus took upon itself to distribute the land among the beneficiaries. In the list of favourites were also those who had sided with the *math* during the course of the struggle and who used to subvert and malign the movement. Those who had fought and struggled received lands that were unviable holdings, relatively unproductive, well removed from their settlement and source of irrigation. These upset people's faith in their capacity to struggle and get what they had set out to achieve. The paper also indicates that the way the political-bureaucratic authority decided to promote individual landed proprietorship and agricultural

entrepreneurship upset the people. The land distributed lacked viability, as each unit was an acre or even less. Most of the land today, belonging to the residents of Premdasa Nagar, is under lease or mortgaged.

Further, the study points out that the revenue officials, despite repeated pleas, did not make revenue assessments and that made holdings legally untenable. The lack of revenue assessment and a seal of authority over the land under possession became a constant source of problems. The small sizes of the land units were not the only disgraceful element in this saga. The authorities, in their enthusiasm to donate a limited amount of land to maximum beneficiaries, distributed even village *ahar*, irrigation tank land that suffocated the traditional irrigation system forever. The distribution of such *ahar* land to the poor and the landless gave the politicians votes in the elections but it erased the natural and traditional irrigation system in the region.

According to the study, two problems cropped up with the use of pump sets. First, maintenance became a problem as no specific guidelines were formulated for the water users. Second, these pump sets were run on electricity. The officials had promised free electricity for irrigation, but some years later bills began to pour into the poor households. The people got terrified and they preferred to leave the fields fallow rather than to till and sow crops. Most cultivation, therefore, depends solely on the monsoons, and its failure or its erratic behaviour causes all-round hardship, starvation, forced migration, and has a spiralling affect on all aspects of living, including wage work.

Effectively, therefore, the struggle against the math and its landed empire that culminated in the redistribution of land did not materially bring any substantive change in their living. Every house now brews mahuwa drink, an occupation of distress. Women generally take to brewing as it provides an opportunity to earn while being at home. Although brewing creates its own problems, it is the only certain source of income. And drinking is rampant. It has its own vicious cycle. The cash flow in the villages has certainly increased due to the footloose status of the labourers in which there is both uncertainty and mobility. People's assets however have declined. While almost all have leased land to others, some have also sold or rented a part of their concrete houses.

The study finds that 30 per cent of Gaya's population comprises of *Dalits*, of which bhuiyans, 'the lowliest and last' are at the bottom of the hierarchy. Most of these *Dalits* were bonded to Gaya's agricultural economy in a system called kamauti under which the kamiyas were tied to the landowners and worked in their fields. The kamauti in Gaya was a uniquely oppressive institution that perpetuated a system worse than slavery. In slavery, the slaves were fed irrespective of the availability or assignment of work. Here, they were not given food if they did not work due to personal or natural hindrances. A kamiya often fell into the web of deceit when he took a small loan from the landlord.

Thus, the paper concludes that all over Gaya, there are scattered *Dalit* hamlets bearing the name Azad Bigha, located in no-man's land. They either occupy commons or settle on river banks or embankments. But this liberty does not mean much. The labour that was exploited remorselessly with wages just high enough to keep the heart beating is without any resources to begin reconstruction. This is a trap the poor and the rural economy find themselves in. The poor do not own the land on which they have built their thatched mud houses. They do not own the land on which they work on wages or as sharecroppers. The case of Premdasa Nagar now needs an investigation at deeper levels, at the level of the intricate process of policy intervention and implementation. One needs to unravel the complex realm of the 'system' rather than dwell on the 'culture' to find answers.

### **7.18 Empowerment of Elected SC Members through PRIs in Bihar, Sachchidananda, Sulabh Institute of Development Studies, Patna, 2006.**

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**Key Topics:** *Dalits, Panchayati Raj Institutions, Empowerment of SCs*

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This study is an attempt to probe the process of empowerment of the elected SCs PRI members and their efforts for the advancement of their own community in Bihar. The major objectives of the study are to examine the role of elected PRI scheduled caste members in prioritising their demands and guiding them for implementation of their own and the wider community; to inquire into the efforts made by them for the upliftment of their fellow caste men and women; to identify the constraints in the empowerment of the elected PRI members at different levels; to examine specifically the role of elected women members in putting forward the agenda of development and empowerment through PRIs; to identify the reason for poor participation of some SCs leading to unequal empowerment and

attainment of better quality of life; to assess the reduction in exploitation, gains in self confidence/self esteem, and social participation through their efforts; and, to suggest measures to accelerate the process of empowerment and effectiveness of elected PRI Scheduled Caste members in Bihar.

The study is based upon primary as well as secondary data. Secondary data has been collected from both published and unpublished literature, Census reports, government records, and other secondary sources. Primary data have been collected on the basis of interviews from the selected respondents comprising of elected Scheduled Caste PRI members, officials, and opinion leaders in the society. The study focuses on the Scheduled Castes. Hence, the concentration of their population in the districts of Bihar has been the main consideration for the purpose of selecting the sample districts and the respondents. The districts with larger percentage of the SCs population have greater number of elected PRI members. Based on these considerations 6 districts, namely, Gaya, Purnia, Rohtas, Samastipur, West Champaran and Gopalganj have been selected for the study.

The study finds that *Dalits* have been trapped in poverty and deprivation for a long time. They are victims of destitutions, deprivation, and debt bondage. An economically backward society such as Bihar lacks all those dynamic qualities that support, sustain, and speed up socioeconomic growth. Removal of all the road blocks is a prerequisite for empowerment. The study argues that *Dalits* must get their due share in and access to societal resources. The development process has made only a slight dent in the dense structure of inequality, exploitation, and oppression. This process has to be speeded up.

The study asserts that empowerment has to be cultivated to transform the state of helplessness and passivity into a state of hope and action. This can only be achieved through psychological mobilisation necessary for demolishing the edifice of inequality, injustice, and exploitation. It induces radical change in one's personality, resulting in a new approach to the prevailing situation. However, the state in its democratic set up cannot do this. It has to be left to civil society organisations. Their conscientisation is necessary.

According to the study, Panchayati Raj possesses all potentials for the creation of new social order. It provides a platform for grass roots action. In many places, it has been an instrument of liberation, education and collective intervention, and critical thinking of marginalised groups to shape their own future.

The study also notes that interface with the bureaucracy, particularly at the grass roots level, has to be improved. Efforts should be made to arrange for their training in dealing with Panchayati Raj functionaries. Most political leaders lack faith in Panchayati Raj and view it as a rival axis of power. Its success might make a dent in their own influence and power. Their attitude will change if the political will of the state government is made explicit, both through spirit and action. The bulk of the elected representatives of panchayats need fuller awareness of their functions. This can be imparted through an effective training programme. There should be a programme for literacy for non-literate men and women elected representatives. Once they are educated and aware, then they can assert their rights in the Gram Sabha meetings. The Gram Sabhas which are virtually non-existent should be activated, as it is there that ward members can be extremely useful.

The study notes that since the bulk of the *Dalit* elected representatives are poor and depend upon daily wage income, they are not regular in attending meeting. It is, therefore, necessary to compensate them for their loss. Social and political development action at the *Gram Panchayat* level cannot be done by sacrificing their hard earned income. There have been many cases in which ward members have taken employment outside their own areas and even outside the state by giving up their membership. It also suggests that there should be focus on new areas of work for the *Dalits* and for women representatives such as land rights, atrocities, child labour, payment of minimum wages and child centred issues.

The study gives the following suggestions for empowerment of elected women representatives, such as introduction of regular sensitive orientation programme for members of the parliament and legislative assembly, and bureaucrats about funds, functions, and functionaries of the panchayat; ensuring that preference is given by *Gram Panchayat* to women self help groups in awarding contracts for village level construction work; ensuring that due consideration is given by authorities at all levels to the proposals of the Gram Sabha relating to issues of women and children; ensuring adequate number of women Panchayat Secretaries/Sevaks; provision of a sub-quorum for women in the Gram Sabha; provision of strong punishment for committing violence against women candidates during and after elections; property rights to land and housing being in the joint name of spouses; and, awards for outstanding performance by women representatives at all levels of the panchayat in the state.

**7.19 The Naxalite Movement in Central Bihar, Bela Bhatia, *Economic and Political Weekly*, Vol. No. 40(15), pp. 1536–49, 2005.**

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**Key Topics:** *Naxalite Movement, Central Bihar*

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This article seeks to shed light on the Naxalite movement in central Bihar. The paper tries to bring out that Naxalite movement will thrive only if it lets people's concerns guide the vision of the parties.

The study relies mainly on two years of fieldwork in more than 50 villages of central Bihar, in 1995 and 1996, which are under Naxalite influence. Information was collected through interactions with the participants of the movement, their opponents, and the representatives of the state. More recent developments are briefly discussed in a postscript to the article.

The paper presents that at the time of the fieldwork, in 1995-96, approximately 17 Naxalite groups functioned in different parts of Bihar. The study found that the social base of the movement in central Bihar consists of the landless, small peasants with marginal landholdings, and to a lesser extent, middle peasants. In caste terms, the base of the movement consists of lower and intermediate castes.

According to the paper, the main achievement of the Naxalite movement in central Bihar is that it has empowered the labouring and oppressed classes. The equations of power have changed drastically. Yet, the quality of material life in the villages has not improved because the Naxalite leaders are not interested in 'development'.

The paper contends that underground and armed action has been an important part of the Naxalite movement from its inception. The practice of revolutionary violence has created a tension between *safaya* (annihilation) and *sangathan* (organisation), or between armed power and people's power. Another problem is the danger that violence breeds violence. While the need for *suraksha* (protection) is invoked to justify violence, it is not clear whether people are safer today than they used to be. Many parts of central Bihar have reached a war-like situation, where people live in constant terror and suspicion, and are exposed to the worst forms of violence on a daily basis.

The paper argues that the declared goal of the Naxalite movement, revolution, remains unaccomplished. Revolution is not a widely shared goal in the movement, but rather a dream of the leadership. It points out that the people who support the Naxalite movement do so mainly because they feel that the Naxalites share their sense of injustice on concerns like land distribution, implementation of minimum wages, etc. Sometimes, joining the Naxalite movement is a matter of survival.

The paper opines that factionalism is a major problem of the Naxalite parties. Various Naxalite factions end up working against the interests of the very people they claim to defend. The quarrels between party leaders inevitably lead to divisions among the people themselves. Naxalite leaders have taken little interest in enhancing the quality of life in the villages, arguing that all reform would have to follow revolution. Some even consider that the more underdeveloped the region, the better are the prospects of revolution.

The paper concludes that the Naxalite movement has not lost its relevance, and may have considerable potential. However, the Naxalite movement will thrive only to the extent that its vision resonates with the people. The wider the gap between the two, higher the chances that the movement would fizzle out. If the Naxalite movement unites and focuses on people's concerns, it could make a real difference in central Bihar and beyond.

**7.20 *Human Rights Violations in Bihar: A Study of Jehanabad District*, M. K. Jha, PhD Thesis, Department of Social Work, University of Delhi, New Delhi, 2005.**

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**Key Topics:** *Jehanabad Violence, Human Rights Violation*

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This PhD thesis describes the phenomenon of human rights violations in Jehanabad district. The specific objectives of the study are to study the origin, nature, and growth of human rights concerns, with particular reference to the extremist movements in Bihar; to understand the socioeconomic and political milieu which is considered to be responsible for violation of human rights; to study the nature and pattern of human rights violations by the state agencies as also by the extremist outfits; to know the socioeconomic background of the victims of human rights

violation and explore the consequences of human rights violations upon them; to explore people's response towards human rights violations and examine the role of social work in propagation and protection of human rights.

Geographically, the study covers 6 selected villages where massacres took place, in the time frame of 1991-2001. Population-wise, the study's scope includes 70 households among the victims' family and 20 individuals from amongst the organisations held responsible for violent incidents. For the households of the victims of human rights violation, sampling was done to collect data through interview schedules and focus group discussions. To ascertain data from human rights violation perpetrators, interview guide was used after drawing samples. Besides, 16 people from human rights organisations, lawyers, political leaders and journalists, etc., were contacted for a better insight into the issue under study.

The study of episodes of human rights violation in Jehanabad between the years 1991-2001 demonstrates that frequent and, at times, normative recourse to violence has become inseparable from the socio-political life of people in Jehanabad. More often than not, the victims of such violence are landless labourers belonging to lower socioeconomic strata of society, both in terms of caste and class. An overwhelming majority of the victims of massacres and other episodes of violence are the people with least or no resistance at all.

However, the study also shows that there were victims from the land owning upper caste families and their location of victimhood was on account of the policies and strategies of the ultra-left organisation leading the struggle on behalf of the landless lower caste.

Numerous instances were shared to show that those who dared to resist the rural oligarchy were dealt with severely. A common method of harassment was getting them implicated in false arson or theft cases, or with extortion cases. One feature which was shared by the respondents was the forceful ejection of sub-tenants and settling the land with others. In quite a few cases, the landowners attempted to reduce the area of land which was a customary lease to the agricultural labourers for their services. The clash of economic interest mixed with feudal caste ethos, sometimes took the character of class conflict and struggle, but it was essentially related to the question of intensification of exploitation and the solidifying resistance to the same.

The data also highlights that social oppression has been reducing over the past few years because the peasant labour organisations have generated adequate pressure from below. However, there has not been a significant dent in the mindsets of the feudal lords, who invariably find and locate new sites and situation of violation.

The constant and continuous dip in the inter-community relations in Jehanabad, which has reached depths of despair, has its roots in the complicity and partisan role played by the state machinery in collaboration with the landed gentry of the area. Poor policing in rural areas and high levels of corruption have demonstrated that violence and crime pays. Misbehaviour with women, especially, when the police force entry into houses of the poor, in the name of raids, or custodial rapes are rampant. Detention without trial or false encounters is not uncommon.

The study highlights that there is little effort on the part of the state to bridge the class gap between the landowners and the landless agricultural labourers. It was a general observation that the change of governments in Bihar has never meant alteration in governance.

The presentation and analysis of data in the previous chapters of the dissertation indicate that despite the existence of a strong social and economic justification, it is not clear that there is a causal relationship between poverty, lack of economic development, and persistence of violence. An analysis of Naxalite groups, their mobilisation strategy, widening gap between stated objective and activities on the ground, and growing criminalisation indicate a complex pattern of violence which is gradually becoming self sustaining. The data indicates that once conflict matures and sets itself up, it acquires animation of its own, and looks for and finds reason to sustain itself.

The study suggests that the human rights of people can be protected by stopping violence, and the administrative machinery needs to be revamped and toned up. Police must be geared to work at a very high level of efficiency without taking law into their own hands. The entire body of the criminal justice system needs to have an unwavering pro-poor bias, and any vacillation or tampering should be seriously dealt with. Any genuine intent of violence prevention/mitigation on the part of the government must take into account the combustible materials lying at the root. At a pragmatic level, human rights education and mobilisation of public opinion should be aggressively pursued which is likely to put pressure on the state to respond in affirmation. The state must have a collaborative network with the civil society, which bridges the huge gap between equality before law and commitment to justice.



**7.21 Change of Socio Economic Structures of Dalits in Bihar: A Study of Purposive Action for Community Development, Jose Kalapura, in Beni A Ekka and Anirudh Prasad (eds) *Social Empowerment through Development Interventions*, pp 107–132, 2005.**

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**Key Topics:** *Society, Ravidasis*

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This interdisciplinary study explores the change in socioeconomic structures of the SCs community, i.e., the Ravidasis or Chamars in a village named Ganj in Bihar, under the influence of a Christian mission organisation.

The study has applied historical, sociological, and anthropological techniques in the methodology. Apart from archival sources, both from the government and mission, other original sources, as well as the method of observation and participant observation have been used in the study. Both structured and unstructured interviews enabled to reconstruct the story of Ravidasis of the village. A field study conducted in 1994 and later in 1998 and which was updated in 2004.

The study finds that the Ravidasi community belonged to the general category of leather workers. Ravidasis of Ganj belonged to the Jhusia/Dhusiya sub-caste and did not marry outside their sub-caste. Among the 178 *Dalit* households, the majority were Ravidasi Christians. A survey on Christian Ravidasis in Central Bihar puts the literacy rate at 60 per cent. The study also states that nearly 20 per cent of them are in blue or white collar jobs.

Examining the situation in earlier years, the study found that Ravidasis were a very large proportion of landless agricultural labourers in the district. Oppressed by upper caste landlords and threatened by the intermediary castes, on the one hand, and largely neglected by the government, on the other, the *Dalits* had only two alternatives, the Naxalite movement and conversion to Christianity.

According to the study, one of the social structures in the village, namely mahajani, compelled the Ravidasis to borrow from the mahajans either to meet expenses of daily life or of marriages. Several Ravidasis has been bonded as mahajan beggars in the early 1930s and 1940s and had been entangled in court cases and litigations by their creditor mahajans. Another common agrarian relationship between the landed and landless, namely, bataidari was a way to oppress the Ravidasis. Other oppressive systems were janouri and jajmani.

The study reveals that the Ravidasis as a service caste had four specialised services to offer to the village community. They included removing dead animals, work on hide and leather which are used for various implements and furniture, play dhogar, i.e., a special drum played at child birth, marriages, etc., and the job in which chamayin women are specialised, i.e., midwifery.

However, Ganj came under the influence of Christian missionaries in the late 1940s. A substantial number of programmes were undertaken by the Mission. They empowered the adult convert groups to fight the apparent oppressive socioeconomic systems such as *mahajani*, *bataidari*, *janouri*, and *grihasthi-pauni*. Mission schools also seem to have provided an impetus to female education.

The immediate goal of education was some gainful and useful employment. Among those who were employed in blue and white collar jobs, in government and private firms, a high majority had the education from Mission schools. The study found that nearly 200 *Dalit* converts in Shahpur territory were job holders in 1997. The Mission functionaries also introduced a strategic and systematic means to solve the debts of the Christian debtors by establishing a Cooperative Credit Union. The Credit society liberated the debtor Ravidasi Christians of Ganj.

The study concludes that the impetus for occupational mobility was given by the Mission first by creating necessary infrastructure for both academic and vocational education of the Ravidasis and, secondly, by discouraging them to disengage themselves from polluting occupations and encouraging them to engage in alternative higher status occupations. According to the study, the strategic and goal oriented force of Shahpur Catholic Mission with its patrons, benefactors, spiritual gurus seems to have had an immensely transformative influences upon Ravidasis of Ganj.

**7.22 *Dalit Discourse in the Universities of Bihar*, Arun Kumar, in Arun Kumar and S. Kumar (eds) *Dalit Studies in Higher Education*, Deshkal Publications, New Delhi, 2005.**

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**Key Topics:** *Higher Education, Dalit Studies*

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This chapter in an edited book attempts to formulate some prevalent discourses regarding *Dalits*, in general, and *Dalit* studies, in particular, within the academia in Bihar. It emerged from deliberations between scholars from four universities of Bihar, including Vice Chancellors, researchers, students, activists, and journalists. Inputs were also received from professors at Jawaharlal Nehru University, Delhi University, Jamia Millia Islamia, and Central University, Hyderabad.

Some major themes emerged from the discussions mentioned above. First, *Dalits* have long been neglected as a subject of study; both their life experiences and their contributions to society should be acknowledged in the syllabi for higher education. Second, *Dalit* thinkers, ideologues, and political figures have not received their due in social sciences, in general, and in history, in particular. Third, there is a need to develop a *Dalit* vision and perspective which may inform history, literature, sociology, and other disciplines within the social sciences. Fourth, a question regarding what qualifies as *Dalit* literature was frequently raised. Last, *Dalit* Studies must be development oriented with a genuine and special concern for women and other marginalised groups such as the Muslims.

The study points out that even though all scholars expressed concern and solidarity with *Dalits'* cause in general, it was not very difficult to discern a rather condescending and patronising approach in some. Most scholars argued passionately for the need to induct *Dalit* Studies in higher education. The need, however, appears to be more political than academically arrived. It was not so much the demand of the development of a social science discipline that necessitated the introduction of *Dalit* Studies in higher education, but a political necessity. Unlike other parts of the country, *Dalit* discourse appears to be open to the question of what constitutes *Dalit* writing. This is because identity politics has not been strong in Bihar for a number of historico-political reasons, according to the study. This factor weakens cultural relativism which has otherwise become a hallmark of *Dalit* discourse in India, today. Further, the *Dalit* discourse in Bihar does not want to repeat the mistake of being gender insensitive and without a feminist perspective.

Thus, the study concludes that *Dalit* discourse in the academia of Bihar appears to be receptive of and sympathetic to the cause of *Dalits*, in general, and *Dalit* Studies, in particular. The academic rigour may not satisfy all concerned, but it should be viewed in the larger context of the underdevelopment of the social sciences in the state. However, it is encouraging to see a lack of parochial attitude towards *Dalits*, prevalent across India, lacking in Bihar. Universities now promise to introduce more courses related to *Dalit* Studies.

**7.23 *The Origins and Development of Private Armies in Bihar [Bihar mein Niji Senaon ka Udbav aur Vikas]*, Narendra Singh Kumar, Vani Prakashan, New Delhi, 2005.**

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**Key Topics:** *Private Armies*

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The book explores the reasons for violence and counter-violence in the rural areas of central Bihar in the last two decades. The context the study analyses is the present social, economic, and political situation along with the historical background as the problem has its origin in the past. As this was of violence between landlords and landless agricultural labourers, the study analyses the relationship between different classes on account of land and agriculture. The relationship between caste and class struggle and the effort to acquire political power has also been explored.

The study has been carried out under the fellowship of R. K. Birla Foundation. The author has travelled from Patna to Palamau, in addition to Bhojpur and Jehanabad, and has interacted with a lot of social and political workers. The leaders and workers of Liberation Groups and Ranvir Sena were also interviewed to collect related information and understand the ground realities.

The book argues that most of the private armies were found in the decade of the 1980s. Their main objective was to set the Naxalite groups right, while giving so called protection to the farmers. But in the early 1990s, most of these

private armies were dissolved due to conflicts between the Naxal groups. At this time, it was the Ranvir Sena, which was not only more organised, but also got wide support of small farmers. In this context, the study also explores the reasons for the inception and the rise of Ranvir Sena when the private armies had lost their importance.

The book argues that in the last two decades, there is a continued leashing of violence in the rural areas of Bihar between the private armies of the landlords and Naxalite groups. Thousands of lives have been lost in this interplay of violence between these two groups. This is evident not only between Naxalites and landlords but also between different groups of Naxalites. To some extent, this may be described as a war to acquire political power. Even the police perform the role of an agent in this violence.

According to the book, the major cause of this violence is the semi-feudal social structure prevalent in Bihar. The main feature of this system is that landlords have no other way of investing their capital so that they can keep a firm grip on their land or spend it in conspicuous consumption. Naxal groups hold landlord behaviour responsible for this violence. Specifically, they account non-implementation of land reforms, non-implementation of minimum wages, encroachment on the social norms of *Dalits*, and violation of their democratic and human rights as reasons for violence.

The book argues that this state of violence is puzzling for the government, political leaders, intellectuals, and social scientists. The government considers it a law and order problem and tries to solve it by police force. This gives rise to counter-violence most of the times. The Naxalities contend that landlords have weapons throughout the state and their atrocities range from ruthless beating and killing of landless labourers and, hence, they should not be denied the right to use counter force. This becomes even more important when the government presents a complete picture of failure in protecting the rights of *Dalits* against the private armies of landlords.

The study finds that due to the Naxalite movement, *Dalit* landless is no longer prepared to tolerate the life of constant insults and exploitation. Now there is a sense of awakening and consciousness of their rights and they find it unacceptable that the upper castes have been exploiting them for ages, resulting in the formation of landlords private armies.

The study argues that the failure of the government is equally responsible for this violence due to non-implementation of land reforms. The economic condition of small farmers has also not improved so as to fulfil the justified demands of minimum wages to the landless. So this class also supports the big landlords in organising private armies.

#### 7.24 *The Musahars*, Arun Shankar Prasad, Janaki Prakashan, Patna, 2005.

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##### Key Topics: *Musahars of Mithila*

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The key objective of the book is to analyse the social, political, economic and cultural status of the Musahars in Mithila, Bihar. Even though Musahars constitute the third largest caste in terms of their population, there has been limited research on them. The book points out that no major research has been conducted to identify the causes of their backwardness in the state. It is, thus, important to explore the position of Musahars in Bihar at this juncture. Even though the politics of reservation can allow lower castes some improvement in their social and economic standing, in the Musahar community there has been no visible change. They are still educationally, economically, politically, socially, and culturally backward. The book tries to trace the circumstances responsible for their continued backwardness, in particular, through an analysis of religious affinity, cultural heritage, and political outlook.

Since Mithila has a very large area, it was decided to conduct research work in an area in Mithila which is representative of Mithila. Manigachi block in Darbhanga district was selected, especially because of the preponderance of Musahars in the *panchayats*. The most populous *panchayats*, Thengna, Raghapur, and Chanour, were selected in the block. The study is based on interviews with 300 respondents (all heads of their respective families). A key drawback of this is that more than 90 per cent of the respondents in the survey are male. Even the book points out that only 4 per cent of the respondents were women. This is so because only the heads of households were interviewed and it is rare to find female headed households in Bihar. Standard research techniques including schedules, survey, interview, observation and observation methods were used. Empirical data was collected. Besides this, synchronic approach and diachronic evidence was also collected through census data books, office records,

voter lists, etc. Some collective information on common rituals such as marriage, birth, death ceremonies, etc., was also collected.

The schedule consisted of questions relating to the social, political, and economic information relating to the community. In-depth interviews were conducted by the researchers in both Hindi and Maithili. Questions covered age, sex, income, education, marital status, liturgy, occupation, material possession, social behaviour, political outlook, and caste conflict. The key variables used were of age, income, and education.

The book begins with presenting a socioeconomic profile of the respondents. Next, he examines landlessness, material possessions, standard of living, low wages to agricultural labourers, poverty, mobility of labour, indebtedness, and other economic indicators of well-being. He then describes the social life of the Musahars in detail, looking, in particular, at rituals and customs surrounding birth, marriage, and death. Next, he examines the political awareness of the Musahars and their religious life. Finally, the book presents an analysis of inter caste relationships within the village.

The book finds that most Musahars are landless and live below poverty line. Their earnings are not more than Rs 150 per month. However, beggary is not common among them. In general, houses have one or two rooms. Only 11.3 per cent of the houses have more than two rooms. Generally, they possess materials such as karahi, taba, chholni, kalchhul, earthen pots, lanterns, etc. Most Musahars are labourers. Besides transplanting and weeding in the fields, they work on embankments. Some are rickshaw pullers. 50.3 per cent of men migrate to other places for employment. Women also work as casual labourers. Children collect firewood for cooking purposes and also help in rearing cattle and in hunting snails and crabs. In general, agricultural labourers get payment in kind consisting of food items. The book finds that they get only Rs 4 as cash payment if they opt for it. The book feels that their income and expenditure cannot be demarcated item-wise because they cannot maintain any family budget. They purchase according to their day to day income and unavoidable needs. There is a high incidence of consumption of alcohol. In all, the book finds that the respondents (96 per cent of them are male) spend close to Rs 50 (one-third of their average monthly income) on intoxicants such as alcohol, *bhang*, *ganja*, *biri* and *khaini*. Their expenditure on education is close to nil. Children are usually put to work to earn for the family. There is almost no access to qualified medical care and most rely on quacks for medical care. Musahars are often forced to take loans during rituals and ceremonies including marriage and child birth, and if unemployed for long periods of time. The percentage of indebtedness among illiterates is as high as 86.7 per cent.

Musahars have very little political consciousness and a very poor knowledge of local political parties and their leaders. Their caste organisation is not part of a larger network. Since independence, their representation in the parliament has been almost nil. Their representation in *Gram Panchayats* has been equally poor. Close to 98 per cent of them claim that the *Gram Panchayat* has not benefited them in any way. Most settle their disputes in the Caste Panchayat and 98 per cent of them consider the Caste Panchayat more beneficial than the *Gram Panchayat*. The Block Office (BO) is generally not very useful to them. Only 4 per cent of them reported receiving any help from the BO. Most do not get old age pension. Close to 60 per cent of the respondents are unaware of the reservation policy of the government and only 1 per cent have benefited from it.

The community considers barrenness a misfortune. They often consult quacks like ojhas and pray to deities and devtas (gods). The book finds that they do not discriminate against the girl children. The practice of adoption is prevalent among them, but in general children of relatives are adopted. Arranged marriages are the custom in the community. The settlement is considered final when the chekka is done and either party gives Rs 2 or Rs 10 to the bride or the bridegroom. Domestic customs of death and sradh are suggestive of the fact that they are orthodox Hindus. However, instead of Brahmins, people from their own caste conduct the sradh ceremonies. Musahars have been regarded as untouchables in the past. However, that conception is fast fading according to the book. In some places, Brahmins do not allow them to draw water from their wells and tube wells. Interestingly, Musahars regard other Harijans as untouchables.

The book classifies Musahars as Tantra Margis who believe in the spirit world. They follow Samaj Dharma as well as Sadhna Dharma. They are further divided into various sects including Kabir Panthi, Vaishnav and Tantra Margi. The prominent deities of the Musahars are Dihwar, Dina, Bhadri, Aghori and Sales. They observe numerous Hindu festivals including Holi, Satuni, Joorsital, Lagpanche, Krishna Asthami, Durga Puja, Diwali, Chhath, Jitia, Ram Navmi, Makar Sankranti, Neman, and Sonham. Numerous problems of health and sanitation abound due to

poverty and illiteracy. Often, easily curable diseases prove fatal. The book concludes by pointing out that the case study most clearly demonstrates the socio-political neglect of the community. While there has been much talk of the development of the ex-untouchables in India, this case study shows that, at least in this instance, there has been no concrete change in their condition.

**7.25 Limits to Power: Naxalism and Caste Relations in a South Bihar Village, Shashi Bhushan Singh, *Economic and Political Weekly*, Vol. No. 40 (29), pp. 3167–75, 2005.**

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**Key Topics:** *Naxalism, Caste Relations*

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This paper explores the general tendencies associated with the rise and decline of Naxalism in rural Bihar. The study reports a case study of a single village in a very troubled region of south Bihar, where contesting sections of the village community have tried to use Naxalism for their own ends. The emphasis is not on the political issues associated with Naxalism, but on delineating the concrete ways in which it becomes operative in village politics.

The paper gives a brief outline of the social relations in Dhampur village in Bihar in the 1970s and 1980s, the rise of Naxalism, social realignment in the village through various struggles, and, finally, it concludes with a section on the situations for the decline of Naxalism.

The study points out that the village of Dhampur (name changed) is located in a remote area 15 km from the block, and 50 km from the district headquarters of a major district in south Bihar. There is no metalled road and there are no electricity or telephone connections in the village. The population of the village is 1,800 which make it the biggest village in the region. Unlike many other villages, the SCs are settled contiguously and only a narrow street divides the upper caste area from the Scheduled Class (SC) settlement. But there is no intermixing of houses with the upper castes. The village is inhabited by 13 castes, and caste boundaries are still strong.

Agriculture is the backbone of the village economy. Land is the most important economic resource, and 95 per cent of it is held by the upper castes. Only 10 households own 17.6 acres or more of land, and they are all Rajputs. The Rajputs have decisive dominance in village affairs because of their high position in the caste hierarchy, their control over land and other sources of wealth, and their numerical strength.

Till the 1970s, the SCs were economically dependent on land for sustenance and the Rajputs held most of the land. The SCs used to borrow money and grain at high interest rates from the upper castes, which used to get subtracted later from their wages, and the vicious circle of poverty persisted. The houses in which the SCs live today are built on the lands of the upper castes. They used to exercise various sorts of rights over these SCs, who were called the adami of the Rajput households who had given them land. The Rajputs even controlled the physical mobility of the SCs, and prevented them from working outside the village without their permission. Animal husbandry was another occupation for SCs, but most of the animals belonged to the upper castes and were given on batai. Even in the higher level assembly and parliamentary elections, the upper castes used to decide who should be supported. There was panchayati raj till the 1970s, but rather than empowering the SCs, this institution made the upper castes more powerful.

The study points out that the first factor responsible for the breakdown of the dominance of Rajputs was associated with the introduction of a canal in the early 1980s. The SCs of Dhampur started going to Amawa for work since the Yadavs had raised wages substantially because of increased productivity. When the SCs started asking for the same wages in Dhampur also, the landowners refused to raise wages and there was a mass strike by the SCs agricultural labourers. Taking advantage of the situation, the Naxalites tried to expand their base in Dhampur in support of the SCs' strike. Fearing violence, the police intervened and the wages were raised partially, and the strike was called off.

During the harvesting season, there is demand for labour in north-west India, particularly in Punjab and Haryana, and the SCs started migrating there. There was also migration towards other urban centres where the SCs worked as rickshaw pullers or as manual labour. This exposure of both upper and lower castes to the alien environment of urban and north-western India had significant implications for the social system. It, thus, became difficult to maintain the old sense of difference and hierarchy back in the village as well. This not only weakened the sense of superiority of the upper castes, but the ritual purity and pollution associated with caste also started collapsing. The economic diversification has also taken place and the upper castes, who have additional sources of

income, are better off than those solely dependent upon agriculture. All this has weakened the economic hold of the upper castes over the OBCs and SCs.

In the early 1980s, the government gave the SCs legal ownership of their homes. This helped to break the symbolic domination of the upper castes and made way for a new social order where everybody was equal in the eyes of the government. Most of this land has now been bought by the OBCs and SCs which gave them a sense of independence.

When the Vidhan Sabha (legislative assembly) elections were held in the early 1980s most Rajputs supported the Janata party, but the Brahmins and Bhumihars were with the Congress. So this time the village did not support any candidate en bloc, and everybody was free to exercise their franchise. This provided an opportunity to the SCs to take independent action. The rise of the Janata Dal in the 1990s provided another opportunity and SCs, en bloc, shifted their loyalty to Janata Dal. They continued to vote independently with the support of the Naxalites, who made it clear to the upper castes that the SCs could not be forced to vote against their will.

By the 1980s, the old social order was on the verge of collapse. The old Brahminical ideology was no longer sufficient to preserve the superior position of the upper castes. This led to a naked power struggle. While the dominant group among the backward castes fought on mainstream political platforms, the poor who had no resources joined the ultra-left organisations. Naxalism provided these marginalised people a space from where they could challenge the supremacy of the upper castes. Since both the electoral and the radical struggles were against the upper castes, this helped the lower castes to unite against the common enemy.

The rise of Naxalism in the village can be attributed to various factors, but the issue of wages and the dignity of the lower castes have played an important role. Among the Naxalites, the most dominant organisations are the Maoist Communist Centre (MCC) and the Majdoor Kishan Sangram Samiti (MKSS). Though, these radical organisations seem to be class based, caste is such a fundamental institution in society that even they have not been immune to it.

In the 1990s, the politics of Bihar was focused on the Mandal and Mandir issues, which led to the exodus of many from Naxalism and a realignment of the cadres. When Laloo Yadav became the chief minister of Bihar, the lower castes, in general, and Yadavs, in particular, shifted their loyalties to the Rashtriya Janata Dal because Laloo made the dignity of the lower castes the main issue. Most of the Yadav leaders who were associated with the MCC became the political supporters of Laloo Yadav, and the boundary between Naxalism and the mainstream political parties got blurred to some extent. Laloo wanted an alliance with the Rajputs and the MCC stopped disturbing Rajputs to some extent. On the other hand, the Rajputs also accepted the dominance of the Naxalites – not only did they not oppose them, but many Rajputs themselves became Naxalites.

The Bhumihars joined up with an already existing landlord army, the Ranvir Sena, which was fighting the Naxalites in other areas. In the late 1990s, two of the biggest massacres involving MCC and Ranvir Sena took place near Dhampur. The police started putting pressure on the SCs because they were seen as supporters of the MCC. This created a situation where more and more SCs started disassociating themselves from the Naxalites.

The study highlights that the basic contradiction upon which the Naxalites work is that between the landed and the landless, but this contradiction is not as clear as it was in the 1970s. For the SCs, association with a mainstream party is more prestigious and hassle free than joining the underground movement. Now the SCs want power, and there is tension between the Yadavs and the SCs because they are competing for power, symbolised at the state level by the fight between Laloo Yadav and Ram Vilas Paswan. So the alliance, which was operating at the level of Naxalism, is now breaking up.

The study concludes that the economic landscape of Dhampur has changed considerably, and it has become more outward oriented. The importance of land as a factor of livelihood and dominance is decreased. More people are engaged in petty business, trade, and the service sector, and large numbers have migrated elsewhere in search of livelihood. This has created a situation where more and more people are losing interest in village affairs. The paper feels that one of the reasons for the decline of Naxalism was that there was no common ground left where the two groups could fight. The movement was more concerned about attacking the symbols of upper caste domination. The Naxalites' biggest contribution was that they have guaranteed that the natural course of development would not be distorted by the dominant castes for their own benefit. They have ensured that the lower castes are not excluded from electoral participation by the upper castes. However, Naxalites now understand that the social structure can be changed, but not beyond a point. So Naxalism entered the village because economic development had helped the SCs to become independent, but further economic development forced the SCs to keep their distance from

Naxalism. Had the Naxalites not been present, the upper castes would have been tempted to use coercive methods against the upwardly mobile SCs, leading to violence by both sides.

**7.26 Hierarchy, Difference and the Caste System: A Study of Rural Bihar, Gaurang R. Sahay, *Contributions to Indian Sociology*, Vol. No. 38(1-2), pp. 113–36, 2004.**

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**Key Topics:** *Caste Hierarchy*

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This article seeks to contribute to the conceptual understanding of caste in the light of field data collected from 4 villages of Bihar. Against the background of two major theoretical positions the 'hierarchy' thesis and the 'difference' thesis, the article confirms the empirical validity of the 'difference' thesis by demonstrating that castes in these villages have their own ideologies, revealed mainly in diverse and discrete origin tales that contest their hierarchisation on a continuous vertical scale.

The 4 villages of Buxar district of Bihar selected for this study were Unwas, Basantpur, Bishrampur, and Bharchakia. These villages are primarily agrarian and, apart from agriculture, there is hardly any other economic activity that takes place. These villages have been chosen with some caution so that they are representative in a number of ways. Care has also been taken to see that the major castes of this region are adequately represented in the chosen villages. This empirical investigation was carried out against the background of two major theoretical inputs on the nature of caste: the 'hierarchy' thesis and the 'difference' thesis.

The hierarchy thesis argues that the caste system hierarchises Hindus on the basis of an ideology of purity and pollution. This concentration on ritual status is what makes the caste hierarchy a true hierarchy. Considerations of economics and politics are secondary in this scheme of things. Against the 'hierarchy' thesis, the difference thesis argues that overemphasis on any single hierarchy, ignores the fact that there is no caste that is not proud of its legacy, beliefs, and practices. It is for this reason that castes should first be apprehended in terms of 'discrete categories', attentive to what each caste considers as its intrinsic worth.

The existence of discrete castes and their multiple hierarchies is corroborated by the conflict among castes and their struggle for power in the villages. In fact, caste conflict in the villages of Bihar is a general and regular phenomenon. It has become a part of the everyday life of the villagers, as has the phenomenon of 'caste armies' such as the Ranvir Sena, Lorik Sena, Brahmarshi Sena, Sunlight Sena, Bhumi Sena, etc.

The article also points out that people are not restricted in their choice of occupation by their caste affiliations. The important occupations in the villages are fairly widely distributed among castes, and people of different castes are involved in the same occupations. There are four generalised occupations in the villages: agricultural farming, salaried occupations, business, and wage labour. All four major occupations are fairly generalised and widely practiced by families belonging to the various castes. Occupation appears to be determined, first and foremost, by the instrumental rationality of the logic of economic profit and loss. This is also underscored by the way the jajmani system is practiced in the villages.

The article concludes that caste system in the villages is characterised by difference, in many ways. First, all castes have their own ideologies, as is evident in the diverse and discrete origin tales of castes that do not endorse the hierarchisation of castes on a continuous vertical scale. This does not mean that castes in the villages do not hierarchise themselves in respect to one another, but that each caste has a discrete and contested notion of caste hierarchy, and no hierarchy has complete sway over the villages. Second, the absence of Sanskritisation in the villages suggests that caste members do consider their ideology pure when compared to others. They do change or modify their ideology, but not necessarily by emulating the beliefs and rituals of higher status castes. Third, the phenomena of conflict and power struggles among castes indicate that they do not share an all encompassing ideology. None of the castes controls or is able to impose its own ideology on other castes. Fourth, the distribution of the major occupations among various castes denies a specific relationship between caste and occupation as a basis for hierarchising castes: villagers have unrestricted access to the available occupations. And, fifth, this consideration applies also to the jajmani system in the villages. The jajmani system no longer provides a basic framework for the division of labour. Ideas of religious purity and pollution do not underlie and perpetuate this system.

**7.27 Violence and Political Culture: Politics of the Ultra Left in Bihar, Arun Kumar, *Economic and Political Weekly*, Vol. No. 38(47), pp. 4977–83, 2003.**

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**Key Topics:** *Politics, Ultra left, Violence, Political Culture*

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The article takes the instance of the Ultra Left in Bihar to discuss what violence does and can do to a supposedly emancipatory politics and political culture, in general. Its contextualisation seeks to force us to rethink the operative categories in circulation, trying to unravel the politics of the poor.

The article begins with a clarification on what is understood as political culture and violence. It emphasised that a political culture ultimately is about the relationship between the directly political and what appears outside it. Violence is taken here as a conscious response to difference in order to eliminate it. In this sense, it is illusory because violence can only eliminate the person who differs, but not the difference itself. Pertinent to this essay are the two following arguments, applied as explanations for violence. One is about the inevitability of it. The marginalised and subjugated were not given access to democratic forums to raise their concerns. The other issue pertains to what may be called victim-hood, 'violence was forced on us', 'it is the only way one could survive in the given scenario', etc. A final point that it makes, before a discussion on Bihar, is that once employed for larger than apparent individual interests, violence proceeds to stake a claim to glory: the bigger the scale, the greater the claim. The article locates the emergence of the Ultra Left in Bihar and its association with violence, keeping in mind these key points.

The article cites the shifts in the political practices of the Ultra Left in Bihar. The period of individual annihilation to 'liberate and turn feudal zones into Red areas' was short. The emergency and the state's move to reclaim its monopoly over violence played an important role in inspiring a rethinking by the Ultra Left about their political line. The need for an open mass movement was registered. This could have turned into a historical moment in the annals of the Left movement in Bihar, but it was not to be. Armed squads were continued secretly, violence had now openly become a question of 'tactic' that demanded the rhetoric of disbanding armed squads of 'professional revolutionaries' and, instead, a move to 'arm the masses' themselves. As a result, the commonsensical adage that violence begets violence has come to haunt the political culture of Bihar. Violence has become the reason of the time.

The article points out that along with the question of dignity, 'land to the tiller' and the payment of minimum wages have been two major issues around which the politics of the Ultra Left has revolved since the 1970s. However, small holdings, fertility of the soil, and lack of alternative jobs outside agriculture have taken the struggle for land virtually to a dead end. Though wages have improved over the years, this too appears to have reached a plateau, thanks to the stagnation in farm productivity. As a result, many sections of the Ultra Left today are at sea as to what programme to follow, not only to further the struggle for redistributive justice, but also to keep their cadres together. Owing to changing ground-level realities, the cadres find it difficult to carry on any further with the twin demands of 'land to the tiller' and the payment of minimum wages.

New issues have been taken up but mostly rhetorically. In the year 1995, the CPI (ML)-Party Unity took up the question of 'bureaucratic feudalism', by which both meant mass mobilisation for the issues of development, stopping corruption in the bureaucracy for smooth implementation of government schemes, and punishing corrupt contractors. What has actually happened in the name of exposing corrupt officials and contractors is that now there are more extortionists and kidnappers than ever before, many of them masquerading as agents of social change. The line between a criminal and a militant Leftist has begun to disappear.

According to the article, education can still be a rallying point for the people in Bihar, cutting across class and caste barriers. But, the Ultra Left has always shied away from engaging with anything that could disrupt its image of society being in binary opposition all the time on all the issues. This article is useful for its analysis of the ever present dualism in leftist politics and the paradoxes therein.



**7.28 People Power: The Naxalite Movement in Central Bihar, Prakash Louis, Wordsmiths, New Delhi, 2002.****Key Topics:** *Naxalite Movement*

The key objective of the book is to explore the socioeconomic milieu in central Bihar in order to understand the radical agrarian movement, its origins, historical growth, ideological principles, the actors involved, the strategies followed, and the outcome. In particular, the book attempts to delineate the factors that led to agrarian movements, especially in the background of the agrarian scene of central Bihar; to develop an in-depth sociological understanding of the behaviour of peasants in a wider sense of deprivation, frustration, and exploitation, so far as it results in mass discontent, resistance, mobilisation and revolt; to analyse the role of leadership, ideology, and political alliance of peasant organisations with other classes and political parties; to probe into the response of the state and other strata of society to the peasants' upsurge; and to see if the theories propounded by social scientists about peasant movements address the many pertinent issues raised by radical agrarian movements.

The study focuses on both the internal and external forces of agrarian movements in central Bihar. Internal factors included elements inherent to the agrarian structure like the construction of the Sone canal in the old Shahabad district, which not only averted famines but made Shahabad the grain bowl of Bihar and, in the process, also improved irrigation facilities, sharpening differences in terms of the appropriation of surplus production. External factors, which have contributed to agrarian mobilisation, include political forces which play a large role in determining the character of political organisations and leadership for the mobilisation of the peasantry.

The book examines three dominant areas of oppression and the consequent protests as a result of oppression. Firstly, social oppression as caste oppression has been a recurrent phenomenon from the early 1980s. Women from lower castes are doubly oppressed and often sexually exploited by upper castes. Secondly, minimum wages are an issue as even the low stipulated wage determined by the government is not given to the labourers even today. Thirdly, land redistribution in the form of the right to own land, to cultivate land, and to enjoy the produce of land, as well as the right to homestead has been a key feature of contestation.

A village has been taken as the primary universe for this study. After gaining in-depth information from a single village, data was collected from several other villages to get a broader view. Multi-caste villages with a history of agrarian struggle and with active political organisations were chosen. Interviews were also conducted in villages where the movement had become stagnant either due to long years of struggle or after the primary issues were settled. Protest marches, public meetings, etc., are often held at the block level and, hence, the Community Development Block was chosen as the secondary universe of the study. Data was recorded using the quasi participant observation method. Interviews were conducted with village elders, particularly those knowledgeable of the area. Individuals fighting for peasant rights were also contacted. Militant peasant organisations were also contacted to learn more about their ideology and also the manner in which it operates at the ground level. Those opposing the struggle were also approached for their views. Members of radical political organisations and their leaders, both at the local and at higher levels, and local government and non-government officials were interviewed for collecting information. State-level government officials were also interviewed to gather information about the government's perception and the programmes visualised for comprehending and containing agrarian movements.

The source material of secondary data includes action groups' diary records, handbills, paper cuttings, posters, etc. Census reports, reports by human rights groups like the PUCL, PUDR, etc., were also collected. A literature review on the agrarian structure, peasant unrest, political organisation, etc., was conducted. The study is both historical and sociological in nature. It is sociological because it aims at investigating the changes taking places in the agrarian social structure and it is historical because it deals with the emergence and role of action groups in the history of agrarian movements. The study examines the agrarian structure prevalent before the advent of the agrarian movement, the immediate cause that sparked off the movement, the various issues undertaken to mobilise and to organise the peasants, the process of mobilisation, the role of the radical political organisations, and the outcome of these agrarian movements.

The study concludes that even though the ultimate goal of seizing political power through a protracted arms struggle was not achieved and more than three decades later, both the number of their adherents and the area of influence remains limited; militant organisations and the movement has succeeded in raising awareness among the

peasant class about the oppressive socioeconomic and political structures of society, and also in exposing the class character of successive governments and political parties.

**7.29 Social Power and Everyday Class Relations: Agrarian Transformation in North Bihar, Anand Chakravarti, Sage Publications, New Delhi, 2001.**

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**Key Topics:** *Class, Caste and State, Social Power*

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The book presents a nuanced ethnographic analysis of the interrelations between caste, class, and power through a study of a village in Purnia, Bihar, in the 1980s. The key objective of the book is to document the consequences of the transformation in the economic orientation of dominant landlords (known as maliks) in the area since the 1960s. While their earlier role in agriculture had been primarily parasitical, at the time of field work the maliks were increasingly pursuing agriculture for profit. The book situates the agrarian and class relations that the author witnesses at a particular point in the process of agrarian transformation in the state.

The study examines agrarian class relations in Aghanbigha (a pseudonym), a village in Purnia, north Bihar, between November 1978 and May 1980, in particular, looking at the relationship between the maliks (who were Bhumihars by caste) and the subordinate class of landless labourers. The book illustrates the complex interrelationship between caste and class in the village, as the author points out that while his primary objective is to understand the manner in which class (through the selective ownership and control of land, among other factors) operates in the relations of exploitation, in fact, the Bhumihars which are the dominant class are also the dominant caste. Clearly, any understanding of the structure of exploitation in the village, even with a focus on class, cannot exclude the role played by caste. The book makes an important conceptual distinction between exploitation and domination. Whereas, exploitation refers to the appropriation by one class of the fruits of the labour of another, by virtue of possessing superior control over the means of production, the latter refers to more 'comprehensive control over the lives of the members of the subordinate class – materially, politically and ideologically.' (pp. 22) It is, therefore, impossible to understand the relations of dominance without taking account of caste.

The author bases his analysis of class relations in Aghanbigha on narratives, including those describing the unique experiences of particular individuals who constituted the subject of enquiry during his field work. The key themes that the book examines include: the decline of sharecropping as an institution and the increasing use of hired labour in the course of the 1960s and the early 1970s; the new intensive cropping pattern, demanding the use of a large number of labourers to grow a series of crops in quick succession and the commercial orientation of maliks, the class structure of the village, the mechanisms for recruiting labourers on a large scale, and, finally, the extraction of labour by the dominant class.

The findings of the study reveal that the primacy thesis, which ascribes a key role to technological interventions for social change, does not always hold true. The book points out that the substitution of baitadars by agricultural labourers was a consequence of class antagonism, on the one hand, and technological changes, on the other. One of the key findings of the study is that the culture of exploitation in the village is determined by the dominant caste, which is also the dominant class. The class structure in Aghanbigha (and possibly other parts of north Bihar where similar technological changes have taken place) has assumed a polarised form. The book maintains that agrarian capitalism has had profound negative consequences on the lives of the underclass. It further adds that the harsh working conditions of the labouring class in Aghanbigha was an outcome of the combined effect of economic power of the maliks as a class and their social power as members of the dominant class. An important part of this social power was their ability to use the various arms of the state for their own ends. Therefore, the state too has contributed to widening the gulf between the dominant class and the underclass. The book argues that this interrelation between caste and class is a reflection of similar contexts in other parts of Bihar. It points out that if the exploitation of the underclass does in fact depend heavily on the nexus between class power and social (caste) power, one of the possible means of liberating its members may be to create a breach between social power and state power.

In the examination of labour relations, the book finds that while in a typical capitalist system of production, using formally free labourers, despite its exploitative character, there is, nonetheless, the potential for labourers to become a political conscious proletariat because they possess a voice as economic agents. In Aghanbigha (and

possibly the rest of Bihar) the dependency of the underclass on the dominant class deprives them of the economic agency in the labour market as well as political agency in class politics.

The book concludes by arguing that to achieve a more equitable order for those who are subject to class dominance, a breach in the nexus between social power and political power is essential. It highlights that left of centre regimes tend to respond most positively to certain crucial issues affecting the welfare of the underclass. It then argues that given the current context in Bihar, where the ruling parties have been consistently opposed to the ideology of the left of centre factions, the situation of the underclass, engulfed by relations of unfreedom and dependency is not likely to change, as 'the social character of the state in Bihar is heavily weighted against them' (pp. 293).

### **7.30 Caste and the Colonial State: Mallahs in the Census, Smita Tewari Jassal, *Contributions to Indian Sociology*, Vol. No. 35(3), pp. 319–54, 2001.**

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**Key Topics:** *Caste Census, Mallahs, Criminal Castes, OBCs*

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The study situates the contemporary identity of the Mallahs of the Bhojpuri speaking region of eastern Uttar Pradesh and Bihar, in the context of interventions by the colonial state in the first half of the 20th century, especially through the caste census exercises. Based on fieldwork in selected villages of eastern Uttar Pradesh and Bihar, it discusses Mallah efforts at sanskritisation, as well as attempts by different segments of the caste to claim an overarching Nishad identity, and the expectations of the colonial state on which these were grounded.

The Mallahs are closely linked with a range of caste groups traditionally associated with water based occupations such as fishing, river faring, water based transportation, desilting wells, etc. In the state discourse, the caste is identified as one of the Most Backward among OBCs in the region in terms of economic, social, and political criteria. Mallahs have been economically marginalised in terms of lack of access to productive resources and livelihood security; socially through lack of access to education and political through a lack of political representation. During the course of the 20th century, they have seen rapid socioeconomic transformation and occupational diversification, moving from water based livelihood patterns to settled agriculture and artisanal production.

A specific conceptualisation of caste, wherein theoretical questions on the nature of caste or principles of caste organisations were eclipsed by a perspective in which caste itself held a 'substantial' identity in the colonial state's discourse on the structure of Indian society. Name, number of members, physical characteristics, cultural practices, and territory occupied, were some of the ways in which caste was substantiated by the census. Castes appeared as relatively discreet communities whose members shared certain commonalities in the areas of worship, dress, occupation, and relationships with each other on the basis of assigned ritual-political standing.

Alongside the colonial caste census, the sociological discourse on caste developed in two directions. While the census and ethnographic surveys were continuously generating information about caste, there was a parallel ordering exercise underway which reorganised and reworked the data produced. This reworking involved (a) the standardisation of names of castes and sub-castes so that clearly demarcated categories could emerge; and (b) evolving a hierarchy of castes with all-India applicability, as opposed to castes whose names altered across regions, or with changes in socio-political contexts. This led to a situation where each caste was placed along an artificial vertical line, occupying a higher or a lower position than every other caste. The study points out that a lack of clarity about the shudra varna characterised the census operations and ultimately contributed to the skewing of the census information and results, largely in favour of the three superior varnas.

The colonialists' persistence in classifying castes in an unambiguous hierarchical scale actually generated endless petitions from people who recognised the census operation as an available avenue for social mobility. In the 1901 census, unlike subsequent censuses, claims to higher status came mainly from individuals rather than from caste associations. It was popular belief that the effect of the census record would be to fix the individual's position in the social scale. By 1931, the census operations had become so immense and such vast amounts of information on caste had been collected that the colonial state felt the need to simplify the process. Different castes were, therefore, clubbed together, particularly among depressed groups, in the belief that total figures would suffice for them.

At this time, Mallahs were talking, often claiming that they were a clean caste at whose hands upper castes would accept water and at whose ceremonies Brahmans would officiate. In fact, the group of castes clubbed together

under the term Nishad including the Mallahs, uniformly places themselves above the ritually polluting castes, citing historical texts. The census operations set in motion certain instruments of upward mobility which were seized by most caste groups, hoping to raise themselves in the hierarchy of castes. However, a reverse process was also underway from 1871, where certain castes were singled out by the colonial state for surveillance and control. In 1871, the Criminal Tribes Act was passed for this same purpose. Inherent in the law were assumptions about readily identifiable 'dangerous castes with criminal tendencies'. People belonging to these castes were assumed to have inherent criminal tendencies, owing to the usages of their caste, which not only condoned such activity but also provided the network of support which sustained it over a period of time.

The study, thus, identifies three major components in the construction of the Mallah identity in the 20th century: (i) the attribution of 'criminal' status, assigned by the colonial state for the regulation, administrative control, and surveillance of Mallah and related 'unsettled' caste groups within the context of traditional agrarian economies; (ii) claims to the overarching title Nishad by a large and diverse number of fishing and river faring castes, both for the purposes of standardisation in the census records as well as for the forging of a common and distinct identity; and (iii) the attribution of a socioeconomic and political 'backward' status to a large number of castes deriving their livelihood from water based activities and occupations.

The study points out that the relevance of exploring the colonial logic assumes greater significance in the context of the post colonial state's policy of extending compensatory discrimination towards those groups previously notified as criminal. In pockets with no collective memory of criminality by the Mallahs, the notion of backwardness and the logic of submerging differences in favour of an overarching Nishad identity are key elements of that identity. However, in popular consciousness and in Bhojpuri folklore, the *Chain Mallahs* do have a reputation for petty thievery. However, the history of *Mallah* criminality is remembered differently from the same discourse by its political leadership and by 'organic intellectuals' within the community.

The study concludes by pointing out that tracing the history of Mallah identity formation over almost a century has thrown up significant issues of relevance for the debate on inclusion of caste in the census today. The Mallah case highlights the manner in which the standardisation procedures of the colonial census had led to the ignoring of the customs, cultures, and occupation diversity represented by a range of castes.

### **7.31 Dalit Struggle for Equality: A Study of Three Movements in the 1930s, Jose Kalapura, Proceedings of the Indian History Congress, Bhopal, 2001.**

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#### **Key Topics:** *Dalit Struggle for Equality*

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The present study is an attempt to detail the *Dalit* struggle for equality in the 1930s as it is considered the most significant period in the *Dalit* Movement. The study explains that 1930s saw the emergence of the *Dalit* community from an insignificant segment of Hindu society – outcastes and untouchables – to a community to be reckoned with having a high degree of visibility and measure of political power in the form reserved seats.

The study explains the three strategies employed in the *Dalit* assertion for equality in the 1930s, namely, sanskritisation, conversion, and political action. The study states that there are 138.2 million *Dalits* in India, of whom 81 per cent live in rural areas, contributing 77 per cent primary workforce, casual agriculture labour, or menial jobs as nearly 70 per cent are landless. Only 37 per cent are literate and 80 per cent of them still live below the poverty line. The oppressed condition of the *Dalits* is due to certain deteriorated socio-religious conditions within the Hindu society. *Dalits* are not a homogeneous group and belong to some 471 communities, or jatis, and occupational categories. Exploited economically, culturally, politically, and in the field of religion, *Dalits* have been even segregated. The *Dalit* struggle for equality in social, economic, cultural, religious, and political life has been in all historical periods. In modern times, *Dalits* have employed several strategies, three of which are significant during the period of our study. They include sanskritisation, conversion, and political action.

According to the study, sanskritisation is a process by which a low Hindu caste or tribal or other group changes its customs, ritual, ideology, and way of life in the direction of a high, frequently twice born caste. The paper states that one of the most telling examples of sanskritisation was the attempt by Chamars of Agra. Under the influence of a certain preceptor, Swami Atma Ram whose book traces the origin of the Jatav race to Lord Shiva, the Agra

Jatavs concluded that they originally belonged to the Kshatriya caste, began to assert a claim to Kshatriya status and changed their names to Jatavs or Jatav Rajputs. However, when the Jatavs realised that the upper castes did not accept their claim to Kshatriya caste, they began to assert their *Dalit* status and fight for equality through political participation and conversion. The study exposes that this change of strategy might have been spurred by the appearance of Ambedkar on the socio-political scene of India. Sanskritisation, but, did not work out for the untouchables, although it did give a higher status to certain tribals and other communities.

The study finds that in the modern period, conversions to Buddhism have occurred largely among the *Dalit* groups. *Dalits* who have been awakening since the late 19th century seem to have found in Islam the value of equality they had been seeking in vain within the Hindu society. During the 1930s and earlier, thousands of *Dalits* all over India converted to Islam. Similarly, the Sikh Panth also attracted many *Dalits*. In the 16th century with the influence of European missionaries there was mass conversion of *Dalits* to Christianity. The Musahars and Paswans in Bihar converted to Christianity. All these conversions became a grave concern for Hindu political leaders.

The study then details on the third strategy employed by the *Dalits*. By 1930s, *Dalits* became conscious of their social plight and political rights under the influence and leadership of Ambedkar. *Dalits* played an important role in four major political events. They were the Round Table Conferences, Gandhiji's fast and Poona Pact, Ambedkar's declaration and *Dalit* Conferences, and Provincial Governments. *Dalits* had a number of social and political organisations which aired their grievances through memoranda, conferences, etc., against social discrimination. The Simon Commission of 1927 recommended adequate and effective representation of *Dalits* in all legislatures and government bodies. The First Round Table Conference was equally significant for *Dalits* because they were represented by two *Dalit* leaders. The British government granted separate electorates to *Dalits*. The Poona Pact gave *Dalits* political power but not autonomy. The *Dalits*, debating on the question of leaving the Hindu fold, held several conferences so that they could bargain for both religious and political equality.

The All Religious Conference organised by All India Depressed Classes Association (AIDCA) in 1936 consulted representatives of various religious faiths. Hundred *Dalit* delegates from seven provinces took part in the meeting on the first day, but later declared that they were not in a hurry to join any religion and also warned that no religion that does not offer the fullest social and religious equality would be considered. The Patna conference of AIDCA in 1937 consulted representatives of many religions including Catholic missionaries of Patna, but a decision on conversion was not taken. As per the provisions of the 1935 constitution, *Dalits* contested the 1937 elections under the Congress and other party tickets, both for the reserved seats and the general ones. Congress won in most of the constituencies and came to power in 6 states. However, barring some fringe benefits to a few *Dalit* leaders of the Congress and containing the emergent *Dalit* power as a political force, the Congress did nothing significant to the cause of *Dalits*.

To conclude, the study states that the *Dalit* community emerged from an insignificant segment of Hindu society – outcastes and untouchables – to a community to be reckoned with, having a high degree of visibility and measure of political power in the form reserved seats. Yet, the road they have to tread has been quite long and does not seem to be shorter even today.

### 7.32 Heroes, Histories and Booklets, *Badri Narayan, Economic and Political Weekly, Vol. No. 36 (41), pp. 3923–34, 2001.*

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**Key Topics:** *Bahujan Castes, Caste Politics, Culture, Folk Tales*

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The article examines *Dalit* popular literature, looking at authors, consumers, markets, and alternative meanings of the texts. More broadly, the article explores the reconstruction of *Dalit* history in the passages of these texts. It links the emergence of an educated and political conscious middle class of *Dalit* bahujans in UP and Bihar, active in writing and publishing literature, with the rise of bahujan politics in the 1980s, which sought to acquire self respect and social acceptance for the community.

The article qualitatively examines the publication of popular *Dalit* literature, focusing on identifying publishers, readers, and the dynamics of the market. He then presents a historical reading of alternative myths created by popular *Dalit* literature in the past and present context. The study finds that *Dalit* popular literature has been published on a large scale from the early 1990s. There are growing numbers of *Dalit* writers and they represent a new alternative

space in national literature. Most popular booklets, according to the article, are created through forging links with folk tradition and local history. Writers of *Dalit* folk histories enter the memories of *Dalit* people in two ways, first, they explore content and form related with their folk memories and, second, they serve as a link between history, preserved through political knowledge and the folk memory of *Dalits*. Some of these writers enter the political domain while some remain outside it. In the political discourse of bahujan politics in UP and Bihar, local, popular, and *Dalit* caste histories are important for mobilisation. In Bihar for example, use of popular myths like 'Chuharmal' and 'Salhes' by Ram Vilas Paswan's *Dalit* Sena is a clear indication of this trend. The article argues, "The educated among the *Dalits* and people linked with bahujan political consciousness use the past to educate *Dalit* people about their political interests, to create a political language for mobilising *Dalits*; and to provide claims and demands for the social, economic and political privileges on the basis of the history of injustice done to lower castes in the past' (pp. 3932). The construction of the past, the article argues, helps to create the power to mobilise *Dalits* in politics, provides justification for receiving more affirmative policies, and subverts the dominant discourse and helps in the creation of an alternative discourse. However, the categorisation of all *Dalits* as one, with a singular history, is problematic and is contradicted by histories of specific *Dalit* communities.

### **7.33 Village Studies in India, Gaurang R. Sahay, Rawat Publications, New Delhi, 2001.**

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**Key Topics:** *Village Studies, Caste System*

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The book presents an overview of the nature of rural social formation in Bihar. The term social formation has been used to denote a social entity which is constituted by a combined articulation of three levels of structure – economic, political and ideological – at a certain place and stage of social development, in terms of all encompassing categories of caste and class. For an analysis of the economic structure, the study deals with the ownership of various forces of agrarian production and the economic relations. The study of political structure details various political institutions and practices such as faction, village panchayat, and voting behaviour in the villages in Bihar. For the ideological structure, the study pays attention to one ideological entity, i.e., the caste system. It also makes an empirical analysis of many caste based organisations, institutions and practices. Reconceptualising the concept of class, various concepts like caste, faction, sanskritisation, dominant caste, hierarchy, jajmani system, sharecropping, etc., have also been examined and reformulated in the study.

For the purpose of the study, four villages have been selected from the Buxar district of Central Bihar. They are Unwas, Basantpur, Bharchakia, and Bishrampur. The villages selected have distinct characteristics. All the villages selected are situated in the same locality and belong to the same village panchayat known as Unwas village panchayat. Two techniques of data collection, the structured interview and observation were used.

The study finds that in the villages, land is the most important means of production. This is because the economic structure of the villages is predominantly agrarian. There is individual ownership of land in the villages. The structure of land ownership is highly unequal. More than half of the families hardly own any land. Though most of the land is owned by a few families, none of the families owns more than 40 acres of land. In these villages, around one-fourth of the total land is leased out to sharecroppers. Families which lease out land belong to all classes and to almost all land owning castes. Of all castes, Brahmins lease out most of their land. They are followed by Koeris. Other castes like Mahabrahmin, Sonar, Kayasth, and Bhumihar also lease out most of the land they own. There is a clear pattern in taking land on lease. The class which owns more land takes less land on lease. In the four villages, the Koeris take more land on lease than any other caste. They are followed by the Nonias and Yadavas. The sharecroppers pay rent in both cash and kind.

In these villages, all the big land owning castes such as the Brahmin, Rajput, Yadav, Koeri, and Bania own most of the threshers, pump sets and tractors. The class which owns more land also owns more modern machines. But unlike castes, there is no class which does not own any of the modern machines. Hence, the study reveals that some families are landless or near landless, but they are resourceful enough to own modern machines and rent them for making money.

The study reports that in these villages, pump sets have almost replaced irrigation by rehat or lifting of water manually with a metal vessel. The use of modern machines has minimised the use of bullocks in agriculture. People relied on chemical fertilisers for better agricultural productivity, irrespective of their caste and class position.

Agricultural work in the villages requires a lot of labour power. Most of the families involved in cultivation hire in labour power to get the agricultural work done. The Bhumihar, Kayastha, Mahabrahmin, and Sonar get their work done totally by hired labour. Among the big land owning castes, the Koeri and Yadav use hired labour less than Brahmin, Bania, and Rajput castes. An overwhelming majority of the families which do not hire labour power belong to the class of landless and near landless people. The castes which do not hire in labour power are the Nonia, Dusadh, Chamar, Kahar, Gond, Koeri, Rajbhar, Kamkar, Dhobi, and Bhar. In the villages, 40 per cent of the total families engaged in cultivation also perform agricultural work for others without taking wage but in terms of exchange.

In these villages, people are politically conscious. They know where their political interests lie. Various factions existing in the villages provide an indigenous basis to the political parties to mobilise people politically. The study reported that the people belonging to a caste form a faction in their own villages. The main purpose behind the formation to form a faction is to acquire social prestige, to maintain the already acquired social prestige, or to pool their resources to cushion their privileges better. To fulfil this purpose the factions engage in some political activities. They support selected political parties and help them during the elections by mobilising electoral support for them not to speak of campaigning and voting for them. Disputes between two families of the same caste are settled only by their kinship group, or by their own caste fellows, or by the law, but not by any village assembly.

The present study found that in the villages there is stiff competition among the forward castes, backward castes, and the SCs to acquire political power by controlling and dominating political institutions and processes. In this respect the backward castes have been more successful.

On an analysis of the exiting caste structure in the villages, the study found that the caste system does not represent a single monolithic ideology but various heterogeneous and conflicting ideologies. Since different castes adhere to different ideologies, they too cannot be ordered on a continuous scale in a single hierarchy. By formulating hierarchies according to their own interest, various castes in the villages try to differentiate themselves from one another. Various castes hardly differentiate from one another on the basis of occupation. The only caste based practice that still survives in the villages in an institutional form is the jajmani system. The study explains four terms that are frequently used to designate the persons involved in the jajmani system. They are the jajman, pauni, purohit, and mahabrahmin.

On the basis of various findings of the study, the principal conclusion arrived at is that the nature of social formation in the villages is capitalist. Both types of labourers – daily wage labourer as well as attached – that exist in the villages are free wage labourers. The difference between the daily wage labourer and attached labourer is related only with the duration of the contract that exists between the labourers and the persons who buy their labour power. However, in the villages, as in capitalist social formations, the freedom of the wage labourer is conditional because of two constraints. First, the labourers cannot sell their labour power whenever and to whoever they want. Also, labourers cannot get the wage they aspire, since the amount of wage depends mainly on the availability of labour when their labour power is needed. Thus, in the villages, the freedom to sell labour power is subject to the principle of demand and supply, as in capitalist social formation.

Another important feature of capitalist social formation is generalised commodity production. In the villages, whatever surplus value the various families receive after selling their surplus agricultural products in the form of profit, contributes to the accumulation of capital. Such families do not consume all or most of the surplus value. They invest in agriculture as much of the surplus they can. By investing and reinvesting the surplus value, the families reproduce capital in an extended form. The present study highlights that such a process of 'extended reproduction of capital' takes place only in capitalist social formation.

The study highlights that sharecropping is one of the important aspects of the functioning of economic institutions in the villages. Marx used the concept of 'formal subsumption under the capital' to denote the initial stage of capitalism. During this phase of capitalism 'capital subordinates labour on the basis of some technical conditions of production within which labour hitherto has been performed' in the pre-capitalist era, such as feudal social formation. The particular contention that the cropping does not appear in a capitalist social formation characterised by 'real subsumption of labour under capital' is not supported by the various facts from the villages. The villages display all the symptoms of 'real subsumption of labour under capital'. Almost all those who cultivate land in the villages, as owner cultivator or sharecropper, use machines. This enabled them to increase the rate of production

over the years as well as to appropriate relative surplus value. Thus, the study concludes that sharecropping is not a feudal economic institution but a capitalist one which can appear along with both 'formal subsumption of labour under capital' as well as 'real subsumption of labour under capital'.

### **7.34 Bihar in Flames, S. K. Ghosh, APH Publishing Corporation, New Delhi, 2000.**

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**Key Topics:** *Law and Order, Gun Industry*

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The book, written by a police officer in the Bihar police force, critiques the defunct criminal justice system in Bihar and argues that 'law and order has almost completely collapsed in the state in which the private senas of powerful landlords and Naxalite groups maintain the peace and dole out their versions of rough-and-ready justice. The State Legislative Assembly has become a shouting and brawling House for a large number of legislators with criminal records and organised crime connections. The kidnapping industry sponsored by some criminal politicians, the new cost effective profession, has an approximate annual turnover of Rs 25 Crore.

In 24 short notes, the book outlines various instances of the breakdown of the law and order machinery in the state. It points briefly on a broad range of topics including conflicts over land, social justice, *panchayats*, the movement for Jharkhand, crime against women, opposition to police brutality, elections, illegal gun manufacturing factories, the Naxalite movement, the rule of gangsters in the state, a 'criminal cabinet', the state of education in Bihar, demoralisation of the bureaucracy, the nexus between contractors, gangsters, bureaucracy and politicians, the state of prisons in Bihar, violation of human rights of prisoners, widespread corruption, CBI raids, and finally discusses the finding of the 1997 report of the office of the Comptroller and Auditor General.

The book criticises the RJD regime in the state and argues that its brand of politics is responsible for Bihar status as one of the most backward states of the country. He points out that the per capita income was Rs 2,122 per annum in 1989-90, and only 38.54 per cent of the population was literate. It notes that, 'India's second most populous state and intrinsically wealthiest State in the Indian Union has been compounded by acts of omissions and commissions which has transformed this ancient area of learning and civilization into a living hell.' (pp. 3). It also points out that cognisable offences in the State went up by almost 50 per cent in 1991.

On the subject of conflicts over land, the book notes that there has been a growth of an assertiveness among the long suppressed and quiescent communities and that the most downtrodden have in fact emerged as the symbol of the insurrection. It points out that today there are several groups among the Naxalites who operate mostly in central Bihar and often run a parallel administration, throwing a challenge to the upper caste landlords and even the government.

On social justice, the book elucidates, 'the concept of Social Justice' has reached a point on utter shamelessness. There has been rapid decline and fall in the quality of administration. Caste, not merit, nor seniority count in appointment, transfer, posting and promotion' (pp. 31). It also points out that the rising crime graph against women is a matter of great concern and measures must be taken to make Bihar a safer place for women to live and work.

On the issue of police brutality in the state, the book explains that 'in Bihar, police brutality is employed in great frequency and extensively against caste and political rivals with the knowledge of the rulers' (pp. 46) It points out that this is primarily because of the rising numbers of criminals who have made their way to the legislative assembly. There is also a lack of supervision by senior police officers and much political interference in their work. Caste armies or senas can commit atrocities against the poor sometimes because of the compliance of the state.

According to the book, gangsters and guns have been an integral part of the electoral process in Bihar. These gangsters sometimes run a parallel machinery to conduct a parallel process of polling. It points out that a certain degree of violence has always marked the electoral process in the state. However, there was a spike in the 1980s and 1990s, with 63 people killed in 1985 and 87 people killed in 1989.

The book argues that gun factories have been a booming industry in central Bihar and that the demand for firearms is steadily rising because of the high crime rates. It notes,, 'gun making is the only cottage industry that seems to thrive in innumerable Bihar villages dotted across the State's sprawling plains when everything else seems to founder in a quagmire of corruption and politics' (pp. 65). It also laments the sorry state of the state's higher education institutes and points out that almost all universities and colleges are violence ridden and that 'criminals



rule educational institutions' (pp. 83). The book argues that caste politics is perhaps one of the biggest triggers of violence in the state's educational institutions.

**7.35 *Differential Impact of Development on Scheduled Castes: A Study of Rural Central Bihar*, R. Kumar, PhD Thesis, Centre for the Study of Social Systems, Jawaharlal Nehru University, New Delhi, 2000.**

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**Key Topics:** *Development, SCs, Rural Central Bihar*

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The main objectives of this PhD thesis are to study the level of awareness among SCs about various governmental measures for promoting social change and also to examine the degree of their participation in various welfare schemes; to study the changing pattern of social conditions of the SCs; to study the quality and quantity of facilities accessible to them through various governmental measures; to study the nature of work they are engaged in and the sources of income among various segments of the SCs; to study the changes in the educational status of the SCs; and, finally, to study the changing patterns of relationship within the SCs and in relation to non-SCs.

The study is based on a sample of 233 respondents drawn from Daudnagar block of Aurangabad district of Bihar. These respondents are drawn from different segments of SCs like Chamars, Dusadhs, Bhuiyas, Nats Pasis, Dhobis, Rajwars, Dabgars, Mehtars, and Doms.

The study finds that there is no homogeneity in the socioeconomic and cultural ethos of different segments of SCs. The practice of untouchability among the SCs and between the SCs and the non SCs had been abolished legally, but it continues to be a practice as observed by the respondents at social occasions. The SCs belong to a mixed type of family, although the proportion of nuclear family is more among them and linked to their economic position. The joint family is breaking due to the lack of resources to support them.

Most SCs have a similar pattern of residence and most reside in kutchra and semi-‘pucca’ houses. This is because the governmental housing schemes do not take into account their housing problems. Majority of them are engaged as agricultural labourers. Occupational mobility and diversification of occupation are quite negligible among the SCs in spite of various developmental programmes. Their economic status can be perceived by the nature of their income, i.e., kind and cash. Most of them earn in kind, while only a miniscule minority earn in cash. High degrees of indebtedness were found.

According to the study, majority of the SCs are illiterate, often leading to problems in terms of employment and healthcare. Most of the respondents are aware of the government schemes for poverty alleviation, etc., but they are not aware of the procedures of obtaining benefits of these schemes. Further, misappropriation of funds by government officials adds to their woes. Most of the benefits from government schemes for education, poverty alleviation, healthcare, hygiene, etc., have not percolated to all levels.

Though development programmes have not left much impact on the SCs, in general, and their education, in particular, their increasing social awareness has given rise to a middle class or a dominant class of the SCs, i.e., the creamy layer. They are assimilating into the upper class categories and, the study feels that they are forgetting their duties toward the people from their own background.

The State Scheduled Caste Development Corporation of Bihar has become a ‘white elephant’. The need is to reform the Corporation and create greater awareness among the SCs and the government officials for better implementation of government schemes, and to analyse the working of each such scheme with periodic reports on their performance.

**7.36 Human Rights of Dalits: A Case Study of Bihar, Umakant, PhD Thesis, Centre for Political Studies, Jawaharlal Nehru University, New Delhi, 2000.**

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**Key Topics:** *Human Rights, Dalits*

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The main concern of this PhD thesis is to analyse the growing menace of caste carnage and other human rights violation of *Dalits* in Central Bihar, in the past two decades. The study aims to analyse the factors responsible for such violations and also attempts to look into the inter-personal relationship among various sections of society. An attempt to examine the role of radical groups and voluntary organisations, and the state and its agencies in creating awareness among *Dalits* and in checking the growing violence and human rights violation is also made.

The methods used in this study are historical and analytical. Micro level information was collected through interviews, informal talks, and non-participant observation. The macro level primary sources comprise data collected from the reports of the Welfare and Police departments at Patna. Various reports of the National Commission for SCs and Scheduled Tribes and the Ministry of Home Affairs were taken into consideration for analysis.

The practices of untouchability, economic backwardness, and non-implementation of land reforms have been the prime factors responsible for human rights violations of *Dalits* in Central Bihar. All the benefits of land reforms and green revolution have remained confined to the forward castes and upper sections of the backward castes, such as the Yadavs, the Kurmis and the Koeris.

The study finds that disparities in the socioeconomic hierarchy run alongside the caste hierarchy throughout Bihar. More than 71 per cent of *Dalits* in Bihar live below poverty line. Wages for *Dalit* agricultural labourers have been abysmally low. The agricultural workers not only face economic exploitation but also undergo the worst kind of discrimination.

However, from the late 1970s and onwards, Central Bihar has seen organised resistance by the oppressed people to which landowning castes have responded by forming their so called private armies. In Central Bihar and elsewhere, it is not exactly a class war that is the main force behind the violent scene. It is both a caste and status war; a war in which the origin of trouble in many cases may perhaps be economic but in its actual occurrence, it becomes a caste war. Caste consciousness is as much real, perhaps more real than the class consciousness.

According to the study, radical groups which have been operative in the region from 1970 onwards have no doubt raised the awareness level among the *Dalits* regarding the exploitative economic relationship in the villages. But in a caste ridden society like Bihar, the class approach does not seem to have made much impact. This is also to say that radical groups have failed to develop an anti-caste ideology/approach while dealing with the problems of *Dalits*. The radical groups and voluntary organisations have failed to develop any genuine revolutionary movement of social transformation and economic emancipation.

As the far as the role of the state is concerned, the study offers a pessimistic account. Despite the Constitutional mandate, the practice of untouchability continues unabated. In fact, in many cases it has worsened. The State, as an effective and powerful institution, has undoubtedly failed in its duty of creating awareness and togetherness among various sections of society. Crores are spent in the name of rural development and even Special Component Plans for *Dalits*, but ineffective implementation has proved to be a bane. There is no trickle-down effect of development benefits. Successive political parties in power, over the years, have provided conscious support to various obscurantist upper caste groups and actions to maintain hegemony in society and over state machineries.

The study concludes with suggestions to improve the prevailing distressing conditions and constant human rights violations of the *Dalits*. It argues that every state government should be held accountable to the National Human Rights Commission and that each state should have its own human rights commission. The state government of Bihar should implement land reforms and there should be workshops/orientations to sensitise the population as well as government officials. Every district in Bihar should have a special police station for *Dalits* with proper facilities and training. There should be facilities for speedy and fair trials in right earnest. Caste and communal problems should not be merely treated as law and order problems. A comprehensive socioeconomic restructuring should be given prime importance by the government of the day, as political democracy remains meaningless without social and economic democracy.

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**SECTION 8**

**Politics and Electoral Processes**

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## Overview

This section is closely related to the earlier section on caste and class. Caste and politics are inextricably linked given the deeply divided and often polarised social context in the state. Three major themes emerge from the studies on politics and electoral processes in the state; firstly, the centrality of caste as a category to the political processes in the state; secondly, the divergent perspectives on 'caste politics' at the state and local level politics; and thirdly, the internal diversity within the category of 'other backward classes'. Much of the literature also discusses the causes of the RJD's electoral defeat in 2005.

Clearly, caste or identity politics is the key concern of researchers interested in the electoral processes in the state, whether at the state (Kumar and Ranjan, 2009; Alam, 2009; Ananth, 2005a; Ananth, 2005b; and Kumar, 2004; Robin, 2009) or at the local level (Sachichidanada, 2009; Pankaj and Singh, 2005; and Gupta, 2001). Kumar and Ranjan (2009) analyse the 2009 state assembly elections and point out two major factors that contributed to the victory of the ruling Janata Dal (United)–Bharatiya Janata Party coalition. While the developmental policies adopted by the Nitish Kumar led government were critical, they also suggest that the victory was also made possible because of the use of community and caste-based support by the alliance, which the divided opposition could not achieve. At the local level, Pankaj and Singh (2005) find that even though their political hold over state level institutions has decreased, the upper castes continue to dominate the *Panchayats*.

A key difference between those who study the electoral processes at the state level and those who study them at the local level is evident in the literature in this section. While, caste politics is associated with 'empowerment' through an analysis of how the lower backward castes or scheduled castes have performed in local level elections (Kumar, 2001; Gupta, 2001; Thakur, 2003; Pankaj and Singh, 2005). In state level analyses, we see the term mandalisation – connoting a perception of identity politics where it is bereft of any positive transformative potential – crop up frequently. For example, Alam (2009) argues, with reference to state level politics, that Mandalisation of politics in the late 1980s effectively mobilised the backward castes in the state. The coming together of backward castes, Dalits, and Muslims was now ready to script a new chapter in the political history of the state. At the local level, Gupta (2001) points out that though the upper castes or the traditional elites still retain a substantial part of the social and political power at the grassroots level, the 2001 panchayat elections will go down in the history of Bihar as a turning point for the electoral 'empowerment' of the lower backward castes.

Noting that the term Other Backward Classes encompasses a multifarious range of castes, positioned at varied levels of economic, social, and political deprivation, and so cannot be seen as a homogenous category, researchers find that in the 2001 Panchayat elections, the upper OBCs fared better than lower OBCs. Further, even through the representation OBCs in the *Zila Parishads* has increased; traditional elite continue to exercise power in state structures (Majumdar, 2005; Pankaj and Singh, 2005; Thakur, 2003; and Gupta, 2001). Majumdar (2005) argues that despite the provision of enhanced scope for the representation of women and other historically disadvantaged sections of society in the PRIs, most remain mere spectators because of illiteracy and other disadvantages and because of the social context within which the Act was enacted.

Finally, there has been much written about the Rashtriya Janata Dal's defeat in the 2005 and 2009 elections and its replacement by the JD (U) (Pankaj, 2009; Alam, 2009). There is much speculation on what the new government holds in store for Bihar's poor track record of development. Studies in the section allude to the diminished influence of caste-community alliances in the state, and a greater thrust on development (Alam, 2009) but also suggest that caste-community alliance remain critical in ensuring victories (Kumar and Ranjan, 2009). Singh (2005) examines the Congress rule between 1973 and 1985 and argues that it was 'welfare oriented' with a focus on education.

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1. Not implying that it leads to empowerment but often acknowledging the need for the 'empowerment' of certain castes

Sankarshan Thakur (2005) studies the causes for the electoral rise and fall of Laloo Yadav in the state and attributes his defeat to both immediate and long term factors. Pankaj (2010) studies the developmental experiences of Bihar and Madhya Pradesh through a comparative perspective, and finds that economic and governmental reforms at the state level are not regime neutral and that factors like the nature of party politics, political, and ideological positions of the ruling party, its electoral support base, the forces of opposition, and leadership structure of the party, are key to understanding the success and failure of welfare measures.

**8.1 Political Regimes and Economic Reforms: A Study of Bihar and Madhya Pradesh, Ashok Pankaj in Ashutosh Kumar (ed.) *Regions within Regions: Rethinking State Politics in India*, Routledge, New Delhi, 2010.**

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**Key Topics:** *Political Regimes, Party Politics, Economic Reforms, Governance*

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With the unfolding of economic reforms in the 1990s, and, consequently, a decline in the federal control over governance and development at the state levels, the units of federation, i.e., the states acquired greater autonomy in the framing of economic policy. However, in the context of the new economic regimes, some states adopted the reforms policy to change the paradigms of governance and development, whereas, some others remained passive receivers of the new transformation. This may be one of the reasons for the varied performance of states in the post-reform period.

This book chapter points out that Bihar and Madhya Pradesh (MP) are examples in contrasts. While MP improved its growth rate (moderately high) and bettered the demographic features, Bihar witnessed stagnant to negative growth and an overall decline in the quality of human life, at least in the 1990s. The former has received laurels for democratic decentralisation, strengthening of *Panchayati Raj*, decentralised development process, massive literacy drive, drinking water programme, and introduction of e-governance, the latter has drawn attention for deteriorating economic and demographic features, political resistance to reform and change, inability of state to perform basic functions, criminalisation of governance and politics, massive corruption and incessant social tensions.

The chapter examines why, despite having common historical experiences, viz., colonial rule, social similarity in terms of structural and cultural practices, low level of economic development characterised by under-developed agrarian economy, and the same political-bureaucratic structure, the states of Bihar and MP have responded quite differently to reforms in governance and development in the post-reforms period.

Up to 1990, Bihar and MP shared common demographic and economic features, with similar trends in development indicators. However, the story stands changed in the post-reforms period. Major demographic features of MP have registered marginal to substantial improvement in this phase. Its decadal population growth rate declined from 27.2 per cent during 1981-91 to 24.3 per cent during 1991-2001. The sex ratio improved from 912 females per 1000 males in 1991, to 920 females per 1000 males in 2001, still below the national level. Its literacy rate jumped from 44.7 per cent in 1991 to 64.1 per cent in 2001. On the other hand, the decadal population growth rate of Bihar increased by almost five per cent from 1981-91 to 1991-2001. With respect to sex ratio, literacy rate, and infant mortality rate, there was only marginal improvement. Hence, it remained at the bottom of BIMARU states in terms of major demographic indicators. Even in terms of economic indicators (performance), MP has done better than Bihar in the early phase of the reforms. Between 1980-81 and 1990-91, gross state domestic product of MP grew at the rate of 4.56 per cent, on average, per annum, and that increased to 6.17 per cent in the post-reform period between 1991-92 and 1997-98. On the contrary, the average annual rate of growth in gross state domestic product of Bihar declined from 4.66 per cent between 1980-81 and 1990-91 (marginally higher than that of MP's 4.56 per cent) to merely 2.69 per cent, on average, per annum for the period 1991-92 to 1997-98.

The study argues that the ideological and political positions of the ruling parties in the Bihar stood against economic and governmental reforms that demanded dismantling of the state controlled economy and public sector undertakings; phasing out of all kinds of subsidies; and a taxation and investment policy based on the principle of *laissez faire*. On the other hand, since the beginning of the reform phase, the reform-friendly governments of the Congress (1993 to 2003) and the BJP (2003 up to now) have ruled in MP. The Congress party initiated economic and governmental reforms at the federal level, first by making dramatic changes in its own principles and ideologies in the early 1990s, and then its provincial satraps followed the reform policies.

Secondly, an important influence on differential reform commitment of Bihar and MP has been the regional and national character of the ruling parties. The Congress and BJP ruled governments have alternatively propelled the engine of reforms in MP. On the other hand, Bihar, being ruled by a regional political party with an anti-liberalisation ideology, is not inclined towards reforms.

Based on the two case studies (Bihar and MP), the paper argues that the ideological and political positions of the parties and their commitment towards economic and governmental reforms work as an important influence

on their respective governments. A close examination of the reform commitment of different state governments indicates that the Congress ruled states have generally responded positively to reform policies. For example, MP under Digvijay Singh, Karnataka under S. M. Krishna, Delhi under Sheila Dixit, and Rajasthan under Ashok Gehlot have demonstrated greater responses to reform and performed better during the period.

Thirdly, the political electorate base of the Rashtriya Janata Dal (RJD), consisting mainly of OBCs but also of Muslims, Dalits and the poor, makes economic and governmental reforms politically unrewarding. For, the major segments of the RJD vote banks are economically and socially backwards, who are dependent on the state for health and education, their socioeconomic development, and the public and government sectors for protection of job reservation policy. Thus, the apparent hostility of the RJD and its chief to economic and governmental reforms is much more politically understandable than otherwise.

On the other hand, the electorate base of the Congress in MP largely consists of the upper castes, urban middle classes, Dalits and tribals. Since, upper castes and urban middle classes found new opportunity in economic reforms and did not find themselves adversely affected much in terms of job opportunity in the government sector, as fifty per cent of the seats fell in the reserved category, their hopes and prospects lay in the new economic regime.

Fourthly, the divided and weak opposition in Bihar, its unstable social support base, its vulnerability to defection and co-optation by the RJD, and its inability to mobilise masses on the issues of governance and development, has removed the pressure of parliamentary democracy from the RJD government to reform and perform. On the other hand, governments in MP have to respond to the popular pressure well articulated by a strong opposition party.

Fifthly, the two parallel socio-political movements, triggered by the Mandal and Mandir politics, doubly challenged the Congress party in MP. The Congress in MP responded to this new challenge through economic and governmental reforms packaged in a manner to revive the 'coalition of extremes'.

Sixthly, generating political and social consensus through the democratic process is not an easy task, given the fragmented nature of society and politics of Bihar. MP, on the other hand, has remained politically and socially least fragmented. Unlike Bihar, the OBC movement has remained very weak in MP.

Seventhly, while party politics in MP has polarised in terms of the two-party system, Bihar remains a political battlefield for almost all the national parties and a number of regional parties. The coalitions that have been experimented in some recent elections are politically unstable and ideologically incongruent.

Through the case study of Bihar and MP, this paper argues that economic and governmental reforms at the state level are not regime neutral, and that political factors like the nature of party politics, political, and ideological positions of the ruling party, its electoral support base, and the forces of opposition and leadership structure of the party, are important influences.

## **8.2 Bihar: Can Lalu Prasad Reclaim Lost Ground?, Mohd Sanjeer Alam, *Economic and Political Weekly*, Vol. No. 44 (17), pp. 11-14, 2009.**

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**Key Topics:** *Elections, RJD Role*

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The article discusses the possibilities of Lalu Prasad being able to recover his party's predominant position in the state of Bihar, in the 2009 Lok Sabha Elections. It looks at the demography, political economy of social inequalities, and recent political developments in the state, to examine if they have a bearing over the answer about Lalu's future.

The article finds that while Bihar is the third most populous state of India, its social life revolves around the villages. Over three-fourths of its people secure their livelihood in agriculture and allied activities. Agriculture, on which the people of Bihar are excessively dependent in comparison to other states, is not in good shape, with prolonged stagnation over the years. Bihar ranks the second highest amongst Indian states in terms of proportion of population below the poverty line. Society in Bihar has been an ensemble of thousands of individual castes. Political watchers of the state have described these castes to be in constant conflict for social dominance and political power. Despite being numerically lesser, the forward or upper castes have dominated the rule of the state till 1990. The disproportionate access to power enjoyed by the upper castes was a cause of unease and angst among the upper backward castes or middle castes.



It is argued that the Mandalisation of politics in the late 1980s effectively mobilised the backward castes in the state. The backward castes now saw it as an opportunity to capture power decisively as the political moment during the Mandal phase was in their favour. The coming together of backward castes, Dalits, and Muslims was now ready to script a new chapter in the political history of the state. The results of the Lok Sabha elections held in 1989 and assembly election in the following years corresponded to this new script. Consequently, with the decline of the Congress Party, the Janata Dal occupied much of the political space and the party's leader Lalu Prasad became the chief minister of the state, ruling it for nearly 15 years.

Riding on the Muslim-Yadav-Dalit alliance, Lalu Prasad was able to capitalise on a strong support base, but showed little regard to the running of the state and, therefore, was perceived to have failed in taking the agenda of development forward. Even a casual look at the policies/programmes meant for the poor and their implementation suggests that nothing substantial happened between 1990 and 2000 that would have ensured a measure of economic betterment of the toiling masses, leave alone overall socioeconomic development of the state.

The article opines that it can be assumed that land reform, a major political agenda in the state in the early years after independence and what is still regarded as a bona fide pro-poor policy, took a back seat in the priorities of the party in power. On the economic front too, Bihar appeared to paint a dismal picture during the 1990s. Also during the 1990s, the law and order situation worsened considerably and as a result crime rates increased.

Despite failures and widespread perception of worsening state of affairs, Lalu belied the expectations of political observers who had already written him off ahead of the assembly elections held in 2000. The RJD of Lalu Prasad did indeed suffer a jolt having lost 43 seats compared to what it had won in 1995, but it was still the single largest party after the elections. By and large, the RJD's vote bank, particularly Muslims and Yadavs, stood solidly behind it.

The RJD performed even better in the Lok Sabha elections held in 2004. According to the article, two explicit reasons seem to explain this. One, the politics ushered in 1990s brought about a political reconfiguration in the state not only in terms of party politics, but also of political classes and power elites. Second, the patron-client system of voting in which the ryots (tenants) and bonded labourers (mostly Dalits) had to vote to the call of their masters (mostly forward castes landlords), was also dismantled. The breakdown of this system undoubtedly brought about political freedom to a large section of people. One might claim that this political emancipation of the lower castes and Dalits was mere tokenism or symbolism, but it is difficult to deny that once they were able to cast their vote against the will of their masters, they were free from several chains of constraints and were able to assert self-respect and dignity. Lalu Prasad's rule was, thus, the symbol of *izzat* (self-respect). Besides, Lalu Prasad kept the state free of communal riots, which was a recurring phenomenon during the Congress regime.

But the assembly elections held in February 2005, in a sense, stopped, the march of the unchallenged political chariot of Lalu Prasad and his party. He could not recover from this, and finally succumbed to the winds of change that swept the state in the next election held six months later in the same year. The defeat of RJD was described by many as a result of politics in the state taking a new course. In other words, the perception now was that the politics centred merely on caste-community coalitions, had played itself out.

According to the article, a close reading of the verdict, nonetheless, suggests that Lalu Prasad's vote bank did not deplete in any significant way. Yadavs continued to rally behind him. A portion of Muslim voters did drift away yet, largely, the community threw its weight behind him. But the Ram Vilas Paswan factor made a difference by making a dent into Lalu Prasad's core support base. He took away a major part of Dalit and also a part of Muslim voters and won 29 seats in 2005 February election. There is some substance in the argument that if Lalu had reached an electoral understanding or tie-up with Ram Vilas Paswan, the electoral outcome would have been different.

In conclusion, the article finds that since 2005 change is visible in the state. Recent surveys have shown that Nitish Kumar is one of the most popular chief ministers in India. People approve of his policies and programmes taken for the development of the state. Unlike Lalu Prasad who allegedly promoted the phenomenon of Yadavisation, whereby, Lalu Prasad was involved in widespread patronage to members of his caste grouping, no such allegation exists against Nitish Kumar. It is expected that the people might not remain fixated within caste-community appeals. Seen in this context, the article claims that the only thing that appears to be positive for RJD-LJP alliance is that lately people have begun to differentiate in electoral choices between assembly and parliamentary elections.

**8.3 Bihar: Development Matters, Sanjay Kumar and Rakesh Ranjan, *Economic and Political Weekly* Vol. No. 44(39), pp. 141–44, 2009.**

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**Key Topics:** *Elections and Development*

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The article analyses the robust victory of the ruling JD (U)–BJP combine in Bihar in the 2009 elections and argues that the victory owes much to the developmental policies adopted by the Nitish Kumar led government. That said, it also asserts that the victory was also made possible because of community and caste-based support by the alliance, which the divided opposition could not achieve.

The study begins with an analysis of the vote shares of the contesting parties, analysing voting behaviour of different vote banks. It then moves on to examining the importance of alliance formation to the ultimate victory in the elections. It argues that clean record of developmental work by the Nitish Kumar led government, did help in engineering the shift among the voters from different social communities. The Nitish Kumar-led JD (U)–BJP government was positively rated by an overwhelming majority of people on all accounts, whether it was the issue of development, or the issue of controlling crime, or for providing basic amenities to the people like water, electricity, roads, and providing or generating employment opportunities.

The level of satisfaction with the work done by the state government was extremely high. An overwhelming majority, 88 per cent of the people, felt satisfied with the work done by the state government, while only 10 per cent saying they were dissatisfied. The opinion was shared among people cutting across castes and communities. About two-thirds of voters in Bihar rated the JD (U)–BJP government better compared to the previous RJD government for developmental work. Though this was the Lok Sabha election, the voting decision of voters was guided more by the performance of the state government compared to the performance of the central government. Since a large majority of people had rated the performance of the state government positively, the ruling party also became a preferred choice of a large number of voters giving a decisive edge to the JD (U)–BJP over the RJD–LJP alliance. The clean image of the present chief minister Nitish Kumar also added to the popularity of the JD (U)–BJP alliance. Not surprisingly, 69 per cent voters rated Nitish Kumar as the best chief minister Bihar had during the last 20 years.

The article reflects that elections for the state assembly are due in 2010 and the results of the 2009 Lok Sabha would certainly have a bearing on the future. The morale of the JD (U) and BJP is high. They are looking forward to a second term in office. Going by the trend of the recently concluded Lok Sabha elections, there is hardly any doubt that the present JD (U)–BJP government would retain the power in the state. But that would be possible only if the NDA would contest the forthcoming assembly elections without any shift in alliance. The BJP has been a trusted ally of the JD (U) in Bihar for quite some time. Though the BJP is a junior partner, it has its own substantive support base. The two parties complement each other and that is the real source of strength of this alliance. The article claims that breaking off the alliance with the BJP would certainly shift a sizeable section of the Muslim vote in favour of the JD (U), but at the same time there would also be fear of losing sizeable upper caste votes.

**8.4 Development versus Democratic Essence: Voters' Preference in Assembly Elections in Haryana and Bihar, Ashok Pankaj, *South Asia Research*, Vol. No. 29(2), pp. 169–70, 2009.**

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**Key Topics:** *Elections and Development, Democracy*

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The paper examines the outcomes of the elections in Haryana and Bihar in 2005 and argues that the results seem to indicate a growing concern with democratic values over developmental issues, amongst the electorate.

The paper begins with outlining the key trends in political and voting behaviour in the country. It points out that, firstly, anti-incumbency votes have become almost a rule of electoral behaviour, other than the May 2009 election results. No ruling party of a coalition has been re-elected at the federal level since 1989. This has been the trend at the state level as well, with the exception of the CPI(M) in West Bengal, Congress in MP, RJD in Bihar, Congress in Delhi, and BJP in Gujarat. Secondly, regional sub nationalism has emerged as a strong political force in some states like West Bengal, Tamil Nadu, Assam, Punjab, Jammu and Kashmir, Maharashtra and Gujarat. However, this does

not operate consistently as a determinant of voting behaviour. Thirdly, the shifting patterns of social coalitions and voter's realignments, more often than not, are guided by immediate contexts and issues. Old and erstwhile state social coalitions have given way to more fluid and unstable ones, both at the state and at the national levels. Fourthly, the state electoral arena appears to be reasonably insulated from national political and electoral priorities, as caste, community, and personalised following of leaders have overshadowed institutionalised party politics. Finally, the paper argues, 'the recent voting trend in India defies a well established principle of voting behaviour of western democracies, namely that the more well to do the population, the greater interest and participation there is in democratic elections.' (pp. 174)

The Indian electorate attaches a great deal of importance to democracy, according to the paper, and participation in democratic elections is one indicator of such faith in democracy. Deinstitutionalisation of party politics notwithstanding, voters' turnout in successive elections has actually increased. The paper presents two major arguments to explain this phenomenon, first, that the Indian masses have internalised political democracy as a source of authority and view the government as a protector, moderniser, liberator, and arbiter. Second, that the 'newly awakened plebeian order has realised the liberating potentialities of democratic elections.' (pp. 176) They see the electoral process as their main instrument of social and political mobility.

Anti incumbency has traditionally been strong in Haryana. Except for the first 3 Assembly elections (1967, 1969, and 1972) that returned the Congress, the ruling parties have always lost the ensuing Assembly elections. The paper points out that when measured in terms of the nature and magnitude of the defeat of the ruling parties, the anti incumbency factor worked most strongly in the 1977 and the 2005 elections. In 1977, the Janata Party won 83.33 per cent of the Assembly seats after defeating Congress and in 2005 the Congress won 74.44 per cent of the seats when it defeated the Indian National Lok Dal (INLD). The common contributor to anti incumbency in both elections (1977 and 2005) is the 'perception of subversion of democratic rule by democratically elected government.' (pp. 177) In 1977, it was the imposition of the national emergency and in 2005, it was the "undemocratic and authoritarian style of government by the INLD under a seemingly constitutional government that caused defeat.' (pp. 177)

Whereas, the electorate clearly chose the Congress in Haryana, in Bihar the mandate was more fractured and indecisive. Also, the dominant issue in Bihar was whether the RJD deserved a fourth tenure after years of misrule. The RJD regime was marked by development failures such as poor law and order, high levels of crime, and corruption and criminalisation of governance and politics, stagnant economy and a decline in per capital income. However, a large number of voters agreed that the RJD regime resulted in social and political empowerment of Dalits, OBCs, and Muslims. Whereas, the verdict in the February 2005 election was fractured and indecisive, it was clear in November 2005, the JD (U) alliance won a decisive victory. The paper outlines various interpretations of the mandate, including a vote to end the misrule of the RJD, a vote against subversion of democratic politics by the Raj Bhavan and against the imposition of President's Rule in the state, and a positive mandate to the NDA for governance and development of the state. However, the paper stresses on the fact that the November 2005 mandate might have been at least partly against subversion of democratic politics and the imposition of President's Rule, which was subsequently declared unconstitutional in the state.

The paper concludes by arguing that the two Assembly elections indicate the ongoing trend of substantialisation of India democracy. The electorate seems to have internalised the importance of democratic issues. There is, thus, an increasingly strong realisation that there cannot be a trade off between development and democracy, and that even formal and electoral democracy means much more to the common people of India.

### **8.5 Bihar: New Stronghold of OBC Politics, Cyril Robin in Christophe Jaffrelot and Sanjay Kumar (eds) *Rise of the Plebeians?: The Changing Face of Indian Legislative Assemblies*, Routledge, 2009.**

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**Key Topics:** *OBC Politics, Legislative Assembly*

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This chapter in an edited book on the changing face of the Indian Legislative Assemblies explains the rise of the lower castes in Bihar starting with the historical trajectory of Bihar. It deals with Bihar in its two successive incarnations, before and after the creation of Jharkhand in 2000. Based on secondary data, the paper is divided into various

sections, namely, social profile of Yadavs of Bihar and Tribals of Jharkhand, peasant movements and semi-feudalism, the rise of the OBCs in 1967, the Janata Phase, the triumph of the coalition of extremes, the rise of the Janata Dal to power, and the weakening of the social justice factor.

The study finds that in the entire range of the Hindi belt, Bihar stands as an exception in terms of caste arithmetic because of the large proportion of the Yadavs, an OBC caste, representing more than 11 per cent of the population. In post-2000 Bihar, Yadavs are ever in a larger number with almost 15 per cent of the total population. The most striking difference between the post-2000 Bihar and Jharkhand is the high proportion of STs in the latter. In 1991, the STs represented 31.3 per cent of the population in the districts which were to form Jharkhand.

The study points out that the representation of the higher castes among Congress MLAs declined from 51.2 per cent in 1952 to 49.2 per cent in 1962. In the Vidhan Sabha, the percentage of these caste groups was 46.1 per cent of all the MLAs. The lower castes remained a neglected lot which was used to fill in the lack of numerical strength of the upper caste dominated factions in a clientelistic framework. Their leaders were co-opted to mobilise various caste groups in favour of the ruling castes, especially at the time of elections. But this arrangement contributed to their promotion, especially when faction fights became more intense within the Congress.

Between 1957 and 1962, the percentage of upper OBC MLAs increased by 4.1 percentage points. Gradually, low caste political leaders built support structures and began to ask for more power. This change was prepared after the OBC caste groups understood the advantages they could derive from the introduction of universal suffrage and later from the publication of the Backward Classes Commission Report in 1955, which got the OBC elite to change its emphasis from social activities to political mobilisation, a ground for the emerging polarisation of Bihar politics between the Forwards and the Backwards.

According to the study, the alliance between the Congress Socialists and the Kisan Sabha then resulted in a strong class-oriented peasant movement and the two started agitating for the complete abolition of the zamindari system, considered as an obstacle in the way of economic and social advancement of society. The first turning point of this process took place during the 1967 elections, as evident from the social profile of the MLAs who were then returned in Bihar. Whereas, the percentage of the upper caste MLAs decreased from 46.1 per cent to 44.8 per cent, for the first time since 1952, that of the OBC MLAs rose from 23.5 per cent to 26 per cent.

In 1967, the OBC MLAs constituted 40 per cent of the SSPs elected members and among them 22.9 per cent were Yadavs. Within the Vidhan Sabha, the Yadavs emerged as the second largest group, equal to Bhumihars, with 11.6 per cent, after the Rajputs (17.2 per cent). The largest groups of OBC MLAs, comprising the Yadavs, the Koeris and the Kurmis, belonged to the upper layer of the OBC; they were the ones who had benefited from the land reforms and had become landowners.

The process of party political democratisation in Bihar has had a substantial impact on the representation of the OBC in the Vidhan Sabha. In the late 1980s, the Janata Dal took shape in Bihar as the political heir of the Janata Party. The victory of the Janata Dal under the leadership of Ram Sundar Das and Laloo Prasad Yadav in Bihar in 1990 was revealing of the disintegration of long-established patterns of vertical mobilisation and highlighted the coalescence of disadvantaged social groups. The very fact that in 1990, even the Congress(I), notoriously associated with the upper castes, had to nominate a record number of 105 Backward Classes candidates (to confront the Janata Dal OBC candidates), including 80 candidates from the upper OBC, gave an unmistakable signal to the upper castes that the days of their reign were numbered. After the Janata Dal came to power in 1990, Bihar became the first stronghold for OBC politics.

The OBC are a very heterogeneous category, and, in Bihar, the castes which benefited from this political empowerment belong to the upper strata of the OBC. They are mainly Yadavs from the small middle landowners' class, thereby comprising the economic elite of the category. The gradual political empowerment is, therefore, confined to a very limited section of the OBC experiencing some upward social mobility, and small labourers and landless peasants have been left out of any social upliftment. Indeed, Laloo Prasad has better understood than any other political leader that 'politics organised around interests do not have the benefit of the kind of popular mobilisation

that electoral and party politics produce. He has instrumentalised the Backward movement so that the main goal was not the elimination of caste discrimination but the coming to power by the instrumentalisation of this discrimination. The way Laloo Prasad reached power was indeed due to the mobilisation of caste through the backward identity. The notion of social justice only corresponded to the removal of the upper castes from government in favour of the Backward Castes, mainly the Yadavs. Thus, the idea of social development was not contained in the concept of social justice. Social justice meant the identity movement for the political upliftment of some Backward Castes. As a result, the social coalition of OBC, SCs and Muslims, that supported RJD from 1990 onwards, fell apart as the government did not take any economic and social measures in favour of the non-elite categories. Therefore, the RJD-led Secular Democratic Front (SDF) — RJD, INC, NCP and CPI-M — lost the elections in November 2005 in favour of the JD (U)–BJP combine. This new era in the politics of Bihar probably announces a new kind of caste politics.

### **8.6 Grassroots Democracy at Work: A Study of Panchayat Elections, Ravindra Kumar Verma, Mahaveer and Sons Publishers and Distributors, New Delhi, 2009.**

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**Key Topics:** *Grassroots Democracy, Panchayati Raj Institutions*

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Our country has witnessed the revival of active grassroots democracy in the mid-1990s and in Bihar in 2001 owing to introduction of new PRIs under the 73rd Constitutional Amendment Act. It is in this sense that this book examines the working of grassroots democracy in rural India in its three pronged dimensions of operative democracy at the grassroots level, namely, the people, political parties/voluntarism, and the electoral process. The book encompasses four major perspectives: (i) the people, in the context of political participation, political socialisation, perceptions of the leadership, and voting behaviour; (ii) tracing the historical accounts of emergence of political leadership at the grassroots level in the social milieu; (iii) the third perspective is concerned with the political actors, particularly the latent role of political parties and organised voluntary efforts for political sensitisation of the weaker sections in the revival of the grassroots democracy; and (iv) finally the electoral process in which the election conducting machinery interfaces the challenges of candidates and the electorate and the opinion of the people on the functioning of the electoral mechanism.

The major objective of the present work was to examine the various dimensions, reflected through panchayat elections held in the typical socio-political milieu of Bihar. It has further examined the politico-legal arrangements and intersections of the social and political variables in the state of Bihar related to elections to the panchayat bodies. With this major objective in view, the book has examined the historical account of evolution of *panchayati raj* institutions in Bihar, the whole electoral process in terms of procedure, machinery, candidature and electorate, the role of lower level organisations of the political parties as well as voluntary organisations in terms of pre-election awareness among weaker sections, and its structure and functioning. It has analysed the opinion of the electorate on expectations from their local level political leadership and also from the candidates.

The present study has been based mainly on primary source of data collection. A survey was conducted in six villages of the three selected districts, namely, Rohtas, Patna and Bhagalpur, which were selected on the basis of development parameters and geographical features. Two villages from each district were selected keeping in mind that one village falls in the developed category and the other in the backward category. Altogether 342 respondents (inclusive of candidates) were interviewed and the purposive sampling method was mainly utilised.

It was found that there was a significant impact of socioeconomic and political factors on the pattern of village leadership and power relations over the period from 1793. The major landmark years of the changes in the pattern of political leadership were 1973, 1912, 1947 and 2001 onwards. Each periodical phase had different socioeconomic characteristics of political leadership and power concentrations at the societal level. The factors of change were the land tenure pattern, introduction of small industries, and democratic experiments. It has found in the study that people's political participation has been increased rapidly in the post 73rd amendment period and the weaker sections are now more enthusiastic in political roles rather than people from the general categories.

**8.7 Subaltern Saheb: Bihar and the Making of Laloo Yadav, Sankarshan Thakur, Picador India, New Delhi, 2006.**

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**Key Topics:** *Laloo Prasad Yadav, Politics, Development, Empowerment*

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This book, first published in 2000 as 'The Making of Laloo Yadav: The Unmaking of Bihar', was republished after the 2005 state elections in Bihar, where Laloo Yadav suffered a loss. The study revisiting this subject six years after the original book chronicles the rise and fall of Laloo Prasad Yadav. The book, through examining the major events surrounding the rise and fall of the leader, from initiation into politics during college at the peak of the socialist movement in Bihar, to his surprising victories in the Bihar assembly elections, his style of working as chief minister, to his eventual loss in the 2005 assembly elections, attempts to understand the phenomena of Laloo Yadav, and the reasons for his numerous successes and more recent fall in politics.

The book begins with a description of the state of development in Bihar at the time and writes, 'Laloo Yadav promised a dream and delivered a nightmare... for forty years before him the state had suffered abuse and exploitation at the hands of the leaders... then Laloo Yadav arrived chanting change in mesmeric tones. But all that did was unleash a continuum. He inherited mess and contributed chaos to it, like a typhoon visiting the ravages of a quake and mangling the remains' (pp. 2-3). In Chapter 2, appropriately titled, 'I am the State', the book presents a portrait of Laloo Yadav at the peak of his popularity, at the end of the 1990s. It notes, 'Laloo Yadav's politics was an angry revolt against sahebdom, against the age old order appointed by the upper caste haves in Bihar. But in time, he became the biggest sahib of them all. He was like no other Chief Minister Bihar, or even the country had ever seen before.' (pp. 24).

In the subsequent chapters, the book delves into the Laloo Yadav's style of functioning as the chief minister and his famous unorthodox approach to state formalities. In 'Charvaha in a Chopper' the book points out that, 'His daily morning durbar at the Patna Veterinary College... was a court of instant justice. He was a bit of a Robin Hood, eager and in a hurry to distribute the goods of the state. But was this the real Laloo Yadav? The answer would take a while coming, and for those who had hopes from him, it wouldn't be a pleasant one.' (pp. 93). The book describes the politician's high ambitions of rooting out the three major ills that had plagued the Congress raj – corruption, criminalisation, and the breakdown of communal peace – through strengthening the state's vigilance department, strengthening security in both Patna and Ranchi headed by a commissioner of police, and the creation of an anti riot police force. None of these ambitions were ever realised, perhaps because, as the author writes of him, 'planning bored him, perspective was too big a word, for deliberations and thought he had no patience.' (pp. 94).

By the mid-1990s, even though some dissenting voices against the prevailing 'Laloomania' could be heard pointing out that Laloo Yadav's rule only represented a change in the guard and not any real change in the state, he remained immensely popular and won a resounding victory in the 1995 assembly elections with 164 seats in a 324 member Bihar assembly, a majority of which were won on his own.

The book argues that the end of the prevalent 'Laloomania' began with the 'fodder scandal' of 1996 with allegations of excess fund withdrawals from various branches of the government's animal husbandry department, most located in south Bihar (now Jharkhand). Between 1997 and 2000, as he struggled to hold his seat in power, he often likened his situation to that of Krishna and said, 'I am fighting the battle for Hastinapur. Like Krishna, the milkman's son, who fought for the Pandavas, I am fighting for the underprivileged of Bihar. In this battle all is fair' (pp. 154). However, as the book points out, he became so preoccupied with retaining his hold over power that his initial ambitions of ending years of Congress misrule, giving Bihar a fresh start, and of ending years of exploitation of the lower castes, were forgotten along the way. The book notes, 'the fodder scam became a watershed. After it broke in 1996, Laloo Yadav became so preoccupied with clinging to power that he stopped bothering about whatever little he used to on the administrative side, even schemes or programmes that might have helped him politically.' (pp. 164)

One of his biggest achievements while in power was that he managed to put an end to communal riots in the state. However, the same could not be said for caste wars. In fact, during his time, caste wars increased manifold and the killings became more frequent. For example, in the decade before he came to power, 841 people died of caste related killings. However, in the fifteen years that he was in power, the number rose to close to 1,500. The book argues that this is possibly because he never went to the root of the problem which was essentially two fold, age old inequity

and the urgent need for land reforms. He saw frequent caste wars as either a law and order problem to be tackled by the police, or even as a conspiracy of his enemies!

In the concluding chapter, the book provides an insight into reasons for Laloo Yadav's eventual defeat, locating them not only in immediate factors but also longer term causes such as his extended tenure of misrule, 'his coterie and his shadowy charmed circle... his little dynasty... his greed for power' (pp. 217). However, according to the book, the most important reason of his eventual loss in 2005 was that he failed to meet any of his early promises and turned out no different than Jagannath Mishra, whose misrule he had promised to end at the start of his political career alongside Jayaprakash Narayan in 1990.

**8.8 Dawn of New Caste Battles?, V. Ananth Krishna, *Economic and Political Weekly*, Vol. No. 40 (49), pp. 5142–44, 2005.**

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**Key Topics:** *Politics and Caste Battles*

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The article attempts to analyse the political situation in Bihar at a time when the Lalu Yadav-Rabri Devi regime had long lost its legitimacy, and asks if the new government can really herald a new dawn in Bihar?

The paper points out that the election results only formalised the end of Lalu Yadav's hold on Bihar, the process had begun five years ago. Nitish Kumar could have become chief minister of Bihar in February 2000 itself. However, the Samata Party leader, Nitish Kumar decided in 2000 that even if he bartered ministerial berths in return for support from the independents and the 23 Congress MLAs, he could only survive on a day-to-day basis, for the motley combine would only have a bare majority in the assembly. Moreover, he would have trouble keeping his own party colleagues happy without accommodating them in the cabinet. So Nitish Kumar refused to compromise on principles and stepped down from the chair within a week of being sworn in.

Lalu Prasad Yadav, meanwhile, was prepared to pull out all stops to ensure that his wife, Rabri Devi, remained chief minister. Lalu Yadav promised cabinet berths to all the 23 Congress MLAs as long as all of them agreed to follow the high command's order that it was their duty to rally behind Rabri Devi in the defence of secularism.

According to the article, after having led the Janata Dal to a sweeping victory in the 1995 elections, Lalu Yadav's RJD, however, had lost the mandate in the 2000 elections. The RJD's strength went down from 167 to 124, a loss of 43 seats. And these were gains for the Samata and the Janata Dal (U), who together secured 54 seats while the BJP's strength increased from 41 to 67.

The analysis reveals that the February 2000 verdict was the culmination of a process determined by three major factors: first, that the Lalu Yadav agenda of social justice through affirmative action, initiated in Bihar from the time Karpoori Thakur was chief minister in 1970 and furthered as a political project in the post-Mandal era, was losing its cutting edge. The second feature that influenced this process was the consolidation of the upper castes behind the Janata Dal (U)-BJP combine. This, indeed, was a significant development and its roots could be traced to the mobilisation against Mandal on the streets. The most decisive factor in this regard was the consensus of sorts that appeared among the upper castes to rope in sections of the OBCs and even concede the political leadership to an OBC leader. The evolution of Nitish Kumar as the leader of the anti-Lalu Yadav forces was of critical importance in this process: a phenomenon that V. P. Singh would describe as the Mandalisation of the political establishment. The third factor responsible for the decline of Lalu Yadav lay in the foregrounding of the slogan of development by the JD (U)-BJP combine.

Nitish Kumar had played his role in the social-engineering framework, which is not the same as the agenda of social-justice enunciated by Ram Manohar Lohia. Rather, than empowerment of the OBCs in the political sense, the end-game of social engineering, is to rework the socio-political agenda to ensure the continuance of the upper caste hold over the political establishment by co-opting individual leaders from among the backward castes, and even accord them positions of prime importance.

According to the article, with Lalu Yadav out and Nitish Kumar in, the upper castes who had lost their control over the social, political, and other institutions of the democratic state in the post-Mandal era and will now be waiting to wrest full power in Bihar. A political and an ideological challenge to the remnants of the feudal era is now an important factor that guides the political discourse in Bihar. The social groups that backed Nitish Kumar and

helped him replace Rabri Devi will now want him to treat the CPI (Maoist) challenge and other such assertions of democratic rights as a problem that needs to be tackled quickly and with an iron hand. They are bound to pressure Nitish Kumar to treat the Ranvir Sena with compassion. In conclusion, the article suggests that it will be a long way before all the people of Bihar are in the democratic mainstream. It will take a while before civil society is revived and the rule of law is established.

**8.9 Assembly Election Results: Another Churning in Bihar, V. Ananth Krishna, *Economic and Political Weekly*, Vol. No. 40 (10), pp. 925-928, 2005.**

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**Key Topics:** *Election and Politics*

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The article highlights that the outcome of the polls in Bihar and Jharkhand has landed the Congress-led United Progressive Alliance (UPA) in a crisis. It tries to unfold the reasons for its downfall and also attempts to point out the possibilities of the future political scenario in the state. The paper presents a few options before the AICC president to keep the 'secular' coalition going in Bihar. It argues that Sonia Gandhi could reject Ram Vilas Paswan's demand that Bihar be placed under central rule for now. This will provoke Paswan to walk out of the union cabinet. The ruling coalition's strength in the Lok Sabha will be 4 less than what it is now. That by itself may not affect the longevity of the combine. The other option before Sonia Gandhi will be to stand up for Paswan and convey to the Bihar governor Buta Singh that the party favours central rule for a while. While this will depend on how far the Janata Dal (United) and its leader, Nitish Kumar, would go to manage the shortfall and cobble up a majority in the 243 member state assembly; by making any such moves, Sonia Gandhi will end up antagonising Lalu Prasad.

On probing into the reasons for the political crisis in Bihar, the paper finds that the fall in the RJD's strength in Bihar, from 115 MLAs in the previous assembly to 75, and the fact that the RJD lost seats to every other party shows the level of discontent in the state. Lalu's party lost as many as 40 seats. And even if the RJD leader counts the 10 MLAs of the Congress, 3 each from the NCP and the CPI, and the lone MLA of the CPI(M), the combined strength is far too short of a majority in the 243 member legislative assembly. The mandate is against the Lalu-Rabri regime that led Bihar into a cesspool of corruption and lawlessness. The verdict is against a political culture that reduced the concept of affirmative action and the ideal of social justice to slogans.

The article contends that given the fact that the political discourse and voting pattern in Bihar had, for some time now, been guided by the sharp polarisation of forces between the pro- and anti-Lalu forces, the divisions within the UPA cannot be held as the only factor behind the poll outcome. In other words, the JD (U)-led combine (of which the BJP is an integral part) has emerged as an alternative in Bihar. This began to take shape even in February 2000. That was when Paswan was part of the JD (U) and campaigned against the Lalu-Rabri regime along with Nitish Kumar's Samata Party. The Samata-JD (U)-BJP combine came close to forming the government then, but Lalu managed a majority by gathering around him all the independent MLAs and the 24 MLAs of the Congress and, thus, ensured the RJD another term in power.

However, according to the article, Lalu's biggest blunder was the way he alienated Ram Vilas Paswan. This turned out to be his unmaking. The point is that out of the 29 seats that the LJP has won, 14 were wrested from the RJD. The LJP had not only snatched assembly seats from Lalu, but also contributed to the RJD's defeat across the state. While in north Bihar, the split of votes between Lalu and Paswan helped the BJP win at least one-third of its total score (the party won 37 seats) in central Bihar, it helped Nitish Kumar's JD (U) wrest as many as 21 seats from the RJD. If only Lalu had been less arrogant and had enlisted Paswan to campaign with him, the duo could have made a lot of difference.

In addition to these factors, the article finds another factor that worked against Lalu was the recent merger effected by some of the far-Left groups. The CPI-ML(Maoist) has emerged as a powerful platform both in terms of the area of influence and possession of weapons. True, it did not contest elections. But the fact that they had merged and, hence, become more powerful than they were earlier, led to heavy deployment of central forces in Jehanabad, Aurangabad, Gaya, and Sasaram districts during the poll campaign and more so on polling day. The poll results have shown that it is Nitish Kumar and his party, the Janata Dal (United) that has improved its performance substantially.



The JD (U) was down after the reverses it suffered in the Lok Sabha elections. Similarly, the CPI(ML-Liberation), has managed to retain Sahar and Karakat and wrest Sandesh and Paliganj from the RJD.

The paper also points out the possibility that a Left alternative, however, can happen if the leadership of the CPI(ML-Liberation) and that of the CPI(ML-Maoist) gather the necessary courage and wisdom to initiate a political dialogue between themselves. And if that happens, large tracts of Bihar will witness a new churning. When that happens, there could be ample space for the heirs of the popular upsurge that rocked parts of Bihar after August 1942, as well as those who worked towards the ideal of democratic socialism in Bihar.

The paper concludes that, in Bihar, it was Lalu Prasad's notions of infallibility that have ended 15 years of misrule. What is interesting is that the shake-up in India's second largest state opens the scope for a Left alternative, provided the radical groups join hands.

### **8.10 *Emerging Grassroots Power: A Critique on Elections to the Panchayats and the Municipalities in Bihar*, M. L. Majumdar, Concept Publishing Company, New Delhi, 2005.**

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**Key Topics:** *Panchayati Raj, Municipality, Elections, State Election Commission*

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The author of the book, who was the State Election Commissioner of Bihar, in 2001, when elections to the *Panchayats* and the Municipalities happened for the first time in two decades, argues that if clear and unambiguous instructions are given to the district administration and that if the concerned authority takes responsibility for its decisions, the district administration can, in fact, rise to the occasion and carry out the instructions of the Commission in their entirety. Through the book, the author uses his own personal experience as a part of the state bureaucratic machinery to illustrate the working of the election machinery in the state, especially at the local levels, in both the rural and urban contexts.

The author took over as the third State Election Commissioner of Bihar in September 2000, and prior to writing the book, conducted two general elections, one to the rural and the other to the urban local bodies, all within a period of one year after an absence of elections for close to two decades. The book begins by a study of the election process by outlining the structure of the *Panchayati Raj* Institutions (PRIs) and the State Election Commission (SEC). It then outlines some of the key challenges he faced at the initial stages of the 2001 elections. For example, except delimitation of constituencies, revision of voter lists, and the selection of polling stations, the SEC did not frame any detailed guidelines for the conduct of the election. One of the biggest challenges to this work came from the political leadership of the state, which expected all government officials to work for them and according to their rules. Accordingly, one of the biggest tasks at the outset of the election was to establish the credibility of the SEC, which even though it was more than six years old at the time of the election, was without any experience of conducting Panchayat elections. The book points out that in the absence of any local elections in the state for more than two decades, even a large number of state government departments, let alone the common people, were not aware that a SEC existed.

The book then goes on to describe the later stages of the election process, pointing out that while the SEC has a small manpower base, with only three officers from the State Civil Service to assist the Commissioner, the entire district administration and also the officers and staff of various departments of the government who are posted in the field, are at the disposal of the SEC for the duration of the election. In fact, the book elaborates that the Commission did not face any problem in utilising the services of the District Magistrates (DMs). Moreover, the state government also extended its full cooperation to the Commission in the conduct of the election. It further points out that while initially the district administration was sceptical about holding elections to the *Panchayats*, once it became apparent that the elections to the *Panchayats* was to be a reality, the entire field administration, both civil and police, did their job commendably, especially regarding the coordination between the two.

However, the State government's reluctance to act on the recommendation of the Commission against certain officers continued till election to the municipalities, till as long as 2002. The book narrates a particular incident, which gives the reader an insight into the politics between different arms of the government. During the election to the *Panchayats*, it was noted that 7 DMs and 2 Divisional Commissioners were not up to the mark and the Commission recommended that they be transferred at the time of the elections. The government transferred 2 of the

Divisional Commissioners and 5 of the 7 DMs but remained silent on the issue of the 2 remaining DMs. The author refused to conduct elections in the two districts where the DMs were not transferred. The government informed him that they would transfer them once the elections were over. Ultimately, the two DMs were given leave for the period of the elections and rejoined immediately at the end of the election. However, once the municipal elections were announced, the author once again refused to hold elections in those districts till the DMs were transferred. The DMs were eventually transferred and elections took place. This incident is a microcosm of the issue that the book deals with, of how different parts of the government must engage and work with each other, and the hurdles faced by various government departments in carrying out their duties.

In the subsequent chapters, the book outlines the process of the local elections in 2001, examining their fairness, incidents of violence in the elections, the implementation of reservation, among others. It concludes that the elections to the PRIs and the Urban Local Bodies (ULBs) in Bihar were reasonably fair in 2001, and the scale of violence was not as great as initially projected. Secondly, while the state level political leadership has been detached from the reality of grassroots politics for a number of decades now, the holding of local elections has introduced, '...a sense of panic and nervousness in the State leadership after the successful elections to the PRIs/ULBs (pp. 177). The book points out that the new opportunities for women to become members of the PRIs has led to great changes in rural Bihar and at the time of the elections, women voters came out in large numbers.

The book concludes on a positive note by stating that once they are given the opportunity (in this case through the holding of local elections), anyone can make their presence felt, as has been demonstrated in rural Bihar. Clearly, the denial of the democratic right of local self government for over 2 decades had created widespread dissatisfaction among the people and '...no government in future can ignore the hopes and aspirations of the common people' (pp. 177).

### **8.11 The Changing Socio-Political Profile of Local Political Elites, Ashok Pankaj and Mahendra Prasad Singh, *Contributions to Indian Sociology*, Vol. No. 39(3), pp. 407–28, 2005.**

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**Key Topics:** *Panchayats, Caste, Class and Elite*

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The article examines the changing socio-political profile of *Panchayati Raj* Institutions' representatives in Bihar. It argues that the political assertion of the upper backward castes, Yadavas, Koeris, and Kurmis in Bihar dates back to the pre-Mandal period. The OBCs are not a homogeneous socio-political community since they comprise both dominant and deprived castes, and that the upper castes, despite losing political ground at the level of the Vidhan Sabha and Lok Sabha, have been able to retain their foothold at the grassroots level, as demonstrated by their substantial representation in the PRI elections of 2001. This has significant implications for the political economy in a period of democratic devolution and decentralised development. More importantly, it explains the violence ridden politics of the state. Besides social and economic disparities, there is considerable mismatch between political dominance in the upper tiers and at the grassroots levels of Indian society.

The article points out that in the context of the shift from a state-centred/centrally commanded model of development to a society centred/market oriented model, with the state as a facilitator or at most a regulator (a far cry from the interventionist state of the past), a new and more effective role in the process of decentralised development is now being advocated for the PRIs. Globalisation has tended to weaken the nation-state and facilitated a greater play to global, regional, and local forces in political and corporate governance. In India, democratic decentralisation (through PRIs) is considered a desirable mechanism for mitigating the increasing economic and regional disparities that result from the new model of development and ensuring that the dividends are more equitably distributed, to make development socially and ecologically sustainable.

It shows that the caste profile of *mukhias* of the *panchayats* elected in 1978 broadly testifies to the political hold of the upper castes at the grassroots level. For example, while it is generally believed that the political empowerment of the OBCs is a post-Mandal phenomenon, even in the 1978 *panchayats*, the OBC *mukhias* easily outnumbered those belonging to upper castes. Out of a total of 7,662 *mukhias* in 40 parliamentary constituencies of now-divided Bihar, 3,136 (40.92 per cent) belonged to the upper castes; 2,921 (38.12 per cent) to the upper backward castes; 302 (3.94 per cent) to the lower backward castes; 101 (1.31 per cent) to the Scheduled Castes; and 24 (0.31 per cent) to the Scheduled

Tribes. Among minority religious communities, Muslims accounted for 811 (10.58 per cent) of the *mukhias*, and Sikhs and Christians for merely 0.06 per cent and 0.01 per cent, respectively. Among the upper castes, Rajputs and Bhumihars had proportionately larger shares, with the former getting 1,277 (16.66 per cent) and the latter 1,038 (13.54 per cent). Brahmins were placed in the third position with 709 seats (9.25 per cent) and Kayasthas fourth, with 101 (1.31 per cent). The most interesting part of this story, however, was the representation of upper and lower OBCs, whose combined strength of 3,223 (42.06 per cent) marginally outnumbered the representation of upper castes, with 3,136 (40.92 per cent). This belies the general assumption that the political ascendancy of the OBCs has been a post-Mandal phenomenon in Bihar.

The article notes that party affiliations of elected *mukhias* demonstrate that the Congress party maintained its political dominance at the grassroots level, even though its political strength in the Lok Sabha and Vidhan Sabha had declined considerably by 1978. Moreover, when the 1978 panchayat elections were held, the Congress party had lost power at the centre and in the state as well. Nevertheless, it managed to get 3,337 out of 7,694 (43.37 per cent) of the *mukhias* elected on its platform. Its political supremacy at the grassroots level was unparalleled as no other party could get even half of the numbers bagged by the Congress. The Janata Party was in second position with 1,336 *mukhias* (17.3 per cent), followed by the Lok Dal with 765 (9.94 per cent). The BJP could get only 254 (3.30 per cent).

For the 2001 panchayat elections, caste-wise data are available for 7,120 out of 7,892 *mukhias*, 1,160 members of *zila parishads*, and all 37 chairmen of *zila parishads*. While the upper castes comprised 40.92 per cent of total *mukhias* elected in 1978, their strength declined to 34.0 per cent in 2001. This decline (of almost 7 per cent) seems to be more or less evenly distributed among all the constituents of the upper castes. For example, the strength of Bhumihar *mukhias* declined from 13.54 per cent to 12.1 per cent; that of Rajputs from 16.66 per cent to 13.4 per cent; that of Brahmins from 9.25 per cent to 7.7 per cent, and that of Kayasthas from 1.34 per cent to 0.8 per cent. On the other hand, the strength of the OBCs registered an increase from 42.06 per cent in 1978 to 45.7 per cent in 2001, an increase of 3.64 per cent. As against the case of the upper castes, all of whose shares declined, the increase in the OBC share was entirely grabbed by the upper OBCs. For example, they improved their tally from 38.12 per cent in 1978 to 41.8 per cent in 2001, an improvement of 3.68 per cent (exactly the enhancement of the share of OBCs as a whole). On the other hand, the strength of the lower OBC *mukhias* remained almost stagnant. 3.94 per cent in 1978 and 3.90 per cent in 2001.

The article finds that among the upper OBCs, Yadavs stood out as the principal beneficiaries, increasing their tally from 20.22 per cent in 1978 to 24.2 per cent in 2001. Other upper OBCs, that is, Koeris and Kurmis, gained only marginally by 0.95 and 0.98 per cent, respectively. Like the lower OBCs, the Scheduled Castes and Scheduled Tribes could not improve their representation at the panchayat level. The share of SC *mukhias* declined marginally from 1.31 per cent in 1978 to 1.06 per cent in 2001, while that of ST *mukhias* improved marginally from 0.31 per cent in 1978 to 0.5 per cent in 2001. Apart from Yadavas, Muslims were successful in improving their strength, from 10.58 per cent in 1978 to 15.6 per cent in 2001, a gain of 5.02 per cent, which was the largest by any caste or community. Even the Yadavas could gain by only 4 per cent.

According to the article, another remarkable fact was that the Muslims were able to enhance their representation to approximately the level of their share in the total population of the state. Almost the same trend could be seen among *zila parishad* chairmen and members, except for the fact that Yadavas captured a proportionately larger share of chairmanship (35.1 per cent), exceeding their proportionate share of *mukhias* and members by 10 per cent.

The article draws some conclusions from their research which are discussed in detail. First, political empowerment of the OBCs in North India has been seen as a post-Mandal phenomenon. However, in the case of Bihar, at least, the panchayat elections of 1978 belie this general impression, as OBCs were able to get their caste men elected as *mukhias* in slightly larger numbers than the upper castes. Second, Brahmins, Bhumihars and Rajputs among the upper castes, Yadavs, Koeris, and Kurmis among the OBCs, and Muslims among religious minorities, collectively accounted for 80.42 per cent of the total number of *mukhias* elected in 1978. This reflected the collective dominance of upper castes, upper OBCs, and Muslims at the grassroots level. Third, OBCs are not a homogeneous socio-political community. There are dominant and deprived castes even among them as is revealed in the differential representation of upper and lower OBCs at the grassroots level. Fourth, apart from the upper castes, Muslims and Yadavs are the other important social groups which have been politically assertive. This is evident in their dominant representation in the PRIs elected in both 1978 and 2001. This may explain the success of the Muslim–Yadav (MY) combination formed by Laloo Prasad Yadav. Fifth, even though the upper castes have lost considerably in terms of the decline in their representation at the

Lok Sabha and Vidhan Sabha levels, their control over the local power structure in, the third tier of democracy, PRIs has not weakened proportionately, for the upper castes still managed to get 35.2 per cent of the chairmanships, 25.3 per cent of the membership of *zila parishads*, and 34 per cent of the mukhia positions. Sixth, the lower OBCs, SCs, STs, and women were at the periphery of political power, and they remained so even in this phase of democratic upsurge. And, last, the article suggests that the political impact of this new phase of the Dalit and OBC movements has largely benefited the Yadavas and Muslims, both of whom have considerably enhanced their representation at the grassroots level. Muslims, followed by Yadavas, emerged as the greatest beneficiaries, increasing their representation from 10.58 per cent to 15.6 per cent, almost to the level of their share in the total population of the state.

The article concludes that the study of the changing socio-political profile of PRIs in Bihar reveals that the upper castes may have politically weakened in state and national politics, yet their power base at the local level is not inconsiderable. This has significant political economy implications in the changed scenario, as the new model of decentralised development implies the federal transfer of powers and economic resources from the centre to the states, and a devolutionary transfer from the states to the grassroots. This is likely to intensify conflict at every level. Despite the apparent stability of government in Bihar, the recurrent violence in the state could be largely explained in this light. Nevertheless, the recent advance made by Hindu revivalism and the recovery of the Congress party in the state and national politics, have given upper-caste elements some breathing space and provided them with a strategy of survival by using the critical and creative potential of coalition politics at the level of caste/community/class electoral alignments as well as inter-party legislative alliances. At the time of writing (summer 2004), the Koeri, Kurmi-dominated Samata Party of Bihar (now merged with the Janata Dal United) was a part of the BJP-led NDA (National Democratic Alliance), while the Laloo dynasty in Bihar was managing to survive at the head of an RJD Congress coalition government in Patna. However, by the time this article went to the press (December 2005), the Nitish Kumar led JD-U, in alliance with the BJP (NDA) was able to throw the RJD Congress alliance in the state out of power.

### **8.12 Power and Politics: Congress Rule in Bihar 1973 – 1985, Gopal Prasad Singh, Academic Excellence, New Delhi, 2005.**

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#### **Key Topics:** *Congress Rule*

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This book attempts to examine Congress rule in Bihar between 1973 and 1985 and makes very strong statements in favour of Congress rule in the state. It makes its argument in five major parts, divided into five major chapters, which present the reader with an overview of the Congress party in Bihar, an overview of the Five Year Plans of Bihar, the work of the Congress government in Bihar, the Congress as an opposition party, and, finally, coordination between the Congress party and the Congress government.

Primary sources for this study include legislative documents such as Bihar Rajyapal Ka Abhivhashan (1947–82), Vikasonmuck Bihar Budget Ke Ayane Mein, Government Five Year Plans, National Sample Surveys Statistical Abstract of India, Agriculture Labour Inquiries, Statistical Data of Bihar, and Census of India 1961 and 1981, among other. The book clarifies that the research is extensively based on the legislative proceedings of the State Legislature. Secondary literature has also been used for the analysis.

In the first chapter, the book discusses the purpose, sources, and a survey of Congress rule prior to 1973. Next, the book presents an analysis of the Five Year Plans of the Planning Commission and the State Plans as well as the annual financial budgets between 1973 and 1985, with a focus on the Third, Fourth, and Sixth Five Year Plans.

In the third chapter, the book examines the Congress rule in Bihar between 1973 and 1985. It outlines the achievement and challenges of Congress rule in Bihar, looking specifically at issues related to agriculture and irrigation; electricity, power and industry; mines and minerals; roads and transport; education and health; and uplift of scheduled castes, scheduled tribes, and backward castes of Bihar.

The book points out that the agricultural stagnation in Bihar is both due to institutional, structural, and technological factors. It notes, “The ‘feudal type’ of agrarian set up and the backward technology have combined to put a major break to the agrarian transformations, in fact have perpetuated the continuation of each other” (pp. 86) The book suggests two major strategies for breaking out of this agrarian stagnation. Firstly, breaking the semi feudal

or feudal agrarian set up, and secondly, massive investment in irrigation along with proper water management as well as availability of fertilisers, RTV seeds, and credit.

In the next chapter, the book discusses a period when the Congress worked as an opposition party. It highlights, 'The inner bickering and grouping within the Congress and intra-party hobnobbing by the leaders of all political parties of Bihar (became common). Horse trading 'Aya Ram and Gaya Ram' technique in Bihar politics developed in a gigantic scale. Toppling of one coalition government by party or parties in opposition became the common enactment of the political drama in Bihar. Personal gains and clashes began to dominate politics' (pp. 171)

In the final chapter, the book discusses the coordination between the Congress party and the Congress government. It argues that while in power and when in opposition, the Congress party lost its popularity, primarily because of internal differences and groupism.

In conclusion, the book notes that 'rule of the Congress in Bihar (excluding the period of opposition) was progressive and relatively welfare oriented even if all the failures are counted and recounted. It was a period of democratic rule by and large for better than the present one. It worked for the removal of poverty through various policies, programs and measures... in the field of agriculture, irrigations, electricity of power, industry, education, health and hygiene and welfare of scheduled castes, schedules tribes and backward castes the contribution of the Congress rule in Bihar under review are one and many. Education since the independence became the main concern of the Government from primary, middle, secondary to university levels. Technical education and institutions sprang up to cope up the State demand. The progress of education and welfare of the teachers taken by the State Government became all India indicator. Kedar Pandey and Dr. Jagannath Mishra's period Chief Ministerships in the field should perhaps be seen as the golden period of the progress of education in Bihar'" (pp. 173).

**8.13 *Janata Regionalised: Contrasting Bases of Electoral Support in Bihar and Orissa, Sanjay Kumar in Rob Jenkins (ed.) Regional Reflections: Comparing Politics across India's States, Oxford University Press, Delhi, 2004.***

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**Key Topics:** *Janata Party, Elections*

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The objectives of this chapter, in an edited book, are to establish empirically the existence of these contrasting electoral support bases across these Bihar and Orissa, and also to explain why, in the case of Orissa, the Janata-descended party found the non-OBC route so much more attractive than did its counterpart in Bihar.

The paper analyses data collected through sample surveys in these two states during the last few Lok Sabha and Assembly elections. With respect to Bihar, the study has clubbed all four of the main upper castes (Brahmins, Rajputs, Bhumihars, and Kayasthas) together. All OBC groups have been classified into either Upper OBC or Lower OBC, in addition to keeping the numerically strong Yadavs as a separate category. Two other backward castes from the OBC category, the Kurmis and the Koeris, have been clubbed together. Finally, all the scheduled castes and tribes have been clubbed into broad categories of Dalits and Adivasis. In Orissa, the three most important upper castes (the Brahmins, Karnas, and Kshatriyas) have been clubbed together into the upper caste group. The Khandayats are numerically the biggest group among all OBCs in Orissa. All other castes belonging to the OBCs have been clubbed into one broad group, other OBC. There is very little differentiation among the people belonging to various lower castes and so they have been grouped as the Dalits. Similarly, all the people belonging to different tribal communities have been clubbed as one political group, Adivasi.

The study reveals that the absolute dominance of Janata Dal in Bihar in the early 1990s is credited to Yadavs, Kurmis, and Koeris voting in favour of the Janata Dal. The resentful Kurmis and the Koeris deserted the Janata Dal and have supported the Samata Party since 1995, resulting in the emergence of the BJP-Samata alliance as a serious force in Bihar since then.

It is argued that the nub of the contrast between the states of Bihar and Orissa, then, is that in the post-Mandal era the Yadavs of Bihar voted en bloc for the RJD, whereas, the Khandayats, in Orissa, are not so sharply polarised in favour of any particular political party. During the last decade in Bihar, the Yadavs have mobilised to put up a challenge to the political dominance of the numerically small, but traditionally dominant, upper castes. In Orissa,

by contrast, the Khandayats have not mobilised to oppose the political dominance of the upper castes. They have aligned with one or the other upper caste for their share in political power.

According to the paper, the contrast, which could be drawn between Bihar and Orissa in terms of the OBC voters is as follows. In Bihar, the OBCs voted for the Janata Dal in large numbers until the 1996 Lok Sabha elections, though after the initial formation of the RJD there has been a declining support for the RJD among the OBC voters. In Orissa, some of the OBC voters voted for the Janata Dal until the 1996 Lok Sabha elections, but after the formation of the BJD in 1998, the popularity of the BJD among the OBC voters has increased somewhat.

The paper finds that the contrast which could be drawn between the Dalit voter of Bihar and Orissa is that while the Dalits in Orissa had voted for the Congress in large numbers through the 1998 Lok Sabha elections (and even during the 2000 assembly election a majority of them voted for the Congress), in Bihar there is almost no support for the Congress among Dalits. It is noted that one similarity which could be drawn between Bihar and Orissa is that in both these states, neither the RJD nor the BJD has been the choice of Adivasi voters. In Bihar, the Jharkhand Mukti Morcha (JMM) has been the choice of Adivasi voters, while in Orissa, Congress remains top choice.

On analysing the divergent social bases of electoral support for the Janata-descended parties in Bihar and Orissa, the study finds that the economic struggle between the upper castes and the OBCs, which began in the form of disputes over inequities in land distribution, resulted ultimately in a political struggle in Bihar, whereas in Orissa, there was far less potential for political conflict to centre on the issue of agricultural land, which meant that party conflict was less likely to polarise along caste lines, between the upper castes and Khandayats (or other OBCs).

The findings of the survey, from both the states, does indicate the contrast in the voting pattern. Extreme caste tensions predominate in Bihar and result in perpetual conflict. In Orissa, it is not caste, but region which has provided the dominant cleavage driving political mobilisation and counter-mobilisation. The paper finally illustrates the reasons for the non mobilisation of OBCs in the political scenario of Orissa. Unlike the OBCs in Bihar, the Khandayats were excluded from the Mandal list. There was also no trained and responsive leadership within the Gauda community. The other factor, which contributed to the continued dominance of the Brahmins and the Karnas in Orissa politics is the large population of Adivasis who remained substantially cut off from contemporary social, political, and economic developments.

**8.14 Leadership Network: A Study on the Emerging Pattern of Leadership at Panchayati Raj Level in Bihar, G. N. Thakur, Centre for Regional Studies, TM Bhagalpur University, Bhagalpur, 2003.**

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**Key Topics:** *Panchayati Raj, Leadership*

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The key objectives of this PhD thesis are to examine the changing socioeconomic background of the more recently elected panchayat leaders; to examine the work culture of both the older and new panchayat leaders; to examine the linkages between the panchayat leadership with those in higher levels of politics; to analyse the major aims of the *Panchayati Raj Act, 1993*, in Bihar; to examine the relationship between the non official leadership and the bureaucracy attached to these institutions; and, finally, to examine the changes brought about in the policy and outlook of the state government towards decentralisation.

The study is confined to Bhagalpur district for empirical data. While Dumka, which is now in Jharkhand, was also originally selected as a research site, it was dropped after the bifurcation of the state. Four *Panchayat Samitis* in Bhagalpur – Sabour, Jagdishpur, Sultanganj, and Sahkund, were selected. In each Panchayat Samiti, four *panchayats* were selected. Thus, a total of 16 *panchayats* were included in the study. These were: Barari, Fatehpur, Sardho, Sabour, Puraini North, Balua Chack, Jagdishpur, Saino, Maheshi, Tilkapur, Abjuganj, Masdi, Kaswa, Kherhi, Makandpur, Belthu, and Amba. All the incoming members of *panchayats* and *Panchayat Samitis* and also members of the *Zila Parishad* within the selected area were the units of observation. Some outgoing members were also selected. Functionaries of all the three organs were also include for this purpose. Questionnaires and interviews were used for data collection. Structured questionnaires were administered to non official members in PRIs as well.

The study argues, firstly, that despite the provision of enhanced scope for the representation of women and other historically disadvantaged sections of society in the PRIs, most remain mere spectators because of illiteracy and other disadvantages because of the social context within which the Act was enacted. Secondly, there is very limited

attention given to changing the outlook of PRI staff through training. This might prove to be a deterrent to any large scale social change. Thirdly, maintaining a non sectarian outlook will be a challenge, given the context of the ongoing social conflict between the forward and the backward classes. Lastly, there is a possibility of earlier more traditional leadership gaining control of the new PRIs.

**8.15 Bihar: New Panchayats and Subaltern Resurgence, Shaibal Gupta, *Economic and Political Weekly*, Vol. No. 36(29), pp. 2742–44, 2001.**

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**Key Topics:** *Panchayat Elections, Lower Castes and Panchayats*

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The article uses the 2001 *panchayat* elections as a background, to argue that the presence of the lower backward castes in the power structure as *mukhias* and zilla parishad chairmen indicates that new social and political equations are emerging at the local level. The study, section-wise, examines the results of the 2001 *panchayat* elections in Bihar, with each section covering diverse groups in terms of lower castes, schedules castes, upper castes, and the communist vote-bank.

The article finds that *panchayat* elections of 2001 were held in Bihar after a lapse of 23 years. The recent *panchayat* elections could not be avoided due to the intervention of the judiciary. The broad results of the elections largely conform to the social and political trends in Bihar since the last *panchayat* elections in 1978, which had gradually strengthened the hold of the upper backward castes on the state's political power structure. The most significant result of these elections is further consolidation of the political power of M-Y (Muslim and Yadav) combination. Though this combination appeared to be fragile at the *panchayat* level elections, but by the time chairmanships of the zilla parishads were being worked out, the magic of M-Y combination started working. These elections also revealed some other interesting political trends.

It argues that the 2001 *panchayat* elections will go down in the history of Bihar as a turning point for the electoral empowerment of the lower backwards. Not only have they emerged as chairmen of zilla parishads, but a large number of them have been elected either as *mukhias* (3.9 per cent) or as members of the zilla parishads (3.5 per cent).

It notes that in the results of the *panchayat* elections, although there has been a change at the lower power-structure in favour of the upper and lower backward castes, the upper castes or the traditional elites still retain a substantial part of the social and political power at the grassroots level. This has resulted in the continuation of the earlier patron-client relationship, especially in the rural areas.

The article finds that besides the lower backwards castes, even the Scheduled Caste candidates have performed well in the *panchayat* elections. A number of Scheduled Caste members have got elected from the flaming fields of the south Bihar plains, the most developed part of the state, the very area where they had to face the main brunt of the atrocities.

The article suggests that while the left parties claim that their poor results in the assembly or parliament elections are no indicator of their real strength and that they are present at the grass roots level. The *panchayat* elections have indicated that their assertion has some substance. Among the Hindi heartland states, the communist movement has been powerful only in Bihar. The *panchayat* elections have demonstrated that the mainstream communist movement is still a force to reckon with. Though these elections were not fought on party lines, a closer examination would indicate that the left has got a substantial number of seats.

**8.16 Bihar – Panchayat Elections: Overcoming State's Resistance, Girish Kumar, *Economic and Political Weekly*, Vol. No. 36(20), pp. 1681–84, 2001.**

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**Key Topics:** *Panchayati Elections*

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The article explores the scenario in which the *panchayat* elections took place in Bihar, after a long gap of 20 years. The article begins by tracing the progression of *panchayati* elections in Bihar over a period of time and then goes on

to analyse the factors that prevented the elections from taking place for so long. It concludes on a hopeful note about the 2001 elections and the role that people can play in it.

The article notes that, at last, a recalcitrant Bihar state was compelled to hold elections to its PRIs in 2001, which it has been evading for nearly two decades. The last panchayat election was held in Bihar in 1978 and prior to that in 1971. As soon as the nomination process began, reports of violence started appearing in the local newspapers. Several cases of kidnappings of merchants and traders were also published claiming that hefty sums were collected as ransom, allegedly to finance the panchayat elections. In spite of elaborate security arrangements and protracted polling schedules spread in six phases, the panchayat election claimed the lives of 129 people, including 50 candidates who were killed in pre-poll violence. All these precious lives were lost, however, it is nothing compared to what had been feared all along during the last 15 years.

The article notes that there are 128 backward castes listed in the state's reservation list. An overwhelming proportion of them happen to be asset-less, the poor, and representing extremely backward segments of the population. It argues that during the last 10-year rule of the Yadav couple, Bihar has undergone a long spell of social churning, raising the aspirations of the hitherto neglected castes, although they have remained economically exploited, as they were earlier, under the decade old dispensation of social justice. Amidst such a conflicting scenario, the local NGOs have played a pro-active role in the aftermath of the 73rd amendment.

The article contends that by conducting pre-election voter's campaigns, orientation programmes aimed at raising the awareness of people at large, they have succeeded, to a large extent, in bringing the agenda of development through decentralisation into the people's court. As a matter of fact, a forum of over two dozen NGOs, under the banner of 'save panchayat campaign', had been on the forefront of the demand for holding panchayat elections.

Towards this end, they had organised dharnas, rallies not only at the district level and below in Bihar but had also staged one day dharna at the Rajghat in Delhi in August 1998. All this has added to the awakening of the poor masses, who have been denied the fruits of development over the years. That *panchayats* are the institutions of self governance, closest to the people and who also would offer them opportunity to participate in the decision-making process, is a notion that has gradually gained ground in the state.

At the same time, it is argued that one cannot expect a miracle from the *panchayats* formed after the elections. The article suggests that intra- and inter-caste feuds are not going to evaporate from the villages of Bihar. Rather, caste conflicts are likely to intensify in days to come, for grabbing the funds, howsoever a pittance, reaching the *gram panchayat* level. Simultaneously, the political power would also percolate down with newly elected 8,452 *mukhias* in an equal number of *gram panchayats*. Among them, there may be a large number having corrupt and criminal background. But there is every possibility of having a few *mukhias* with a genuine concern for the development of their *panchayats*.

Lastly, the article indicates that there would be 1.16 lakh elected members including 40,000 women. To cap it all, for the first time, people would come face to face with the holders of power without any intermediary. As per the new act, holding of the gram sabha meetings would now become compulsory. A new situation will, therefore, arise when even a handful of people would start demanding to know when the funds are coming and how they are going to be utilised. Eventually, that will mark the beginning of an end to the status quo in Bihar.



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**SECTION 9**

**Poverty and Human Development**

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## Overview

Bihar is known to be a poor and backward state. Though there has been progress in the areas of poverty and human development recently, the progress has been slow and Bihar lags behind the rest of the country. Poverty and human development are closely inter-linked. Anti-poverty programmes in the state have not performed due to weak institutional mechanisms, and widespread corruption. In recent years, select government interventions have been quite successful. These are discussed in detail in the last section.

The seventeen studies in this section of the Compendium are wide-ranging, comprising of empirical, academic and policy research. They capture the causes and consequences of poverty in the state (IFAD, 2003; Sharma et al., 2002), offer critiques of poverty identification and measurement (Rodgers and Mishra, 2010), anti-poverty programmes (Diwakar, 2001), and specifically of targeted programmes of the government (Das Gupta, 2010).

Thakur et al. critically analyse rural poverty and income distribution using results from a primary survey and find that income distribution is less unequal for technologically developed villages. Some studies are specifically devoted to human development (Jiwan, 2002), disaggregated by the northern and southern districts in the state. Qualitative studies in this section study chronic poverty in the state with respect to social conflict (Mohanty, 2006), and poor people's views on the key economic, institutional, and social hurdles they experience in their attempts to move out of poverty (Kumar, 2002). Another study looks at the underlying factors of poverty and vulnerability (Parker and Kozel, 2005).

Given the relative deprivation in the northern region of the state, more research has been done to examine poverty and (lack of) human development in North Bihar. Veena Kumari and R. K. P. Singh study the various components and indicators of human development in poor households in north Bihar. Another study by the same authors looks at the rural housing and health condition in region. Kumari (2005) has undertaken a micro-level analysis of social and human development in North Bihar. Diwakar (2004) studies the (lack of) livelihood options for agricultural labour in the state.

One study in this section focuses on unsafe child migration and trafficking in the districts of Araria and Khagaria (Mitra Das and Mishra, 2010). A village study presents the status of food security and access to basic services (Kumari and Singh, 2006). Another policy research study (IHD, 2010), which has constructed a food security index at the district level, is of immense use for public policy practitioners.



**9.1 *The Effectiveness of Targeting in Bihar*, Chirashree Das Gupta, Paper presented at International Seminar on Poverty in Bihar: Pattern, Dimensions, and Eradication Strategies, organised by the Institute for Human Development, Asian Development Research Institute and United Nations Development Programme, 2010.**

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**Key Topics:** *Targeting of Poor, Poverty Reduction*

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The aim of this paper is to illustrate that the false dichotomy between universal and targeted social service delivery needs to be rejected towards a willingness to develop a broad institutional framework of converging policies, geared towards breaking the barriers to improvement of the social, economic, and political status of the poor.

This paper notes that almost every problem that was associated with ‘universalisation’ of welfare, that formed the basis of abandonment of ‘universal entitlements’ in favour of the means tested ‘targeted social service delivery’, re-emerged as the main concern in the literature on ‘targeting’. The existence of this vast common pool of knowledge has had no bearing on the framing of poverty reduction strategies in a ‘late developing state’ like Bihar. The empirical exercises around poverty reduction strategies in Bihar demonstrate that ‘identifying the target’ has been an exercise fraught with all the ‘problems’ that have been noted in the literature, and interventions which are aimed toward a more universal category of beneficiaries, compared to those which are heavily reliant on narrow ‘targeting’ exercises, have a relatively better record in reaching the deprived in Bihar. The paper puts forward these two observations, based on a review of the issues that emerge from the political economy of targeting in Bihar through the recorded experiences of identifying who is below the poverty line. It is followed by overviews of four targeting based programmes which aim to intervene in one or more social aspects of deprivations caused due to poverty.

**9.2 *Food Security Atlas of Rural Bihar*, Institute for Human Development, New Delhi, 2010.**

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**Key Topics:** *Food Security, Hunger, Public Distribution System*

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This study documents the food security situation in Bihar, with the objective to identify regions and social groups in Bihar most affected by food insecurity; to analyse the nature and dynamics of the food security situation at the sub-state level; and to suggest policy interventions appropriate to improving food security for those regions and social groups.

Using the Range Equalisation Method (REM) approach, adopted by UNDP, and Principal Component Analysis (PCA), the study has developed a Food Security Index (FSI) for the rural areas of the state, specifically, at the district level. The districts having higher index values are considered as relatively more food secure as compared districts with lower index values.

The FSI is a composite index covering three dimensions, that is, Availability factors (proportion of net irrigated area to net sown area, per capita value of agricultural output, and percentage of inhabited villages having access to paved roads); Access factors (percentage of agricultural labour to total workers, proportion of ST and SC population to total population, dependency ratio, per capita monthly consumption expenditure, rural casual wage rate, and rural female literacy rate); and Absorption factors (percentage of households having access to safe drinking water and percentage of inhabited villages having access to PHC). Besides these three groups of factors, an additional component, i.e., public entitlement has been used to explain how this influences food security. But the public entitlement factor is not included in the indices of food security.

To crosscheck the validity of the FSI for the three AAA (Availability, Access and Absorption) components, the study used the Food Security Outcome (FSO) index. The outcome index calculated is based on two child-related variables: Child Mortality Rate (CMR) and child malnutrition (weight for age  $-2SD$ ). Child malnutrition  $-2SD$  includes children who are below  $-3SD$  from the International Reference Population median. The district-wise figures relating to the above two variables are taken from the Reproductive and Child Health (RCH) 2002 Survey. The study has adopted the RE method to calculate the FSO Index.

For each variable, component, and index, districts have been divided into five classes: Secure, Moderately Secure, Moderately Insecure, Severely Insecure, and Extremely Insecure. The method used for making class intervals is the 'equal intervals' method.

The study concludes that there are five dimensions of Bihar's economy which have a direct bearing on food security in the state. The main strength of Bihar's economy lies in its rich agricultural soil and water resources. But the flipside of the coin is the proneness of North Bihar to flood disasters on account of fast-flowing rivers which originate in Nepal. Secondly, the incidence of poverty in rural Bihar is one of the highest in the country although the pace of its decline during 1994-2005 was higher than at the all-India level. Thirdly, in terms of its infrastructure, rural road connectivity, which is essential to support agricultural growth, is very poor. Fourthly, variability of agricultural growth rate was more than three times higher in Bihar. Fifthly, female literacy in Bihar (33.6 per cent) is well below the all-India level (54.2 per cent). These features exercise an adverse impact on food security in the state. Per-capita cereal intake has declined. Nearly two-thirds of agricultural labour households do not get sufficient food around the year.

The primary focus of the second part of the report is on estimating food security at the district level in Bihar and identifying those districts which are at the lowest level, and need specific policy interventions. Food security is dependent on availability, access, and absorption. All these three, measured in terms of eleven indicators, are taken to form inputs into food security. Over the long run, inadequate food securities in terms of these factors result in harmful outcomes in terms of morbidity, high mortality rates, and low BMI. But in view of the long lag involved, there can be a deviation between the overall outcome and input indices of food security.

The report finds that if one examines the correlations, Outcome and Input Indices of Food Security are insignificantly related ( $r = +0.306$ ). Secondly, the relationship of Availability and Access Indices to both Input and Outcome Indices of Food Security is significantly positive, although much less strong in case of the Outcome Index than in case of the Input Index of Food Security. In terms of the relationship of the Input Food Security Index (FSI) to individual indicators, seven variables emerge to be of prime importance, viz., (i) irrigation (ii) agricultural output per capita, and (iii) approach to a paved road, all of which are Availability Indicators; (iv) female literacy and (v) proportion of non-agricultural workforce, which are Access Indicators; (vi) Availability of safe drinking water and (viii) easy accessibility to public health centres, which are Absorption (Utilisation) Indicators. From the point of view of policy interventions, the relationship of Food Security to individual indicators is much more relevant than the relationship of FSI to Overall Availability, Access, or Absorption Indices, since policy can address individual variables, not their composite.

The study finds that in terms of Food Security Index, there are six districts in the Secure category (S), eleven in the Moderately Secure category (MS), thirteen in the Moderately Insecure category (MIS), six in the Severely Insecure category (SIS) and one in the Extremely Insecure category (EIS). The two lowest Food Security categories (SIS and EIS) are taken to be in need of concerted attention. According to the outcome approach, there are nine districts belonging to the two lowest categories (SIS and EIS). However, these nine do not include all the seven districts according to the input approach. According to the Atlas, the list of districts needing specific attention should include all those districts which appear in the two lowest categories according to Input as well as outcome approaches to food security. If one follows this approach, twelve districts can be designated as the Special Category Districts that need specific attention. These are (i) Kishanganj; (ii) Araria; (iii) Jamui; (iv) Katihar; (v) Madhepura; (vi) Purnia; (vii) Sheohar; (viii) Aurangabad; (ix) Kaimur; (x) Sitamarhi; (xi) Lakhisarai; (xii) Banka.

Related to policy implications, the study argues that there are five variables, viz., irrigation, roads, female literacy, provision of safe drinking water, and public health centres which are, by and large, directly amenable to state policy, three variables, namely agricultural output, consumption expenditure, and agricultural wage rate which are at most indirectly amenable to state policy; and three variables, namely, percentage of SC/ST population, dependency rate, and proportion of agricultural workforce, which are not amenable to policy instruments.

These three can only be improved through welfare measures, an enhanced pace of development, etc. It is suggested that in case of each of the variables, where the district already stands in a high or medium position, the district level policy should devote relatively lower attention and resources than in cases where the variable concerned has a low food security score.

The report also discusses food security interventions such as the status of the state in terms of five types of food security interventions, namely, the status of TPDS, NREGA, National Food Security Mission, Rural Road Connectivity, and Mid-day Meal Scheme.

### 9.3 *Stolen Childhoods: The Lives and Lot of the Poor Child Workers of the Kosi*, Manoshi Mitra Das and Sunil Kumar Mishra, Institute for Human Development and Save the Children, India Bal Raksha Bharat, 2010.

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**Key Topics:** *Child Trafficking, Child Exploitation*

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This study was an enquiry into the phenomenon of unsafe child migration and trafficking in the flood prone areas of the Kosi belt in Bihar, a region made famous by the catastrophic floods of 2008. In the wake of the floods, media reports suggested that there was massive increase in child trafficking as a result of the deep seated rural poverty and vulnerability, a situation that was exploited by unscrupulous elements involved in the criminal act of human trafficking. Research, however, suggested that while trafficking of children as well as adults may have increased in the aftermath of the floods, the region was no stranger to human trafficking in 'normal' times.

The study aimed at estimating child trafficking and analyse its causes, which lie deep in the economy and society of the poor in the 'sending' areas, as well as the demand for cheap and pliable child labour for a large variety of enterprises, and domestic work. It also attempted to analyse the effects of trafficking on the lives of the trafficked children themselves and, further, to develop actionable recommendations for effectively combating the scourge of child trafficking in the region.

The study argues that migration, particularly by the poor, both adult and child, was taking place in the backdrop of massive rural poverty and lack of livelihood options, exacerbated by historical factors that contribute to underdevelopment, backwardness, and exploitation. It hypothesised that labour migration has emerged in the region, not just as a knee jerk reaction to floods, but as a well worked out response by the poor to hereditary patterns of poverty and underdevelopment that have led to lack of options. Unsafe child migration, amounting to trafficking, has occurred in the backdrop of familial as well as social acceptance of migration as a survival and risk mitigation strategy and child trafficking also grows in the backdrop of caste discrimination as well as semi-feudal exploitative mindsets that accept child labour by the poor as part of upper caste/class privilege. It used the internationally accepted definition of child trafficking in order to capture the phenomenon occurring in Bihar as well as aligning it with international findings on the subject. Children between the ages of five years until under 18 years, who have undergone unsafe migration, alone, without the parents or family moving to the new location along with them, who are accompanied during their journey mostly by third parties, whose persons are under the control of the employers and are subjected to exploitation through labour by the employer at the destination are deemed as trafficked children.

To estimate the extent of child trafficking in the region, a sample survey was carried out to capture the quantitative aspects of child trafficking in two districts in the Kosi belt, Araria and Khagaria, both of which show widespread backwardness and poverty, landlessness, and low human development. Both these districts were classified into three strata, based on the percentage of literate females in the villages. Since there is no published data on trafficking, female literacy rate as a proxy indicator of social development was used. A total of twenty villages were studied (13 in Araria and 7 in Khagaria), and the number of villages surveyed in each stratum were directly proportional to the share of each stratum to population of both the districts, subject to a minimum allocation of 7 villages from a district. A comprehensive listing of all children 0–18 years of age, in approximately 4,111 households, in these 20 villages was carried out. A total of approximately 11,000 children were listed. Thereafter, for a detailed household survey, 411 households with at least one trafficked child were selected. Participatory research methods, such as FGDs, key person interviews, and case studies were used in order to capture those facets of child trafficking that could not be captured by quantitative methods. The study also reviewed relevant literature from secondary sources.

The study finds that among the listed children more than 50 per cent belonged to the SC and OBC I categories. More than 85 per cent of the children were from asset poor households. Among the listed children, approximately 8,500 were in the age group of 5+ to under 18 years. Low educational levels, high levels of poverty, and child labour were significant characteristics in the areas covered by our research. The survey results confirmed the hypothesis that child labour is rampant across castes, including the general category, and particularly high among the SCs and minorities. Children attending school were also found to be engaged in labour.

According to the study, out of a total of 8,500 listed children (5+-under 18 years) the percentage of trafficked children was high, at 7.7 per cent, belonging to more than 10 per cent of total 4,111 households covered. The majority

of these were from landless and poor households belonging to SC and OBC I, as well as Muslim households. While more than 60 per cent trafficked children were from households with little or no education among the adults, most of the trafficked children themselves were school drop outs. Most of the trafficked children were boys in the age group of 14-18 years.

The study found that among the households studied, in 63 per cent of households, the reasons for child trafficking with family consent were related to adult underemployment, and poverty and vulnerability. In such situations, any crisis, such as a health related expenditure or social obligations, could further force households into dire poverty. These households were asset poor and indebted to private creditors. A large proportion of such households also had adults working as migrant labour. In a large number of instances, the traffickers were agents/middlemen belonging to the same area. Even when family members accompanied the children to the site of their employment, they handed them over to the employer or middlemen. Under all these circumstances, the children were deemed to be trafficked. They were often put to work in types of employment that are illegal for children.

Through FGDs and case studies, the study found that children were put through enormous problems at the work place where they suffered a variety of abuses, including sexual abuse, at the hands of employers/middlemen/older workers. Families were often aware that their children were being abused. However, they claimed that on account of their poverty, they could not complain. They told the children to try to forget such experiences. Most families had irregular contacts with their children, mostly via the agents who were also known to the families. These agents took away the children's earnings and intermittently sent some portion of the money to the families, deducting the cash advances they made to parents/guardians prior to actually taking the children away physically from the household. A significant proportion of SC and OBC I parents reported that they had no idea of their children's whereabouts and had not received any money from them either.

The study raised the question as to whether all this exposure of children to extreme risk was really worth it for the families in terms of their economic betterment. Eighty per cent of the households stated that they had benefited from their children being trafficked in terms of cash advances as well as payments sent to them by agents from time to time. However, the outcomes for the children were found to be negative in terms of their health, both physical and psychological, their lack of education, and their chances of improving their future lives as adults. Child workers interviews showed several instances where children wanted to study and did well when allowed to. However, the parents connived with agents to send the children away repeatedly until the children gave up on their attempts to study. It is argued that for parents, facing poverty and lack of options, sending children away as trafficked migrants was inescapable, and few saw anything wrong in this.

The study records that listening to the voices of those that were actually trafficked, the innocence of the boys was palpable as they described the change in the personality of the agents who appeared benevolent in the villages and oppressive when they actually reached the destination point. Early marriage is widespread in the region for both boys and girls. Once boys get married, the pressure on them to migrate increases due to advances made by agents for the weddings. Children are also motivated to leave home on account of widespread domestic violence and deprivation. They see no other option to leaving. Once they leave home at an early age and are abused by the middlemen or employers, they are sucked into the vortex of trafficking. During the early years they really cannot save much as their handlers get hold of their earnings and deduct whatever they can on various pretexts. Later on, as they grow up, they try to negotiate the migrant labour market on their own. However, they are always in the unorganised sector where they are deprived of any long term gains. And back home, while their families use their incomes for debt servicing and consumption, they are caught up in a groundswell of debt, poverty, poor education, insecurity of livelihoods, and of life itself.

The study opines that in this struggle of the poor to survive, children are grist to the mill of contractors and informal sector employers of cheap child labour. The rest falls into place neatly, with the parents going along actively with the contractor employer nexus in lieu of cash advances. Therefore, while rural areas, which are the sending communities, may show sudden signs of 'prosperity' in terms of houses being repaired, debts being repaid, dowries being paid, but these are short lived as there is no real social change and no empowerment of the poor vis-à-vis the landowner/contractor /moneylender/employer/police/local authorities nexus.

In conclusion, the study recommends that in the long run, there is a need to address structural factors, which are the root cause of poverty. In addition, flood protection measures, greater community awareness, participation



in flood protection and disaster management, social sensitisation programmes for local administration to reduce discrimination against lower castes and minorities, and women in disaster care, would help. Specifically related to child trafficking, the study proposes awareness creation among children of their rights, the risks to them of trafficking and bonded labour, and the importance of reporting any instances of children being forced or induced to leave the village, are important aspects that need to be built into their education system. It advocates for comprehensive legislation that brings together all facets of human trafficking under one definition and sets out stringent punishments for traffickers, particularly of child traffickers. It suggests that honest and well trained police teams need to put in charge of following up on tip offs, reports by NGOs, etc., and in registering FIRs instead of ignoring the problem, making arrests, gathering evidence and preparing evidence in ways that will stand scrutiny in the courts, training and sensitisation of the police and judiciary, involvement of grassroots *Panchayati Raj* institutions, as well as training and sensitisation of parents and guardians. In this context, according to the study, the role of civil society and NGOs needs to be recognised and given due importance in the entire effort to combat human trafficking.

#### **9.4 Identification of the Poor in Bihar – Lessons from IHD Surveys, Gerry Rodgers and Sunil Mishra, Paper Presented at International Seminar on Poverty in Bihar: Pattern, Dimensions, and Eradication Strategies, organised by Institute for Human Development, Asian Development Research Institute and United Nations Development Programme, 2010.**

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**Key Topics:** *Poverty Identification, Measurement of Poverty*

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This paper opines that there are many reasons to measure poverty of which two are particularly important. The first is as an indicator of progress in development, typically the percentage of the population which falls below the poverty line. The second is a means of identifying target groups for policy. The paper emphasises that even if the underlying concept of poverty is similar in the two cases, the methods and variables used for its measurement will normally differ.

According to this paper, the first objective will tend to lead to aggregate measures which are more readily interpreted and communicated. It will also give priority to measures which capture change over time in plausible ways. The long running debate over the measurement of poverty in India mainly focuses on measurements that can be derived from national surveys such as the regular NSS rounds, the NFHS, and others. Particular attention tends to be given to measures of income and consumption, the economist's basic tools to provide a proxy for welfare. Alternative measures, such as calorie intake or anthropometric status give patterns over time that many scholars argue are hard to interpret. Poverty is then defined as falling below a particular income or consumption level per capita. The debate over whether and how fast poverty has fallen is mainly expressed in these terms.

Nevertheless, the paper finds many obvious problems with this approach. One is the tendency for the poverty line to be taken as fixed. Politicians tend to resist the idea that they are chasing a moving target, yet it is clear on reflection that the poverty line should reflect societal norms and possibilities and so will rise with economic development. The aggregate measures are considerable simplifications of a complex reality.

On the other hand, according to the paper, the second objective reflects diversity, both in dimensions of poverty and in the characteristics of poor people, since these may call for correspondingly diverse policy instruments. It gives the example of inadequate food, education, and housing as different aspects of poverty which call for distinct policy approaches. It argues that much of poverty has its origins in exclusions and discriminations – from rights, land, employment, and income opportunities, and so on – which means that the nature of poverty is different for different groups, and so calls for policies which address the specificities of, for example, caste, community, or gender.

Three successive surveys in rural Bihar have attempted to explore these questions further and, in particular, to capture different dimensions of poverty in a way which contributed to the analysis of both welfare and policy. The first, in 1981-83, was conducted jointly by the A. N. Sinha Institute, Patna and the ILO. The second, in 1998-99, was undertaken by the Institute for Human Development, New Delhi, and IHD is currently undertaking the third, which started in 2009. The study uses data from the three sets of data mentioned above. Most of the data used is quantitative and the linking of data files of various years will enable a longitudinal study.

Based on these three sets of surveys, the paper discusses the usefulness of constructing measures to identify the poor. Since it is very early in the analysis of these data, only some preliminary ideas are reported. In particular, it looks at the results of each survey separately. The surveys covered the same 36 villages at the three dates, and the 1998-99 and 2009 surveys also covered the same households (and successor households) in 12 villages. As poverty is not a constant state but varies over time, and many households move upwards and downwards across the poverty threshold, a larger proportion of people experience poverty in any given period than are counted below the poverty line at a certain point in time. In future, the surveys will permit this aspect of poverty to be explored.

**1981-83:** The 1981-83 survey explored a number of ways of measuring poverty and identifying the poor beyond the standard expenditure and income measures. In particular, it included several measures of nutritional intake – calories, food quality, and the skipping of meals, and anthropometric measures of children. These measures are today in wider use than was the case at that time, notably in the National Family Health Survey and the National Nutrition Monitoring Bureau surveys. The 1981-83 survey also covered housing and domestic facilities and possessions, expenditure levels other than food, illness and mortality, health facilities and education.

Many of the measures identified in the 1981-83 survey were highly correlated. Another approach, rather than working with overlapping indicators, is to try to identify distinct, independent dimensions of poverty. A principal components analysis which identifies such independent dimensions as weighted linear combinations of correlated indicators is a useful method to do this.

**1989-99:** The 1998-9 survey covered the same villages as in 1981-83. It again asked some of the questions from 1981, such as skipping of meals and domestic facilities (but not the calorie or anthropometric measures), and explored patterns of change. It repeated the question on the perceived adequacy of food, went into greater detail on perceptions of poverty and of change in economic conditions, and also collected more conventional expenditure data.

Expenditure data showed a substantial decline in poverty in the 17 years between the two surveys, but the survey showed how the choice of the poverty line strongly influenced the trends. In 1981 69 per cent of households were below the state-specific expenditure based poverty line, falling to 43 per cent in 1999. But this hid an even more dramatic fall in the percentage below a lower poverty line (75 per cent of the state expenditure criterion), from 51 to 16 percent, whereas, the numbers between 75 and 100 per cent of the state poverty line had actually increased from 18 to 27 percent. The largest declines in extreme poverty were, remarkably, found among Scheduled Castes and Muslims.

**2009-10:** A new survey is now under way in the same villages. The first stage consisted of the collection of village level data, along with a preliminary survey of a sample of households, including the same households in 1999 and their successor households in 12 of the villages. The household survey only collected basic information on a few key indicators. A detailed household survey will be implemented at a second stage of the research.

Data which has been collected in the first stage permit analysis of two issues relevant for this paper. First, relationship between the patterns observed in the data and the official classification of households as above or below the poverty line (and those targeted by the Antayodya Anna Yojana, in principle the 5 per cent of the poorest households) can be explored. The BPL (Below Poverty Line) measure identifies households that are entitled to benefits from the public distribution system and some other policies. This concept uses a multidimensional measure to identify the poor (which it then converts to a scalar on the basis of a rather arbitrary points system). It has been much analysed and discussed and is widely considered to be seriously flawed, both in concept and application.

Second, there is extensive village level data, which can be used for exploring other aspects of poverty. While poverty is usually considered as a characteristic of individuals or households rather than of communities, village level data might provide an additional perspective, particularly in terms of the availability of and access to shared resources and state policies. Village level data might also be of use for the measurement of change.

Village level data is not usually considered as an indicator of poverty, but it may have some advantages. First, villages are, of course, easier to target than households. Secondly, some shortfalls at the community level, for instance in terms of infrastructure, might well be considered an aspect of poverty, such as the availability of drinking water, or proximity of schools. Insofar as to capture insecurity as a dimension of poverty, this might also be captured at village level (e.g., vulnerability to floods or to violence). Thirdly, some village level variables may be good predictors of the incidence of poverty among households within the village and may be easier to measure. Longitudinal village data

may also provide indicators of change in poverty. This has not yet been systematically explored with the IHD survey data, but possibilities can be illustrated.

According to the paper, there are a number of possible poverty indicators or predictors at the village level in the IHD survey, for example: Population density on cultivable land, proportion of agricultural labour households, proportion of Scheduled Caste households, distance to educational and health facilities, drinking water quality, toilet facilities, crop yields (paddy and wheat), wages (most frequent, male full time daily wage in agricultural work), Male:Female wage differential, number of months in which a shortage of work is reported, and frequency of floods or drought.

It is clarified in the paper that at this stage it is merely a report on work in progress, and more analysis is required, in particular for linking the 2009 and 1999 surveys. It is clear that in many areas more detailed information is required to go further into the identification of the poor, the nature of their vulnerability, and understanding their response. That includes aspects not only of consumption but also of production. It also requires more information on work and employment, which is complex and interdependent with intra-household inequalities, and with migration. More work is also required to isolate particular forms of exclusion and discrimination.

### **9.5 Fragile Human Capital Causes Poverty in North Bihar: Some Empirical Evidences, Veena Kumari and R. K. P. Singh, *Agricultural Economics Research Review*, Vol. No. 22, pp. 99-108, 2009.**

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**Key Topics:** *Poverty and Employment, Health and Human Development*

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This article aims to examine various components and indicators of human development in poor households in north Bihar.

North Bihar was chosen as the area of research given the high incidence of poverty in the region. From 15 districts of north Bihar having poverty level higher than the state average, two districts, Samastipur and West Champaran, were selected using a random table. One block in each of the two districts and one village from each of the selected blocks (Warisnagar and Nautan) were chosen following the selection procedure adopted for districts. From the selected villages (Hajpurwa and Baikunthawa), a sample of 50 households each of poor and non-poor categories, making the sample size of 100 poor and 100 non-poor households was selected randomly. The data was collected through a household survey using a pre-tested questionnaire.

The paper finds that chronic energy deficiency was more prevalent in poor households, particularly among female members. Additionally, a majority of children from poor households were found inflicted with malnutrition. Besides inadequate quantity and poor quality of food intake, the reasons identified for malnutrition are: unhygienic dwelling houses, poor access to basic needs, and high illiteracy. These factors not only contribute to the poor healthcare of family members of poor households, but also adversely affect their regular employment, resulting in a low level of income and persistent poverty. The prevalence of illiteracy and poor participation in rural institutions were also found to be responsible for their low level of skills and poor exposure to outside world.

The cases of illiteracy, dropouts, and non enrolment of children in schools have been noticed to be higher in the poor rather than non-poor households. The reasons for male dropouts are mostly economic, whereas, social reasons predominate for female dropouts. The poor have been found residing in unhygienic houses and have limited access to basic amenities. The poor households depend on non-professionals for medical treatment due to their weak economic status, on the one hand, and the collapsed primary health structure in Bihar, on the other. The study has suggested that poverty could be reduced through higher investments on educational infrastructure and improvement in the nutritional status of these households. The paper suggests that a more stringent implementation of the mid-day meal scheme along with improved monitoring mechanisms will help improve the nutritional status of children of the poor households, which would go a long way in alleviating poverty in Bihar.

The study has observed that targeting of rural poor households in formulating strategies and implementing development programmes warrant special attention. These factors need to be addressed immediately for increasing their capability and skills so that they could be able to get out of the poverty sphere. The paper concludes by pointing out that improvement in social and human development aspects is a prerequisite for the implementation of any programme for poverty attenuation in Bihar.

**9.6 Rural Housing and Health Condition in North Bihar: A Village-Level Study, Veena Kumari and R. K. P. Singh, *Journal of Rural Development*, Vol. No. 26 (3), 2009.**

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**Key Topics:** *Housing, Health Condition*

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The study starts with an introduction on access to basic services and argues that access to poor households to housing and basic amenities has been one of the avowed concerns in the country since the inception of planning. Housing is one of the three basic necessities of life, namely, food, clothing, and shelter. Poverty reflects the inability of an individual to satisfy certain basic minimum needs for a sustained, healthy, and a reasonably productive living. Shelter and quality housing is one of the basic needs of an individual for active participation in the social development process which may lead to reduction of poverty. But housing problems and homelessness are more prominent issues in underdeveloped and developing countries.

In this backdrop, the study aims at analysing the condition of rural housing, access to basic amenities, and rural health services which is based on primary data. The study was conducted in two villages, namely, Hajpurwa and Baikunthwa of north Bihar, where the level of poverty was above state average. First, for selecting these villages, two districts of North Bihar having a level of poverty above the state average were selected with the help of Random Table. In a similar way, two blocks and two villages, that is, one block from each district and one village from each sample block were selected. Finally, 50 poor and 50 non-poor households from each of the selected villages, making a sample size of 100 poor and 100 non-poor households, were selected randomly for detailed investigation.

The study finds that non-poor people were residing in comparatively better houses than the poor. Both categories of households had more access to safe drinking water as compared to the rest of the three basic amenities (electricity, toilet facility, and bathroom facility). The possession of basic amenities, especially toilets, may have a synergic effect in improving overall living condition in the rural area. Any appreciable improvement on this front via the trickle-down effects of income growth, education, and consciousness would need an indefinite time period. Hence, the study argues that there is an urgent need to make an institutional effort to improve the availability of basic amenities in rural areas.

The study finds that per family space for non-poor households was three times more (69.88 sq m) than the poor households (19.09 sq m). However, poor households have to keep animals in this available space, making living more uncomfortable and unhygienic. Quacks are still operating for the treatment of ailing family members of both poor and non-poor households. Most of the child deliveries take place at home among both the categories of households. This is attributed mainly to the fragile infrastructure of primary health centres (PHCs), irregular visits of doctors/nurse to PHCs, low literacy rate, and poor health consciousness, and clearly indicated poor access to scientific professional health services in the study villages. Hence, the study proposes that the PHCs should be strengthened in the villages so that villagers could have easy access to health and hygienic facilities.

The study recommends that *Panchayati Raj* institutions, which have recently been reconstituted by making provisions for extremely backward and women in various positions, should be given more authority and responsibility for improving the housing and health conditions in rural Bihar. They can identify, honestly, the poorest among the poor for involving them in the rural development programmes. It also puts forth a suggestion that NGOs can play a vital role in improving the housing and health conditions of rural households through creating awareness about the benefits of good health, making arrangements for safe drinking water, providing assistance in construction of proper ventilated houses, imparting education, and by ensuring people's active participation in government development programmes, especially prepared to target them. They may involve themselves in the dissemination of information and knowledge regarding the schemes of social welfare activities and also engage themselves in programmes running for the needy and poorest of the poor. Therefore, the voluntary organisations have a great role to play in improving the housing and health conditions, and providing basic amenities to rural households. They could give a helping hand to the government and other development agencies engaged in rural development.

### 9.7 Food Security in Rural Bihar: A Village Level Study, Veena Kumari and R. K. P. Singh, *Journal of Rural Development*, Vol. No. 25 (4). 2006.

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**Key Topics:** *Food Security, Village Study*

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Improving food security at the household level is an issue of great importance for a backward state like Bihar where thousands of poor suffer from persistent hunger and malnutrition. The present study envisages identifying the extent of food secured households along with their access to basic education, health facilities, and safe drinking water. The study is based on primary data obtained through the survey method conducted in randomly selected villages, namely, Krishnanagar, Maheshi, and Tilakpur of Bhagalpur district, which represent almost representative socioeconomic situation of the state. A sample of 120 households in proportion to different categories of households, that is, landless (no land), marginal (<1 ha), small (1–2 ha), medium (2–4 ha), and large (4 ha and above) were selected randomly. The consumption data were collected twice in an interval of one month, which were related to seven preceding days of the respective interview date, to get more precise information about the consumption pattern.

It was found that per household annual total availability of foodgrains was 2461.62 kg, constituting 78.04 per cent from production, 17.18 per cent through purchase, and 4.7 per cent as wages received in kind. However, availability of food grains was comparatively high on large farm households, mainly due to larger quantum of food grain production which was made possible due to the large land base. The study further observed that the purchase and wage received constituted about 83 per cent of the total availability of foodgrains on landless households, but the importance of these sources of foodgrains declined with increase in the land base of households. Thus, the net availability of foodgrains was found comparatively high for medium households mainly due to their preference to keep foodgrains stock for payment of wages to labourers, whereas, the majority of large farmers leased out their land to tenants and required smaller quantity of food stock for payment of wages. It was also found that the consumption level of cereals was higher than the Recommended Dietary Allowance (RDA) in the study villages because almost all the households under study had agriculture either as primary or secondary occupation, which enabled them to produce sufficient quantity of cereals for consumption purposes. Moreover, cereal prices did not increase significantly during the last 10 years in Bihar resulting in increased accessibility to cereals. The farmers producing pulses do not consume but prefer to sell to get money to meet other household requirements. Thus, the per capita consumption of pulses was much lower than the RDA level for all categories of family members. The consumption level of nutritious food like leafy vegetables, oils and fats, and fish and meat is still much lower, mainly due to poor purchasing power of households in the rural areas.

The study further inferred that female members are still consuming less of milk, vegetables, pulses, and oils and fats than male members. Despite the availability of milk, children of the weaker section of society do not consume the required quantity of milk because they prefer to sell the milk for purchasing cheap food materials and other domestic requirements.

With regard to health and hygiene facilities it was observed that more than three-fourths of the births take place in unhygienic dwellings and more than 50 per cent children of landless households are not vaccinated against dreaded diseases. The majority of households do not have sufficient living space and more than 50 per cent of them are still not getting safe drinking water. The study finds that weak health infrastructure and poor health services are the main reasons for poor health and unhygienic condition in Bihar. Moreover, poor economic status of households is also responsible for their poor access to health and hygienic facilities.

In conclusion, the study recommends that there is an urgent need to take necessary steps to improve the household food security along with health and hygiene facilities in Bihar, in general, and in the study villages, in particular. The programmes relating to food security, health, and drinking water facilities need to be implemented sincerely in Bihar for improving the welfare of rural households. Intra-family differences in consumption levels need to be removed by educating them.

**9.8 Chronic Poverty and Social Conflict in Bihar, N. R. Mohanty, Working Paper 32, Chronic Poverty Research Centre and Indian Institute of Public Administration, New Delhi, 2006.**

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**Key Topics:** *Social Conflict*

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This paper aims at studying the chronic poverty in Bihar and analyses the underlying social conflict in the state. The paper uses both primary and secondary data in the analysis of poverty in Bihar.

The poverty conflict interface in Bihar has had different dimensions in different periods of time. The caste-class convergence that characterised the social relationship in the 19th and large parts of 20th century has become a thing of the past, though the changing social dynamics is confined to higher and middle castes rather than the lower castes. The traditional upper caste landed gentry faces difficulty as agriculture has become uneconomical in many parts of the state. The main impediment in the way of agriculture is the lack of irrigation facilities.

The paper opines that poverty of the lower castes provided fertile ground for the growth and expansion of Naxal groups, and increasing pauperisation of the upper castes has created the breeding ground for Senas of different hues. It is a classic example of poverty causing social conflicts and social conflicts engendering poverty. To fight poverty, the government has to begin with basics, like providing irrigation facilities and proper water management, developing grass root institutions and empowering the PRIs, promoting agro-bases industries, etc.

The paper argues that those who benefit from social stability have a vested interest in maintaining peace and keeping conflicts in abeyance. Today, in large parts of Bihar, the impact of democratic politics and militant action has deepened to such an extent that the richest and the most powerful cannot resort to physical torture or sexual exploitation of the poorest of the poor, without facing a backlash.

The paper concludes that it is not as if there is a positive turnaround in the situation, that social conflict has given way to social peace. The reality is that there is a balance of terror. It is a two-way process. Because of the balance of terror, there is the appearance of social amity on the surface. Thus, an environment of all round economic development must be created so that the vicious cycle of conflict and poverty in Bihar, gives way to a virtuous cycle of peace and prosperity.

**9.9 A Study on Social and Human Development Aspects of Poverty in North Bihar: A Micro Level Analysis, Veena Kumari, PhD Thesis, Rajendra Agricultural University, PUSA, Samastipur, 2005.**

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**Key Topics:** *Poverty and Livelihoods*

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The study investigates the influence of social and human development factors on poverty. It argues that despite unprecedented growth in agriculture and other sectors of the economy, poverty and hunger persists in Bihar. While academics have attempted to analyse various factors affecting poverty to a great extent, very few have examined the social aspects of poverty.

The study was conducted in two randomly selected districts of North Bihar, namely, Samastipur and West Champaran. It is based on primary data which was collected by interviewing individual households through the survey method. The sample constituted of 200 households (100 poor and 100 non-poor households), which were drawn from randomly selected villages, one each from two identified districts. The information was collected in 2003 and the survey was conducted in the months of October–November 2004, through questionnaires.

The analysis showed that there was a wide variation in sources of livelihood between poor and non-poor households. Cereals, roots, and tubers were the major constituents of the diets of the poor and non-poor. Poor households were more likely to be deficient in intake of pulses and other protein rich food than non-poor households. However, poor and non-poor households did not differ much with respect to sources of energy in their diets. Interestingly, the causes of girls dropping out were almost similar in both poor and non-poor households. Further, according to the study, while reasons for boys dropping out of school were mainly economic, those for women dropping out were mainly social. A comparatively high proportion of females were chronically energy deficient than

males in poor households, while this difference was slightly less in non-poor households. The study also found that both poor and non-poor households availed the services of 'quacks' for medical treatment. The poorer households had a much lower stake in the management of rural organisations than non-poor households. The study suggests that the level of poverty in Bihar can be reduced by more investment in education and nutrition of the rural poor as well as launching of more government development programmes targeting the rural poor. The study concludes by arguing that the targeting of rural poor households in formulating strategies and implementing development programmes warrants special attention.

**9.10 Understanding Poverty and Vulnerability in India's Uttar Pradesh and Bihar: A Q-Squared Approach, Barbara Parker and Valerie Kozel, *Q Squared Working Paper No. 9, Centre for International Studies, Toronto, 2005.***

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**Key Topics:** *Poverty and Vulnerability*

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Despite decades of anti-poverty programmes and spending and an extensive research and policy literature, poverty remains widespread in India. Much of the existing work on Indian poverty has focused on material deprivation of poverty, which identifies the poor as individuals living in households whose per-capita expenditures fall below some norm, or poverty line. However, poverty is a highly complex phenomenon. To identify the full range of pertinent factors and to examine their interaction, it is necessary to broaden and deepen conventional approaches to poverty measurement and analysis.

This paper examines the factors which maintain or exacerbate poverty and vulnerability and which leads to upward or downward mobility in Uttar Pradesh (UP) and Bihar, two large states in northern India, using a multidisciplinary approach in which more conventional poverty analyses were used in interaction with open-ended qualitative research methods. The broad objective of the study was to contribute to the achievement of India's poverty-reduction goals by updating and enriching the current understanding of how economic, social, cultural, and political factors work in creating and maintaining disparities in opportunities and resource endowments.

The study area is confined to South/Eastern UP and North/Central Bihar. The design of the study was based on a modified Living Standards Survey (LSS), using a multi-topic, pre-coded questionnaire administered to households and communities, with a complementary set of qualitative research instruments. The qualitative methods were used for three purposes. They were to identify factors linked to the perpetuation of poverty which are known to the poor themselves but may not be fully reflected in conventional surveys, to provide through example and case history, an understanding of the specific mechanisms through which poverty arises and is maintained in the study villages, to build theories and hypotheses which will help in designing the household survey, and for testing in the quantitative portion of the research project, and to ensure that the survey instrument is well-tailored to the examination of specific local conditions. In order to elicit the participation of villagers in identifying the key social, institutional and economic forces that perpetuate poverty in these districts, Participatory Rural Appraisal (PRA) techniques and in-depth semi-structured interviews was implemented in 30 villages. These villages were located in the Allahabad, Gorakhpur and Banda Districts of Uttar Pradesh, and in the Jehanabad, Vaishali, Munger and Saharsa districts of Bihar. A series of research instruments and exercises were developed to capture the views of a wide range of villagers—poor, middle-income, well off, male, and female.

The study found that poverty is caused by low levels of assets coupled with low and uncertain returns. The poor have few assets beyond their own unskilled labour. In addition, the poor have limited access to public assets as community infrastructure, basic services and government programmes. They, therefore, suffer from poverty of access to public goods and services. Finally, they are often deprived of informal systems of support and social capital.

Analysis of the survey results supported informants' claims that the cost of medical care was a significant cause of extreme poverty. The first-contact level of the government healthcare system was usually bypassed by the poor, primarily because it lacked medicines and supplies. Instead, they approached untrained or minimally trained private practitioners or quacks whose services are expensive and often ineffectual.

The study reports that the destitute poor are a small proportion of the poor whose quality of lives is precarious to the extreme. They were economically insecure, experienced a specific shock, catastrophe or personal problem that left

them without a livelihood or so deeply indebted that they have little hope of emerging from debt. Most of the destitute poor have few or no social ties, so they cannot expect to be absorbed into a larger family or extended kin unit.

The question of the relationship between poverty and social identity was analysed in the study using the survey data. Results indicated that although not all impoverished households are members of lower castes, low social standing has historically been strongly associated with poverty in all its many dimensions. Moreover, in many regions of India, the gap between SC/STs and the majority is not closing, despite India's increasing industrialisation and rising incomes. In the study regions in UP and Bihar, low caste households were disproportionately represented in the agriculture sector, typically working as low-paid, low-status casual labour. Many did not own land, but instead worked on land owned by their upper caste neighbours. Those not working as casual labourers in agriculture were likely to be working as casual labourers in non-farm activities. Unlike those with higher social status, few members of low caste households in rural UP had permanent or secure jobs.

The study highlights that one of the most critical dimensions of poverty is illiteracy and low educational attainments. Only 55 per cent the SC/ST girls, in even the highest welfare quintile, were enrolled in school, in contrast to nearly 90 per cent of upper and middle caste households living in households at the same per-capita expenditure level.

The findings unveil that all other things being equal, SC/STs in UP and Bihar have lower returns to labour. An educated son or daughter of a poor family with limited contacts outside the village and a stigmatised social identity is less likely to find suitable employment and more likely to join the ranks of the educated unemployed.

Focused group discussions suggested that members of elite groups who borrow (whether from relatives or from formal sources) often do so in order to acquire capital for investment in productive assets, that is, for economic advancement. In contrast, borrowing by the rural poor was most often linked to meeting emergency consumption needs or expenses associated with illness. Thus, the study reports that the poor households are less able to depend on savings and more likely to cope by taking unsecured loans.

Another advantage that supports domination by the higher castes is a greater density of social capital. Upper caste households were found to maintain a joint family structure in which brothers reside together after marriage, pool their resources, and cooperate productively. Poor families were forced by necessity to break from the joint household and set up nuclear families. These nuclear families, which are likely to be low-caste, are viewed as inferior in so far as they can command fewer resources, benefit less from economies of scale, and have less political influence than can a large joint family.

Qualitative work of the study confirmed that credit relationships in rural villages are often exploitative and rarely benign. When loans are provided by private moneylenders, interest rates may be ruinous.

The study categorises that the less poor (i.e., the best-off among poor households) are often those who own a small amount of agricultural land and have begun to diversify their earnings portfolio, for example, through petty trading or small business activities, often linked to agriculture or livestock (selling eggs or milk, producing simple prepared foods).

In dry regions, access to inputs and, especially, irrigation water is required if land is to produce good yields. Better off households are more likely to own private ponds and pump sets, or they are able to utilise political contacts outside their tola and village to ensure that public wells and pump sets are located on or near their own fields. Households with irrigated lands are better able to achieve food self-sufficiency. Those households which are able to produce enough food, either through agriculture or employment, to feed all family members throughout the twelve months of the year were identified as those which can attain a steady state or may even have the potential for advancement. In contrast, those who can feed themselves for only part of the year are expected to lose ground and to fall into chronic debt.

The study adds that some of the poor exhibit a clear potential for beginning to accumulate surplus resources and climb out of poverty. Among the less poor, impoverishment may in some cases be a transient condition because they may be debt free by possessing assets or employment sufficient to maintain a steady state and they face fewer social constraints to economic mainstreaming than do the structural poor.

Thus, although a specific household may show overlapping traits, three different types of poverty syndromes were identified over the course of the study. Each of these three poverty syndromes entails its own set of circumstances in terms of barriers and opportunities for advancement. An effective poverty reduction strategy will not treat all three



uniformly. Instead, separate assistance tools and tactics may be required to effectively address the specific conditions of each syndrome.

The paper warns that unless effective measures are taken, the extensive external contacts of powerful upper castes will help them better capture government and other resources slated for the village. Since residence patterns are often segregated by caste, resources such as drinking and irrigation water, schools, health posts, infrastructure projects, Public Distribution System (PDS) shops, etc., become concentrated in the wealthy or dominant-caste communities. Capturing these resources strengthens their ability to retain economic and political dominance of their villages, and to block lower caste households from moving up in the economic hierarchy. Lack of external contacts, therefore, contributes to the failure of the poor to gain access to or to effectively use many of the government services that were designed to help them. The study concludes that in rural India, poverty of social relationships is linked to poverty of access to public resources.

**9.11 Livelihood Constraints: Options and Strategies for Survival of Agricultural Labour in North Bihar, D. M. Diwakar, *Social Action*, Vol. No. 54 (4), pp. 374–91, 2004.**

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**Key Topics:** *Subsistence Agriculture, Agrarian Change*

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This article attempts to examine the challenges of livelihood, constraints, options, and strategies of agricultural labour households of North Bihar with the help of primary data collected from 286 sample households of agriculture. It discusses, in detail, subsistence agrarian structures of North Bihar, occupational structures, employment and wage constraints, and poverty and analyse options and strategies available to the households.

The sample has been collected at the district, village and household level from three representative districts based on multi-stage stratified random and purposive sampling method in three kinds of locations; firstly, an area that witnessed progressive social mobilisation against economic and social exploitation, where effective land distribution, technological changes, multi-crop and commercial cropping, etc., are pervasive ; Second, an area that is low, flood prone, waterlogged, and primarily mono-cropped, suffering from out-migration as well as backward agriculture; The final location represented the most backward agriculture with unirrigated, mono-crop and the dominance of traditional agriculture. Begusarai, Darbhanga and Madhubani districts were taken as representative districts for the different types of locations, respectively.

This study utilises labour use as the basis to comprehend rural society in North Bihar, with HHs supplying physical labour to the other lands for payment being placed at lowest status in the agricultural community and are called agricultural labour (AGL). The HHs in which labour is neither hired-in nor hired-out and are mainly based on family labour are called poor middle peasant (PMP) HHs, while non-cultivating agricultural labour (NACL) HHs comprise of the landless labour working on others farms.

Based on the sample districts, the study finds that marginal farmers constitute more than 86 per cent of the farmers but possess only 45 per cent of operated area while semi-medium, medium and large farmers are about 4 per cent and possess 22 per cent of operational area and about 7 per cent constitute the small farmers who possess about 17 per cent of operational holdings, suggesting an inequality of distribution of land on the one hand and a subsistence agrarian economy on the other. Marginal farmers mostly use family labour and, thus, are cultivating agricultural labour. HHs enter the lease market to supplement their income, making tenancy an important institution in North Bihar, with sharecropping tenancy widely practiced.

The study finds that Madhubani district has 34 per cent of leasing and 14 per cent of leasing out of land, which is the largest scale of leasing out of land in the representative sample. Leasing-in patterns are similar in Darbhanga but both slightly lower in Begusarai. AGLs and PMPs have registered larger share of leased-out land as a percentage of net operated area, suggesting that major portion of net operated area of these HHs was part of tenancy. According to the study, net operated area, as a whole, is more than 272 per cent of the cultivable land area owned and it is clear that by leasing out land some HHs end up landless and have shifted to secondary and tertiary sectors, while land has remained a source of supplementary income and a mark of social status. It is found that although sharecropping is prevalent in all regions, the regions with higher level of consciousness have slightly lower intensity and vice-versa. With the announcement of the Bataidari Act by the government, tenants are facing a tough time to get land for

cultivation to supplement income. Further, seasonal tenancy has become pervasive for a single crop to avoid claims of tenants on the land, while only closer kin and loyal persons in confidence are given land to operate, creating a crisis for HHs dependent on sharecropping, with AGLs and PMPs suffering the most.

The study reveals that the annual average wage rate of a ploughman in Bihar was found to be very low (Rs 36.87) and much lower than the prescribed minimum (Rs 58 per day). Most states also show a significant gender gap in wages. For instance Karnataka's female wage rates were Rs 27 compared to overall wage rate at Rs 35 for ploughman. Without sufficient employment opportunities in agriculture but with major dependency on it, such a wage structure leaves limited options for livelihood of AGL HHs.

Based on Census 2001 the study points out that in the sample districts, the workforce engaged in non-agriculture sector, particularly household industry, are a small proportion. There is hardly any HH in the sample that can be completely separated on the basis of either agricultural or non-agricultural activities with largely overlapping of activities. Keeping supplementary income asides, the study notes that 61.3 per cent of sample households have agriculture as their main occupation while 38.7 per cent depend on non-agricultural activities. Madhubani has the highest percentage of sample HHs in agricultural activities with 69 per cent, while Begusarai and Darbhanga have 58 and 56 per cent, respectively.

Based on labour use, it is found that a sizeable percentage of HHs use family labour for cultivation (53 per cent), out of which about a third of the HHs participate in cultivation irrespective of sex. For agricultural labourers only a few HHs do not utilise female family labour, although there are still a few AGL HHs that do not permit employment of females on other's fields. Most HHs, to the extent that they can restrict the work of women, prefer to confine them to HH activities, if they can afford to do so. However, in many cases households that have a migrant member require females to work on others fields due to tied migration costs, debts owed, compulsions of family, or survival due to delayed remittances.

The study finds that although family labour is used even by upper castes and big peasant households, middle peasants use the highest followed by AGL and PMP with family participation increasing as we move to more backward agriculture with it being highest in Madhubani followed by Darbhanga and Begusarai, respectively. In terms of occupations, sowing, weeding, and harvesting tend to employ more family labour than other activities.

The study calculates the Total Labour Days in Agriculture sum of total family labour with total hired-out and hired-in labour and finds that NCAL households have the lowest total labour days in agriculture which is practically all hired-out labour as these constitute the landless. Average labour days per household in agriculture was found to be only 184 days with it being 124 for NACL households suggesting that landless labourers are employed for only 4 months in a year. Only about 1 month's employment is available per household with low rate of labour absorption suggesting below subsistence farming, especially for AGL and PMP households. Increasing migration has led to higher female participation, although in upper castes their role is primarily supervisory. Their participation is almost at par with male workers in all activities except ploughing with sowing and threshing, although mainly in NCAL, PMP and AGL households. AGL and NCAL households have a rate of casual labour as compared to the seasonal nature of labourer in PMP households. It is found that districts with higher consciousness have more casual labour with emergence of market forces than seasonal and bonded labour leading and, hence, Madhubani has the least casual male workers and highest seasonal workers in AGL and NCAL households.

The study finds that agriculture in Bihar is found to be mainly subsistence level comprising largely of marginal workers, with dominance of traditional techniques. Irrigation levels are low and productivity is dependent on monsoons amidst heavy losses due to floods and constant waterlogging, leading to restriction of employment opportunities in the region. Due to avenues of employment being limited, the wage rate is depressed and almost 57 per cent of people in North Bihar live in poverty. Options available to HHs faced by such a situation are extremely limited. NCAL workers can either work in fields at depressed wages as their opportunity cost is almost zero or migrate for survival or attempt to lease out livestock. Faced with these options, there has been an increasing shift of workers into non-farm activities like weaving, sewing, pottery, construction, and community services, and also a large out-migration to urban areas.

The study argues that although this has led to significant changes in like increasing schooling of children to create human capital and greater political awareness, workers are still not free from the hold of the rich and moneylenders as they are still lacking in resources and most government programmes targeting them have been

largely inconsequential. The study concludes by pointing out that the key problem in North Bihar stems from lack of adequate and sustainable employment. There is a need to better agricultural productivity by providing for irrigation and also flood control and drainage. Employment must also be expanded through need based activities in the non-agricultural sector and there is a pressing need to enhance capabilities and provide safety nets for the vulnerable. The study sees implementing minimum wages, providing for vocational training, increasing female participation in society, and increasing purchasing power through meaningful employment and greater access to land as the key to solving the problems of the people of North Bihar.

### **9.12 Study on Rural Poverty in Gangetic Plains: Profile and Determinants, International Fund for Agricultural Development, 2003.**

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#### **Key Topics:** *Rural Poverty, Determinants of Poverty*

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The study aims at analysing poverty levels in the Gangetic Plains. Although this vast region covers five agro-climatic regions of the country, the present study has restricted itself to the Middle Gangetic Plain, covering three agro-climatic regions of Eastern Uttar Pradesh, North Bihar, and South Bihar. The study is based entirely on secondary data, much of which could be collected from scattered sources.

The study finds that the vast area of the Middle Gangetic Plain (MGP) is one of the victims of regional disparities in development, where both the growth process as well as the pace of rural poverty reduction have been much slower than elsewhere in India. Comparable estimates, relating to the year 1993-94, show that while the rural poverty ratio was 36.7 per cent for India as a whole, it was much higher at 51.8 per cent in MGP.

It is noted that unlike other poverty stricken regions in the country, the resource base of this river valley region is very substantial—the natural fertility of the soil is very high, the water resources are abundant here, and the region also enjoys a high level of bio-diversity. But unfortunately, this natural advantage is more than negated by a number of other factors—demographic, economic, and structural, all inhibiting the growth of its rural economy and causing very high levels of rural poverty.

The demographic pressure on its land resources is one of the highest in whole of the country and even in the world—803 persons per sq km, more than two and a half times the national average of 324 persons per sq km. In terms of rural population per hectare of cultivated area, this demographic pressure is relatively less, but it is still twice as much. While a hectare of land is required to support only one rural family for the whole of the country, in MGP, it has to support two rural families and in some parts, it is even three rural families.

The functioning of its rural economy is also very traditional, thanks to the tenurial system of Permanent Settlement introduced during the colonial period. Nearly 70 per cent of the rural households in MGP are either landless or own less than one acre of land. A large part of the land here is cultivated not by its owners, but by sharecroppers. Further, a very large number of agricultural holdings here is so small that their owners are unable to cultivate them using modern agricultural inputs. Land is the principal source of livelihood in rural areas and it is, therefore, not surprising that the rural poverty ratios are one of the highest in MGP.

Besides demographic pressure and iniquitous land distribution, the rural economy of MGP also suffers from another disadvantage, the high flood proneness of the area. Nearly two-thirds of the area under MGP is flood prone, causing frequent damages to property and, more importantly, deterring agricultural investments.

The study argues that rural poverty ratios have declined elsewhere because of accelerated growth process of the agricultural economy. But except for some moderate growth in its agricultural sector, MGP has not witnessed other poverty-reducing activities and, therefore, the pace of poverty reduction here has always been slower here.

Both the growth process and the poverty alleviation programmes are of immense relevance for poverty reduction. Admittedly, some studies using aggregate national level data have emphasised the greater role that the growth process has played in reducing rural poverty in the recent period, but the disaggregated data, for backward regions like Uttar Pradesh and Bihar, clearly indicates that the contribution of growth of aggregate output to poverty reduction is much limited here. If one analyses the experience of the 1980s, it further points to the substantial potential of properly implemented Poverty Alleviation Programmes (PAPs) towards reducing poverty.

In the past, all interventions towards poverty reduction had been made by the government yielding limited results during the 1980s, and even more so during later years. Fortunately, a large number of NGOs have appeared during the 1990s whose commitment, flexibility, and professionalism together have often resulted in more cost-effective and efficient PAPs throughout the country, including Uttar Pradesh and Bihar.

For a long time, PAPs had primarily aimed at providing material benefits to the poor, either free or at subsidised rates. Such efforts rarely promote the concept of self-help without which it is not possible to make a lasting impact on poverty. The PRIs and SHGs are two such potent strategies for promoting structural changes in the rural society which could enable the rural poor to help themselves.

### **9.13 *Human Development in Bihar – A District Level Analysis*, PhD Thesis, J. Jiwan, Centre for the Study of Regional Development, Jawaharlal Nehru University, New Delhi, 2002.**

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**Key Topics:** *Human Development, District Level Human Development Analysis*

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This study aims to know the level of human development at the district level among different regions in Bihar, understand the various reasons behind the different levels of human development in different regions of state, and understand the trends and patterns of expenditure on social services, especially health and education.

The first chapter opens with a discussion on successive stages in the concept of development. Thereafter, a holistic concept of human development has been discussed, from the literature on different aspects of human development. A study of the UNDP's methods of measurement of the Human Development Index has been carried out. Also, the government's understanding of the human development approach during all five year plans has been discussed. The effects of the new economic reforms on central grant trends and state's expenditure on different social aspects have been taken into consideration. Levels of human development and gender-related development have been extensively detailed at the district and regional level. Regional analyses of education and health status of the people have been done in the light of levels of human development in the state.

The study argues that human development is the process of enlarging people's choices and expanding the human capabilities to lead a long healthy life, to be knowledgeable, and to enjoy a decent standard of living. In this regard, the people of Bihar are not able to lead a long healthy life, to be knowledgeable, and to enjoy a decent standard of living in comparison to other Indian states. Some of the main findings of this study are as below.

The study finds that at the state level, Bihar is placed at the bottom of the human development ladder in India. The people of Bihar are lagging far behind in all core parameters of human development, namely, educational attainment, life expectancy, and per capita income. It argues that Bihar is one of the most backward states in almost all socioeconomic fronts. For example, as compared to other states, incidence of poverty in Bihar has not been drastically reduced over the period of time. Therefore, Bihar is characterised by backwardness, severe poverty, high illiteracy rate, high gender inequality, and very poor economic performance. The study reveals that though the central grants to Bihar have been continuously increasing for socioeconomic development, the share of basic services like health and education in the total social service expenditure has remained stagnant. The study also notes that northern Bihar has a low level of human development largely due to low value of income and educational index. Central Bihar has medium level of human development because of mainly, a medium level of educational index. South Bihar had highest level of human development largely because of its high level of income index (economic development). On gender related development, the study finds that northern Bihar has medium to low range of gender-related development, due to the large gap between men and women in terms of educational and economic status. Central Bihar experienced high to medium level of gender-related development index because of the high to medium level of equally distributed income, life expectancy, and educational index. South Bihar possesses a high level of gender-related development index mainly due to the high level of equally distributed income index. According to the study, South Bihar has a higher level of human development as compared to gender-related development. North Bihar experienced a high level of gender-related development index in comparison to human development index. Central Bihar with a medium level of human development also has medium range of gender-related development index.

The study suggests that although Bihar has low level of human development, vast disparities exist among districts and regions as well. South Bihar is relatively developed as compared to north and central Bihar because of better

economic development. Lack of political will and commitment and corruption are the major reasons for the failure of developmental programmes in the state. Therefore, proper management is needed for making developmental programmes a success.

**9.14 Gains and Stagnation in Bihar and Andhra Pradesh, Somesh Kumar, in D. Narayan and P. Petesch (eds), *From Many Lands: Voices of the Poor*, World Bank and Oxford University Press, New York, pp. 147–180, 2002.**

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**Key Topics:** *Experiences of Poverty*

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A book chapter, this study reveals the poor people's views on the key economic, institutional, and social hurdles they experience in their attempts to move out of poverty. The study is based on discussions with poor women and men in 6 rural, 2 urban, and 2 peri-urban communities in Andhra Pradesh and Bihar. The communities represent varying demographic, environmental, occupational, and social characteristics, and include the most disadvantaged groups in Indian society; women, the landless, and members of the scheduled castes and tribes. An overriding criterion was to select places that offered the possibility of programme or project follow-up.

The study notes that many men and women acknowledged improvements in well-being over the past decade with more money, more children in school, more job opportunities, more services, more savings, and a larger scope for women's participation. While these changes are indeed helping people cope and survive better, especially the very poorest in their communities, participants report that few rural people are managing to break free and leave poverty behind. The numbers of poor people remain very large and in some villages their numbers are continuing to grow rather than diminish.

The study also noted sharp inequalities in social relations, reinforced by the caste system influence, in respect of access to economic opportunities and public services, and to the social life of the community. Poor people see better livelihoods opening up around them but say they don't have the means to access them. They remain stuck, eking out a living on small and unproductive farm plots or in precarious daily wage jobs that pay very poorly. Lack of employment in farming and fishing forces many people to migrate, and wage insecurity drives people into debt.

Men and women in the study, clearly show that they know how to cope with destitution, but their challenges are growing. In villages, population pressure has brought environmental problems and caused landholdings to be subdivided into smaller and smaller plots. In cities, homelessness is a rising problem. Drinking water has become scarcer. Schools and health centres are short-staffed and poorly equipped. Police harassment is reportedly on the rise. Problems of dowry remain vexing.

In discussions about their lives, people in the study repeatedly emphasise that the causes and impacts of poverty are multidimensional and interconnected. When reflecting on the various government institutions that interact with their communities, study participants consider them important, but often ineffective. Many discussion groups express appreciation for public entitlement programmes, but in their evaluations find the assistance more helpful in easing their struggles than in enabling them to climb out of poverty. Poor people report that many public services and programmes have problems of governance and weak accountability.

The study finds that participants rarely describe any role for poor people in influencing public agencies, although they can cite specific measures that they feel would greatly improve their lives. Women blame the liquor trade for the ruin of so many households and for the rise in domestic violence. They would like to see it more regulated. Men's groups in the slums say they have waited a long time for the local administration to honour requests to regularise their illegal constructions.

Support for decentralised decision making at the panchayat level and the inclusion of women in leadership roles are important first steps. However, unless poor men and women can strengthen their capacity to participate actively in this framework, the *panchayats* will not be representative. If capacity is built, poor people can acquire more influential roles in setting government priorities, defending their rights, and obtaining better public services.

In both urban and rural areas, poor people are engaged in a variety of entrepreneurial activities. This work often yields low and precarious returns, and in urban areas vendors report that they face repeated harassment by the police.

Given the large numbers of people engaged in petty trade, home-based work, and other informal activities, policies related to private sector development should focus on actions that enable poor people's entrepreneurial initiatives to become more productive. It is important to link rural non-farm producers with urban distributors and markets.

For most people in the discussions for this study, well-being means work that is stable and safe, food for the family regardless of the year's scant rainfall or the morning's poor catch at sea, and a surplus to rely on in the future. In the struggle for a better life, poor people say that government schemes help somewhat, but it is the local civic groups that are their greatest supports.

**9.15 *Dynamics of Poverty, Employment and Human Development in Bihar*, Alakh N. Sharma, Sandip Sarkar, Anup K. Karan, V. Gayathri, and Pushpendra, Institute for Human Development and Action Aid India, New Delhi, 2002.**

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**Key Topics:** *Poverty and Employment, Human Development*

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The study attempts to understand the incidence, determinants, and consequences of poverty in Bihar and the required policy measures to reduce it. The main objectives of the study are to investigate the process of changes in rural poverty and employment scenario over time as well as to understand the current poverty and related syndrome in rural Bihar. The study aims to record and evaluate people's own perceptions of the nature and extent of poverty, and its causes and consequences. It also examines the impact of various policies on poverty alleviation, employment generation, social security, welfare, etc. The final objective of the study is to document and evaluate the social and institutional environment and to suggest policy and legal reforms for the poor.

The study is based on primary data collected from 36 villages spread over 6 districts covering both the north and south Bihar plains. Participatory Rural Appraisal was conducted to understand some aspects of poverty, human development, and livelihoods. Information on basic socioeconomic aspects like ownership of assets, indebtedness, working of government programmes, labour use pattern, etc., were collected through a household questionnaire.

The study found that rural Bihar depicts a grim picture of underdevelopment and widespread poverty and deprivation. Although the study has not used the quantitative measure of poverty, some important dimensions of poverty like health, education, and access to basic services reveal that a large proportion of rural population utterly lack these basic human needs. Despite this state of underdevelopment, the study has shown that the society and economy of the state are not stagnant.

According to the study, rural society in Bihar is divided into three major groups in a hierarchical manner. The first is the big landlords which comprise of forward castes like Brahmin, Kayastha, Bhumihar, Rajput and a section of upper caste Muslims. The second group comprises of the middle peasants belonging to OBC (the Kurmi, Yadav, and Koeri). The third is a class of poor middle peasants and agricultural labourers comprising of Scheduled Castes, OBC II, and lower caste Muslims.

The study reports that the changing pattern of land relations show that land transfer is taking place in favour of middle caste-class people. While the Kurmis have been able to maintain their old operational holding status, the Yadavs and a section of SCs have increased their holding status through land market and leasing practices. The upper caste-class people are gradually shifting their activities to non-farm activities like business, service, etc. The lower caste Muslims have been the worst sufferers.

The study notes that the economy of Bihar is a labour surplus economy. The poverty driven high WPR has led to concentration of workers mainly in low profile jobs. With respect to wages, the study found that in almost all the villages, the wages in real terms have shown an increase and in some villages the rise is substantial. Higher work participation of Yadav and Koeri women in economic activities can be seen in the case of middle class households. Gender discrimination also manifests in terms of differential wage rates for males and females in a number of villages.

The study points out that there has been large scale migration of rural labourers from north Bihar plains, not only to distant places but also to big towns within the state. Besides economic reasons, many social factors like increasing rural tensions, deteriorating infrastructural facilities, low caste status have led to large scale migration.

In most cases, the upper caste-class people migrate for longer durations and lower caste people, mainly for wage labour and for shorter periods. A significant number of youth from the upper castes have also started migrating to distant places and many of them are engaged in manual work. The large scale seasonal migration of labourers from the villages resulted not only in breaking the prevailing class-caste hegemony but also in the monetisation of rural Bihar. The study found a rising demand of the contract system of wages on the side of landlords and labourers, which can be attributed to the gradual opening up of the village economy and of extending the boundaries of the village labour market.

The study has also tried to assess the nature and extent of poverty in Bihar by capturing qualitative aspects. Various parameters such as people's perceptions regarding factors associated with poverty, change in socioeconomic status, and various determinants of level of human development have been used to capture the extent of poverty. District wise analysis shows that total asset ownership is the highest in Gopalganj, followed by Rohtas, and is the least for Purnia. Total assets and land holdings show a consistent rise from casual non-cultivating agriculture labour to the level of landlord class. With respect to caste, Kurmis top in the possession of total assets followed by Bhumihars. SCs and backward caste Muslims lie at the bottom. In almost all villages, it is found that most people still depend on traditional sources of lending. Institutional loans do not reach the most dynamic section of the society. It is limited to the upper castes and higher land size classes. The study reports that traditional loans are mostly used for unproductive purposes. For all non-cultivating classes, loans are largely used for the treatment of ailments.

The study found that the quantum of food availability is not the same throughout the year for a poor person. Poor people experience periods of starvation. The non-availability of house and land are both cited as important correlates of poverty. In this context, the study argues that land distribution programme is an important part in any poverty alleviation programme. As far as education is concerned, the survey results show low levels of literacy in Bihar. The poor school infrastructure, lack of interest, and high student ratio contribute to the poor education levels in the state. The study also reports that the health situation is in a bad condition in the state.

In order to make a dent on widespread poverty in rural areas, the study finds that the government is running many anti-poverty and employment generation programmes. But all these have only a small impact on the living conditions of the poor. The coverage of these programmes is very small. Further, the study found significant leakages and malpractices in many of the programmes.

Comparisons with an earlier ILO-ANISS study reveal that interrelation between class and caste continues to be quite high, though it remains relatively weak between class and land ownership and between caste and land ownership. A drastic fall in the attached labour is observed leading to the swelling of the ranks of casual agricultural labour. In the earlier survey, migration mostly took place in households with lesser number of males and more proportion of children, but now households with a larger number of men and a higher proportion of children migrate, showing a migration of surplus labour. Labour supply by caste has not changed much, except for huge increases in Muslim women wage labour, necessitated by their fall in economic status. The leasing in land phenomenon has considerably diminished showing increased incidence of direct cultivation. Compared to the earlier survey, the upper castes operational holdings have decreased and those of middle castes have increased. Traditional loans were earlier used for consumption purposes followed by social and health expenditure. The present study found that now it is mainly used for health expenditure followed by social expenditure. Compared to the earlier survey, the housing status of rural households has improved.

The analysis and findings of the study show that although Bihar's rural economy has not achieved faster economic development, change has taken place in several ways in society. These changes have important policy implications. The study has shown that infrastructural underdevelopment acts as a very powerful constraint to development and its diffusion in the state. A large number of villages without electrification, inadequate power supply, no roads or bad roads, poor rural marketing network, inadequate and defective irrigation coverage, demonstrate the importance which the state should attach to development of rural infrastructure in the state. All these require a large amount of investment by the state. Poverty alleviation programmes have to be effectively linked through the schemes of infrastructural development in rural areas. The study also recommends for strengthening of the food security system in the state. The study suggests that the flow of both cooperative credit and commercial banks credit needs to be increased and its delivery should be simplified. Investment in health and education also needs special attention. People's organisations and NGOs have to be necessarily involved for making the initiatives effective. Finally, the study concludes that, the success of all development plans, schemes, and public action depends on the institutions and agencies involved with their implementation and execution.

**9.16 Where are the Poor Households of the Villages of North Bihar in the Programmes of Rural Development?,  
D.M. Diwakar, *Review of Development and Change*, Vol. No. 6 (2), July-December 2001**

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**Key Topics:** *Rural Development, Government Programmes, Panchayati Raj*

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The article notes that Bihar is the second most populous state in the country but its backward economy is characterised by subsistence farming, chronic unemployment, and poverty stemming from prevalent semi-feudal relations and a lack of infrastructure. Agriculture is largely dependent on the monsoons and while it is also hit by recurring droughts, floods, and waterlogging leading to a lack of income, workers stuck in debt traps, and trapped in either formal or informal bondage with migration proving the only outlet. Given this background, the study attempts to examine the implementation of poverty alleviation programmes carried out in Bihar based on their impact on rural development, condition of assets created, either to individual or society, effects of these assets to uplift the poor, viability and sustainability of assets, as well as exploring the possibility of encouraging participation of the masses.

The study was conducted in 40 villages of Sitamarhi district, which was randomly selected. The four blocks of Bathnaha, Belson, Majorganj and Nanpur were selected within the district on the basis of their concentration of population of SCs, agricultural labourers and population living below the poverty line. A further 10 villages from each block were randomly taken to be part of the sample. The study was conducted through a Village Schedule, which made an inventory of village development, schemes implemented, work done, basic amenities, identifying beneficiaries, requirements of the village, functioning of the PRI, redistribution of land, and a Beneficiary Schedule which covered accounts of the socioeconomic features of beneficiaries, conditions of development programmes, difficulties faced, and suggestions of beneficiaries. A day to day field diary was also recorded for qualitative research.

Sitamarhi district was randomly selected to be a representative district for Bihar. It had a population of about 20 lakhs with 11.7 per cent SC and ST population with very small number of STs. Its sex ratio was lower than the overall sex ratio of Bihar and population density higher. Literacy in the sample villages was very low at 22.4 per cent with the percentage of literate females only 5.7 per cent. Majority of the workforce is dependent on agriculture and every main worker had to feed at least 2 non-workers in the district. The district was affected by recurring floods leading to low employment, low incomes, backwardness, and depressed wages with large gender differences. Health facilities were generally poor in the district with only 45 per cent of sample villages having health and medical centres. Sanitation facilities, particularly toilets, were extremely poor and some villages did not even have safe drinking water, health and medical centres, panchayat bhawans and primary schools.

The District Rural Development Agency (DRDA) was responsible for identifying poor beneficiaries and implementing programmes. Poverty was found to be concentrated among peasant cultivators with marginal and small holdings, and landless labourers, and the DRDA and bureaucracy showed an indifferent and apathetic attitude towards the poor right from the identification and selection stages. It was found that all schemes were not being implemented in all villages. Integrated Rural Development Programme (IRDP), *Jawahar Rozgar Yojana* (JRY), *Indira Awas Yojana* (IAY) and National Old Age Pension Scheme (NOAPS) were the major schemes implemented in the maximum number of villages, with the coverage of IAY being the largest. Community based development works were mainly restricted to construction of roads, *panchayat bhawans*, schools, drainage facilities, etc.

The study finds that while there were some successes, implementation of other schemes remained largely unsatisfactory with some being partially implemented and incomplete, and some yet to be started even though funds were available. This article attempts to assess these schemes based on official data provided by the district administration as well as directly from beneficiaries who are the ultimate source of assessment. Based on the official assessment, it was difficult to judge schemes as officials were hesitant to cooperate in data collection and also most scheme targets were not fixed. Although performance of IRDP, JRY and IAY during 1996-98 raised hopes for better implementation, land reforms were a complete failure with not even 2 per cent of HHs targeted over the three years. In all schemes, funds remained unspent and, in some cases, almost 100 per cent of funds allotted, with total unutilised funds in the district being 102 million. However, this must be viewed in context of funds being kept to meet exigencies of floods, and for relief and repair works. In the Beneficiaries version, it was clearly seen how the criteria for selection were distorted with 5.5 per cent of beneficiaries having no criteria for selection at all. Although the quality of assets received mixed reactions with criticisms from several quarters, it was found that 74



per cent of assets created were in use. Majority of the beneficiaries of the scheme, though, complained that there were underhand dealing among contractors, headman of the village, and administration, and that lack of proper supervision, indifferent attitude of officials towards the poor, and absence of any form of protest were the prime reasons for poor construction. Further, there remained discrepancies in the wages paid for works and redistribution of land remained low key as reported by beneficiaries.

The study found that most assets were in use and making profits and developmental schemes for creating infrastructure and amenities also brought some positive results. Development programmes led to a shift in occupation structure away from agricultural labour with increase in self employment and non-agricultural labour. Although some employment was generated through these programmes, its volume remained insufficient and only 2.4 per cent of beneficiaries gained employment for more than 90 days. These programmes led to a positive change in distribution of income, with not only poor people moving to upper levels of income but allowing some that were not poor to also improve their position. About 99.4 per cent of beneficiaries suggested that they had benefited from developmental activities.

Despite all the above benefits, the objective of increased participation of the people through PRIs in the mechanism of rural development process was unsatisfactory with lack of the involvement of the *Gram Sabha* in the process.

The study points out that identification of beneficiaries, leakage of funds, nexus of officials, contractors, middlemen, and local leaders, along with a lack of awareness regarding various schemes among the population still remained serious areas of concern in the mechanism of rural development. Beneficiary households were of the view that unless a comprehensive development package with peoples' participation is worked out, mere poverty eradication and development programmes may not meet their objectives.

The study concludes by listing out some of the suggestions provided by beneficiary households to better the mechanism of rural development. However, the people of the area are of the view that unless effective measures for flood control and water management are taken by imposing confidence in people and involving them for finding a solution, hardship of the district will remain unchanged and entire investment in the name of development will be siphoned off without any significant consequences.

**9.17 Rural Income Distribution and Poverty in Bihar: Insights from Village Studies, Jawahar Thakur, Manik L. Bose, Mahbub Hossain, and A. Janaiah, *Economic and Political Weekly*, Vol. no 35 (52-53), pp. 4657-63, 2000.**

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**Key Topics:** *Poverty and Income Distribution, Village Studies*

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In this paper, rural poverty and income distribution is critically analysed, based on an intensive survey (1996-97) in 8 villages representing all agro-ecological regions of Bihar. The study examines the structure of household incomes and its distribution, and how they differ between the technologically developed and the less developed villages in Bihar. An attempt is also made to analyse the contribution of different factors of production to household incomes and to measure the sources of income inequality.

The study consists of a sample of 847 households belonging to 8 villages from 6 development blocks belonging to 4 districts in Bihar. The sample villages are classified into two groups according to coverage of modern varieties. The group with a high coverage of modern varieties is called technologically developed and that with a low coverage as technologically less developed. The technologically developed villages were also found to be those with better access to infrastructure facilities. A Gini decomposition analysis is applied to quantify the relative contribution of various income sources to the overall degree of inequality in household income. To find out the factors affecting the probability of an individual being poor, the study estimated a Probit model using poverty as a dependent variable, a binary (poor, 1 and non-poor, 0), and a set of socioeconomic and technological factors as explanatory variables.

The study found that rice production accounts for only 13 per cent of household income, while about 55 per cent income originated from non-agricultural activities. The total household income was 73 per cent higher in the technologically developed villages than in the underdeveloped villages, indicating a positive impact of the diffusion of modern agricultural technology and the development of infrastructure. The adoption of modern varieties under

irrigated conditions contributes an addition to household incomes, which is 33 per cent of the returns from land when cultivated with traditional varieties.

The study reveals that male worker earns Rs 24,683 per annum, but the marginal returns from female workers is negative, indicating that the household employs female labour beyond the point where the marginal productivity of labour is zero. The workers who are educated in secondary schools and above earn on the margin Rs 9,695 more than the less educated. The households in villages with access to infrastructure facilities earn on average Rs 16,065 more than households in villages lacking those facilities.

The results show that the marginal return from land is about 26 per cent higher in the developed villages compared to the less developed villages. The low-income households, who depend more on the sale of labour power for a livelihood, would gain more from technological progress and development of infrastructure than the high-income household, better endowed with land and physical capital. Improvement in the human capital content of labour would further augment this favourable income distribution effect.

The study also shows that income distribution is less unequal for the technologically developed villages. It can be noted that the income from rice cultivation (Gini, 0.37) and other agricultural activities (Gini, 0.29) are less unequally distributed than the income from non-agricultural activities (Gini, 0.46).

According to the study, higher productivity and profitability in rice cultivation in the technologically developed villages contributed to concentration of household income. The study reveals that the incidence of poverty was substantially lower for the technologically progressive villages that also have better access to infrastructure facilities. The poverty function indicates that poverty can be eradicated by effective population control in rural areas, effective implementation of various agrarian reforms to make cultivated land accessible to marginal and landless households, improving education, development and diffusion of modern agricultural technology suitable for fragile environments, and development of better infrastructure, especially reliable irrigation.

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**SECTION 10**

**Health and Nutrition**

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## Overview

The health and nutrition status of any society determines its well-being to a great extent. The development indicators related to health are particularly disturbing in Bihar and this is reflected in the studies herein. The studies in this section can be categorised into four broad categories. First is on the traditional and long known specific diseases, such as *Visceral Leishmaniasis* (Kala-azar) and polio, as well as new issues emerging out of tobacco use. Second, recent research on reproductive and child health emerges as a crucial area of study. Third, issues in health infrastructure and capacity building of health manpower in the state, and, fourth, some diverse studies such as on groundwater contamination, indigenous medicines in the state etc.

The state has the largest number of Kala-azar cases in the country and Boerlaert et al. (2009) suggest that current and future preventive measures for such a deadly disease need to be subsidised or provided free to the majority of households living in the affected areas or else they might prove futile. In fact, Kala-azar has received considerable attention in the state and research has examined perceptions on Kala-azar among the population (Mishra et al., 2010); the link between low serum zinc levels and Kala-azar (Mishra et al., 2010), the underreporting of Kala-azar cases (Singh, 2006; Singh et al., 2010), the cost of patient management (Meheus et al., 2006), its management in rural Primary Health Centres (Hasker et al., 2010), the use of Amphotericin B for its treatment (Sundar et al., 2004), transmission dynamics of Kala-azar (Mubayi et al., 2010), the influence of topography on its endemicity (Bhunja et al., 2010), its annual incidence in an endemic area of Bihar (Das et al., 2010), and its household costs and economic impact (Sundar et al., 2010 and Sarnoff et al., 2010). The prevalence of other vector borne diseases like malaria, filariasis, and communicable diseases such as tuberculosis is also extremely high, but these diseases have not generated as much research interest.

In 2006–07, Bihar reported the second highest number of polio cases in the country. Ironically, a World Bank report points out that full immunisation, which has a direct impact on child health, covers only a small fraction of children and has been declining in recent years because of the shift in attention to the pulse polio immunisation (PPI) program (World Bank, 2005: pp. 21). Jeffery and Jeffery (2010) point out that in recent public health budgetary allocations, 74 per cent of the total immunisation budget has been devoted to pulse polio and allocations to TB, malaria, and diarrhoeal diseases have been much lower than allocations to pulse polio. It is important to recognise that polio cannot be eradicated and that planning must move towards a routine immunisation programme that covers all children against all communicable and preventable diseases.

Tobacco usage is another area of concern. Two recent developments include penetration of new manufactured products in the smokeless tobacco market in rural areas and the usage of tobacco by children (Sinha et al., 2009). Yasmin et al. (2010) examine occupational health hazards for women beedi rollers in the state.

The Compendium also includes recent research in the state on reproductive health. Sinha (2008) examines maternal mortality in a district hospital in Bihar. Patel et al. (2009) suggest that the best means to achieve safe abortion in the state would be to allow trained midwives to provide these services in rural areas. Daniel et al. (2008), from the lens of reproductive health communication interventions, find that women who had gone to school had a higher level of knowledge, more favourable attitude and greater demand for and use of contraceptive than uneducated women. Shekhar et al. (2007) find that young people in Patna are not fully aware about sexual and reproductive issues and suggest that sex education programmes are crucial for adolescents to help them make informed decisions. Other studies are on the availability of medical abortion pills, the role of chemists (Ganatra et al., 2005) and the abortion experiences of young unmarried women (Jejeebhoy et al., 2010).

Studies included in the Compendium reveal that one of the biggest challenges to the improvement of health outcomes in the state is the shortage of trained functionaries in the health sector. The Planning Commission (2007:

pp. 10) points out that the state health machinery in Bihar requires 5,648 female and 9,786 male health workers. The same report also points out that there is a severe lack of sub-centres, primary health centres, and community health centres in the state. Other major factors include low level of institutional deliveries, low coverage of full immunisation, low female literacy, and poor family planning programmes.

Other issues addressed in the research on health include black fever (Dutta, 2008), elimination of iodine deficiency disorders (Sankar et al., 2006), the nutritional status of scheduled castes in the state (Kumari, 2005), arsenic and groundwater contamination in the middle Ganga plain (Chakraborti, 2003), Vitamin A Supplementation to the poor (Lakshman et al., 2009), the utilisation of positive deviance analysis in evaluating Community Based Nutrition Programmes (Levinson et al., 2007), issues centred around population and health (Singh, 2004), and indigenous systems of medicine in the state (Tripathi et al., 2000).

## 10.1 Influence of Topography on the Endemicity of Kala-azar: A Study Based on Remote Sensing and Geographical Information System, Gouri S. Bhunia, Shreekant Kesari, Algarsamy Jeyaram Vijay Kumar, Pradeep Das, *Geospatial Health*, Vol. No. 4(2), pp. 155-165, 2010.

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**Key Topics:** *Visceral Leishmaniasis (Kala-azar)*

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The article notes that Visceral Leishmaniasis (VL) is a fatal infectious disease epidemic in the Indian states of West Bengal, Bihar, Uttar Pradesh (UP) and Jharkhand, and is caused by the protozoan parasite *Leishmania Donovanii* and transmitted through a female sandfly vector. The distribution of VL is highly influenced by climatic and geographical factors that determine the distribution of the sandfly vector, the parasites, and animal reservoirs.

Tropical climatic conditions as well as low altitude levels, which allow for suitable breeding places for the sandfly vector, are conditions favourable for the transmission of VL. Keeping this in mind, the paper attempts to determine the geographical distribution of Kala-azar in the northeastern part of the Indian sub-continent as well as to investigate topography and vegetation with regard to their suitability for the vectors that transmit VL on the Indian sub-continent, while also looking into the social status and behaviour of people living in the study area.

Although traditionally in the field of epidemiology tools like Geographical Information Systems and Remote Sensing are used, the article also explores an alternative method of topography modelling using a Digital Elevation Model (DEM), which is a digital representation of the ground topography measuring absolute altitudes above a tidal datum that is defined as the mean of hourly water elevations observed over a specific cycle. This approach averages out all tidal highs and lows and defines the Mean Sea Level (MSL) as the zero elevation for a local area. This approach offers a useful base upon which collected data of VL risk could be modelled and provides a rapid method for preliminary stratification of Kala-azar potential in remote highland areas which are difficult to reach and evaluate in any other way.

The study focuses on the states of Bihar, Jharkhand, West Bengal, and UP which bore the brunt of the 2005-07 Kala-azar outbreak presenting a large number of cases. Average elevation levels ranged from 53 m above the MSL in Bihar to 610 m for Jharkhand and 201 m for UP, while in West Bengal the altitude varies between 73 m and 293 m. In Bihar the climate is cool in the winter and hot in the summer and West Bengal is humid and sub-tropical, while UP and Jharkhand are sub-tropical and dry to semi-humid.

The Kala-azar incidence data is provided by the Rajendra Memorial Research Institute of Medical Sciences in Bihar and was complemented with satellite and weather data from the Moderate Resolution Imaging Spectro-Radiometer (MODIS) and all weather stations in the study area respectively. Further, a socio-behavioural survey was carried out looking at social status parameters like literacy rate, ethnicity, sex ratio, and economic parameters like standard of living and work status in each of districts of the study area to provide information on the link between socioeconomic status and incidence of Kala-azar.

Based on the data, the study finds that the number of cases of VL were very high at altitudes below 50 m and became moderate at the 50-149 m level. At the altitude of 300 m, the number of cases diminished to eventually become nil with increasing height suggesting that the distribution of the sandfly vector is influenced by altitude and the number of cases of VL decrease with rising altitudes. The population density of the study area showed that the density of population and number of cases gradually increase up to 50 m elevation and then gradually decline, except for Bihar where these parameters are higher at 150-199 m level than at the 100-150 m level.

The article, with the help of data on annual mean temperatures as well as precipitation and weather data, reaches the conclusion that annual mean minimum temperatures of 16-20 degrees Celsius, annual maximum temperatures of 25-30 degrees, 80-90 per cent relative humidity and 1000-1500 mm of precipitation are significant in producing a suitable environment for breeding places of the sandfly vector. While investigating the link between Normalized Difference Vegetation Index (NDVI) and distribution of cases, it was found low NDVI values around (0.03-0.015) correlated with a high occurrence of the disease emphasising that low density vegetation zones are significant for the sandfly vector distribution in the affected areas.

It was also found that areas with higher incidence of VL were generally poorer and had lower literacy rates and economic status. The study suggests that poverty may not be a risk factor for Kala-azar but can lead to malnutrition,

poor housing conditions, lack of preventive measures in the form of illiteracy and low levels of sanitation, and economic status and, thus, could be an important determinant in the transmission of the disease.

The paper concludes by suggesting that the alternative method applied in their study could be applicable to many previously published studies too and points out that the advantages of the approach lies in the easy access of detailed maps over the internet of many layers, from general geography to environmental information which can be instantly updated as new results appear.

**10.2 Annual Incidence of Visceral Leishmaniasis in an Endemic Area of Bihar, India, Pradeep Das, Steven Samuels, Philippe Desjeux, Atul Mittal, Roshan Topno, Niyamat Ali Siddiqui, Dipika Sur, Arvind Pandey, and Rhonda Sarnoff, *Tropical Medicine and International Health, Special Issue: Burden of Disease of Visceral Leishmaniasis in South Asia, Volume 15, Issue Supplements, Blackwell Publishing Ltd, 2010.***

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**Key Topics:** *Visceral Leishmaniasis (Kala-azar)*

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This study was undertaken to provide population-based estimates of the number of VL cases in East Champaran district, which is a VL endemic district, and has experienced a rise in VL cases. Based on the estimates, a key objective of the study was to gauge the resources required for programmatic interventions, as well as establish a baseline from which to assess the impact of such interventions.

Stratified multi-stage sampling was used to select blocks, villages, hamlets, and households. A total of 15,178 households, comprising of 91,000 individuals in 80 villages in 7 of 27 administrative blocks of the district were covered. Data collection was done in 2 phases, in December 2006 and April 2007. Depending on the severity of the disease, the blocks of the district were grouped into 'high,' 'medium,' and 'low,' strata.

The study found that in the past 12 months, 227 VL cases had occurred, of which 149 treated individuals survived, 14 died from VL, and 64 were active cases. The 227 VL cases were found in 194 households, of which fifty eight (13 per cent) occurred in households with more than one VL case in the past 12 months. As far as distribution of VL cases across the study area is concerned, cases were identified in all survey blocks except Chhaurandano, which belonged to the low incidence stratum. With respect to demographic distribution, it was found that VL cases ranged in age from 3–70 years. Thirty five per cent were 10 years or younger and 45 per cent were under 18 years. Men comprised 56 per cent. In terms of distribution of VL cases by caste, the most common caste category among the cases was OBCs, while 'SCs were the second most common (28 per cent). It was also found that 70 per cent of the cases the houses were of thatch and/or grass, which is the characteristic of the poorest households. With respect to sex distribution, cases were more biased towards men. The ratio of men to women was 1.3:1. Among the 64 current cases, 32 were men (50 per cent), for a male-to-female ratio of 1:1. However, mortality due to VL was biased towards females, albeit a small sample. Of the 14 individuals who died from VL, five (36 per cent) were men, with the male to female ratio, thus, being 0.6:1.

The paper calculates that the high-incidence stratum had an estimated incidence of 35.6 cases per 10000 persons per year (90 per cent CI: 27.7–45.7). The annual incidence rate in the medium stratum areas was 16.8 cases per 10 000 (90 per cent CI: 9.3–30.6). The combined annual incidence rate for the high and medium areas combined was 21.9 cases per 10000 per year (90 per cent CI:14.0–34.2).

In conclusion, the paper argues that for the government's VL elimination goal to reduce the VL incidence to one case per 10000 at the sub-district level, a twenty two fold reduction in the incidence rate in the affected areas with a thirty five fold reduction in the most highly affected areas would be required. It stresses that in addition to political commitment, it would be crucial to provide support through policies, programmes, and resource allocations to deal with problem of VL.



**10.3 Management of Visceral Leishmaniasis in Rural Primary Health Care Services in Bihar, India, Hasker, E., S. P. Singh, P. Malaviya, R. P. Singh, R. Shankar, M. Boelaert and S. Sundar, *Tropical Medicine & International Health, Special Issue: Burden of Disease of Visceral Leishmaniasis in South Asia, Volume 15, Issue Supplements, Blackwell Publishing Ltd, 2010.***

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**Key Topics:** *Visceral Leishmaniasis (Kala-azar)*

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The article notes that in 2005 the VL-endemic countries of South-East Asia region- Nepal, Bangladesh and India agreed upon a strategic framework for elimination of VL. The main strategy towards achieving this goal in India relied on the public sector PHC services that had to ensure early diagnosis and treatment. Any person living in a VL-endemic and with a fever for more than 2 weeks with no response to anti-biotics and anti-malarials was to be tested for VL with an rK-39 dipstick test and those positive were to be first treated with oral miltefosine. Those unresponsive with this treatment were then treated with drug amphotericin B. VL drugs and diagnostics were to be free to patients in the public sector.

During visits to health centres in two districts of Bihar in April 2009, the study found the in rK39 dipsticks were often not available and patients referred to private facilities for diagnosis. Further, most patients were treated with Sodium Stibogluconate (SSG) rather than miltefosine. Vials of SSG were provided one at a time by health centres to patients/relatives and no provisions for injecting it were made, meaning 10 visits to the centre over a 30 day period for average adults.

The reporting format used did not distinguish between new cases, relapses, and treatment after failure, and only reported death or successful treatment. Thus, the paper suggests that all these factors together could have led to a severe under reporting of VL cases and, hence, aims to study the healthcare seeking behaviour of patients in PHCs as well as document their treatment outcomes and costs incurred.

The study was based on random cross-sectional survey of all VL patients registered in public sector PHCs in of all rural blocks of VL-endemic Muzaffarpur district of Bihar during 2008. Based on a list of all cases reported by community health centres in each of these blocks, a random sample of 150 was taken. Reviews of patient records were done by a physician with experience in VL-treatment, while field workers visited their homes and conducted personal interviews. Data was recorded on patient and doctor delay, treatment regimens, treatment outcomes and costs incurred by patients.

Any person with a fever for more than 2 weeks without response to anti-malarials or antibiotics, and a positive rK-39 dipstick test was defined as a VL patient. Treatment outcomes recorded ranged from 'treatment success', 'treatment failure', 'relapse', 'defaulted', 'transferred out', 'referred to higher level', 'died' and 'other'. Patients delay was defined as the time between onset of symptoms and first going to a community health centre while Health Systems Delay was seen as the time between first presented at health centre and start of VL treatment.

Of the 150 cases sampled all had their medical records reviewed but only 138 could be personally interviewed while for one of them the relatives were interviewed. Seventy seven patients were male and 132 had been diagnosed based on clinical symptoms and a positive rK39 dipstick test, while 18 had been parasitologically confirmed. Most of these first reported to an unqualified local practitioner (113), while 12 reported to a qualified private practitioner, and 14 directly to the PHC system. Out of these 14, 12 first reported to Auxiliary Nurses/Midwives (ANM) or Accredited Social Health Activists (ASHA). Out of all the cases, only 12 had reported directly to a community health centre.

The median patient delay was found to be 40 days, while the health systems delay was minimal and a median of 2 days. Those first reporting to an ANM or ASHA (12) had a median delay of a further 36 days before reporting to a community health centre. Out of the 139 patients interviewed, 79 completed full diagnostic tests in community health centres while 58 were referred to private labs for diagnostic tests and the remaining 21 were diagnosed by NGOs.

Out of the 150 patients assessed, 8 had previous history of VL. Out of the remaining patients, 68 were prescribed SSG as initial treatment regimen, 43 were prescribed miltefosine as required while the remaining 31 were prescribed amphotericin B. Cyclical patterns in drug usage suggested that during some periods miltefosine was not available and, hence, SSG was used. Treatment compliance was found to be excellent (more than 90 per cent) both based on medical records as well as personal interviews.

The treatment outcomes suggested by patient records followed a similar pattern when compared with those from personal interviews conducted but seemed a little overestimated. According to patient records 75 per cent of those treated with SSG were successful, while 86 per cent of those treated with Miltefosine and 94 per cent of those with Amphotericin B were classified as successful. However, according to personal interviews these figures were 61 per cent, 85 per cent and 92 per cent, respectively. In personal interviews 40 per cent of those treated with SSG said they had required second treatment while this was at 15 per cent and 13 per cent for those treated with Miltefosine and Amphotericin B, respectively.

Data on expenditures incurred were available from 136 patients. The median total expenditure was found to be Rs 4,000 per patient with most of it being spent on drugs (median: Rs 1,500). Equal amounts were spent on private practitioners and in the PHC system with median expenditures of Rs 1,455 and Rs 1480 respectively, while village health workers were usually not paid and expenditure on unqualified practitioners was at a median level of Rs 500. All 139 patients experience financial difficulties due to their illness, with 92 of these reporting major financial problems.

Based on the results mentioned above, the paper points out three key failures in implementation. First, although VL case management is entrusted upon community health centres, most patients report to them with a delay of 1-2 months. Second, while, guidelines suggest use of miltefosine and amphotericin B in second treatment, 70 per cent of new patients were prescribed SSG or Amphotericin B. Third, VL diagnosis and treatment in principle are free but patients still spend a median of Rs 4,000.

The article suggests that possible solutions to these problems could lie in a better functioning of existing network of village health workers by making them aware of the disease and referral system of PHC as well as training them to conduct rK39 dipstick tests and initiating first line of treatment with oral miltefosine. Further, ASHAs and ANMs could help in monitoring treatment intake as well as search for cases of VL in hamlets for patient as it is a disease known to have a localised distribution. It is also clearly seen that treatment with SSG in a large number of cases requires second treatment, thus, putting patients at risk. Hence, it is necessary to provide a more regular supply of miltefosine, which could be done by maintaining a 1 year buffer stock at district level and a 6 month buffer stock at block level with the former being replenished twice yearly and the latter quarterly. On the plus side, it was found that apart from 2 patients, ultimately all patients were cured and that compliance rates did not seem to be a serious problem.

However while accepting the conclusions it must be kept in mind that many patients are taken care of by the private sector and our not incorporated in this study. Also, patients were not followed up in a prospective manner which may have allowed for documenting reasons for not responding to treatment and also there may be recall bias in estimates of costs of treatment. Hence, it is suggested that the VL control programme adopt a system of cohort reporting similar to one used in Tuberculosis control with every patient starting treatment assessed every 6 months and outcomes reported in a systematic way.

**10.4 Polio in North India: What Next?, Patricia Jeffery and Roger Jeffery, *Economic and Political Weekly* Vol. No.14 (15), pp. 23–26, 2010.**

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**Key Topics:** *Health Policy, Pulse Polio*

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The article attempts to make a critical evaluation of the operation of Pulse Polio Initiative in the country, in the backdrop of continued cases of wild poliovirus and acute flaccid paralysis throughout the 2000s. With the help of various secondary sources like government documents, international reports and articles, the article exposes that since 2000, confirmed wild poliovirus cases are increasingly concentrated amongst Muslim children and localised in western Uttar Pradesh and Bihar.

The study reveals that the pulse polio activities have largely focused on the hot spots, with more frequent immunisation rounds and extensive mapping procedures to monitor coverage. Between January 2007 and May 2009, the high risk districts of western UP experienced about 20 rounds of Monovalent oral polio vaccine-1 (mOPV1), five rounds of mOPV3, and one round of tOPV. Yet, these rounds have failed to stop a rise in the number of WPV cases. Cases of AFP continued to rise from 9.4 per 100000 children aged under 15, in 2007, to 10.2, in 2008, and 11.2, in 2009, with no apparent strategy to respond to the concerns these cases generate.

Through a more disaggregation of data, the study highlights that since the early 2000s, confirmed cases of polio in India have been increasingly and disproportionately amongst Muslim children. By 2007, Muslim children accounted for 94 per cent of the confirmed cases. Muslims are disproportionately concentrated in the most economically and socially marginal sectors of north Indian society – precisely those sectors with poor housing and sanitation, in which infectious diseases flourish. Opposition to pulse polio is ‘highly complex and cannot be explained by religious affiliation alone’ and it has been most conspicuous in areas that have been poorly served by government development programmes.

The study argues that supporting evidences prove that Muslim and Hindu villagers alike complain that the inadequacies of government health services, in general, are further undermined by the PPI itself. Reorientation is essential, not only to help reduce polio and other forms of childhood paralysis (which tend to be ignored in the rush to eliminate wild polio) but also to reduce the negative effects that PPI is having on all other activities of the UP government health staff.

The study also exposes that the polio programme field workers in western UP have been under great pressure during the 2000s and that ‘outbreaks of wild poliovirus had brought on the threat or imposition of penalties from the top, all of which was leading to demoralisation and discontent among personnel of all ranks,’ whilst hostility and nervousness were generated among civilians when polio vaccination was carried out forcibly by health administrators, with the support of the local police. Parents were pressurised into complying with the administration of multiple doses of polio vaccine to their children. But most of the children identified with wild polio have had many doses of oral polio vaccine. Routine immunisation may have been weakened by the focus on polio and some vaccine-preventable diseases (for example, diphtheria) have re-emerged and primary and public health activities have been disrupted.

The study reveals that in recent public health budgetary allocations, 74 per cent of the total immunisation budget has been devoted to pulse polio, and allocations to TB, malaria, and diarrhoeal diseases have been much lower than allocations to pulse polio. What needs to be done is to recognise that polio cannot be eradicated, and that planning must move towards a routine immunisation programme that covers all children against all communicable and preventable diseases. This requires a reallocation of resources away from the high profile but ultimately barren pulse polio initiative into revitalising the public health services of UP and Bihar.

The study concludes that the Pulse Polio Initiative as a focused top-down programme which has lost its way using the wrong vaccine and with dubious targets. Identifying the fundamental flaws, it suggests for a radical shake-up of the initiative.

**10.5 Experiencing Abortion among Unmarried Young Women in Bihar and Jharkhand, India: Delays and Disadvantages, S. J. Jejeebhoy, S. Kalyanwala, A. J. Francis Xavier, R. Kumar and N. Jha, *Reproductive Health Matters*, Vol. No. 18(35),163–74, 2010.**

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**Key Topics:** *Abortion, Young Women*

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The objective of the study was to explore and compare the experiences of abortion among married and unmarried women, and the difficulties and delays associated with it. Given that the research into abortion experiences among unmarried women are few and far between, this study was conducted among nulliparous women seeking abortion, aged 15-24, (246 married and 549 unmarried) over a period of 14 months in 2007-08. This was followed by in-depth interviews of 26 respondents among the above, who agreed. The two states have similar socioeconomic indicators in terms of access to health services, literacy rates and large proportion of pregnancies. The data collected was from a certified hospital and provider of abortion services, called Janani, operating in both states and known for good quality services at nominal prices. Eight of the 23 operating branches were chosen across both the states (operating in Ara, Gaya, Patna and Purnca in Bihar and Ranchi, Jamshepur, Hazaribagh and Latehar in Jharkhand, which accounted for over 90 per cent of adolescent abortion seekers. The data collection tools comprised surveys conducted among respondents before and after the abortion and followed by in-depth interviews of the few selected, of those who consented, on the basis of purposive sampling after one week of abortion. Factors associated with

delays and difficulties in abortion were explored through the above methods. The findings were to help design and inform policies to help young women, particularly the unmarried girls, gain timely and safe access along with appropriate support.

The study found that most of the women, married as well as unmarried, had consensual sexual relations with boyfriends/husbands but among 18 per cent married and 2 per cent unmarried, relations were not consensual. Reasons for abortions among over 90 per cent of the unmarried girls was their marital status, followed by conceptions due to force (11 per cent) and desire to continue education (13 per cent), while among the married women almost 50 per cent wanted to abort due to lack of readiness due to age, 40 per cent due to financial constraints and about one third wanted to complete their education. Overall findings indicated that unmarried women were more vulnerable and disadvantaged compared to their married counterparts and were seen to experience more difficulties and delays in abortion were mostly attributed to delays in recognising pregnancies, participating the decision of opting for termination, failed attempts to terminate pregnancy through other methods, fear of disclosure and lack of partner support. They experienced delays due to inability to determine pregnancy in time much more as compared to married women (17 per cent against 6 per cent). More unmarried women had tried unsuccessfully to terminate pregnancy (28 per cent as against 18 per cent of married women) and, similarly, concerns regarding confidentiality were also significantly higher among unmarried women as compared to married women (18 per cent as compared to 5 per cent of married women), indicating the vulnerability of unmarried women facing the choice of abortions. Partner support was also more among married women, although this varied as per different aspects of support.

Logical regression analysis to look into the relationship between marital status and delay in abortion along with the other delaying factors, and controlling for confounding factors such socioeconomic indicators revealed that unmarried women are more likely to delay abortion till the second trimester in this study, but this relationship was not found regarding other delaying factors like late recognition of pregnancy and also participation in decision to abort. This is when socioeconomic factors are not taken into consideration. But late abortions were associated with unmarried women, which indicates that they are vulnerable to risks.

The study found that marital status had some impact on the experience of women undergoing abortion. Unmarried women were more likely to delay their pregnancy as well as face delays due to delay in recognising pregnancy, or lack of partner support, exclusion from decision making and failed attempts at abortion. All these led to unmarried women being two to three times more likely to get an abortion during the second trimester. Findings also revealed that unmarried women were more vulnerable and disadvantaged and, hence, programmes need to take steps to improve access to safe and timely abortion for unmarried young women.

#### **10.6 Low Serum Zinc Levels in an Endemic Area of Visceral Leishmaniasis in Bihar, India, Jyotsna Mishra, Stephen Carpenter and Sarman Singh, *Indian Journal of Medical Research*, Vol. No. 131, 2010, pp 793–98, 2010.**

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##### **Key Topics:** *Visceral Leishmaniasis (Kala-azar)*

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This paper aims to define the relationship between low serum zinc level and the prevalence of Visceral Leishmaniasis (VL) in endemic and non-endemic regions. Further, to examine whether this nutritional deficiency is specifically limited to the active VL patients or whether it also has a geographical distribution, the research group included infected individuals from the same VL endemic regions of Bihar and non endemic region of Delhi as controls.

The study was carried out in the Department of Laboratory medicine, AIIMS. VL patients under investigation were from state of Bihar, India, where Kala-azar is endemic. These patients were hospitalised at the medicine, paediatrics, and haematology wards in the AIIMS hospital, New Delhi, between September 2005 and November 2006, with clinical suspicion of Kala-azar. The diagnosis of Leishmaniasis was made by antibody detection using recombinant antigens from *L. Chagasi* (Ld-rK-39) and another from *L. Donovanii* (Ld-rKE-16). Both are commercially available rapid tests and are routinely used for providing confirmatory diagnosis.

For this, venous blood was collected from 88 patients; 16 parasitologically confirmed VL, 35 healthy controls from the endemic area (Bihar), and 37 healthy urban controls from non-endemic area, that is, Delhi. In all the three groups, levels of serum Albumin, Total Protein (markers of nutritional status), and Zinc were estimated by

colorimetric methods. All statistical procedures of the research project were performed using SPSS V12.0 (SPSS inc. USA).

According to the paper, VL or Kala-azar caused by *Leishmania Donovanii* is endemic in 62 countries. An estimated 5,00,000 cases per year and over 90 per cent of cases of VL occur in five countries: India, Bangladesh, Nepal, Sudan, and North Eastern Brazil. India accounts for about 50 per cent of occurrence of VL diseases worldwide. The eastern states, Bihar, Jharkhand, East Uttar Pradesh, and West Bengal are endemic for the disease. About 90 per cent of the VL patients are poor and live in the rural areas of Bihar. <Para>The article establishes a link between the low socioeconomic status and the endemic nature of the disease in Bihar. It argues that low socioeconomic status has wide repercussions on the societal and personal health of the individuals, including malnutrition, which ultimately leads to a compromised host immune status and notes that epidemiological and experimented studies have documented an increased risk for VL in the malnourished hosts.

The paper further elaborates that Bihar is frequently afflicted with flood and soil has become deficient in zinc. It emphasises the point that Kala-azar is a disease of socially and economically backward classes of the state. The paper's findings are in consonance with nutritional data of Bihar that more than 50 per cent children of nine regions of Bihar had at least Grade I documented malnourishment, based on weight for age, and the level of nutritional deficiencies are related to the social background of the population.

The paper attracts attention to the fact that zinc has an important role in immune system and subjects deficient in zinc, iron, or retinol have increased susceptibility to a variety of infectious agents, specially the VL. The paper claims that the observed difference in the serum zinc level in patients infected with *L. Donovanii* is clinically significant, as it supports the previous reports of lower zinc levels associated with infection by intracellular pathogens seen in in-vitro condition in *Leishmania* infected dogs and humans with cutaneous *Leishmaniasis*.

Based on its findings, the study postulated that oral zinc supplements may have an additive effect in chemotherapy and prevention of VL in the endemic regions of Bihar. It recommends that, as such, further studies need to be done to assess the role of oral zinc supplements in better management and prevention of VL, particularly in endemic areas.

**10.7 Lay Perceptions of Kala-Azar, Mosquitoes and Bed Nets in Bihar, India, Rabindra N. Mishra, S.P. Singh, Veerle Vanlerberghe, Shyam Sundar, Marleen Boelaert, and Pierre Lafevre *Tropical Medicine and International Health*, Vol. No. 15(2), pp. 36-41, 2010.**

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**Key Topics:** *People's Perceptions of Kala-azar*

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In the Indian subcontinent, about 190 million people are at risk by the outbreak of KA which is a deadly disease. In this region, KA is transmitted by the bite of the infected female sand fly *Phlebotomus argentipes*, which breeds in peridomestic environments and bites at night. In India, KA is mainly confined to the state of Bihar, which accounts for 90 per cent of the country burden. In Bihar, KA remains an important public health problem affecting poor people living in houses suitable for breeding of sand flies. In this context, this study provides qualitative information on lay perception of KA, mosquitoes and bed nets, looking into differences of trends in socioeconomic and gender groups in the Muzaffarpur district, a high endemic focus of KA for more than 30 years. Health seeking behaviour is explored as it is related to lay perceptions of modes of transmission. Efforts are also made in investigating mosquito nuisance and modes of protection from mosquitoes including the use of bed nets.

The study was carried out in eight villages in Muzaffarpur district in Bihar, where majority of the people live in rural areas. To assess lay perceptions of KA, 16 focus group discussions (FGDs) were conducted in eight villages. In preparation of the KALANET project, 35 clusters with the highest reported numbers of KA cases in the last 3 years were selected in Muzaffarpur district. Eight remote communities 2–5 km away from the experimental villages were identified among the initial list of high incidence locations to conduct this qualitative study. In each village, 2 FGDs were conducted. Key informants were local health workers, health volunteers, school teachers, and informal and formal community leaders. These persons were expected to have a better knowledge of the disease, more access to information and, hence, could differ from other groups in their perceptions. In total, the FGDs numbered 157 participants. The number of participants in each FGD ranged from 8 to 12. Three major themes were discussed:

(i) knowledge and awareness of KA (local names, symptoms, affected persons, perceived severity, and modes of transmission); (ii) mosquitoes (nuisance, prevention practices including the use or non-use of bed nets); and (iii) KA treatment-seeking behaviour.

The study points out that among the low socioeconomic groups of people in Bihar, *Pilahi* and malaria were names more frequently used for the disease. Key informants also often referred to the disease as *Pilahi*. Some villages had more experience than others with KA. Awareness about KA seemed to be lower among younger women and low SES groups.

The study found that three groups of symptoms related to KA emerged from the data analysis. The first relate to early symptoms of the disease such as fever, loss of appetite, weakness, weight loss, and anaemia. The second group comprises symptoms that appear in later stages of the disease such as stomach conditions, enlarged liver, and a blackish or yellowish body. Finally, a third group seldom stated by participants is symptoms related to fever such as dry lips and running nose.

The paper states that Kala-azar was often confused with malaria, as both diseases are characterised by fever as one of the first symptoms, especially among participants from lower SES groups. Their perception was that a mosquito bite transmits malaria, which causes a fever, and, if the fever persists, KA develops.

There was a common understanding that poor people are the most affected by KA. The most affected group was also defined as the physically weak and the people living in small houses with mud walls and low roofs of bushes, bamboos, or plastic sheeting. Kala-azar was perceived as leading to death and resulting in serious economic consequences for the family of the affected persons, especially in the low SES groups.

The participants of the study indicated mosquito bites as the main mode of transmission. Environmental factors, such as dirty environment were mentioned as the second most common cause. Elderly women emphasised mosquito bites and environmental factors; low SES groups mentioned mosquito bites, dirty environment but also factors not related to mosquitoes, such as edibles, as most common causes of transmission. Other modes of transmission stated in these low SES groups were urine of lizards, dirty clothes, untimely eating, etc. Transmission of KA by other affected persons or by drinking contaminated water was seldom stated. The study found that only people in upper SES groups mentioned sandfly as the cause for the disease.

The paper states that among the people who were aware of KA, two major modes of protection emerged. They are to keep the environment clean and the use of bed nets. Fume or insecticide coils were less stated as a mode of prevention of KA than as a mode of prevention against mosquito nuisance. Other actions as wearing clean clothes, insecticide spraying, using a fan or eating hygienic food were also mentioned.

On appearance of fever, the common practice mentioned by almost all participants (more pronounced by low SES and women) were traditional remedies (juice of crushed roots of herbal plants, unripe papaya mixed with salt, leaves of *Har Singar*, radish and spinach vegetables, snail water, etc.) and self-medication.

If symptoms persist, the next step was to see a traditional healer, an *Ojha* (who silently murmurs some words and puts ashes on the forehead of the affected person). Modern healthcare (Primary Health Care centre, private practitioner, hospital or private non-profit treatment centre) was reported as first step in the therapeutic itinerary only by persons who were well aware of the disease, of a higher SES or higher education. The difficult diagnostic procedures were mentioned by some participants of the low SES. They were aware that the disease is confirmed by blood examination and bone marrow test. Participants reported that the major hurdle for seeking treatment for KA was the cost of treatment.

An essential conclusion of the study is that imperfect knowledge about the disease and its vector may not be an obstacle to individual or collective preventive measures, as fighting against mosquito nuisance in general corresponds to a felt need. However, the actions put forward by the participants to reduce the mosquito burden were different from the ones to prevent KA. This provides valuable information for future local preventive promotion campaigns: people perceive disease prevention differently than mosquito nuisance protection, even if they know that mosquitoes (or vectors) are transmitting diseases. However, bed nets or other vector control methods will not solve the problem of KA in affected villages without complementary interventions in terms of education and overall economic development.

**10.8 Transmission Dynamics and Underreporting of Kala-azar in the Indian State of Bihar, Anuj Mubayi, Carlos Castillo-Chavez, Gerardo Chowell, Christopher Kribs-Zaleta, Niyamat Ali Siddiqui, Narendra Kumar, Pradeep Das, *Journal of Theoretical Biology*, Vol. No. 262, pp. 177–85, 2010.**

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**Key Topics:** *Underreporting of Kala-azar, Private Health Services*

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This article draws attention to the prevalence of visceral leishmaniasis (VL), locally known as Kala-azar or black fever, in the state of Bihar. It is anthroponotic and nearly always fatal if infection is undetected within 2-3 years. Ninety percent of India's cases are found in Bihar, but the official estimated deaths are just between 5-8 per cent of the total infected. The paper affirms that data collected via passive case detection grossly underestimate the number of cases. Compounding this is the social and cultural stigma linked to VL which hinders individuals in seeking treatment from public health services. They prefer private doctors, who in turn do not report the diagnosed cases to the health ministry. Therefore, this article is an attempt to assess the impact of underreporting using district-level (21 affected districts out of 38) reported incidence data in the state of Bihar.

The number of monthly reported cases of Kala-azar from 2003 and 2005 has been used for the purposes of the study. The 2003 and 2005 data were collected under different sets of public health policies, viz., regular public health program (2003) and improved public health program (2005). A mathematical model is devised in the paper, which takes into account variability in infectivity, latent period, and treatment duration that occurs with regard to Kala-azar in Bihar, and reported monthly incidence data (2003 and 2005). Based on their analysis of data, they reiterate that AVL is a deadly disease among the untreated and the population of Bihar is large and changing (largely due to migration). Thus, the mortality reported levels of Kala-azar are high. Two major key quantities have been derived from the model- firstly, the average reproduction number (number of secondary cases generated per infective) estimates for Bihar range from 1.3 (2003) to 2.1 (2005) with some districts' estimates with mean values lower than one. This means that since the mean values of districts are greater than one, the disease is endemic and if the value is lower than one, the disease dies out. Consequently, migration of individuals from endemic districts has played a role in facilitating disease prevalence in districts with mean values lower than one. Secondly, the proportion of underreported cases has declined from an average of 88 per cent in 2003 to 73 per cent in 2005. The biggest decrease took place in Vaishali (74.9 per cent in 2003 to 44.7 per cent in 2005) and the largest increase took place in Katihar (65.1 per cent in 2003 and 78.4 per cent in 2005). Thus, the trend has been heterogeneous with average underreporting ranging from 30 per cent to 90 per cent in the districts. The population density is found to be positively correlated with model-generated underreporting estimates and people (especially literates) use private health services as they are more in number in densely populated districts. While the model-adjusted (for underreporting) incidence rates are found to be declining in Bihar from 2003-05, the reported cases data suggests otherwise. Seven districts (Araria, Begusarai, Madhepura, Madhubani, Purnia, Saran and Siwan) have been classified as high risk according to adjusted incidence rates both in 2003 and 2005. However, due to the efforts of Kala-azar Task Force (formed in 2003); there has been reduction in both underreporting and adjusted incidence rates from 2003 to 2005.

The study attributes the prevalence of Kala-azar in Bihar to high rates of frequent rural to urban district migration, lack of access to adequate and accessible public health services, and extreme poverty. Underreporting is directly linked to majority of the population accessing private health services. The paper suggests that by measures like improving infrastructure in rural areas, educating both health care providers and those at risk, reducing population densities, promoting control policies that reduce parasite transmission, developing an active case detection surveillance system, the prevalence of Kala-azar in Bihar can be mitigated. While these measures would require adequate financial resources, a less expensive way would be making the private medical practitioners accountable to the state public health system for proper administration of treatment and reporting. The paper contends that the magnitude of underreporting needs to be quantified for it is one of those problems that prevents the development and implementation of targeted policies that may be effective in reducing the burden of Kala-azar in Bihar.

**10.9 The Economic Impact of Visceral Leishmaniasis on Rural Households in One Endemic District of Bihar, India, Rhonda Sarnoff, Jaikishan Desai, Philippe Desjeux, Atul Mittal, Roshan Topno, Niyamat Ali Siddiqui, Arvind Pandey, Dipika Sur, Pradeep Das, *Tropical Medicine and International Health, Special Issue: Burden of Disease of Visceral Leishmaniasis in South Asia*, Volume 15, Issue Supplements, Blackwell Publishing Ltd, 2010.**

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**Key Topics:** *Visceral Leishmaniasis*

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This article attempts to estimate the economic burden of Visceral Leishmaniasis (VL) or Kala-azar based on survey data collected in the VL-endemic district of East Champaran in Bihar in December 2006 and April 2007. Based on the findings of the survey, the article attempts to provide a way forward in reducing VL's economic burden on India's rural households.

The article points out how VL is one of the world's neglected tropical diseases for which resources available are not commensurate with estimates of disease burden, leading the Indian, Nepalese, and Bangladeshi governments to sign a MOU in 2005 committing to the regional elimination of VL by 2015. However, limited awareness of disease's burden on households as well as inadequacy of reporting systems hamper efforts to eliminate it.

In order to overcome problems such as small sample sizes and case detection from government hospital records, the study use a survey of stratified multistage sampling of 15,178 households, identifying 214 individuals with VL in the previous 12 months in the endemic district of East Champaran.

People suffering from VL were identified by interviewers by asking questions such as whether household members suffered from a fever longer than 2 weeks, had been diagnosed with VL, died due to VL, or died due to an illness with fever longer than 2 weeks. Clinical interviews were then conducted by medical doctors on these suspected cases and VL was diagnosed based on results of a rapid diagnostic test, clinical signs/symptoms and review of medical history. Data was also collected on the socioeconomic characteristics, treatment expenditures, financing and days of work lost due to illness, income sources, and assets.

Early analysis suggested that the average VL household includes 7 members, who resided in a household for at least 6 of past 12 months. More than 85 per cent of households were headed by men and more than 88 per cent of these men were married. Seventy five per cent of households lived in thatch structures suggesting lower income levels and casual labour, owned farm income and remittances were found to be the primary income sources, with salary only reported by 3 per cent as their main source of income. About half of households owned some agricultural and livestock assets.

The survey found that in the first line of treatment, private doctors (47 per cent) and non-physician rural practitioners (38 per cent) were most frequently visited. However, on the second visit only 5 per cent saw a non-physician rural practitioner, while those seeing a private doctor rose to 79 per cent. The likelihood of visiting a government health centre or hospital was low on both occasions. Patients, on the average sought treatment 10 days after the start of high fever and treatment began 4-6 days after fever for those visiting rural practitioners, 13 days after fever for those visiting private doctors, and 25 days for those visiting government health centres. On an average, only 35 per cent of the patients were diagnosed on the first visit and diagnosis is highly unlikely when first visit is to rural health practitioner. Seventy five per cent of those with a second visit for treatment received VL diagnosis with 96 per cent of those visiting government health centres diagnosed. Only 25 per cent of first treatments and 40 per cent of second treatments were completed out of which pre-diagnosis treatment completion is very low compared to that post diagnosis, which is about 60 per cent of patients.

The authors found that a total of Rs 15,59,221 spent on direct and indirect diagnosis and treatment of VL. On an average, an individual spent Rs 5,388 on all treatment expenses and a household spent Rs 6,079, which is higher as some households reported more than one case. Out of the treatment expenditure, only 14 per cent was spent on diagnosis with 86 per cent spent on treatment. There is considerable variation in treatment expenditure with a quarter of people spending not more than Rs 2,428, while a quarter spent more than 4 times that. This may be explained by the fact that expenses are lowest for those with a single VL treatment (Rs 2,650) while a second treatment raises median treatment expenses by 60 per cent (Rs 4,225). A typical treatment consists of one pre-diagnosis treatment followed by one VL treatment and costs Rs 5,290.



The authors also point out that 85 per cent of individuals with VL were unable to perform daily activities for an average of 30 days, out of which 36 per cent reported a loss of work days and income. The income loss due to VL is estimated at a median of Rs 6,000, with an approximate daily loss of Rs 50.

The paper combines estimates of expenditure and income loss in order to arrive at an estimated average household income loss of Rs 8,610 (interquartile range of 3525:15645) which showcases the economic impact of VL. The value of household assets were found on average to be only slightly more than households expenditure on food, clothing, housing, health and schooling. VL expenditures make up 11 per cent of total expenditure and 13 per cent of total assets and are the second largest expenditure item. In households classified as vulnerable, the economic impact of VL is 72 per cent of household assets, while in non-vulnerable households it is only 5 per cent of total assets.

The paper concludes that in order to cope with the burden households reduce expenditures on certain items, utilise savings, assume new loans, sell assets and sometimes change living arrangements, with most survey respondents taking loans to pay for treatment (87 per cent).

The article concedes that although there are a number of limitations like measurement error due to self reported survey responses, omission of some pre-VL diagnosis treatments, doubts in quality of self-reported income data and measure of asset values, which did not incorporate delay in purchase and selling of assets due to illness, the authors suggest that the economic impact of VL on a household is akin to a loss of over 7 months of an individual's earnings and is a severe strain on households with limited resources.

It is recommended that India's National VL Elimination Programme by ensuring implementation of standard treatment protocol based on symptomatic treatment followed by timely diagnosis, through training of community health practitioners in rapid diagnostic tests, and administering a single, effective and complete treatment can help reduce the burden on households. Given limited resources of households it is also essential to provide effective free or low-cost drugs at government centres.

**10.10 Short Report: Estimation of Under-Reporting of Visceral Leishmaniasis Cases in Bihar, India, Vijay P. Singh, Alok Ranjan, Roshan K. Topno, Rakesh B. Verma, Niyamat A. Siddique, Vidya N. Ravidas, Narendra Kumar, Krishna Pandey, and Pradeep Das, *American Journal of Tropical Medicine and Hygiene*, Vol. No. 82(1), 9–11, 2010.**

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**Key Topics:** *Visceral Leishmaniasis (Kala-azar)*

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The article starts with a background on Visceral leishmaniasis (VL) or Indian Kala-azar, and notes that it is a parasitic disease caused by *Leishmania Donovanii* and transmitted through the bites of sand fly *Phlebotomus Argentipes*. More than 90 per cent of VL cases occur in India, Bangladesh, Nepal, Brazil and Sudan. It is one of the major health hazards in Bihar along with adjoining areas of West Bengal, Jharkhand, and Uttar Pradesh. An average of more than 90 per cent of VL cases in India are reported from Bihar alone, and currently 30 out of 38 districts in Bihar have different levels of endemicity and nearly 67.5 million persons are at risk of the disease. Given this background, and in the absence of accurate statistics, the article argues that it is difficult for health planners and policy makers to evolve a suitable control strategy for elimination of VL by the year 2015 from the Indian subcontinent.

In this context, the key objective of the article is to estimate the level of under reporting of VL cases in the total population, stratified by age and sex. The area selected for the research project was two public health centres in Lalganj and Goraul in the Vaishali district of Bihar. A house to house survey was conducted in the study population (a cohort of 31,324 persons based on sample size) living in 17 villages, and information collected through a field study from March to June 2007.

Unlike other studies estimating the extent of under reporting of VL cases in different areas in Bihar, this study was based on the total population and stratified by age and sex. Records of VL cases identified, treated and reported in public health centres, district hospitals, and medical college hospitals during 2006 were collected. Data were collected on the demographic characteristics of the family members, past medical history, occurrence of VL, date and place of reporting, and treatment taken. Cases of VL were verified through documents such as patient cards, prescriptions, test reports, and drugs received.

The article has seven key findings. First, VL is known to occur in clusters in disease endemic areas. Second, there exists no current active surveillance mechanism for proper reporting of VL in the affected areas, which leads to serious under reporting of VL cases. Third, the total number of estimated cases could be 2–2.25 times higher than the actual incidence and may be even five times higher than the officially reported figures. Fourth, a total of 425 new VL cases were reported at the two public health centres, which had a combined population of 3,88,659 population surveys. In the present study, nearly 65–75 per cent of the cases were in the persons of 5–14, and 15–29 years of age, and male to female ratios were 1.15:1 and 1.47:1 in the source and study populations respectively. Fifth, the study did not find any age specific statistically significant differences in underreporting of VL cases. Sixth, there are higher levels of underreporting for males than for the females, and seventh, the extent of under reporting was much higher in persons more than 30 years of age than in persons less than 30 years of age.

The article notes two main limitations of the research project. First, factors responsible for underreporting may vary from one disease endemic area to another and can lead to marked variation in underreporting. These factors were not taken into account and could be a limitation. Second, currently, there is no system of referring patients from specific public health centres to district hospitals or medical colleges. Patients in this condition may be recorded twice if he/she moves from one level to another.

The article suggests that further research could be carried out to understand why there are higher level of under reporting for males than for females as well as why there exist age specific differences in underreporting of VL cases and, also, the role of socio-cultural and economic factors, especially in the rural areas.

In conclusion, the article recommends that under reporting of VL cases is a serious issue that needs to be properly addressed. There is the need for a legislation which makes it mandatory for all private clinics and doctors to report not only VL cases but any diseases being diagnosed and treated by them to state health agency. This will help in developing a complete database related to all major public health problems and providing an impetus to health planners and policy makers for setting priorities.

**10.11 Household Cost-of-Illness of Visceral Leishmaniasis in Bihar, India, Shyam Sunder, Rakesh Arora, S. P. Singh, Marleen Boelaert, and Beena Varghese, *Tropical Medicine and International Health*, Vol. No. 15(2), pp. 50–54, 2010.**

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**Key Topics:** *Visceral Leishmaniasis (Kala-azar), Cost of Illness*

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Kala-azar (KA) is a life-threatening disease. Ninety per cent of KA cases occur in India, Nepal, Bangladesh, and Brazil. India accounts for half of the cases. About 90 per cent of Indian patients are living in the state of Bihar. The present study attempts to assess the cost of illness for KA from the patient's perspective in selected communities in Bihar.

The study was conducted in the state of Bihar, from March 2006 to May 2007 within the framework of the KALANET project. The study sample consisted of households with a treated case of KA between September 2005 and September 2006. Cases were identified during the baseline census of the population in 16 highly endemic communities prior to the KALANET community intervention trial. Demographic and socioeconomic household data collected were household (HHs) size, monthly HH income, and main source of income. Patient characteristics recorded were age, sex, occupation, and length of illness. A semi-structured questionnaire was used to collect data on costs of illness. The patient, the head of the HH or a principal respondent was interviewed. The questionnaire was designed to collect data on the cost of illness in three categories – direct medical (provider fees, medicines, diagnostics, hospitalisation); non-medical (food and transport); and indirect cost (work days lost). Providers were further divided into local, if they were from the same place as the patient, and distant, if they were in towns and cities. The total cost was the sum of the cost categories.

The study found that there were 171 HHs in which a total of 183 patients with KA occurred during the period. The median age of patients with KA was 18. Fifty nine per cent of the patients were men. Twenty nine per cent patients were young adult/students. This proves that the tendency of the disease is to affect young adults.

The study reports that the median duration of illness from symptoms to cure was 14 weeks. Of this, the median diagnosis time (symptoms to diagnosis) was 5 weeks. In the direct medical costs, most of the cost was comprised

of medicines. Patients visited, on an average, two health care providers for their illness. Majority (77 per cent) of these local healthcare providers were unqualified traditional healers or drug sellers, only 5 per cent were medically qualified. The median direct cost incurred for a distant healthcare provider was \$ 3 per patient. Of these, 65 per cent were private practitioners and 23 per cent were NGOs.

The median direct cost for the diagnostic tests was \$ 9 per patient. The study states that 40 per cent of patients needed hospitalisation, which cost a median \$ 30 per patient. Subgroup analysis of the medical costs per patient revealed that the median medical cost was lower for women than for men and higher for hospitalised patients than for non-hospitalised patients.

In the non-medical costs, mainly for travel and food, the highest cost was at the level of the hospital, \$ 51 per patient. In the indirect costs, measured in terms of duration of work loss, the median total duration of loss during the length of illness (symptoms to cure) was 15 weeks. Before illness, the median work time was 4.29 weeks/month and after illness it dropped to 3.21 week/month. The median time lost during the illness was 2.14 weeks/month. Students and housewives lost a median of 90 days, and caregivers lost 30 days.

The study points out that though in the recent years, there has been considerable effort in direction of elimination of KA from the Indian subcontinent, such as free diagnostics and drugs at public and NGO facilities. For efficient use of resources, a comprehensive knowledge on the cost implications of the disease are needed both from the societal and patient perspectives. Thus, efficient measures are needed to increase the awareness of the disease among local healthcare providers and, in general, the population about the free diagnosis and treatment of the disease at public facilities.

Thus, reduction of the overall cost burden of the disease requires increasing awareness among the population, specific policy changes to reduce costs, and better health financing mechanisms. These measures will help in achieving the long-term goal of eliminating KA from the Indian subcontinent.

**10.12 Occupational Health Hazards in Women Beedi Rollers in Bihar, India, Shahla Yasmin, Basri Afroz Bushra Hyat and Doris D'Souza, *Bulletin of Environmental Contamination and Toxicology Springer, New York, Vol. No. 85 (1), pp. 87-91, 2010.***

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**Key Topics:** *Health and Beedi Rollers, Tobacco and Health*

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This article, published in the *Bulletin of Environmental Contamination and Toxicology* in 2010, studies the health problems of female beedi rollers in Patna, in the eastern Indian state of Bihar, to ascertain the effects of Beedi rolling on health. A beedi is a thin South Asian cigarette with tobacco flake wrapped in a tendu (*Diospyrox melanoxylon*) leaf and secured with coloured thread at both ends. As a cheap form of tobacco consumption, it is extremely popular among the non-affluent. However, it carries greater health risks as it delivers more nicotine, carbon monoxide, and tar than conventional cigarettes.

Beedi rolling is a popular small-scale industry in Bihar and 90 per cent of beedi workers are women. Beedi rollers are exposed to unburnt tobacco, mainly through the cutaneous and nasopharyngeal routes and, hence, are affected by respiratory disorders, skin diseases, gastrointestinal illness, gynaecological problem, fungal diseases, etc. Women beedi rollers who start the profession at a very early age are exposed to tobacco dust for approximately 4-10 hours each day. Monitoring of blood parameters may, therefore, help in the assessment of exposure and risk evaluations. Moreover, information on the effects of tobacco dust on various blood parameters of beedi rollers is lacking.

The study was conducted in Isopur and Naharpura localities of Phulwari Sharif, Patna. One hundred ninety seven female beedi rollers, without tobacco smoking/chewing habits, were monitored for occupation related exposure to tobacco flakes and dust. Relevant information was collected through home visits to their houses. A second group, comprising 61 subjects selected from the general women population (mainly vegetable/fish sellers), was the control group. The control group did not have any history of occupational exposure to tobacco and were not into tobacco smoking or chewing. They belonged to the same age group and socioeconomic status as the beedi rollers. It was also ensured that all the subjects did not suffer from any serious ailment nor were on any medications. The study subjects were interviewed and a questionnaire was filled for each subject, giving details of their age, educational qualification, monthly income, and health problems faced by them. An analysis of the blood profile, for example, WBC, RBC,

Platelets, Haemoglobin content and ESR, and liver function was also undertaken for 20 female beedi rollers and 20 from the control group.

It was found that women in the age group of 40-50 years were mainly engaged in beedi rolling and a large proportion of them were in this profession since 20-25 years. About 90 per cent of them were illiterate. The average monthly income of women beedi rollers was Rs. 378, while that of the control group was Rs. 650. An analysis of the test reports showed that more than 70 per cent of the beedi workers suffered from eye problems, gastrointestinal, and nervous problems. This may be due to absorption of nicotine through the skin into the hands. More than 50 per cent of the respondents suffered from respiratory problems, mostly burning throat and cough. More than 75 per cent faced osteological problems, like shoulder, back and knee pain, possibly due to prolonged sitting posture. The rate of miscarriage was also found to be significantly higher in the beedi rolling group (37 per cent) as compared to the control group (11.5 per cent). Twenty six out of the 73 beedi rollers had faced more than one miscarriage. Histopathological changes were found in the placenta of such women, which can cause foetal hypoxia due to reduced uteroplacental blood circulation, suggesting adverse effects of tobacco dust on pregnancy.

The total RBC, WBC, and platelet counts of the beedi rollers were significantly lower in comparison to the control group. There was also a significant rise in their lymphocytes and eosinophils and a significant fall in neutrophils and monocytes as compared to the control group. Lymphocytes are connected to the immune system and their numbers increase in response to infections. Since none of the study subjects were diagnosed with tuberculosis or cancer, it can be inferred that lymphocytosis in the beedi workers may have been caused by nicotine inhaled with tobacco dust. Similarly, significant rise in eosinophils indicate an allergic reaction, which may be due to long term exposure to tobacco. When the neutrophil count falls, the risk of infection increases greatly; while low number of monocytes in the blood indicates suppressed immune activity which occurs due to release of toxins in the blood of people exposed to tobacco dust. Haemoglobin levels were also lower among beedi rollers as compared to the control group, which can result in symptoms of anaemia. Even the SGPT (ALT) enzyme concentration was significantly higher in the beedi rollers as nicotine absorbed through the body is finally processed by the liver.

The study, thus, revealed the numerous health problems faced by the women beedi rollers due to direct inhalation of tobacco flakes and dust. There was an urgent need to impart education to these workers regarding the health hazards and the need to use protective gear like gloves, masks, etc. It is also important to provide alternative livelihood options considering the economic viability and skills of women. The study further recommended alternative home based occupations like paper recycling, farming of herbal and medicinal plants, vegetable selling, and preparation of indigenous snacks.

**10.13 The Poorest of the Poor: A Poverty Appraisal of Households Affected by Visceral Leishmaniasis in Bihar, India, M. Boerlaert, F. Meheus, A. Sanchez, S. P. Singh, V. Vanlerberghe, A. Picado, B. Meessen, and S. Sundar, *Tropical Medicine and International Health*, Vol. No. 14(6), pp. 639–44, 2009.**

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**Key Topics:** *Visceral Leishmaniasis, Poverty and Vulnerability, Wealth Distribution*

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The objective of this study is to provide data about wealth distribution in Visceral Leishmaniasis (VL) or Kala-azar-affected communities compared to that of the general population in Bihar, India.

After extensive disease risk mapping, 16 clusters with high VL transmission were selected in Bihar. An exhaustive census of all households in the clusters was conducted and socioeconomic household characteristics were documented through administering a questionnaire. Data on the general population in Bihar, taken from the National Family Health Survey of India, were used for comparison. An Asset Index was developed based on Principal Components Analysis and the distribution of this asset index for the VL communities was compared with that of the general population of Bihar.

The study shows that VL clearly affects the poorest of the poor in India. They are most vulnerable as this vector-borne disease is linked to poor housing and unhealthy habitats. Bihar is known to be one of the poorer states of India with 40 per cent of its population living below the poverty line, while the national average is 29 per cent. The data indicates that communities with high and active VL transmission over the past three years are situated at the lower end of wealth distribution of Bihar.

The study points out that there exists ample evidence that poverty and ill health are intertwined, with poor people suffering worse health and having more limited access to healthcare. Likewise, ill health may lead to a loss of income through absence from work and high healthcare costs, driving poor households even further into poverty.

Although the results have shown that in Bihar communities with high VL incidence are considerably poorer than the rest of the state, the study notes that this does not necessarily imply a causal relationship between VL and poverty. Wealth differences between VL affected clusters and the rest of Bihar could also be explained by other factors such as differences in ecological conditions and economic growth within Bihar, or individual differences such as caste, literacy rates and land ownership.

This study suggests that current and future preventive measures for such a deadly disease need to be subsidised or provided free to the majority of households living in VL affected areas of India, or else they might prove futile. Support for the present VL elimination initiative is important in the fight against poverty. Micro Nutrient Initiative, New Delhi, 2009.

#### **10.14 Differentials in Vitamin A Coverage, Service Delivery Patterns and Awareness Regarding Vitamin A among Urban and Rural Communities in Bihar, Anand Lakshman, Chandrashekhar Pandey, N. Chaudhry, Deepika, Vijoy Prakash, and C. P. Singh, Micro Nutrient Initiative, New Delhi, 2009.**

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**Key Topics:** *Health Service Delivery, Awareness of Vitamin A*

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Primary health has never been a focus in the urban areas. Weak urban health infrastructure has posed a threat to ensuring health services for close to 1.5 million children in Bihar. It also hampers the provision of adequate Vitamin A supplementation (VAS) to the poor. VAS campaign was launched in Bihar in 2000, and VAS is delivered through a biannual event, based on a four day strategy in both urban and rural areas. In this context, the present study focuses on the major objectives so as to evaluate and compare VAS coverage and channels of communication among children 9-59 months of age, during September–November 2007. Knowledge, attitudes, and practices with respect to VAS, its benefits and biannual rounds have been explored.

A retrospective cross sectional survey, using WHO cluster methodology with multistage probability proportional to size (PPS) sampling, has been used. The VAS round was conducted in two phases and data collection was conducted in December 2007 to January 2008. Coverage was assessed based on receipt of single dose of Vitamin A during September 2007 and November 2007. Out of 81 villages, both in urban and rural areas, 324 respondents were selected, each from rural and urban areas. The village/ clusters were selected by PPS method using structured and close ended pre-tested questionnaire. Four care givers were selected for interview in each cluster.

The study found that VAS coverage was low in urban areas as compared to rural areas. In the urban areas 60 per cent reported that VA dose was given by frontline workers of the government programmes. In rural areas, 96 per cent reported that VA dose was given by frontline worker of the government programmes.

Although the care givers in urban areas were more knowledgeable about the benefits of VA than rural care givers, their awareness of how and where to get VA dose was lower. The study points out that the care givers in urban areas are more frequently informed that VA syrup is administered to a child. Most care givers received information related to VA from government programme functionaries. The study, thus, recommends improving processes to inform and educate the care givers.

The study suggests that urban and rural areas require different programme strategies to achieve universal VAS coverage, and to cater better to care givers regarding Vitamin A and biannual round. The study recommends that in the urban areas there should be increase in the availability, access, awareness of VA sites. This might result in more care givers taking their children to the sites rather than receiving a dose at home. Finally the study concludes that implications of the survey resulted in the state government making necessary budget allocations in its programme implementation.

**10.15 Support for provision of Early Medical Abortion by Mid-level Providers in Bihar and Jharkhand, India, Lisa Patel, Trude A. Bennett, Carolyn Tucker Halpern, Heidi Bart Johnston, and Chirayath M. Suchindran, *Reproductive Health Matters*, Vol. No. 17(33), pp. 70-9, 2009.**

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**Key Topics:** *Abortion, Training of Service Providers*

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The article assesses the environment for mid-level providers to participate in early medical abortion provision in Bihar and Jharkhand, including factors associated with mid-level provider interest in training for early medical abortion, the attitudes of obstetrician-gynaecologists and general physicians towards them doing so, and the factors that influenced their attitudes.

The data came from a larger project which sought to assess the effectiveness and cost-effectiveness of clinic-franchising programmes in improving the delivery of family planning services and use of contraception in Bihar and Jharkhand. The project applied a multi-stage cluster sample design to the entire area making up the current two states (except for some districts that were unsafe for fieldwork) to obtain samples of governmental, non-governmental, and private health facilities providing family planning services and their clinical staff. Large hospitals with more than 50 beds were excluded. The surveys of health facilities and their staff were piloted and carried out between May and August 2004.

The study shows that the majority of mid-level providers interviewed in Bihar and Jharkhand were interested in being trained to provide early medical abortion in 2004. Not only do a high number of mid-level providers in Bihar and Jharkhand want to participate in early medical abortion training, but those already providing medical abortion were more likely to want to obtain the proper skills to do so. Male mid-level providers were more likely to be interested in pursuing early medical abortion training compared to their female counterparts.

Mid-level providers, working at private for profit facilities, were less likely to be interested in training compared to those working at government facilities. This may be because those at private for profit facilities were likely to have clearly delineated roles and responsibilities with fewer opportunities for advancement.

The study finds that, in general, physicians in Bihar and Jharkhand are fairly supportive of non-physicians being trained to provide early medical abortion services. While the majority of general physicians surveyed were supportive of mid-level providers offering medical abortion, the majority of obstetrician-gynaecologists were not. The study suggests that those who support this form of task shifting should seek to work with physicians who have reservations about it. Over time and with experience of mid-level providers' skills and capabilities, these reservations may be reduced.

The study concludes that, as regards the substantial minority of obstetrician gynaecologists and general physicians who have less permissive attitudes toward abortion, values clarification activities may be helpful, and exposure to the public health justification for reducing maternal mortality from unsafe abortion. Possibly the best strategy for achieving safe abortion is to permit trained mid-level providers to offer abortion services, especially in rural communities. This study suggests that the majority of providers in Bihar and Jharkhand support this idea and would avail themselves of training and service delivery opportunities if they were offered.

**10.16 Tobacco Use in a Rural Area of Bihar, India, Dharendra N. Sinha, Prakash C. Gupta, and Mangesh S. Pednekar, *Indian Journal of Community Medicine*, Vol. No. 28(4), pp. 167-70, 2009.**

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**Key Topics:** *Tobacco Use*

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The study attempts to analyse tobacco use in Akhta village, in Sitamarhi district in Bihar. It is based on house to house survey (1,721) in Akhta village during June-July 2000. Information was collected for 9,097 persons, and after a gap of 15 days one team of survey supervisors comprising one male and one female were sent back to check randomly selected houses in each of the 16 areas (called *tola*) of the village. Tobacco use definitions and criteria were based on standard WHO guidelines. Ownership of land was used as a proxy for the socioeconomic profile of the family.

The study points out that in the sample village, tobacco use among children below 15 years was 6.5 per cent of which 6.2 per cent used tobacco in smokeless form. The most prevalent form was using tobacco as a dentifrice by both girls and boys. The overall tobacco use among adults (15 years or above) was 74.1 per cent for males and 45 per cent for females. Among female smokeless tobacco users, the dominating form was tobacco tooth powder, followed by *pan masala*, *gul*, and *khaini*. Whereas among men, it was *khaini* followed by tobacco tooth powder and *pan masala*. Over 80 per cent of men and women smokers were *bidi* smokers. The study reveals that among children tobacco use was 2 per cent for the age group 0-4, 6.1 per cent for the age group 5-9, and 11.7 per cent for the age group 10-14 years. The prevalence of tobacco use reached more than 80 per cent by the age 30, whereas, among females it reached nearly 60 per cent by the age of 40 years.

The study found that 41 per cent of the respondents were reported to be suffering from chest disease, 22 per cent from abdominal ailments, 9 per cent from high blood pressure, and heart disease, 13 per cent from bone and joint disease, and 16 per cent from other diseases. The relative risk for a smoker having a history of suffering from a disease as compared to non tobacco user was 2.33 and for a smokeless tobacco user 1.74. In the final discussion, the study points out that, over the years, smoking has been replaced by smokeless tobacco use. It is also corroborated by the fact that average age of men as well as women smokeless tobacco users has decreased but those of smokers have increased. However, it is astonishing that 2 per cent of children, as young as 0-4 years, were reported as tobacco users.

Current smoking pattern largely consisted of *bidi*. The use of hookah has considerably reduced. For smokeless tobacco, there are several new industrially manufactured products that are heavily advertised and intensely marketed. The study draws attention of readers that though the government of India had banned use of tobacco in tooth powders and tooth pastes in 1992, these products continue to be available openly in the market, often without mentioning tobacco as one of the ingredient. Towards the end the authors admit the major limitation of the study was the surrogate respondent, one respondent giving information for all members of the family.

**10.17 The Effect of Community-Based Reproductive Health Communication Interventions on Contraceptive Use Among Young Married Couples in Bihar, India, Elkan E. Daniel, Rekha Masilamani, and Mizanur Rahman, *International Family Planning Perspectives*, Vol. No. 34 (4), pp. 189–97, 2008.**

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**Key Topics:** *Reproductive Health Interventions*

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In 2001, Pathfinder International undertook the PRACHAR project to promote change in the reproductive behaviour of youth in 19 administrative blocks (or sub-districts) of three of Bihar's districts: Nalanda, Nawada, and Patna. These 19 blocks have a combined population of approximately 2.8 million. The intervention covered about 650,000 people, including approximately 110,000 unmarried adolescents, newlywed, married women younger than 25 and their husbands. Between 2002 and 2006, 19 Bihar-based nongovernmental organizations worked with Pathfinder to implement the intervention. Each of these partners carried out the project in one intervention cluster that comprised 25–35 villages and approximately 30,000 residents. The goals of the PRACHAR project are to improve the health and welfare of young mothers and their children, improve the economic well-being of families and reduce population growth by changing social norms related to early childbearing. Through workshops and behaviour change communication, the interventions provided essential reproductive health information and addressed key issues of concern to young people at their particular stage of life. The topics presented included the basic structure and function of the reproductive system; the menstrual cycle; hygiene; nutrition; contraception; the transmission, prevention and treatment of STIs (including HIV) and reproductive tract infections; myths and misconceptions concerning sexuality, reproduction, and STIs; recognising and protecting against sexual harassment and abuse; spousal negotiation; gender egalitarian sexual decision making; the availability of reproductive health and family planning services; and the need to access and utilise services. The project selected media appropriate for the audience and the message being delivered. The present paper reports on activities conducted under the original project design of PRACHAR. The study compares family planning attitudes, knowledge and behaviour among young women before and after implementation of the PRACHAR project in Bihar, and compares the post implementation outcomes in intervention areas with those areas where the project was not implemented.

Implementation of the intervention programme began in July 2002 in Nalanda, in October 2002 in Nawada and in April 2003 in Patna. The first phase of PRACHAR ended in 2005–06. Phase II was being implemented at the time of writing the report. The outcomes of Phase I were evaluated by collecting and comparing data from two rounds of surveys conducted in the intervention areas and in comparable areas with no intervention. The surveys gathered information on demand for contraception, contraceptive use, and knowledge and attitudes that influence childbearing and spacing behaviours. The first survey was conducted in 2002–03, before the interventions had begun; the second was conducted in 2004, after 21–27 months of interventions. A cluster sampling procedure was used to select respondents for the evaluation surveys. In Nalanda, respondents were selected from both intervention areas and comparison areas; in Nawada and Patna, only intervention areas were sampled. In Nalanda, 20 clusters (villages) were selected from the seven intervention areas and 20 from the seven comparison areas. Each comparison area was located within 5 km of the intervention areas in the district. Six hundred married women younger than 25, half of whom had no child and half one child, were selected from the intervention areas; an equal number were selected from comparison areas. The sampling procedure was slightly different in Nawada and Patna. In each district, 13 clusters were chosen, from which a sample of 390 women, half with no child and half with one child, was obtained. The villages were selected from a list of all villages in the intervention areas stratified by population size (<1,000, 1,000–2,000 and >2,000); the probability of selection was proportionate to size. In total, 1,995 women were interviewed in the baseline survey, and 2,080 were interviewed in the follow-up survey. The current study focuses on attitudes, especially whether they agreed that early childbearing is injurious to the mother's health and that contraceptive use is safe and necessary for delaying a first birth, whether respondents knew that a woman's fertility varies during the menstrual cycle, and also whether the respondent had a demand for contraception and whether she was using a method. Data were analysed using SPSS. The effect of the interventions on contraceptive use was analysed using a logistic regression model that controlled for socioeconomic and other factors, including women's age, parity, education, caste and intervention district. In addition, the study examined the interaction between intervention area and survey. This analysis made it possible to see if any changes in outcomes between surveys were greater or smaller in the intervention areas than in the comparison areas.

The study reports that the respondents of the study were generally similar across survey areas in age, number of children, education, and caste. At baseline, the demand for contraception in the comparison areas was similar to that in the intervention areas. Approximately one-fourth of women indicated that they wanted to wait at least two years for a child (or their next child) or wanted no more children. With respect to contraceptive use, the paper highlights that contraceptive use increased in the intervention areas between surveys; and at the follow-up, contraceptive use in the intervention areas was higher than that in the comparison areas; and the change in contraceptive use that occurred between surveys was greater in the intervention areas than in the comparison areas.

The study found that about 3 per cent of women in the comparison areas and 4 per cent of those in the intervention areas reported using a contraception method. At follow-up, contraceptive use had increased to 5 per cent, in the comparison areas, but to 21 per cent, in intervention communities. The rise in contraceptive prevalence in the intervention areas was due primarily to increased use of the pill and condoms. At follow-up, about 5 per cent of women in the intervention areas were using the pill and 13 per cent were using condoms.

Knowledge and attitudes improved over time in both the intervention and the comparison communities. This is clear from the fact that the proportion of respondents who agreed that early childbearing is injurious to a mother's health increased from 12 per cent to 65 per cent in the comparison areas, and from 17 per cent to 74 per cent in the intervention areas. The proportion of women who agreed that contraceptive use is safe and necessary for delaying a first birth increased in both areas. However, at follow-up, this agreement was significantly higher in the intervention areas than in the comparison areas.

The paper points out that women in the intervention areas showed improvement in knowledge of the fertile days in the menstrual cycle. At follow-up, 39 per cent of women knew about fertile days in the cycle, compared with only 18 per cent at baseline. In the comparison areas, the level of knowledge remained essentially unchanged, at around 20 per cent in both surveys.

Contraceptive use increased in the intervention areas regardless of parity. At baseline, contraceptive use among childless women was low in both the intervention areas (3 per cent) and the comparison areas (2 per cent). At follow-up, it had increased to 16 per cent in the intervention areas ( $p < .01$ ), but to only 3 per cent in the comparison area. Similarly, among women with one child, contraceptive use increased fourfold, from 6 per cent to 25 per cent,



in the intervention areas, but the change in the comparison areas (from 4 per cent to 7 per cent) was not statistically significant.

The logistic regression analysis of the study proved that attitudes toward early child bearing were more favourable in the intervention area, and improved from baseline to follow-up. Knowledge about fertile days did not differ between areas at baseline, and did not differ significantly between surveys. The increase in demand for contraception between surveys in the intervention area was 1.5 times that in the comparison area, and the increase in contraceptive use was even more pronounced.

The multivariate analysis also revealed associations between attitudes, knowledge and contraceptive behaviour, and the other independent variables. Age was positively associated with the measures of knowledge and attitudes. Knowledge of fertile days and the demand for and use of contraceptives were significantly higher among women with one child than among those with no children. Women with one or more years of schooling had a higher level of knowledge, more favourable attitudes, and greater demand for and use of contraceptives than did women with no education. None of these measures varied by caste, except that knowledge of fertile days was lower among women in the scheduled caste/tribe group than among those in the backward castes. Knowledge, attitudes, and demand for contraception differed among districts, but contraceptive use did not.

#### **10.18 Black Fever in Bihar: Experiences and Responses, Achintya Kumar Dutta, *Economic and Political Weekly*, Vol. No. 43 (12&13), pp. 47–53, 2008.**

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##### **Key Topics:** *Visceral Leishmaniasis (Kala-azar)*

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The paper is an investigation into how serious the Kala-azar (visceral leishmaniasis) situation was in colonial Bihar, what was the government's policy to control it, and how the people responded to it. The study is mainly based on the literature or the secondary data available on the subject.

The study finds that in Bihar, Kala-azar was first reported in 1882 in Patna district, when a malarious type of fever with enlargement of the spleen and a peculiar cachexia, formerly unknown in this part, was prevalent and mistaken for malarial cachexia. The incidence of Kala-azar rapidly increased in the 1900s, affecting a large number of districts – Patna, Gaya, Sahabad, Monghyr, Saran, and Darbhanga, among them. The situation in North Bihar was appalling in the 1930s and 1940s. Of the 92,000 cases treated in the hospitals and dispensaries of Bihar in 1939, 83,961 were in the districts of north Bihar. Further testimony to the alarming situation comes in 1944 when 170 villages in or near the Kosi belt in Darbhanga district were affected by the disease. In many villages in this area no children of three to four years could be found, and pregnant women did not survive for long.

The study realised that working out the rate of incidence of this disease and the exact number of deaths that Kala-azar caused during colonial rule is a difficult task. Many of the cases, which were recorded as chronic malaria or malarial cachexia or enlarged spleen, were nothing other than Kala-azar. Only qualified medical experts could distinguish them; but they were hardly available in the villages.

On probing into the reasons of how Kala-azar was established as an epidemic, the study draws the attention of the reader to the some important aspects. Global occurrence of Kala-azar would seem to indicate that the vector, the sand fly, had a worldwide existence. Sand flies were common in Assam and were there long before the outbreak of Kala-azar in the Garo Hills in an epidemic form. So the possibility that sand flies aided the spread of the disease cannot be ignored. They must have found conditions suitable for further breeding after plantations grew up in the 19th century. The spread of Kala-azar rapidly followed the opening up of communication by rail and road for British commercial and military penetration. The opening up of tea plantations in large areas of Assam and the movement of tea garden workers caused the diffusion of the disease, not only throughout Assam but also to other parts of India. The unhygienic coolie lines where the labourers were forced to stay on the tea plantations facilitated the spread of this epidemic disease.

The study argues that it was British economic policy that made Bihar a Kala-azar affected area. There was agricultural distress in Bihar in the second half of the 19th century. A large number of labourers for Assam's tea gardens were drawn from Bengal and Bihar. A large number of coolies who were employed in rail and road construction were also drawn from Bihar. Thus, Assam got Bihar's cheap labourers and Bihar got Kala-azar in return.

The study points out that there was no specific treatment for Kala-azar before 1919 and no remarkable improvement occurred in the preventive measures either. British efforts at medical intervention succeeded in 1919 with the introduction of an antimony treatment in the form of tartar emetic. Kala-azar attracted much attention of the government in Bihar after 1920 when it took a huge toll of labourers and people in and around the Pusa Estate. By 1921, more efficacious drugs such as urea stibamine and neostibosan had been found and were being used by doctors. However, Kala-azar treatment either with tartar emetic or urea stibamine was difficult, requiring a careful technique and an experienced doctor. This was lacking in rural areas and the treatment was mostly carried out in large hospitals in urban areas. The number of Kala-azar centres in rural areas was very small. The special grant for purchasing drugs for Kala-azar treatment was insufficient and health officials had to appeal to the government repeatedly to enhance it. Even the enhanced grant was not adequate to provide proper relief to the affected people. Governmental funding for Kala-azar treatment in the 1920s and 1930s, when the disease was rampant, was utterly inadequate. Medical aid was, however, so inadequate in Bihar's tribal areas that most of the people had to depend on local resources, which were mainly village quacks or 'ojhas'. There were some serious defects in the working of the newly set up Kala-azar treatment centres. A definite survey had not been carried out in the villages and in the adjoining areas of the centres and it was not known whether all the existing cases in a village received treatment.

The study finds that people were apathetic to allopathic treatment and reluctant to visit the dispensaries for medical aid. There was no curative treatment in the hospitals and dispensaries as no specific drug for Kala-azar existed in India before 1919. The people rightly believed that the disease was incurable. That the affected did not go to dispensaries was dubbed a prejudice but this prejudice seems to have been justified in the context of medicine's failure to cure the sufferers. Improvements in the methods of treatment attracted more patients to the hospitals and dispensaries after 1920. A majority of Kala-azar patients in the villages could not avail themselves of treatment facilities because long journeys had to be made to get to *sadar* and sub-divisional hospitals. There were no dispensaries near where they lived. The government was mindful of this, but did not take steps to rectify the situation.

In brief, the paper unveils that the British medical intervention could do little to arrest the disease and save the victims until 1919. Success against Kala-azar came only when the antimony treatment arrived. In spite of some modest efforts, it could not be effectively prevented because the necessary measures were not in place. The Kala-azar situation became so serious that the matter was raised and discussed in the legislative assembly. The members attracted the attention of the government to the need to eradicate the disease. But the government failed to give any satisfactory answer to this point or take any effective steps for it. Thus, the rural poor and middle class were the most neglected as far as medical relief was concerned, and a majority of them had to suffer and die uncared for and untreated.

**10.19 Why Mothers Die? A Survey of Maternal Mortality in a District Hospital in Bihar, Tripti Sinha, *Health and Population: Perspectives and Issues*, Vol. No. 31 (4), pp. 279–85, 2008.**

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**Key Topics:** *Maternal Mortality, Safe Motherhood*

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This paper analyses 52 instances of maternal deaths over a period of one year in a district hospital in Bihar and formulates obstetric and administrative interventions to rapidly reduce Maternal Mortality Rate (MMR) in the region. Maternal mortality is not uniform across various states in the country and is disproportionately higher in the Empowered Action Group (EAG) states like Bihar.

The study was conducted in the maternity unit of a district hospital in a predominantly rural area of Bihar with high levels of poverty, illiteracy, and sub-optimal healthcare infrastructure, from 1 October 2004 to 30 September 2005. The following data was taken into consideration for analysing the cases: age, parity/gravida, religion, place of residence, quality of ante-natal care received, tetanus immunisation status, history of outside intervention by unskilled birth attendants, and the documented cause of death based on clinical findings and any investigations, if done.

The average annual delivery rate in the hospital was estimated to be around 2,500 to 2,800. The maternal death figures could have been higher than the recorded 52, had it not been for a slump in admissions due to government paramedics and nurses' strike for 52 days during December 2004-January 2005. The maximum number of deaths

occurred during the most fertile years – 41 deaths were recorded in the age group below 30 years. Twenty-four deaths occurred in primigravida, 19 among gravida 2-4, and nine among grand multigravida. No significant differences were seen among the religious communities. Hindus recorded 28 deaths while Muslims 24 deaths. The place of residence had a significant bearing on maternal mortality with 48 deaths reported among women living in rural areas as compared to only four in urban areas. As far as quality of ante-natal check-ups was concerned, a disturbing feature noted was the incomplete documentation of such care. The data on ante-natal care reflected the poor coverage of women who died in pregnancy and also large gaps in the relevant information on each patient. Only three women got good care during pregnancy while the rest had scanty, none, or doubtful ante-natal care. Even tetanus immunisation during pregnancy was not universal. In three cases no immunisation was carried out while the status of 19 cases was uncertain.

Eclampsia emerged as the single most important cause of maternal deaths, followed by infective causes like septic abortion, septicaemia due to prolonged labour, post-operative infection, and ruptured uterus. Severe anaemia was another important cause. Miscellaneous causes were congestive heart failure, acute renal failure due to severe diarrhoea and vomiting post delivery, hepatic coma and Koch's chest. However, in 14 cases, the cause of death could not be determined because the patient reached the hospital in the terminal stage and/or at night when she could not be examined by an obstetrician. In 15 cases prior intervention by unqualified persons was documented, which led to ruptured uterus and infective morbidity, associated with deaths. Maternal mortality due to eclampsia could be attributed to the following factors: not having regular blood pressure check-ups; inadequate obstetric and nursing care on admission in emergency; absence of suction machine to deal with severe pulmonary oedema; and magnesium sulphate not being in stock.

The study suggested the following urgent low cost interventions for cutting down mortality rate due to eclampsia. The ANMs should be trained to recognise the symptoms of impending eclampsia and given a simple protocol for emergency management of eclampsia. Magnesium sulphate treatments need to be made available for emergency purposes. More lady doctors should be posted in FRUs and district hospitals for better utilisation of their skills in government health service. All obstetric units should have functioning apparatus and infrastructure and staff strength should be increased at maternity units. The patient and her family should be educated to recognise the early clinical features of pre-eclampsia and eclampsia. For curbing infective morbidity and mortality, the study suggested training birth attendants in clean delivery practices and providing them with necessary kits. Increasing institutional deliveries and, ultimately, phasing out home deliveries can drastically reduce infective morbidity and mortality. Deaths from ante-partum and post-partum haemorrhages and anaemia can be cut down by promoting small family norms to reduce their risk and also through early referral by ANMs.

The cases documented as undetermined causes expose a serious lacunae in the community healthcare services and are largely due to understaffing of obstetricians. The greatest tragedy about maternal deaths is that the dying women are often young, otherwise healthy, and their untimely death leaves behind motherless children. What could have been merely some degree of morbidity culminates in deaths due to the 3Ds—delay in seeking care, delay in transport to EmOC unit, and delay in diagnosis and definitive treatment, the study concludes.

### **10.20 Bihar: Road Map for Development of Health Sector, Report of the Special Taskforce on Bihar Planning Commission, 2007**

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#### **Key Topics:** *Health Status, Health and Development*

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Bihar, the third most populous state in India, has a very poor record in terms of human development indicators. Though the National Family Health Survey (NFHS-3 2005-06) indicates some improvement in immunisation coverage, contraceptive use, and institutional deliveries, but with regard to the proportion of women who have heard of AIDS, malnutrition among children and women, the situation is still dim in the state. The prevalence of certain vector borne diseases, communicable diseases, and water borne diseases has also worsened health situation the State. In this context, a report of the special task force on Bihar has opened a road map for the development of the health sector of the state.

This paper is based on technical inputs provided by a team at the ICICI Bank, which worked under the guidance of Task Force Member Dr Nachiket Mor. Inputs for the paper were also provided by members of the Planning Commission and the State Health Department.

The study points out that there are substantial gaps in health sector infrastructure and essential health requirements in terms of manpower, equipment, drugs, and consumables in primary health care institutions. There is also a drastic decline in the share of public health facilities in treatment of non-hospitalised ailments in both rural and urban areas. Based on the indicators related to primary healthcare infrastructure and reproductive and child healthcare, the districts of Seohar, Samastipur, Kishangaj, Jahanabad, Nalanda, Khagaria, Araria, Sitamarhi, and Pashchim Champaran lag behind.

Bihar is characterised by very high fertility rate; low level of institutional deliveries, and a high level of maternal deaths, along with very low coverage of full immunisation, low level of female literacy, and poor status of family planning programme. Moreover, there are substantial gaps in sub-centres, primary health centres, and a very large gap in community health centres along with shortage of manpower, drugs, and equipments necessary for primary healthcare and inadequate training facilities.

In this context, health is now being given due attention by the State. With the upgradation of health infrastructure, recruitment of doctors on contract, outsourcing of diagnostic facilities, availability of free medicines, provision of ambulance services, increasing outreach through mobile medical units, and through a mechanism of web-based monitoring, better health outcomes are expected in the State.

Efforts have been made by the state by launching a variety of programmes to reduce morbidity and mortality rates. They include, *Janani Evam Bal Suraksha Yojana* under the overall umbrella of the National Rural Health Mission, Anaemia Control Programme, Blindness Control Programme, Vitamin A Supplementation Programme, Routine Immunisation, Programme for Elimination of Iodine Deficiency Disorders, Revised National Tuberculosis Control Programme (RNTCP), National Leprosy Eradication Programme, Kala-azar Eradication Programme, etc.

National Rural Health Mission provides an important opportunity to improve health outcomes through a variety of new approaches. Two of the key elements of NRHM viz. ASHA Programme and District Health Planning have been undertaken by the State in a rigorous manner. District Health Plans, for the first time, have assumed a new centrality and urgency in the current context of the NRHM. This will also encourage decentralisation and community participation, convergence and improved accountability of health systems at the grassroots levels. Specific activities for improving the health indicators include improvements in infrastructure and delivery system of healthcare, provision of manpower, equipments and drugs, improved inter-sectoral coordination, monitoring and evaluation, and other innovative approaches. These initiatives would have far reaching implications towards better health of common people across the State.

The report highlights that by the end of Eleventh Plan, the State would strive to reduce Infant Mortality rate from 61 per 1000 live births to 29, maternal mortality ratio from 371 per 100,000 live births to 123; total fertility rate from 4.2 to 3.0; and proportion of underweight children from 58.4 per cent to 27.2 per cent. Though the Child Sex Ratio (0-6 years) of 942 is better than the all India figure of 927, the State should reach the goal of 950 by the end of Eleventh Plan.

In order to achieve the desired outcomes, the report proposes a right mix of public health approaches consisting of Service Approach, Regulatory Approach, and Education Approach. Service Approach is a blend of services delivered through static health facilities, outreach facilities, and telémedicine. Education approach is a behavioural change communication strategy which will be used for social mobilisation for better health outcomes in Bihar. Regulatory approach is not a viable option on a large scale. However, certain issues like strict enforcement of PC and PNDDT Act will be taken care of.

The report states that for the first time in Bihar, attention has been given to the aspects of monitoring and evaluation of health programmes. This aspect will now be the integral component of all the health related activities. Annual District Health Surveys through the Registrar General of India will be carried out to complement the already existing mechanisms of monitoring and evaluation.

The report also views that the health status in Bihar is expected to improve at a faster pace by focusing on reduction of Infant Mortality Rate through home based neonatal care, including emergency life saving measures, improving breast feeding practices; integrated management of neonatal and childhood illnesses (IMNCI), and increasing

immunisation coverage. Reduction of Maternal Mortality Ratio through *Janani Evam Bal Suraksha Yojana*; improved antenatal care, provision of skilled attendance at birth, enhancing facilities for emergency obstetric care, increased accessibility to emergency obstetric care (maximum two hours travel time), and PPP arrangements in case of non availability of facilities. Reduction of Total Fertility Rate by behavioural change communication, increase in the age at marriage of girls, delay in first child birth, greater male participation, meeting the unmet needs for contraception, improved infrastructure, and organisation of family planning camps, reduction in malnutrition by better coordination with ICDS, proper organisation of monthly health days at the *Anganwadis*, and health and nutrition education, improvement in the Child Sex Ratio by strict enforcement of the PC & PNDT Act; and greater emphasis on gender issues.

The report recommends that the service approach should be utilised for correcting the Sub-District and Block level regional imbalances, existing deficiencies in the health care infrastructure, making all static facilities operational, and also for enhanced outreach activities to reach hitherto unreached segments of the population. Mobile medical units providing OPD services, lab investigations, and minor operations are needed to provide health services to rural populations of distant areas. Upgradation of district hospitals including blood bank facilities, especially in areas lacking any sub-district hospitals/ community health centres, should be undertaken on priority.

It is important that the opportunity provided by NRHM should be fully utilised. District Health Plans have assumed a new centrality and urgency as per the mandate of NRHM. Capacity building efforts have to be all inclusive to cover not only RCH but also other programmes for the delivery of comprehensive healthcare.

The report recommends a systematic district specific approach along with upgradation/expansion of the network of fully equipped training facilities. For improving the availability of trained paramedical staff, while on one hand the state government needs to strengthen and increase training facilities in the State run institutions, on the other hand, it needs to encourage and attract private sector to play a greater role.

Systematic efforts should be undertaken to integrate AYUSH systems into the national health programmes by enhancing their social and community outreach, increased role in public health, and revitalisation of community based local health traditions, with the ultimate aim of enhancing the outreach of AYUSH healthcare in an accessible, acceptable, affordable, and qualitative manner.

Action needs to be completed immediately for the preparation/improvement of the State Action Plan which identifies sectoral needs and priorities, specifically related to the monitorable targets suggested by the Planning Commission and the NRHM. To share the administrative responsibility and workload at the district level, managers and accountants need to be inducted to provide much needed resource management. A grievance and complaint cell along with a website would increase interaction with the community and improve governance.

The report recommends effective convergence between the departments dealing with health, ICDS, education, drinking water, and sanitation is required as the indicators of health depend as much on other sectors as they do on hospitals and functional health systems.

Considering the vast amount of financial resources going to the health sector, there is a need to provide effective accounting standards and social audit system at key operating levels, particularly in the vast rural areas. Monitoring of benefits should be the key in the accrued social audit function. Health is now being given due attention by the State. With the upgradation of health infrastructure, recruitment of doctors on contract, outsourcing diagnostic facilities, availability of free medicines, provision of ambulance services and through a mechanism of web-based monitoring, better health outcomes are expected in the State.

#### **10.21 Exploring Safe Sex Awareness and Sexual Experiences of Adolescents in Patna, Medha Shekhar, Saswata Ghosh, and Pradeep Panda, *Economic and Political Weekly*, Vol. No. 42(48), pp. 48–55, 2007.**

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**Key Topics:** *Adolescents, Sexual Awareness*

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This article reports the findings from a study of school- and college-going adolescent girls and boys in Patna on their awareness of sexual matters and safe sex, and their experience of sexual relations. The article correlates this awareness and experience at the individual, family, and peer levels. The study was conducted in Patna city in 22 schools and colleges, government and private, both single-sex and coeducational. The selection of educational

institutions was somewhat opportunistic. The study has been conducted in self-selected schools and colleges that granted researchers access to students. The study comprised two phases. In an initial qualitative phase, eight focus group discussions were held with male and female students, and eight key informant interviews were held with selected students, parents, and teachers. The second phase comprised a survey conducted in 2005 among students in Classes IX (aged around 14 years) and XI (aged around 16 years). Questionnaires were self-administered. While the selection of educational institutions was, by necessity, opportunistic, the sample of students who responded to the survey was largely representative of students drawn from the two classes within these schools and colleges. The survey was conducted in one randomly selected section of Class IX and Class XI, from each selected institution. A total of 32 sessions were held in the 22 schools and colleges selected for study. Only those whose parents consented were considered for the study.

The survey instrument was in Hindi and pre-tested. The analysis of the study was confined to 1,025 unmarried students. Of these, 44 per cent are male (451) and 56 per cent female (574). Moreover, 53 per cent were from Class IX and 47 per cent from Class XI. The study examined awareness of sexual and reproductive health matters, and experiences of physical contact (hugging, kissing, touching private parts) and sexual relations with an opposite-sex partner.

The study reveals that students in Patna lack complete awareness about the kinds of sexual and reproductive matters that are likely to protect them from unwanted pregnancy and infection. At the same time, findings suggest that even in this relatively traditional setting, school- and college-going students do find opportunities to engage in physical and even sexual relationships. A substantial proportion of adolescent girls and boys have experienced some form of physical intimacy, and a significant minority of young boys have experienced sexual relations, usually unprotected.

It points out in the sample of students, selected individual, peer, and family level factors are significantly associated with awareness of sexual and reproductive health, and physical and sexual experience. Gender differences in the correlates of physical and sexual behaviour are evident, although the directions of effects are generally similar.

The study finds that the older the students or the longer they are exposed to education, more the opportunities they have to form relationships and engage in both physical and sexual relations. However, this is significant only among girls, for whom Class XI may involve more freedom of movement and unsupervised time than Class IX, compared to boys who may have freedom from an earlier age.

Exposure to other risky influences, like pornographic films, is significantly associated with physical or sexual experience among boys. Among boys, exposure to blue films appears positively associated with awareness of sexual matters, raising questions about whether or not the information provided in these is always inaccurate. Peer contact, likewise, is powerfully and positively associated with physical or sexual experience among boys. In contrast, among girls, the closeness of peer contacts appears only weakly associated.

At the family level, maternal education appears to inversely influence the experience of physical intimacy and sexual relations among adolescents. While among girls, the extent of parental supervision is only weakly associated with physical intimacy indicators, among boys there is a strong and powerful relationship. The findings highlight that those reporting somewhat strict and very strict parental supervision, are, indeed, significantly less likely to report sexual relations.

The study notes that adolescents who have undergone family life or sex education and have frequent peer contact are more likely to be aware of these sexual issues than others. Family and household level factors appear, by and large, to be unrelated to awareness about sexual matters. Those living away from their parents appear to be better informed than those who co-reside with their parents.

The increasing trend towards education for all, increasing access to work among the young and development of peer networks suggests that opportunities for social mixing among adolescent boys and girls have sharply increased. At the same time, the study suggests that individual, family, and peer level factors are keys in determining how well informed adolescents are about sexual matters, and the extent to which they engage in intimate behaviour with members of the opposite sex.

In these circumstances, the study suggests that the programmes that enable adolescents to develop the skills needed to make informed decisions in pursuing relationships should be implemented. Likewise, the important role played by maternal education and parental supervision of adolescent activities suggests that parenting issues are

critical in students' awareness and behaviours in influencing adolescents' awareness of sexual matters, and deterring them from engaging in risky sex are needed.

**10.22 Costs of Patient Management of Visceral Leishmaniasis in Muzaffarpur, Bihar, India, Fillip Meheus, Marleen Boelaert, Rob Baltussen, and Shyam Sundar, *Tropical Medicine and International Health* Vol. No. 2 (2), pp. 1715–24, 2006.**

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**Key Topics:** *Kala-Azar, Treatment Costs*

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Kala-azar or Visceral Leishmaniasis is a life threatening disease if left untreated. Bangladesh, Brazil, Nepal, Sudan and, India account for 90 percent of Kala-azar cases. India accounts for half of the cases and about 90 per cent of Indian patients live in the state of Bihar. Kala-azar is caused by *Leishmania donovani* and is transmitted by the bite of an infected phlebotomus female sandfly. Patients infected with Visceral Leishmaniasis (VL) usually present prolonged fever, diarrhoea, cough, abdominal pain, enlarged liver and/or spleen, nose bleeds, and severe loss of weight. However, there has been little effort to quantify the economic consequences of the disease on the affected population. This study is a first attempt to estimate the direct and indirect costs associated with patient management of VL from a societal and household perspective in Bihar. The paper presents the results from a costing analysis of Kala-azar treatment in Muzaffarpur. The objectives of the study are to identify the economic cost of first line of treatment for Kala-azar in Muzaffarpur.

The paper presents a conceptual framework used for the analysis and the process of patient management, data collection, and cost estimation. The subsequent section presents the results of cost analysis from the societal as well as from the patient perspective, and discusses the implications of findings for control of the disease. Data were collected in July and August 2005 at the Kala-Azar Medical Research Centre (KAMRC). The hospital is located in Muzaffarpur, a highly poverty stricken place which is considered a highly endemic area with a high degree of antimony resistance. Information on provider's cost was derived from annual financial reports for the year 2003–04 of the medical centre and from the hospital administrator. Data on the patient's direct and indirect costs were obtained from medical records with a structured questionnaire designed for this study. The patient, the head of the household, or a principal respondent was interviewed. The questionnaire collected data on demographic characteristics on direct medical costs and direct non-medical costs incurred by the patient and accompanying relatives. The questionnaire also included questions on health-seeking behaviour and costs prior to admission at the KAMRC and on additional expenditures to meet the costs of treatment. Patients were selected from admission records. All patients admitted or presenting themselves for follow up at the time of the study (between 23 July 2005 and 4 August 2005) were approached. Patients on follow up visit were only included if they had been discharged no longer than 6 months to minimise recall bias. Direct medical costs to the patient were calculated by taking an ingredient approach. The indirect costs were calculated using the human capital method and were reported separately as recommended by the WHO.

The study points out that the surveyed patients (range 3–60 years) were on an average 16 years old. A majority of the patients were male (64 per cent) and 18 per cent of the patients were head of their household. The average size of the household was eight persons. The average years of schooling for the patients was only 3 years and a majority of them were engaged in agriculture and/or animal husbandry. The median household income on a monthly basis was Rs 2,200.

The median duration of hospitalisation as found in the study was 18 days. The total cost of care per episode of disease was estimated at Rs 15,400 and is equivalent to 58 per cent of the annual household income. The total medical cost over the period of hospitalisation amounted to Rs 8,490. The 'accommodation' cost for hospitalisation per patient was Rs 2,736 and is an aggregate of personnel costs, overhead costs, and infrastructure. The cost of investigations (diagnostic and laboratory tests) per patient was Rs 2,700. The median cost of drugs is Rs 2,334.

The monthly interest payment on loans taken to meet the costs of treatment amounted to Rs 200. The main item of cost for the patient is drug cost which amounts to Rs 2,160. Consultation fees amounted to Rs 170. The total loss of income to the patient (income loss because of illness and hospitalisation) was Rs 4,400, while the income loss for the relative(s) staying permanently with the patient was Rs 900. With respect to school-going patients, they were absent from school, on an average, for 67 days.

The paper states that households used one or more strategies to cover the costs of treatment, that is, using available cash and savings, taking loans, the sale of assets and/or rental of land and gifts. The study also finds that the indirect cost, mainly the loss of income to the patient and relatives, of seeking/receiving care represents the highest cost item. This high indirect cost follows from the long duration of illness. Moreover, the patients visited, on an average, two different providers prior to seeking/receiving care at the KAMRC. As per the study, only in 24 per cent of cases where providers diagnosed the patient to be infected with the disease and referred the patient to the KAMRC for specialised treatment. In all other cases, the patient was referred to the centre by either a relative, a member of the same village, or the patient knew about the centre him/herself.

Hence, the study recommends that awareness on VL among health professionals should, therefore, be increased to ensure a fast and accurate diagnosis of VL in the early stage of disease. This will decrease the risk of misdiagnosis and mistreatment and, thus, result in a decreased absence from productive activities and reduce the loss of income to the patient.

Poor rural households with weak medical facilities seem to be the worst victims of the disease. The paper recommends that the public health authorities in Bihar should focus on policies that detect VL in the early stage of disease and implement interventions that minimise the burden to households affected by VL and also subsidise hospitals providing treatment of VL to the patient.

**10.23 Tracking Progress towards Sustainable Elimination of Iodine Deficiency Disorders in Bihar, R. Sankar, S. Moorthy, C. S. Pandav, J. S. Tiwari, and M. G. Karmarkar, *Indian Journal of Pediatrics*, Vol. 73, 2006.**

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**Key Topics:** *Iodine Deficiency, Iodised Salt*

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The objective of this study was to assess the status of iodine deficiency in the population of Bihar and track the progress of the elimination efforts. A community based field survey was conducted and using quantitative and qualitative research methods, and data was collected by following internationally recommended protocol and methodology. Thirty clusters were selected using population proportionate to size technique. School age children (6 to 12 years) were the target group studied and urinary iodine in target children and iodine content of salt at households were the indicators used.

The study explains that, geographically, Bihar lies in the sub-Himalayan goiter belt. When the National Goiter Control Programme started in 1962, goiter was thought to be endemic only in the districts of East and West Champaran, Sitamarhi, and parts of Muzaffarpur districts. Subsequently, surveys showed the existence of iodine deficiency to be more widespread in the state. It has been pointed out in the study that this is the first such state-wise survey.

The study found that most of the respondents were aware of iodised salt; most of them bought salt sold in packets, most preferred powdered salt because of ease of use, and most of the respondents were aware of the precautions to be taken with the storage of iodised salt at home. Most did not know the health benefits of consuming iodised salt, most of them were influenced by the commercial endorsements that are heard or seen on the mass media, the health system did not appear to play a part in informing the community, and most of the retailers reported a steady increase in demand and sale of packet salt and refined salt. Lack of awareness on the benefits of iodised salt in the community meant that the increase in the demand for packet and refined salt is probably due to the increasing trend in moving towards packet culture. This is important to bear in mind from the point of view of sustainability of salt iodisation.

The study argues that the results point to the fact that iodine deficiency continues to threaten the health and well-being of the population of Bihar. Re-evaluation of Iodine Deficiency Disorders (IDD) status after introduction of iodised salt was done in the districts of East and West Champaran. These surveys revealed significant decrease in the goiter prevalence. From the year 1979 to 1993-94, goiter prevalence decreased from 64.5 per cent to 24.6 per cent in East Champaran and from 57.2 per cent to 25.1 per cent in West Champaran.

The study finds that Bihar has legal provision that bans the sale of non-iodised salt in the state. The first ban notification was issued in a few districts in April 1988 and, subsequently, the entire state was covered under the notification. Bihar does not produce any salt and all the salt is imported from one of the salt producing states. Household coverage of iodised salt in Bihar in NFHS-2 was 47 per cent in 1998-99 and this dropped to 25.2 per cent in the RCH survey in conducted in 2002.



According to the study, this can be explained by the steep rise in the railway freight, repeal of the Central ban on sale of non-iodised salt by the Central government in the year 2000, and some complacency on the part of programme managers in the face of competing priorities.

The study notes that the IDD Cell in Bihar was established in the year 1986-87. A state level IDD Control Task Force was set up in 1988. However, the organisation has not been functioning at all. Although the entire state is covered by the ban notification, enforcement of the ban is practically non-existent. Polio eradication and vitamin A campaigns are two examples that became high priority programmes with political support and high visibility. Because of the pressure to perform in these programmes, performance with respect to other programmes is faltering.

The study shows that damage to reproductive function, and to the development of the foetus and newborn is the most important consequence of iodine deficiency. The foetal brain is particularly vulnerable to maternal hypothyroidism in iodine deficiency, and iodine deficiency is the leading cause of preventable mental retardation worldwide. Even mild or sub clinical maternal hypothyroidism during pregnancy can impair mental development of the newborn. The best way to supplement iodine to deficient populations is through salt iodisation. For salt iodisation to have the desired impact and protect children from brain damage, adequately iodised salt should be accessible and used.

Data from this study show that iodised salt coverage is low and, consequently, iodine deficiency continues as a major public health problem in Bihar, as indicated by both the process and impact indicators. A series of steps have been initiated in the state following a dissemination workshop held in March 2005. In the dissemination workshop, several important recommendations were arrived at to improve the availability and accessibility of adequately iodised salt in the state. The recommendations address both supply and demand issues and it is hoped that these measures should lead to improved availability and use of iodised salt at the household level.

**10.24 Serious Underreporting of Visceral Leishmaniasis through Passive Case Reporting in Bihar, India, S.P. Singh, D. Reddy, M. Rai, and S. Sundar, *Tropical Medicine and International Health*, Vol. No. 11(6), pp. 899–905, 2006.**

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**Key Topics:** *Visceral Leishmaniasis (Kala-azar)*

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Visceral leishmaniasis (VL, kala-azar) is a major public health problem in the state of Bihar and adjoining areas of states such as West Bengal, Jharkhand, and Uttar Pradesh. Bihar accounts for more than 90 per cent of the cases in the country. The Government of India aspires to eliminate VL by 2010 from India. For prevention and control of any disease, health policy planners need to know the extent of the problem in a specified area, besides other epidemiological parameters, before launching any intervention programme. For this, an effective community-based surveillance system is required to find out the cases. Unfortunately, in the state of Bihar, there is no active surveillance system, and similar situation exists in other states endemic for the disease. In Bihar, only those VL cases are being reported by the Government who are registered for treatment with the public health care delivery system, that is, Primary Health Centres (PHC), District Hospitals, and Government Medical colleges. The objective of the present study is to determine the incidence of VL in a pre-determined area of the state of Bihar and to estimate the extent of underreporting through passive case reporting by the Government health system.

The study was conducted in the district of Muzaffarpur, one of the districts with highest VL endemicity in the state. Kanti Block with an estimated population of 352,000, in 2000, was selected for the present study. A house-to house survey was performed from September 2000 to March 2001, to get information about socio-demographic and environmental characteristics. The total population of the study area was 26,444 distributed in 4,083 households in 2001. The data was collected using pre-tested, semi-structured schedules. Registers and reports of all the Block PHCs, district hospitals, and medical college located in the district Muzaffarpur were undertaken for the years corresponding to the study period (2001–2003). In order to make the study operationally feasible, a survey was conducted in a population of 26,444 over 3 years. Any individual with fever for more than 15 days with or without splenic enlargement was considered to be a suspected case of VL. For those opting for treatment at Kala-azar Medical Research Centre (KAMRC), a non-governmental organisation (NGO) in Muzaffarpur, all the patients were subjected to parasitological examination and a patient was considered to be a 'confirmed' case of VL only when the

diagnosis was made by the identification of amastigotes in the splenic or bone marrow aspirate. Patients seeking care at other facilities (private doctors, private hospitals, and public health institutions) were considered as positive based only on positive parasitological reporting.

For the identification of VL, the field workers visited every household at monthly intervals and enquired for any case currently treated for VL, either in the public or private sector, and for cases having fever for more than 15 days. Opinion leaders in the villages were motivated to participate voluntarily to give information about such cases. At least one such leader was identified in each hamlet. Pamphlets were distributed and pasted at important public places to give information about the signs and symptoms of the disease and to report at a designated place. The suspected cases were followed regularly to know the final diagnosis. These suspected and any other partially treated or relapse cases were offered diagnosis and treatment free of cost to KAMRC at Muzaffarpur.

The present study is the first report of incidence of VL based on active house-to-house survey from the endemic region of India. According to the estimates of the study, the average annual incidence rate for VL was 2.49/1000 population for the study area. More than two-thirds (70.3 per cent) of the total 202 cases were treated by NGOs/charitable hospitals, because patients are offered free diagnosis and treatment at these places. The study reports that most of these patients are poor with very low income and cannot afford to pay for the treatment and, therefore, prefer organisations offering free services.

Of the 202 VL cases identified in the study population, 201 were identified by surveillance activities. There is no established policy or documentation system for referring patients from block PHC to district hospitals or a medical college. Patients are free to seek treatment at any place and from any health system they want. Therefore, it is also possible that a patient is partially treated at one health facility and then switches to another facility or and his name is enlisted at both the places. It is also likely that a patient after treatment at one facility gets a relapse and goes to another facility and figures twice in the reporting system.

The study points out that there may be a slight variation in the actual incidence of the disease due to underreporting reasons. In this context, the study adds that during the year 2003 the proportion of patients seeking treatment from government health system in the study population and the whole Block was 12.3 per cent and 12.44 per cent, respectively, of the documented or estimated cases, giving corresponding underreporting figures of 8.13 and 8.04 times, respectively. The fault lies in the reporting system which picks up only those VL cases which are registered for treatment with the public health care delivery system, that is, PHC, District Hospitals, and Government Medical colleges. A large number of patients opt for the private healthcare system and are, thus, left out of the reporting system.

An attempt was made to find the reasons for poor utilisation of public health facility. Distance of the facility, availability of drugs, type of drugs available and attitude of the healthcare providers are the important determinants for seeking treatment from government health facility. At the time of collecting data only SAG was available at Block PHC which is largely ineffective in the region under study. Amphotericin B, the only effective drug was available only very irregularly at the district hospital and the medical college. When effective drugs are not available at the public health outlets, people, who otherwise would have preferred public health facility, are forced to go to private doctors or NGOs.

In the study area, only 11.39 per cent of the 202 patients sought treatment from the government sector during 3 years of the study period. Considering determinants for utilisation of government health facilities for treatment and official reporting of VL cases at the block and district level, the reporting and incidence rate at the district level is found to be eight times less. As movement of patients from one district to another for treatment is possible and if immigrant and emigrant populations are similar, the study points out that it is not going to affect the extent of the disease burden in the district.

The study recommends that Auxiliary Nurse Midwife (now called Female Multipurpose Workers), working at the sub-centre level, should be given the responsibility to identify the cases in the community during her home visits, irrespective of the place of treatment and then report these at the PHC level. In order to minimise the under reporting, an effort may also be made to collect information at least from reputable private practitioners and NGOs about the cases treated by them every month. For this, a person working at the district hospital could be given responsibility.

**10.25 Availability of Medical Abortion Pills and the Role of Chemists: A Study from Bihar and Jharkhand, India, Bela Ganatra, Vinoj Manning, and Suranjeen Prasad Pallipamulla, *Reproductive Health Matters*, Vol. No. 13(26), pp. 65-74, 2005.**

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**Key Topics:** *Access to Abortion Drugs*

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The paper reports on the availability of medical abortion pills and the role of chemists in Bihar and Jharkhand. It reports on how they are being used, who is using them, how women access them, or how providers, chemists, women, and their partners perceive medical abortion.

In 2004, IPAS conducted a study in the states of Bihar and Jharkhand (where it has an ongoing programmatic commitment to improving access to safe abortion care), to gauge knowledge of and perceptions about medical abortion among women and men, and to study stocking and sales of abortifacient drugs by chemists and the use practices of mifepristone-misoprostol among abortion service providers. This paper presents part of the findings, specifically, the data relating to the role of chemists. In all, 209 chemists were interviewed, including 68 from large outlets, 70 from medium outlets, and 71 from small outlets. Data was collected using a pre-tested, structured questionnaire that included a few open-ended questions. In order to understand the chemist-customer interaction in greater detail, nine additional in-depth interviews with chemist shop owners stocking mifepristone and misoprostol were conducted. The interviews included one each in the state capitals, Ranchi and Patna, six medium-sized outlets in towns (three in each of the two states), and one in a rural area near a district town. The full study also included a survey of 221 abortion providers, similarly selected from the same towns through a listing process, as well as in-depth interviews with a smaller number. Lastly, the full study included a series of focus group discussions (FGDs), 12 with women and 5 with men. Two of the FGDs (one each with men and women) were conducted in an urban area of Jharkhand which was also the site of the quantitative survey. The remaining FGDs took place in rural areas and all but two of the villages were close to large towns, similar to those included in the survey.

The study notes that in India, as in other South Asian countries, a variety of over-the-counter medications for delayed periods/abortion remain in high demand because of low cost and because the perception that side effects are negligible makes the trade-off with low efficacy worthwhile. While the price of mifepristone in India is less than in many other countries, a single tablet still costs 8-10 times more than any of the other preparations and, even in absolute terms, can prove a considerable barrier in these two states (Bihar and Jharkhand), both of which have a per capita income considerably lower than the national average.

The study argue that as higher than necessary doses of mifepristone continue to be prescribed and sold, there is an increased cost and, therefore, both access and demand is reduced. This, coupled with the fact that not all chemists are convinced of or educated about the comparative advantage of mifepristone-misoprostol and were unwilling to risk possible failure or complications, may be responsible for the fact that while over-the-counter sales do happen, the majority of transactions still appear to be prescription driven.

The study also finds that awareness of the rules relating to the drugs and publicity around potential misuse is high. They argue that it is possible that with time, as prescription sales increase and customer demand rises, chemists' own perceptions will change and non-prescription sales will likely increase as well. Hence, the current scenario provides us with a window of opportunity for action.

The study suggests that confusion between emergency contraceptives and abortifacients among some chemists is a cause for concern, as is the lack of understanding among many chemists of the efficacy or otherwise of the innumerable drugs that they stock as abortifacients. Even if not harmful, their use delays care-seeking and means abortions are finally carried out later than necessary. Dissemination of accurate information on these drugs to chemists, as well as on mifepristone-misoprostol, is essential.

The study opines that research is also needed to determine whether any of the Ayurvedic drugs is effective as well. Encouraging chemists to stock and promote the use of inexpensive and easily available pregnancy tests can help to shift abortion care- seeking to earlier in pregnancy, and would serve as appropriate advice of the first step to take for those who come in and ask about dealing with an unwanted pregnancy. While chemists may not be obliged to provide any additional information, and there may be some who argue that providing people with additional product information may only lead to more over-the-counter sales, the fact remains that even customers carrying a

prescription for mifepristone and misoprostol ask chemists to reconfirm dosage and directions for use. Hence, basic information about these drugs is needed by chemists.

According to the study, the finding that most surveyed chemists emphasised the need to consult a doctor, even to people with prescriptions, is an encouraging sign. As most of the providers interviewed were prescribing rather than stocking the drugs themselves, it can be expected that women will go to (or return to) chemists to purchase the drugs. Providing chemists with educational material on abortion and abortifacient drugs that they can provide to customers at the time of drug sales, may also be useful and seen as an add-on value by chemists.

The study argues that given the low literacy level in these two states, materials that rely on pictorial messaging will be needed. Equally important will be materials that targets men who purchase drugs for women. NGOs are ideally placed to adapt existing national and international guidelines into contextual and culturally sensitive information. Schedule H regulations require chemists to maintain a record of sales and of the prescribing doctor. Numerous other Schedule H drugs, such as antibiotics, are all available over the counter to varying degrees, which suggests that the problem is not unique to mifepristone-misoprostol or, indeed, to abortion, but is a larger problem of regulation of drugs in general.

The study recommends that self-regulation among the pharmaceutical companies and better enforcement of drug regulations need to be encouraged for all drugs, not just abortifacients. The risks of using abortifacient drugs without medical oversight will remain a real one in a context where access to safe services remains limited, whether by the law as in Latin America and elsewhere or by poor implementation, as in most of Bihar and Jharkhand. The safeguards do not lie in clamping down on chemists as this will only reduce access to prescription sales. The solution lies in making it less likely that women will opt for unsupervised use by ensuring that medical abortion, and other types of abortion, are legally available at low cost through trained providers in services that are conveniently accessible. This means introducing the drugs into the public sector at primary health centre level as soon as possible, and over the longer term training a wider pool of providers, including mid-level providers.

#### **10.26 *Nutritional Status of SCs, Sunita Kumari, Classical Publishing Committee, New Delhi, 2005.***

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##### **Key Topics:** *Scheduled Castes and Nutrition*

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The book attempts to study the nutritional status and dietary behaviour of Scheduled Caste families in Samastipur district in Bihar. The main objectives of the book are to study the dietary behaviour of Scheduled Caste families, to assess the nutritional status of the diet of Scheduled Caste families, to analyse the socioeconomic and psychological factors associated with the nutritional status of Scheduled Castes with special reference to children and women, and to work out an alternative strategy for improving the nutritional status of Scheduled Castes in Bihar.

Samastipur district in Bihar was selected purposively to conduct the present investigation. At the second stage of sampling, two blocks, namely Pusa and Kalyanpur, were selected randomly from 14 blocks of Samastipur district. From each of the two blocks, two villages having a comparatively larger Scheduled Caste population were identified. Two hundred sample families were selected by simple random sampling technique in proportion to the number of Scheduled Caste families in each identified village.

Research findings of this study reveal that 90 per cent of women respondents had no formal education and they were not in a position to read and write. A majority of respondents had a medium size family. About three-fourth of families were engaged entirely as labourers. About 87.5 per cent of sample households belonged to the category of below poverty line.

The study reports that the each of the sample families consumed 66 kg of rice and 4.6 kg of pulses. They consumed 22 kg of roots and tubers every month. About 56 per cent of the food expenditure was on cereals and rest on other food groups. Hence, the Scheduled Caste families in the study do not have a balanced diet for maintenance of proper health.

About 38 per cent of families consumed tea, but most of them consumed red tea due to the unavailability of milk. About 20 per cent of sample families consumed inferior grains. Roots and tubers were consumed thrice daily by about 96 per cent of the families. The study found that 40 per cent of the families did not consume fruits at all. Meals were either breakfast, lunch, or a whole day meal depending on the nature of employment. Special food items were prepared for pregnant ladies, lactating mothers, and aged family members.

Anthropometric measurements showed that infants, children, adolescents, adult females, lactating mothers, and aged females were underweight. Severe malnutrition was high among 6-12 years female children. Moderate and mild malnutrition was prevalent among lactating mothers. High protein energy malnutrition and symptoms were observed among pre-school children. Mean haemoglobin levels were lower in all age groups of children and females. Higher prevalence of anaemia was observed among lactating mothers followed by pregnant ladies, adolescent girls, 6-12 years children, adult women, 1-6 years children and aged women. Vitamin C deficiency was prevalent among children and adults. Rickets was observed among children. Teeth caries and tuberculosis reported from the samples indicate the poor personal hygiene and sanitation.

The study finds that as far as the socioeconomic and psychological factors are concerned, the annual income of the family had positive influence, but the dependency ratio influenced the nutritional status adversely. Socio-psychological factors like the respondent's education and management orientation did not have any influence on Scheduled Caste households.

On the basis of its findings, the study proposes some strategies for improving the nutritional status of Scheduled Caste households. Crop diversification with fruits and vegetables, and diversification of farming system with dairying, fisheries, bee keeping are suggested to improve the physical access to nutritious food materials. Promotion of gender biased enterprises like pickle preparation, tailoring, knitting, masala making, toy making will improve the cash inflow to Scheduled Caste households, and will, in turn, improve the economic access to food materials. Facilitating strategies like improvement in female literacy, health, hygiene, food quality control, and awareness about food materials may be formulated for improving the nutritional status of scheduled Caste households. The study concludes that the socioeconomic environment is responsible for poor dietary behaviour, prevalent deficiency diseases and poor nutritional status of Scheduled Caste families in the study area.

**10.27 Problems of Population and Health in Bihar, J. P. Singh, *Journal of Social and Economic Studies*, Vol. No. 15 (1), Jan-June 2004.**

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**Key Topics:** *Population, Health and Development*

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This article draws attention to the current demographic scenario of Bihar characterised by low levels of; literacy, workforce participation rate, high infant and child mortality, low age at marriage, high fertility, etc. Present day Bihar is a result of poor development and bad governance. It is not BIMARU as conceived by many social scientists. It is backward not only in purely economic terms but it would be a misnomer to discount it backward in social terms as well. The article dwells on the concept of BIMARU to be used as a scientific tool to understand the issues afflicting Bihar.

The social hierarchy has slowly undergone a change. With the low castes gaining autonomy in exercising adult franchise, possession of land, and with substantial increase in income, they have upset the hegemony of the dominant castes. The state has one of the lowest crime rates. Yet, as the article notes, the media has tarnished the image of Bihar in terms of social development instead of addressing the issues of economic development, and that the state's bifurcation and the prevailing form of governance will adversely affect the state's economic development.

The article argues that Bihar is neither conservative nor backward on account of its socio-cultural traditions, but that westernisation has been slow in taking the state in its grip. This is attributed to geographical and administrative factors. The slow rate of economic development has also inhibited the momentum of social development. At the same time, there is a reflection of optimism that though the process of demographic transition has been late and slow, yet it will be the catalyst to usher in development.

The article outlines the socioeconomic and demographic profile of the state in an attempt to explain the present development scenario of the state. The various social and economic development indicators like per hectare in agriculture, industrial output, dependence of people on the secondary and tertiary sectors of the economy, level of employment, per capita income, level of literacy, degree of urbanisation and modernisation indicate that the state lags behind not only the national average but also other states as well. With 43 per cent people below the poverty line and lowest per capita income (Rs. 4,992), Bihar is a poor state. It not only has the lowest level of literacy rate (47.5 per cent) but female literacy too is the lowest (33.6 per cent). The health services in Bihar too have been performing

abysmally with lowest levels of child immunisation, contraception, and safe deliveries among all states. The article attributes the poor health status to a number of factors namely underdevelopment, bad governance, low investment in health and education, inefficient public health delivery system, low level of literacy, and structural inequalities in terms of class, caste, and sex.

According to the article, the demographic scenario too is bleak for Bihar on the development radar. Its population was 8.3 crore in 2001 and the annual growth rate has been 2.5 per cent. What makes the situation adverse is that the state's land base is not proportional to the population increase with a population density of 880 persons per sq km. The total fertility rate is also high in the state with a crude birth rate of 32 per thousand in 2000. The age at marriage has been quite low, particularly among the poorer sections of the society. The median age at first child birth is 19 years and women aged 15-19 account for 16 per cent of total fertility. Despite a significant decrease in the total fertility rate of Bihar, which was 6.5 in 1971, still it is 22 per cent higher than the national average. Contraceptive practice in the state is below the national average. Only 25 per cent married women in the state are using any method of contraception, female sterilisation is the most popular method with 19 per cent married women sterilised. The use of contraceptive methods does not exceed 10 per cent in any group (women classified by literacy level, caste, or standard of living). Modern temporary methods of birth control are used by merely 3 per cent of married women aged 15-49, very few women use modern spacing methods to delay first birth and increase intervals between pregnancies while just 1 per cent women in the age 15-19 and 5 per cent women in the age 20-24 use any modern contraceptive method. The article conjectures that contraceptive use can be expected to rise steadily with age and with number of living children, especially sons.

The article outlines the barriers to contraceptive use; the first and foremost being desire for sons for continuation of the family line and support in old age. If seen religion wise, Muslims although more literate than the Scheduled Castes, are less interested in family planning. Low female education too contributes to less contraceptive use. People's exposure to mass media, which plays an important role in educating people on family planning, is also quite low. Married women (25 per cent) have an unmet need for family planning which is higher in urban areas. There is optimism that if the current situation is improved then the fertility rate can drop down from 3.5 to 2.3 children per woman which can be brought about by improvement in quality of public services or through intervention of civil institutions.

The article draws attention to the health system in Bihar, which is in an abysmal state, and holds the state government responsible for it. Not only is the health infrastructure poor but the existing institutions are defunct as well with lack of transport facilities, delay in payment to the working staff, lack of residential facilities, inadequate funds for contingencies, declining work culture, and greater involvement of doctors and nurses in private practice. At all levels of health services, maintained by the government, is seen negligence on the part of doctors and inadequate facilities. These factors in their totality have contributed to a high rate of infant and child mortality as compared to the national average. Poor female education is an important factor contributing to high infant and child mortality is seen in the case of women belonging to the SCs, STs, and the Muslim community.

The article concludes that the government of Bihar needs to restructure its health care infrastructure if the population has to be brought under control. The infrastructure of health sub-centres needs to be made for controlling the birth rate and lowering infant mortality in the state. It is reiterated that it is the state government which owns responsibility for revitalising its health administration and family welfare programmes. Female education should also be promoted vigorously. Even NGOs or donor agencies can come forward and play a decisive role in family and health welfare sectors to ensure a faster pace of population stabilisation in Bihar.

**10.28 Amphotericin B Treatment for Indian Visceral Leishmaniasis: Conventional versus Lipid Formulations, Shyam Sundar, Himanshu Mehta, A.V. Suresh, P. Singh, Madhukar Rai, and Henry W. Murray, Clinical Infectious Diseases, Vol. 38 No.3, pp. 377-83, 2004.**

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**Key Topics:** *Visceral Leishmaniasis (Kala-azar)*

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This article draws attention to the protozoal infection, visceral leishmaniasis (VL), the occurrence of which is widely prevalent in Bihar. This infection caused by *Leishmania Donovanii* is hyperendemic and the pentavalent antimony

therapy in use for its cure has lost its effectiveness. Although amphotericin B deoxycholate is now first-line parenteral treatment, yet it too has drawbacks like adverse reactions, prolonged duration, etc. The three lipid formulations of amphotericin B (liposomal amphotericin B, amphotericin B lipid complex and amphotericin B cholesterol dispersion) have been successfully used and, despite being costly, they are clinically appealing as they have proved to be an antidote to the drawbacks of amphotericin B deoxycholate. The clinical gap between the effectiveness of amphotericin B deoxycholate versus lipid formulations has been attempted to be filled in by randomising Indian patients to treatment with the aforesaid line of cures.

A total of 184 patients showing symptoms of VL were screened, 31 elected not to participate or did not meet the criteria. So, 153 patients were enrolled and assigned to treatment. They were randomly divided in three groups; A, B, and C with 51 patients each. Group A was given 15 infusions of 1mg/kg of amphotericin B deoxycholate on alternate days after a 1-mg test dose, group B was given 5 infusions of 2mg/kg each of either liposomal amphotericin B on consecutive days and group C was provided amphotericin B lipid complex. When the treatment began, fever was present in all subjects except three in group A and one each in the other two groups. Duration of fever was shorter in both groups as compared with that of group A. In group A, 2 patients died on days 9 and 17 after receiving 4 and 9 doses of amphotericin B deoxycholate, respectively. One patient failed the treatment in group B. On the day of evaluation (day 19 in case of groups B and C and day 30 in group A), 150 of 153 patients were found to be afebrile, had parasite free splenic aspirate smears and, thus, fulfilled the criteria for apparent cure. The laboratory tests show that 21 patients experienced adverse reactions in group A—renal insufficiency, hypokalemia, and/or decreased haemoglobin level. Additional toxicity was observed in individual patients. Except for a minor increase in BUN level in group C; the creatinine and mean potassium levels in group B and C were unchanged and haemoglobin levels had increased. None of abnormal values like hypokalemia, decreased haemoglobin level and elevated creatinine level, as seen in some patients of group B, were observed in group C.

In the 6 month follow-up period, relapses occurred in 5 of the 150 apparently cured patients. The overall cure rates were 96 per cent for both group A and B; and 92 per cent for group C. Patients who experienced relapse and failed to respond to therapy were retreated with the alternate day amphotericin B deoxycholate. As far as treatment regimen costs are concerned, total per patient cost (hospitalisation plus drugs) for the treatment regimens used in groups A, B, and C can be calculated at \$ 417, \$ 872 and \$ 947, respectively, in a representative 25-kg patient.

The paper argues that although the number of patients enrolled was insufficient to show that the efficacies of amphotericin B deoxycholate, liposomal amphotericin B, and amphotericin B lipid complex were statistically equivalent, yet with satisfactory and comparable cure rates the highly efficient 5-day liposomal amphotericin B or amphotericin B lipid complex regimens are preferable from a clinical perspective to the 30-day course of conventional amphotericin B deoxycholate regimen. Patients show better tolerability to liposomal amphotericin B or amphotericin B lipid complex over amphotericin B deoxycholate, in terms of infusion associated inflammatory reactions. The 30-day hospitalisation cost is also reduced by 80 per cent in the 5-day treatment with liposomal amphotericin B or amphotericin B lipid complex.

The paper suggests that the short course regimen is particularly relevant in Bihar where VL is endemic and poverty is extreme. To take advantage of these regimens, overall cost (drug plus hospitalisation) must be brought into line with that estimated for amphotericin B deoxycholate. The paper suggests that to achieve this, a reduction (60 per cent) in the prices of amphotericin B and amphotericin B lipid complex is necessary on the part of their manufacturers. Such a move would be particularly welcome in Bihar where 40-50 per cent VL afflicted patients are very poor and short course regimens have proved to be highly effective. The article is optimistic in suggesting that if the current agreement (providing one 50-mg vial free for every 3 bought) of the manufacturer of liposomal amphotericin B would be altered to 3 vials free for every 2 purchased, the necessary price reductions can be achieved. If a similar agreement is reached for amphotericin B lipid complex, it would open the door to the use of 2 well tolerated, effective and efficient treatment regimens for Visceral Leishmaniasis.

**10.29 Arsenic Groundwater Contamination in Middle Ganga Plain, Bihar, India: A Future Danger?, Dipankar Chakraborti, Subhash C. Mukherjee, Shyampada Pati, Mrinal K. Sengupta, Mohammad M. Rahman, Uttam K. Chowdhury, Dilip Lodh, Chitta H. Chanda, Anil K. Chakraborti, and Gautam K. Basu, *Environmental Health Perspectives*, Vol. No. 11(9), pp. 1194–201, 2003.**

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**Key Topics:** *Arsenic Poisoning, Childhood Poisoning, Neurotoxicity and Reproductive Toxicity*

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The article describes the groundwater arsenic contamination and an initial evaluation of the prevalence of arsenic toxicity in Semria Ojha Patti village in the Middle Ganga Plain of Bihar. The area studied was the Semria Ojha Patti village of Ara, in the Bhojpur District of Bihar. The 550 subjects examined were self-selected volunteers, 390 adults and 160 children, 6–11 years of age, recruited by loudspeaker announcements at six central sites. All subjects consented, for themselves and their minor children, to medical evaluation and photography and provided samples of urine, hair, and nails. There was a low representation of women (who feared stigmatisation), children who attended school, and men who worked outside the village.

The key findings of the study have been summarised as follows. Groundwater arsenic contamination in Semria Ojha Patti village: The arsenic contamination of groundwater in Semria Ojha Patti village is comparable with that in the highly arsenic-contaminated villages of West Bengal and Bangladesh.

Iron concentrations in tube-well water samples (mean, 2,482 µg/L; minimum, 145 µg/L; maximum, 8,624 µg/L) were higher than previously reported (0–700 µg/L) for the Middle Ganga Plain. The correlation between concentrations of iron and arsenic in water is poor ( $r = 0.478$ ).

In this preliminary survey of 550 self selected volunteers from the total of 5,000 villagers, 60 individuals (10.9 per cent of the total and 6.3 per cent of children) with arsenical skin lesions were registered after clinical observation. Of the 51 urine samples analysed, 98 per cent had arsenic concentrations above the normal excretion level of arsenic in urine. Analysis of nail and hair samples showed that 57.6 per cent of hair samples and 76.3 per cent of nail samples had arsenic concentrations above the normal range. The Semria Ojha Patti village children have high concentrations of arsenic in their biologic samples. Arsenic neuropathy was clinically diagnosed in 21 (52.5 per cent) of the 40 cases examined. The prevalence of neuropathy in this sample was 21 of 40, or 52.5 per cent with males less affected (10 of 25; 40 per cent) than females (11 of 15; 73.3 per cent).

The study finds that those suffering from arsenical skin lesions ( $n = 60$ ) in Semria Ojha Patti village consumed drinking water with high concentrations of arsenic (mean, 475 µg/L; median, 431 µg/L; range, 202–1654 µg/L). The World Health Organization recommended maximum for arsenic in drinking water is 10 µg/L, and the Indian standard is 50 µg/L. The finding of skin lesions in 13 per cent of the adult group and a surprising 6.3 per cent of children supports severe exposure, beginning with the transition to tube wells.

The particularly high prevalence of neuropathy in women is consistent with their more continuous exposure, because many men work outside the home or village. As concluded in our other studies, the extent and severity of neuropathy increased with increased arsenic concentration in drinking water. Although relatively few children had overt neuropathy, they should be tested for neurobehavioral and cognitive effects.

The effects of arsenic on the developing brain and nervous system may begin *in utero*, perinatally, or later, and the severity is also dependent on other factors such as prematurity, intrauterine growth retardation, malnutrition, and infection.

When the West Bengal and Bangladesh governments, respectively, were first informed of the arsenic contamination, it was considered a sporadic, easily remedied matter. Few people realised the magnitude of the problem. Even international aid agencies working in the subcontinent did not consider that arsenic could be present in groundwater. The arsenic problem of West Bengal and Bangladesh intensified during a long period of neglect. The arsenic in Bihar may not be a localised contamination. The magnitude of the problem needs to be assessed.



**10.30 Using Plants for Health: Indigenous Knowledge in Health Care in a Tribal Region of Bihar, India, Sadhna Tripathi, Shashi Varma, and Patricia Goldey, *International Journal of Sustainable Development and World Ecology*, Vol. No. 7, pp. 321–32, 2000.**

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**Key Topics:** *Indigenous Knowledge and Healthcare, Medicinal Plants*

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The study was undertaken with the objectives of identifying, documenting, and determining the scientific validity of selected indigenous health related practices in Bihar. It was conducted in the tribal belt of the Andhaura block of Kaimur district. The two villages studied are 60 km away from the main town. They have no primary health centre, no means of education, nor good transport facilities. They are secluded from the mainstream of development and government support, and their livelihood is fully dependent on natural resources. The wealth of indigenous knowledge which the tribal people possess has neither been harnessed nor explored by anyone so far. Therefore, a modest attempt has been made in this study, through a sample of 100 tribal respondents practicing indigenous knowledge for health-related problems, who were interviewed in order to investigate the different indigenous health technologies prevalent in the area. The scientific relevance of their indigenous knowledge was authenticated or compared on the basis of reported therapeutic action and uses of plants from the available literature with a view to highlighting their medicinal potential.

According to the study, in the past, many major development projects in developing countries have failed dismally, often with serious ecological consequences because of disregard and insufficient understanding of indigenous technologies. In the past decade, a growing number of scientists and policy makers have started to analyse the consequences of their development efforts, giving due importance to the traditional wisdoms. New institutional ways of realising the creative ability of rural people are needed in order to achieve a synthesis of traditional and modern knowledge. The potential of indigenous health technologies is increasingly being recognised. The World Health Organisation (WHO), while declaring health for all by the year 2000, also emphasised the need for revitalisation and expansion of indigenous systems of medicine in order to meet the healthcare needs of world population.

The paper argues that in India, only about 30 per cent of the rural population enjoy primary healthcare from the modern medical health system. Except for scattered documentation by anthropologists and ethnobotanists, no systematic documentation has been made of Indian local health traditions. Rural households practice home remedies, possess knowledge of local foods and nutrition, and consult local experts – healers, bone-setters, specialists – for health problems. According to the Anthropological Survey of India, there are 4,639 ethnic communities in India, each with its own health culture. In this context, the present study highlights that the indigenous practices of tribal people of Bihar, for the treatment of different health related problems were found to be effective and most of these are also scientific medicines.

The study found that the *Babul* plant is widespread in tribal areas. There is adequate secondary literature supporting the use of *Babul* for the treatment of bleeding gums and sore throats, as astringent and effective as a cure for eczema and diarrhoea. In the case of bleeding gums and sore throats, it was found to be scientifically relevant. Similarly, the fruits and leaves of the *Bael* were found to be very effective in the treatment of various health problems. The study reports that it is widespread in the tribal areas. The use of fruit for controlling diarrhoea and dysentery, the full ripe fruit as a demulcent, a laxative, antiviral, and effective in relieving stomach ache is supported by many writers. Literature also proves that seeds are antifungal, anti-helminthic and antibacterial, and root bark is hypoglycaemic and spasmolytic. The study found that the whole plant, *Chinchari* commonly used by tribals is purgative, pungent, and a diuretic, and effective for dropsy, piles, boils, skin eruptions, colic, and hydrophobia. Among tribal people, *Bharbhar* has been used widely in many ways for the alleviation of health related problems. It is observed that the latex has protein dissolving constituents and is effective against warts and cold sores. The whole plant is a painkiller, useful for improving respiration and is an antiviral. They further add that the plant extract stimulates the heart, respiration, muscles, and relieves blood pressure. Infusion of seeds and the juice of the plant are a sedative and useful for the treatment of dropsy and jaundice. The flowers are effective for curing cough and chest problems and the seeds are a laxative, an emetic, an expectorant, and an antidote to snake poison. The paper also reports that the relevance of *Isrol* in the treatment of snake bite and fever has been supported by many writers. They also observed that the whole plant stimulates white blood cell activity, induces menstruation, and is both an abortifacient and contraceptive. It is effective in the healing of wounds, sores, ulcers, asthma, and bronchitis. The usefulness of *Atis* root for the treatment

of vomiting, stomach ache, and diarrhoea is in accordance with the findings from various studies. The whole plant is a febrifuge and a bitter tonic. The root is antipyretic, aphrodisiac, astringent, and tonic and it is also effective in treating hysteria, throat infections, diabetes, dyspepsia and coughs. The present study finds the use of catechu effective for the treatment of dysentery and for stopping bleeding from the gums. They also stated that catechu is astringent, reduces mucous in nose, bowel, and vagina, and is effective for eczema and diarrhoea. The utility of *neem* leaves in the treatment of bleeding wounds, snakebite, and as a demulcent, use of the bark as a tonic, an antipyretic, an astringent, an antiseptic and for curing weakness, wounds and cuts is being scientifically proved. The root and the young fruit are an antipyretic, and are alternative and effective for the treatment of boils and catarrh. The gum is a tonic and useful in treating scorpion stings. The berries are purgative, emollient and anti-helminthic.

However, the study reveals that the uses of plants for treating other health related problems as practised by the tribal people still need to be explored so that such uses can be popularised among those who are completely unaware or ignorant of them. This suggests a strong need for extension education and training for rural and urban people about the applications and methodologies of these effective health technologies, so that they too can make use of indigenous knowledge for health management.

In the concluding section, the paper adds that there is also an urgent need that indigenous knowledge should be preserved and integrated, or blended with scientific knowledge, either by the government or a nodal agency, to develop different alternative health management care strategies. The current rapid deforestation in the whole country may endanger medicinal plant species which need to be preserved for future use without disturbing the ecosystem.

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**SECTION 11**

**Education**

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## Overview

In recent years, there has been significant progress in the spread of (elementary) education in Bihar. However, middle and higher education as well as the quality of education remain major concerns. Studies in this section can be divided into two distinct categories. The first category engages with and captures disparities in educational attainment embedded in social structures such as caste, religion, and gender (Anurag, 2001; Pant, 2000). Studies in the second category are of the technocratic and policy genre and deal with issues such as poor educational infrastructure in the state and government programmes related to education.

Anurag (2001) finds that there is a substantial variation in the literacy rate of Scheduled Castes vis-à-vis that of non-Scheduled Castes for the period 1961-2001 in both rural and urban areas. Vijoy Prakash and Rajendra Kumar Srivastava (2009) argue that lower castes such as the Musahars have no stake in the educational system and stress on non-conventional system of learning, which they call creative learning.

There are 137.2 lakh Muslims in Bihar comprising 16.5 per cent of the state's population, and 8.8 per cent of the total Muslim population in India. As in other parts of the country, Muslims in Bihar constitute one of the most educationally disadvantaged communities in the state. In a comparative study of Patna and Purnia districts, Mohd Sanjeer Alam and S. Raju (2007) find that literacy rates and levels of disparity among various segments of the population are inversely related, i.e., the lower the overall level of literacy, the higher the disparity among different segments of the population. For example, in Purnia where overall literacy was lower, Muslims were far behind the Hindus in terms of literacy, and the accompanying sex disparities in education were also higher in Purnia (almost double amongst the Muslims as compared to the Hindus). In Patna however, the Muslims had a slight edge over Hindus in terms of overall and male-female literacy. While this issue has been discussed to some extent (ADRI, 2004; Alam and Raju, 2007), there needs to be a much richer analysis of the issue in the state as well as nationally.

Another issue of concern is the rampant gender discrimination in the state; there are only 70 girls per 100 boys in grades 1-5 which diminishes even further to 58 girls per 100 boys in grades 6-8. Only 13.1 per cent of the girls who enrol in grade I actually continue till grade VIII. This is partly because of a lack of upper primary schools where girls can attend. Ironically, male absenteeism is actually higher in schools as male children are expected to contribute to farm activities which prevent boys from attending classes, especially in the harvest season. While, 50 per cent of teacher positions in Bihar are reserved for women, in 2002, the percentage of female teachers in primary schools was 22 per cent, when the all-India figure was 66 per cent (Tsujita, 2009).

It also emerges that developing school infrastructure is a major challenge. Pant (2000) highlights forced closure of schools in hilly areas and fear of high influential castes, among other reasons, for dropping out. Other reasons include lack of girls' toilets and kitchen sheds. The percentage of schools (primary to secondary) having electricity and furniture for all students is only 3.6 per cent and 7.7 per cent, respectively. An IDE-ADRI survey found that only 13 out of 80 schools have classrooms for every grade (Tsujita, 2009). While the majority of students attend government schools, in recent times there has been an increase in private schools (Tsujita, 2009).

However, recent data shows that the education infrastructure story in Bihar is not entirely bleak. More than 90 per cent schools had drinking water facility in 2006-07 as compared to 87.7 per cent in 2005-06. Like drinking water facility, more schools now have common toilets and separate toilets for girls. About 47 per cent schools had common toilets in schools in 2006-07, compared to 35 per cent schools in 2005-06; and 16 per cent schools in 2006-07 had separate toilets for girls are compared to only 12 per cent in 2004-05 (Kaushal and Patra, 2009).

World Bank (2005), points out that low completion rates are a result of low enrolment rates, late entry into schools, and high dropout rates. The 'transition' through the school system is very weak in the state. For example, in 2000-01 24 per cent of primary school students transited to upper primary level, 12 per cent from upper primary to secondary level, and only 10 per cent from secondary to higher secondary levels. As mentioned earlier, transition rates are even lower for girls and SCs/STs. Parents are reluctant to send their children to government schools because of poor quality of infrastructure facilities and lack of basic amenities. Interestingly, Pant (2000) also finds that a lack of female teacher discourages parents from sending their daughters to school. This leads to an increase in the

number of girls dropping out of school or not attending school at all. This reveals that while economic factors are important determinants of access to education, social barriers can often play a more decisive role in determining educational opportunities in the state. Additionally, as Sudhanshu Bhushan (2008) points out, improved financial management must be supplemented with increased involvement by parents and guardians to improve secondary education outcomes. Similarly, Nandita Kumari (2008) also recommends a partnership between governments, communities, donors, businessmen, and NGOs as a solution to improving gender equality in schools.

Other themes addressed in this section include the proposed common school system in Bihar (Dubey 2007); the potential of entertainment-education to facilitate social change (Singhal et al., 2006); and the link between women's education and maternal health (Chawla 2007). Manohar Lal (2004) highlights the critical issue of child labour in Bihar and points out that there are 1.73 lakh children (42.63 per cent in agricultural sector, 37.94 per cent in *bidi* making) who work as child labourers in Bihar. JP Singh (2001) examines issues around low enrolment, high dropout rates, poor teacher–student ratio, and habitation in Bihar and Jharkhand.

### 11.1 *Elementary Education in Bihar: Some Reflections on DISE Data*, Savita Kaushal and Sudhanshu Patra, National University of Education and Planning, New Delhi, 2009.

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#### **Key Topics:** *Elementary Education*

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The study makes an analysis of elementary education in Bihar using the District Information System for Education (DISE), (2006-07), collated and published by the National University of Educational Planning and Administration (NUEPA). Using this data, it makes a comparative study of Bihar and Kerala. It points out that the development of a useful informational system is critical for the proper monitoring and implementation of any programme. Some of the major plans to achieve universal elementary education include Non-Formal Education, Operation Black Board, Bihar Education Project, Uttar Pradesh Basic Education Project, Lok Jumbish, Shiksha Karmi Project, Janshala, Mahila Samakhya, District Primary Education Programme, and the Sarva Siksha Programme (SSA), which is still being implemented across India. The SSA, which was launched in 2001, particularly emphasises on an Educational Management Information System Under SSA, DISE is now operational in more than 609 districts across 35 states and union territories in India. It covers elementary schools at present. It collects and computerises detailed data on school location, management, teachers, school buildings and equipment, environment by gender and age, incentives and the number of disable children in various grades. Districts/States can add additional variables if required.

A school level data capture format was developed by NUEPA for collection of school level data base from all the states of India. It consists of 8 parts seeking to collect information regarding school particulars, enrolment, repeaters and readmission, extra facilities, examination results, and feedback of investigators.

The study finds that close to 94.8 per cent schools in Bihar are located in rural areas. A majority of the schools (94.28 per cent) are independent primary schools. With regard to infrastructure, more than 90 per cent schools had drinking water facility in 2006–07 as compared to 87.7 per cent in 2005–06. Like drinking water facility, more schools now have common toilets and separate toilets for girls. About 47 per cent schools had common toilets in schools in 2006–07, compared to 35 per cent schools in 2005–06, and 16 per cent schools in 2006–07 had separate toilets for girls as compared to only 12 per cent in 2004–05.

Data reveals that only about 8 per cent of schools managed by the government and aided schools have kitchen sheds in the school. During the year 2005–06, about 83 per cent schools received school development grants and out of them about 82 per cent utilised these grants. The Gender Parity Index and percentage of girls' enrolment in primary and upper primary classes reveal that there is consistent improvement, both in GPI and girls' share in enrolment.

Given the improvement in the number of schools, facilities in schools, and enrolment, the dropout rate for cohort 2005–06 indicates an average dropout rate of 8.61 per cent in primary grades against 9.96 per cent during the previous cohort (for all-India). However, Bihar, with a dropout rate of 9.34 per cent, seems to be far away from the goal of universal retention at the primary level. An Educational Development Index was created based on DISE data and it showed that Bihar ranked at 35 in case of composite primary and upper primary levels of education with an EDI as low as 0.321, which is much lower than the national average.

A comparison of Bihar and Kerala reveals several stark differences between the two states regarding educational achievement. Around 18.9 per cent students repeat class I in a particular year, in contrast to 0.5 per cent students in Kerala. A comparison of dropout rates reveals that in class I, 3.8 per cent students leave the school system in Bihar in contrast to zero in Kerala. There are, on an average, 6 class rooms in a primary school and 10 classrooms per upper primary school in Kerala, in contrast to an average of 2 classrooms in primary and 4 classrooms per upper primary school in Bihar. Eleven per cent primary schools are single classroom schools in Bihar, in contrast to 0.8 per cent schools in Kerala. Eighty three per cent of primary and 80 per cent upper primary schools in Kerala have common toilet facilities, whereas in Bihar, only 38 per cent primary and 66 per cent upper primary schools have the same. The average pupil-teacher ratio at the primary level is 26 students per teacher in Kerala, whereas, the figure is 62, in Bihar which is much higher than the national prescription of 40:1 student-teacher ratio. An important objective of the SSA is to improve the quality of learning in schools. While in Kerala 55 per cent boys and 58 per cent girls score above 60 per cent, in Bihar only 37 per cent of boys and girls score above 60 per cent. The study concludes that in order to improve learning outcomes in schools, much more needs to be done in terms of infrastructure, teacher training, and monitoring and evaluation of education outcomes in the state.

**11.2 Educational Rights of the Deprived: A Creative Experiment [Abhivanchi to Ka Shikshadhikar – Ek Sreejamvadi 'Proyog], Vijoy Prakash and Shailendra Kumar Srivastava, Rajkamal Prakashan, New Delhi, 2009.**

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**Key Topics:** *Educational Rights, Alternative Education*

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This book is about the educational status of people in a *panchayat* which is primarily inhabited by the lower castes, especially the Musahars – the lowest of the low. It is based on the study of a *panchayat*, Jasmmaut *Panchayat*, in Danapur sub-division of Patna district, located in the Western outskirts of Patna.

The book starts with a very clear theoretical understanding that the present educational system caters to the needs of only the higher and upper middle class, and the people belonging to the lower and lower middle class have no stake in this system. Instead, this system of education compulsively places the poor people at the receiving end of colonisation or what is often called internal colonisation, an extension of the colonial legacy. The book believes in a new system of learning which is called creative learning and it is argued that this system alone can improve the deprived sections of the society to be a part of the pedagogic process, which is otherwise coercive and marginalising.

The study finds that the population of the *panchayat* is 11,142, with a total of 2,015 households out of which 119 are female-headed households and 1,896 are male-headed households. The OBCs constitute about 54 per cent of the population and the number of upper castes in this *panchayat* is nil.

The study constructs an Individual Education Index in which the ideal score from the point of view of educational rights is 1. The study finds that no community in this *panchayat* has achieved this index. The highest is that of the Pasi caste which is 0.67, and, obviously, the *Musahar* caste is at the lowest with a score of 0.4. The score for Muslims is 0.59. The study finds that the percentage of the dropouts among the different communities is high, 38.6 per cent for *Musahars*, 25.94 per cent for Muslims, 25 per cent for Mallahs, 24.8 per cent for *Chamars*, 24.1 per cent for Badhais, 23.46 per cent for Yadavs, 64.71 per cent for Bindis, and 19.59 per cent for Nais. The study reveals that first generation learners among the Musahars are 79.42 per cent, but this figure among the Bind is as high as 83.33 per cent. Hence, the Bind caste does not appear better than the *Musahars*. Even among *Yadavs*, the percentage of first generation learners is as high as 61.52 per cent.

The book argues that the condition of the Economically Backward Castes (EBC) of this *panchayat* seems rather worse and not any better than the *Musahars*, who are generally placed at the bottom. The percentage of Higher Secondary, Graduate, and Post Graduates among the *Musahar* caste is 1.53, 0.38, and 0.38, respectively, but the percentage of the aforementioned three EBC Castes (*Bind*, *Mallah*, and *Nonia*) is zero. The study finds that in the entire *panchayat*, out of 1000 literate *Dalits*, only 6 have post graduate or technical degree, only 12 have reached up to graduation level, only 38 could touch the Higher Secondary level, and only 117 have attained secondary education. Out of 1000 admissions in nursery level, 71 fail to remain up to even class I, 426 leave the school before passing class III, only 170 stay up to Vth class, and 117 reach up to matriculation level. Overall, the condition of the *Musahars* and scavengers is extremely and precariously bad.

The book argues that the concept of dropouts does not present the real picture of the educational scenario. The pupils do not simply go to the schools and the people do not find any reason to send their children to school. Most strikingly, the reason attributed for this abstention is a feeling that there is hardly any teaching in the government schools. Besides, the hidden costs of education like donations at different occasions, notebooks, need for proper dress materials particularly for girls, etc., also deter them from sending their wards to the school. The parents argue that if, even after passing intermediate, one does not get any job, what is the use of sending children to school? The study finds that some parents feel that day to day living costs of educated children is higher and unaffordable. Some parents also find involving children in production activities rather than sending them to school more profitable. Thus, the findings of the book stop very close to subscribing to the philosophy of *Charwaha* schools, once popularised by Laloo Prasad Yadav. The book finds solution to the present malaise of the system in what it presents as an alternative system of learning called creative learning.



### 11.3 An Overview of Inequality in Primary Education in Bihar, Yuko Tsujita, *Mimeo, Institute of Developing Economies, 2009.*

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**Key Topics:** *Primary Education, Inequality*

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The study provides an overview of the educational achievements and challenges in Bihar. It looks at Bihar in particular, because focusing on one educationally backward state will deepen the insight into educational opportunities and constraints in specific socioeconomic contexts. Secondly, the progress of education in Bihar would play an important role in the economic development of the state. The study begins with providing a statistical overview of inequality in educational access in the state. The next section outlines the key current strategies to redress inequality. Next, it discusses education finance and educational equity, and concludes by highlighting the major findings.

The study finds that there is still a gap in attendance between Bihar and the rest of India, on an average, regardless of area and gender. While attendance disparity has improved in rural areas, it has deteriorated in urban areas, particularly among boys aged 6–10. Muslims, comprising 16.5 per cent of the population, are less likely to send their children to school. The Gross Enrolment Ratio in primary schools in 2006 was 75 per cent for the general castes, 72.2 per cent for Scheduled Castes, and 51.3 per cent for Muslims. There is rampant gender discrimination in the state. While the male literacy rate in the 2001 Census was 59.7 per cent, the female literacy rate was almost half that at 31.1 per cent. There are only 70 girls per 100 boys in Grades 1–5 which diminished even further to 58 girls per 100 boys in Grades 6–8. Only 13.1 per cent of the girls who enroll in grade I actually continue till grade VIII. This is partly because of a lack of upper primary schools where girls can attend. Ironically, male absenteeism is actually higher in schools as male children are expected to contribute to farm activities, which prevent boys from attending classes, especially in harvest season. Additionally, repetition rates are 7.2 per cent points higher in Bihar than in India. The drop out ratios among general castes, Scheduled Castes and Scheduled Tribe students are also much higher than those for each corresponding category of caste students in India as a whole. In terms of infrastructure, Bihar is much less equipped, particularly girls, toilets and kitchen sheds. The percentage of schools (primary to secondary) having electricity and furniture for all students is only 3.6 per cent and 7.7 per cent, respectively. An IDE–ADRI survey in five districts namely Bhagalpur, East Champaran, Kishanganj, Madhubani, and Rohtas in 2008–09 found that only 13 out of 80 government schools have classrooms for every grade, and 6 new schools have no building. The pupil teacher ratio is 54 and 59 in primary and upper primary schools, respectively, while the same ratio is 39 and 31 nationally. In Bihar, 50 per cent of teacher positions are reserved for females. In 2002, the percentage of female teachers in primary schools was 22 per cent, when the all-India figure was 66 per cent. While the majority of students attend government schools, in recent times there has been an increase in private schools.

Next, the study outlines two major programmes of the government to improve educational equity in the state – the SSA and the Mid-Day Meal Scheme (MDMS), both of which are centrally sponsored schemes. The SSA is being implemented by the Bihar Education Project Council, which is a state government agency. The MDMS was launched in 2005 in Bihar. At the school level, the Vidyalaya Shiksha Samiti (VSS), the parent body, is basically responsible for implementing the MDMS. The VSS appoints cooks, procures ingredients, etc. Major reasons why schools are unable to provide meals regularly include funds not being released on time, delayed arrival of grains and poor quality of grains.

In the next section, the study examines public finance in education and points out that in 2007–08, per capita development expenditure in other states was Rs 4,207, while in Bihar it was Rs 2,184 only. Average per capita education expenditure in 1998–99 to 2000–01 was Rs 311.10 in Bihar, which is much less than in other states. For example, in Maharashtra it is Rs 730.90. Fiscal constraints seem to have negatively affected education expenditure as the proportion of expenditure on primary education to Net State Domestic Product has declined from 5.9 per cent in 1999–2000 to 3.7 per cent in 2005–06. The state is also increasingly relying on Centrally Sponsored Schemes and has taken a low cost strategy for expansion of education facilities by recruiting para teachers and setting up non formal education centres. There is wide disparity in economic and social indicators across districts in the state. For example, while the per capita annual income is Rs 31,441 in Patna district, it is as low as Rs 3,636 in Sheohar district. Again, while literacy rates were 73.3 per cent and 50.8 per cent for men and women in Patna district, they were only 52.7 per cent and 18.6 per cent in Kishanganj district. However, the allocation on public expenditure on primary education is heavily concentrated in Patna district. Per capita primary education expenditures in Patna district were

7 and 9 times more than those of the entire state in the last two years. Worse still, an IDE-ADRI survey found that school development fund, grant for teachers, and scholarship for students do not reach sufficiently and timely to schools and *gram panchayats*.

Next the study highlights some major issues in equity in education and points out that since government policy and programmes are oriented towards access to education, little attention has been paid to the quality of the education. The Government of Bihar has stopped recruiting permanent teachers since 1999 and, as in many other states in India, low cost education strategy was adopted in the 2000s by recruiting para teachers. Two-thirds of the teachers in five districts in an IDE-ADRI survey were para teachers. No regular teacher is posted in new government schools established after 2006.

The study concludes that education can be an important method for overcoming multi-dimensional deprivation. Education inequality in schools can lead to inequality in employment opportunities as well and in the long run and contributes to furthering the socio-economic discrimination in the state.

**11.4 Bihar: Grants-in-Aid Policies and Practices in Secondary Education, Sudhanshu Bhushan, in J. B. G. Tilak (ed.) *Financing of Secondary Education in India Grants in Aid Policies and Practices in States*, Shipra Publication, Delhi, pp. 280-98, 2008.**

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**Key Topics:** *Grants-in-Aid Policies, Government Schools*

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This chapter examines the problem of Grants-in-Aid to Secondary schools in Bihar. The study notes that the system of Grants-in-Aid to Secondary schools in Bihar was predominant till 1980. Afterwards, with the takeover of the management of aided secondary schools, the sole responsibility of financing these institutions rests with the state government. Only a few minority secondary schools are now government aided.

According to the study, before 1980 the responsibility of the state government was limited to managing and financing 64 Government Boys' Schools and 28 Government Girls' School. The rest of the schools were being managed by the public. The Managing Committees of the schools were responsible for the recruitment of teachers, payment of their salaries, and regulation of the service condition of teachers. Through the system of Grants-in-aid, the government bore the major responsibility of running the Secondary Schools in the state. After the takeover of community managed schools in 1980, the present Bihar has 2,533 Government Boys' School, 42 Government Girls' School, 74 Aided Minority Schools, and 54 Autonomous Schools. As a result, the budgetary provision under Secondary Education has increased from around Rs 21 crore in 1979 to Rs692 crore in 2000. Grants-in-aid to minority secondary schools stand at around Rs. 16 crore, but the payment has been quite irregular.

The study finds that at present the secondary education in the state is passing through a difficult phase. There is the problem of an acute shortage of teachers in the government secondary schools. Out of around 34,000 sanctioned posts of teachers, roughly 10,000 posts of teachers are vacant. Around 1,500 posts of Head teachers are vacant. Many rural and mofussil schools have one or two teachers and they are on the verge of closure. Shortage of teachers along with the deputation of teachers to non-academic activities is seriously hampering the teaching activities in school. Another problem of secondary schools is the excessive bureaucratisation and politicisation. In the Managing Committees of government schools and nationalised schools, there is heavy representation of top bureaucrats and politicians who have little time for promoting the interests of quality education. There is another problem of 250 Project Girls' schools which were nationalised during the Sixth Plan period, but either enough teachers are not posted or their services are not regularised resulting in the non-payment of salaries to the teachers. On the issue of quality education most of the Government Teachers' Training Institutions are closed. The recruitment of teachers has been stopped for the last ten years.

According to the study, at present, the state government is passing through a serious fiscal problem. Vacancies in various government departments, in general, and in education departments, in particular, are rising, so much so that many institutions are on the verge of closure. Hence, to talk of expansion of Secondary schools in Bihar within the framework of public ownership also sounds absurd. Already, the Constitutional commitment of providing universal elementary education in Bihar has put a heavy demand on the public exchequer. Given the above scenario, the study on Grants-in-Aid is not only of historical interest. Rather, the government, from its previous experience, may like to

use the system of Grants-in-Aid in a newer form, shifting partial responsibility of managing the finances on to the *panchayats* and the communities.

The study argues that, from purely a perspective of managing the finance of secondary schools in Bihar, there is, at present, the problem of reviving the old glory of government schools and managing the nationalised schools in a professionally competent manner. Along with quality there is the problem of quantitative expansion, since at the secondary and post-secondary stage, out of a total estimated population of 70 lakh in the age group 15-19 years, the estimated enrolment is only 11 lakhs. Private secondary schools in urban areas are also growing at a rapid pace. These schools, however, charge high fees which only the privileged sections of the society can afford to pay.

The study traces the historical background of the development of secondary schools in Bihar. The development of Secondary education in Bihar till 1980 was based on the system of grants-in-aid. The system of fixed grant, based on needs such as salary of teacher's infrastructure, etc., was dominant in Bihar. Efficiency grant or grants for improving the quality of education was overshadowed mainly to cover the ground for quantitative expansion. The government was committed to raise the salary of teachers under the pretext of quality, but this was to meet the demand of teachers' union to free them from the overall supervision of Managing Committees. The Secondary schools were nationalised in 1980, putting an end to the system of grants-in-aid. But this also meant that community's interest in these schools was over. The government supervision was not only poor but that it gave rise to patron-client relation between the administrator and the teacher responsible for many aberrations in the system. The transfers, postings, and service conditions of teachers were the matters on which disputes arose and court cases consumed most of the time of teachers and administrators. It also points out that social conflicts and deteriorating law and order in the state have also begun to show their ugly heads within schools. The result of these developments was that the government schools, after nationalisation, were badly managed and the dropout rate of students was quite high. The study shows that even though the government was increasing its financial commitment at the secondary level of education, much of the resources were being wasted due to mis-management.

Thus, the study recommends that financial resources must be put to the best possible use by evolving the right kind of management. In fact, increasingly, the government should involve the guardians and teachers in the managing committees of schools.

### **11.5 Gender Related Education Development Index of Bihar (1981-2001): A Spatial-Temporal Appraisal, Nandita Kumari, PhD Thesis, Faculty of Social Sciences, Department of Geography, Patna University, 2008.**

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#### **Key Topics: Education Development Index**

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The present study analyses the discordance between male and female literacy rates in Bihar. The main objective of this paper is to examine the spatial distribution pattern of Gender Related Education Development Index (GEDI) in Bihar for the period 1981-2001, temporal changes in GEDI between 1981 and 2001, and causative factors of spatial patterns of the GEDI value in Bihar.

The first phase of the study involved a conceptual building phase, that is, carrying out a survey of available literature pertaining to the topic. The second phase was that of methodological development. GEDI calculation was based on the harmonic mean of female and male achievements. For computation of GEDI, female population share, female literacy rate, male population share, and male literacy rate have been used.

Analysis of GEDI of Bihar for 1981, 1991 and 2001 shows that GEDI values have been increasing over the years. It indicates declining gender disparities in literacy and education over the years in the state.

Increase in the level of urbanisation, higher availability of facilities for education, and chances of getting jobs with better salaries would be the result of a better education scenario in the state. Introduction of various government policies encouraging education, especially, girls' education in the recent years, is positively correlated with lower child mortality, increased family planning, and better educated families. It has lessened the gap between male and female literacy rates and so GEDI values have shown an increasing trend for the period under study.

The study points out vast spatial inequalities in GEDI values in the state. Those residing in the north and north-eastern districts have comparatively higher GEDI values. The urban areas have high GEDI values as compared to rural areas. The districts located in flood affected areas have high levels of poverty and, hence, low GEDI values. The districts located in the western and south-western parts of the state, where the amount of rainfall received is quite low and free from annual floods, exhibit better GEDI values. The intervention of the government has failed to yield any positive results in the eastern districts.

The study explains that parental indifference towards girls' education, male priority over girls' education, security concerns and distance from school, besides poverty are the main reasons for poor GEDI values.

Therefore, the study recommends that partnership between governments, communities, donors, businessmen, and NGOs appear as a solution in getting more girls to schools. Literacy has to be perceived as a means for empowering women in the wider struggle against inequality and injustice in the society.

### **11.6 Contextualising Inter-, Intra-Religious and Gendered Literacy and Educational Disparities in Rural Bihar, Mohd Sanjeer Alam and S. Raju, *Economic and Political Weekly*, Vol. No. 42(18), pp. 1613–22, 2007.**

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#### **Key Topics:** *Muslim Literacy, Gender and Literacy*

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This paper seeks to place Muslim literacy and education as relational, and its locatedness in a larger spatial context in order to propose that there can be no one unilinear process in conceptualising religious differences in matters of literacy and education, which might be produced variously through individuals and the larger structures of which individuals are a part.

This study derives from a doctoral work and is based on the survey of 300 households, in the summer of 2002, in two blocks in the districts of Patna and Purnia in Bihar. The paper provides a detailed account of the educational profiles of the religious groups, mainly Hindus and Muslims, drawn from the field survey in rural Bihar. Next, it makes a comparison between two differing localities in order to spatially contextualise literacy and educational disparities between the two religious groups. Finally an attempt is made towards developing an explanatory framework so that some of the processes contributing to emerging disparities can be understood.

What is being suggested is that instead of essentialising the so-called 'homogeneity' of 'Muslim characteristics', more pertinent questions to be asked are: who are these Muslims? Where are they located? Who are the referent communities and how do they compare with these referent communities? Within this overall conceptual framework, however, gendered disparities need further probing, as girls/women – Muslim or otherwise – carry an additional burden of subordination even as they do not occupy monolithic spaces within this class and caste like hierarchies, introducing further complexities.

In keeping with observations in the paper, literacy rates differ in terms of religious affiliation, skewing in favour of Hindus and, in terms of gender, in favour of males. It can be seen that overall literacy rates are higher in villages in Patna than those of Purnia and so are the reduced gender disparities. Significantly, female literacy – a stock variable – is quite high in Patna as compared to Purnia, suggesting that the literacy attainments in Patna were somehow better distributed across various age cohorts over the years. Significantly, in Purnia, where overall literacy was lower, Muslims were far behind the Hindus and the accompanying sex disparities were also higher in Purnia, which were almost double amongst the Muslims as compared to the Hindus. In Patna, however, the Muslims had a slight edge over Hindus in terms of overall and male-female literacy. Part of the explanation for the divergence lies in the relatively higher proportion of Muslim workers in services in Patna compared to their Hindu counterparts. Thus, there were clear indications that the lower the overall level of literacy rates, higher was the disparity among different segments of the population, in general, and sex based disparity, in particular.

A closer look at inter-religious comparison reveals that in general the Hindus have a higher enrolment rate in every age group compared to the Muslims. However, the enrolment rate varied in the districts under study. In Purnia, as expected, the enrolment rate was much lower than in Patna, where less than half the children in the age group 7-18 were on rolls. In Patna the enrolment rates were comparatively much higher.

Although limited in its coverage, the analysis supports the contention that membership of any religious group does not necessarily imply its backwardness, partly because locational specificities do impact one group's behaviour vis-à-vis the other. In this case, Muslims followed the referent Hindu group – the demonstration effect – and also because in a more developed environment, the access to education is enhanced for all to take advantage of. Literacy, a social parameter acts both ways – as an input and output variable – in comprehending developmental outcome, which makes the task of positioning explanatory components in the literacy outcome somewhat difficult. This dual relation can only be explained partially and yet certain predictor variables can be picked up from existing literature. For example, apart from the demographic and social characteristics such as age and sex, economic attributes like the occupation of the head of the household and standard of living are crucial for suffusing aspirations and in allowing access to educational opportunities.

### **11.7 Women's Education, Health and Fertility: Examining Three States in India: Bihar, Rajasthan and Tamil Nadu, Bhawna Chawla, International Comparative Education School of Education Stanford University, 2007.**

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**Key Topics:** *Women's Education, Health and Education*

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Women's access to education is increasingly being recognised as a fundamental right by international and national bodies. Enhancing this access is an important goal for most developing nations. Many studies have well proved the significant benefit of educational attainment on the health status on women. Better educated women experience lower levels of morbidity, mortality, and disability, and have fewer children. However, there is mixed evidence on whether the linkage is direct or impacted by intervening pathways. One body of evidence suggests that the relationship is causal while the other argues that education is merely a proxy for the socioeconomic status of the household.

Understanding this linkage is, therefore, important for policy makers and programme planners, as it would demonstrate the potential role of women's education in improving maternal health and reducing fertility. Another important aspect of the health-education link is whether this linkage is uniform during various stages of a country's development. Regions differ, not only in terms of their culture but also socioeconomic development. Women in states like Kerala, Tamil Nadu, and Andhra Pradesh enjoy higher education status and autonomy. On the other hand, northern states are commonly known to be more conservative and women are generally less educated and less likely to work outside their homes. In this context, the present research examines how women's education is associated with different aspects of health and fertility. The study attempts to analyse the association between women's education with fertility, and fertility-related behaviour and health outcomes. It also tries to unveil whether the relationship is direct or whether there are any intervening variables. Finally, the study examines whether the association varies across regions.

The study focuses on three states in India namely, Bihar, Rajasthan and Tamil Nadu. While Bihar and Rajasthan are two of the poorest performers in India in terms of gender equality, Tamil Nadu captures the other end of the spectrum with the state making significant strides in women's education and health. The second round of National Family Health Survey (NFHS, 1998-1999) is used for analysis. The dependent variables are broadly classified into two categories, that is, fertility and health variables. Fertility outcomes include number of births, age of woman at the time of first birth, and usage of family planning methods.

General health is defined as whether the woman suffered from malnutrition/anaemia or other diseases like asthma, tuberculosis, malaria, jaundice etc. The primary independent variable for the study is women's level of education. While analysing the relationship of health and fertility with women's education, the study focuses on the effect of formal schooling rather than non-formal education. Control variables in the study are SES, husband's education (continuous variable employment status, place of residence, religion, caste and age). Logistic and Ordinary Least Square (OLS) regressions are used to analyse the relationship between health outcomes and education.

The univariate regression results of the study show that women's education is strongly linked with their fertility and health indices. In the underdeveloped states of Bihar and Rajasthan as well as the developed state of Tamil Nadu, educated women are more likely to use contraception, have fewer children, and delay their first childbirth. Women with better education are less likely to suffer from morbid diseases (tuberculosis, jaundice, malaria, asthma)

or malnourishment. The findings are consistent with existing assumptions on health, education, and fertility that education is correlated positively with women's health status and negatively with fertility levels.

While looking into the pathways through which the relationship operates, the study found that both fertility and health are impacted by husband's level of education, poverty, religion, and a woman's independence within the family to make her own decisions. In the states of Bihar and Rajasthan, women's education is significantly associated with lower fertility, higher contraceptive usage, and delays in childbirth. The effect is upheld after allowing for other factors such as husband's education, poverty, urbanisation, caste, religion, and employment status. This continued significance of women's education for Bihar and Rajasthan challenges previous research, which finds that low fertility and education are jointly driven by some common third factor such as socioeconomic status.

In the case of Tamil Nadu, the study found that education is not associated with contraceptive usage, indicating that non-educated women in Tamil Nadu are using contraception as much as the educated women when we take into account SES and background. Since the overall use of contraception in Tamil Nadu is much higher than Bihar and Rajasthan, the environment of contraceptive usage in the state may impact women's behaviour. Mass media exposure also plays a positive role in contraceptive usage, and the population in Tamil Nadu has better access to mass media due to the generally higher development in the state. Communication among women and diffusion of knowledge about family planning methods may play a part in enhancing contraceptive coverage among the uneducated female population in Tamil Nadu.

However, the study reveals that higher contraceptive usage among the uneducated in Tamil Nadu has not resulted in lower fertility or delays in childbirth. The uneducated women in Tamil Nadu continue to have more children and have them at an earlier age as compared to the educated women. The study suggests that if enhanced contraceptive usage among the uneducated is not resulting in lower birth rates, it is important that policies are directed to spread better awareness on more effective use of these family planning techniques.

Regional variations are also found in the education-disease incidence association. For Bihar and Rajasthan, multivariate analysis shows that disease incidence is negatively associated with women's education. This association disappears in the case of Tamil Nadu. For both Bihar and Rajasthan, other extraneous variables also impact disease prevalence among women. In Bihar and Rajasthan, where women have limited physical and social access to healthcare, education potentially helps these women gain tools and knowledge necessary to overcome these obstacles to reduce the prevalence of morbid diseases. Diseases like tuberculosis, jaundice, malaria, and asthma are impacted by the health behaviour of the individual and the family. Prevalence of such diseases can be drastically reduced if cleanliness and infection avoidance practices are adopted. Education can also be a marker for such healthy practices.

On the other hand, in Tamil Nadu, education is not a significant predictor of disease prevalence. Disease prevalence among women in Tamil Nadu is less than 3 percent, a level much lower than that of both Bihar and Rajasthan. The uneducated women imbibe community norms of healthy behaviour as much as the educated women. Another factor responsible for this link could be the effective public healthcare system and promotion of health education in the state. The state government in Tamil Nadu has been a pioneer in the promotion of healthcare messages along with the micro credit programmes in the state. The public sector has a dominant presence in healthcare within the state and the nongovernment sector has also been a frontrunner in interventions for tuberculosis and malaria. Bihar and Rajasthan are more dependent on private sector providers which are not adequately regulated, leading to sub-standard services. The study states that the more effective public health care system in Tamil Nadu plays a role in the low disease prevalence among the less- educated women in Tamil Nadu.

The study found that women's nutritional status is not associated with their education level in any of the three states. According to the study, respondents living in poor households are more likely to be malnourished than those from households of higher economic status. Additionally, the husband's education is not a significant predictor of contraceptive use and disease prevalence (in Tamil Nadu) and nutritional status in all three states. Urbanisation impacts contraceptive usage in all three states. Urban women are more likely to use family planning methods possibly due to better availability of contraception in urban areas and also due to the prevalence of culture of acceptance in urban areas. Also, the urban poor live in more cramped conditions that could influence their desire for smaller families.

According to the study, Muslim women are less likely to use contraception and on an average have more number of children as compared with the majority of Hindu women. Religious perceptions against contraceptive usage among Muslims could also explain why fertility among Muslim women is much higher.

With respect to employment status, the study adds that working women are more likely to use contraception and have fewer children. However, employed women are also more likely to bear their first child at a younger age. In Bihar, they are more likely to suffer from morbid diseases. The study finds that age is significant for all outcome variables. Younger women are less likely to use contraception and have fewer children. Younger women have a desire to have more children in the future, after which they would start using contraception. Younger women do have delayed childbirth in all three states, which indicates a gradual cultural shift with women of latter generations preferring to have children at an older age. The study also found that younger women are more likely to suffer from malnutrition and older women are more likely to suffer from diseases possibly due to lessened immunity.

The article concludes that women's nutrition apart from their socioeconomic status, indicates a need for continued commitment from the government to ensure food security for the poor. Distribution of supplement tablets should also be prioritised through public and voluntary sector interventions. As anaemia among women is associated with higher maternal mortality, lower immunity, as well as fatigue and depression, it is important that programmes are aimed to address the challenge.

### **11.8 Road Map of Common School System in Bihar, Muchkund Dubey, *Economic and Political Weekly*, Vol. No. 42(29), pp. 2999–3005, 2007.**

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#### **Key Topics:** *Common Schools*

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The article discusses the recommendations of the Commission on a Common School System (CSS) in Bihar, regarding the norms and standards required for a CSS, and the resource requirements for implementing such a system. It also briefly touches upon teacher education, principles of pedagogy, school management, and the draft of a right to education and common school system bill.

It notes that a development of great significance was the announcement on the 22 July 2006, by the Chief Minister of Bihar, Nitish Kumar, in his valedictory address in a seminar on CSS held in Patna, of his government's intention to establish such a system in Bihar and to constitute a Commission to advise the government on how to go about it. The Commission commenced its work from 10 September 2006, and submitted its report to the chief minister on 8 June 2007, two days ahead of its nine month term. In carrying out its mandate, the Commission set and kept in the forefront the overall objectives of the goal of free and compulsory education for all children in the age group 5–14 years will be reached in five years starting from April 2008, that is, by 2012-13, the goal of universalising secondary education will be reached in eight years by 2015-16, and the goal of providing facilities according to the norms of the CSS, for senior secondary level education to 70 per cent of the children completing secondary level education, will be reached by 2016-17.

The paper explains that the Commission has established a set of norms and standards for ensuring school education of equitable quality. These relate to access to schools, school land, physical infrastructure, school furniture and equipment, number of teachers required, the teacher education requirements, and free and compulsory pre-elementary and elementary education. Besides, norms for curriculum, pedagogy, and teaching of languages have also been established. But these do not have any significant financial implication.

In this context, the paper highlights norms and standards which suggest that a primary school will be provided within 1 kilometre from habitation; a middle school within 3 kilometres and a senior secondary school within 5 kilometres. A primary school will have a capacity of 210 students; a middle school, 440 students; and a senior secondary school, 420 students. Each class or section in a primary and middle school will have 40 students; at the secondary level, 40 students; and at the senior secondary level, 30 students; norms relating to school land and total floor area calculated on the basis of square metres per child, have been prescribed for each category of schools. In each primary and middle school, there will be a hall for pre-elementary children measuring 50 square metres. Norms have been laid down for school furniture, which includes desks, benches, computers, library books, utensils for mid-day meals (for primary and middle schools only), equipment for games and sports, office equipment, teaching-learning equipment, etc. There will be eight teachers in each primary school, 17 in each middle school, and 20 in each senior secondary school. The derived pupil-teacher ratio in these schools will be 35:1, 30:1, and 22:1, respectively. All teachers will be trained and otherwise qualified according to the norms of the National Council for Teachers' Education.

The Commission has suggested that the chief minister of Bihar should go on a special mission to the prime minister and seek the central government's assistance for meeting at least 50 per cent of the additional cost of the CSS. In addition, the paper outlines some recommendations made by the Commission for the mobilisation of additional resources, such as, all assistance under SSA should be provided within the framework of the CSS. The ministry of science and technology and NIIT should be approached for providing computers to schools in the CSS, and NABARD should be approached to set up laboratories in the schools and teacher education institutions. National financial institutions, particularly banks, which have opened a window for lending for social development, should be approached to provide loans to the state as their contribution for building the CSS. The rural and urban community should be called upon to help in building schools, mainly through donation of land and by providing other components of the infrastructure. All schemes and plans in the state not consistent with the approach of the CSS should be discontinued, and the resources thus released utilised for financing the CSS. These would include closing the schools and hostels run by the Department of Social Welfare and Union Ministry of Labour and not allowing additional Kendriya Vidyalayas or Navodaya Vidyalayas to be opened in the state.

The paper notes that the Commission has, therefore, prepared a three-year plan of structural and process oriented transformation of the entire system of teacher education in order to respond to the challenge of moving towards the CSS. The SCERT will be restructured as an autonomous academic institution. All the nominal 37 DIETs and 23 PTECs will be upgraded to full-fledged 60 DIETs. The research programmes of both SCERT and DIETs will be thoroughly revamped. The present Block Resource Centres will be converted into block education centres or Prakhand Shiksha Kendras (PSKs). They will function as an academic extension of DIETs, engaged in teacher education, material development and research. The plan envisages the construction of 249 new and strengthening of all 533 PSKs.

Finally, the paper explains that a comprehensive legislation entitled Bihar Right to Education and Common School System Bill has been prepared for possible adoption by the Bihar legislature. The Bill encapsulates, in a formal and legal language, the theoretical and conceptual premises behind the CSS and spells out the rights and obligations of the parties involved, that is, the children, the state, the teachers, and the schools. The bill provides for the constitution of a State Commission for School Education, which will have the responsibility, among others, of monitoring the implementation of the Act, recommending suitable measures, and acting as a court of last appeal in relation to any grievance regarding non-implementation of any provision of the Act. In the proposed legislation, the rights and obligations of different parties are based on the latest thinking on education and pedagogy, and the principles of international law.

### **11.9 *Entertainment-Education and Possibilities for Second-Order Social Change*, Arvind Singhal, Nagesh Rao, and Soumya Pant, *Journal of Creative Communications*, Sage Publications, New Delhi, 2006.**

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**Key Topics:** *Entertainment- Education, Social Change*

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The article is inspired by the entertainment-education radio soap opera, *Taru*, about a family from the upper-caste Brahmin community in Bihar, which allowed men from the lower caste *Dalit* community to serve water to guests during their daughter's wedding. While most social change projects achieve first-order change, that is, change within a system which itself remains unchanged, *Taru* seemed to have engendered second-order changes, that is, changing the system itself. This article investigates how *Taru* generated second order changes in Bihar, distilling lessons for how entertainment-education programmes can be strategically positioned to create and sustain systemic social change.

This research on how the *Taru* project's various interventional activities sparked second order changes in certain villages of Bihar, is guided by methodological triangulation, the use of multiple research methods (both quantitative and qualitative), to investigate the same phenomenon. The present article draws mostly on various types of qualitative data collected over a period of 18 months from four villages in state: Abirpur in Vaishali district and villages Kamtaul, Madhopur and Chandrahatti in Muzaffarpur district. Data sources from these four villages included: (a) 45 transcripts of in-depth and focus group interviews with listeners of *Taru*; (b) transcripts of 18 *Taru* listeners' club diaries (each with weekly entries); (c) 22 transcripts of audio taped listeners' club discussions in village Abirpur after listening to *Taru*; (d) some 14 hours of video testimony provided by listeners of *Taru* and their



community members; and (e) extensive field notes of the first author and of the other half-dozen field researchers involved in collecting data. In addition, in the summer of 2003, a participatory theatre workshop and folk theatre performances were conducted with 45 *Taru* listening club members hailing from these four villages.

The article explains that *Taru* was a 52-episode entertainment-education radio soap opera, broadcast in India from February 2002 to February 2003. Its purpose was to promote gender equality, small family size, reproductive health, caste and communal harmony, and community development. The overall storyline of *Taru* shows clearly that this is a programme that models second-order changes, introducing decisively different codes of social behaviour that radically challenge existing norms and practices. *Taru* modelled new realities for a more egalitarian integration of Dalits in society, created a space for discussion and dialogue. The analysis of the effects of *Taru* makes important theoretical and practical contributions to understanding change processes through entertainment education (E-E).

Using the example set by *Taru*, the article offers a set of seven factors and processes that can initiate second-order change. First of all, the primary purpose of an E-E programme is not to change others. It is to offer a 'new' story and a set of 'new' ideas for audience members to explore and consider. The data here suggests that audience members from the four community case study villages identified with *Taru* and other key actors in the soap opera. Second, the audience members talked, discussed, and debated a variety of ideas and chose to act on some of the issues (untouchability, creating a school for children, etc.). Several scholars have shown that dialogue is a critical prerequisite for social change to occur. Third, having the support of family members and other community members is a critical part of embarking on second-order change. Indeed, second-order change involves agreement on values and action beyond the level of isolated individuals. Fourth, the process of reframing, and in many cases going outside the box, is a key ingredient for the creating second-order solutions to existing social problems. Fifth, this reframing has to be translated into a critical action that is culturally compatible with the intended audience. Sixth, since it is natural for the audience members to resist second-order changes (for example, when Dalits serve water to high caste members), continually addressing the resistance from community members is essential. Finally, when an individual or a member of a community introduces second-order change behaviour into a specific context, amplification must begin to occur. Amplification is a critical and necessary ingredient to sustain second-order change. Amplification allows for an issue to stay on the agenda and for a critical action to trigger other multiple actions.

While providing insights on E-E sparked second-order change processes, the article notes some limitations of the study. First, it considers only one set of social change processes in one village. Second, it does not specifically address the ethical issues surrounding E-E-initiated change. Finally, this article is a post facto (not concurrent) analysis of the spontaneous effects of *Taru* in Bihar.

In conclusion, the article calls for overcoming occupational psychoses and trained incapacities in conceiving and implementing social change interventions. It calls for a different orientation, a different world-view, and a different way to frame social problems to expand the space for solutions.

#### **11.10 Socio-Economic and Educational Status of Muslims in Bihar, Asian Development Research Institute, Patna, 2004.**

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**Key Topics:** *Muslims, Socio-economic and Educational Status*

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The main objectives of this study was, firstly, to determine the socio-economic status of the Muslims in Bihar and bring out the nature of the socio-economic problems and constraints faced by them; secondly, to specifically examine the educational status of the community; and, thirdly, to suggest specific measures for ameliorating the socio-economic conditions of the Muslims.

The study draws from a wide ranging sources of information. The core information base for the study, however, is a household survey covering various dimensions of demographic, economic, health-related and educational characteristics of the Muslim population. The secondary information base of the study includes the census reports, the results of the National Family and Health Survey-II (1998-99), and a few other data obtained from government departments.

The study finds that Bihar is one of those 10 States where the Muslims constitute at least 10 percent of the population. The picture of the Muslims in Bihar that emerges from the survey is of a community steeped in poverty,

with very low income levels to eke out a living and, as compared to the general population, endowed with lesser amount of land, land-related and non-land resources, and mostly engaged in low paid jobs in the unorganised sector or in self-employment activities, where the returns are very poor on account of the very limited access to resources. Their low income levels affect their position in all other sectors. The overall literacy rate among the Muslims in Bihar is lower than among the general population and the extent of educational exclusion is substantial among the young Muslims. The death rates among the Muslims are also higher than that for the general population, indicating the inferior health conditions prevailing among them; and life expectancy is lower. There is, thus, a large and widening economic and social distance between the Muslims in Bihar and other communities.

According to the study, the main reason for the lower income levels of Muslims in Bihar is that they are much less endowed than the general population, with land, land-related, and non-land resources. Barely 25.2 per cent of the Muslims cultivating households grow any cash crop. The livestock endowment of the Muslims consists mainly of goats and poultry. Nearly half of the rural Muslim households sell part of their animal husbandry products. Artisan-based activities used to be an important source of livelihood for many Muslim households in the past, but the survey reveals that in the rural areas barely 2.1 percent of the Muslim households are engaged in such activities.

The study did not find any rural household engaged in any modern manufacturing activity. Very few Muslim households, both in the urban and rural areas, have access to decent employment sources, like jobs in government and semi-government organisations and in the organised sector. The average Muslim worker employed in the organised private sector earns about Rs 1,770 and Rs 3,520 per month in rural and urban areas, respectively.

Because of poverty and lack of employment opportunities in their place of residence, out-migration of workers of the Muslim households in Bihar is a common phenomenon. At low levels of income at which most households in Bihar subsist, and more so the Muslim population, the hardships of life are reflected not only in low consumption levels but also in the consumption loans that the households have to take in order to barely ensure their biological existence. The burden of indebtedness is very high among the Muslim households in rural Bihar.

From the data on preferences for savings mechanisms, it is found that the savings of the Muslim community in both rural and urban areas are very limited. As regards the living conditions of the Muslims in Bihar, in the rural areas housing conditions for them are a little better than for the general population, which is mainly because of the traditionally inherited ownership of dwelling units. However, in the urban areas, the distance between the living conditions of the Muslims and the general population is much wider.

The Muslim population in Bihar has, by and large, remained deprived of benefits from the government's poverty alleviation programmes. Out of five such programmes that are essentially employment and income oriented, IRDP is the only one which has reached some rural Muslim households (5.3 per cent). Among the poverty alleviation programmes with welfare orientation, the Muslims have benefited only from the Indira Awas Yojna.

The study explains that as in the case of economic indicators, the Muslim population in Bihar is worse off in relation to most of the social indicators also. Because of their poverty, a large proportion of the children in the Muslim households go to government schools which serve about half the Muslim students, both in the rural and urban areas.

The study also shows that the average level of health standards of the Muslims in Bihar is worse than that of the general population. This is borne out by the figures of birth rate, death rate, extent of immunisation, and intake of nutritious food and other related data. The death rates among the Muslims in Bihar are also higher than that of the general population. The study points out that the consumption levels of nutritious food items may not be lower among the Muslim population.

A particularly disconcerting finding of the present survey relates to the participation of the Muslim population in Bihar in social institutions. Their participation in professional organisations is only marginal and that in minority organisations almost negligible. The participation of the Muslims in educational organisations is found to be a little better, but such participation is generally confined to *Madarsa* related organisations. However, recently, there has been a substantial improvement in school enrolment among the children of the Muslim population, and much of the increase in enrolment is because of the higher enrolment of girl children. The enrolment in schools for girls now is only marginally lower than for the boys. There is also a decline in the dropout rates of the school going children of the Muslims of the present generation.

**11.11 Primary Education and Child Labour in Bihar, Manohar Lal, *Journal of Social and Economic Studies*, Vol. XVI, No.1, Jan-June 2004.**

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**Key Topics:** *Primary Education, Child labour*

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This article throws light on the topic of widespread social evil of child labour. Former Prime Minister P. V. Narsimsha Rao on 15 August 1994 declared that two million children working in hazardous working environment would be withdrawn and rehabilitated by 2000 AD. A national workshop of Collectors and Deputy Commissioners, held in September 1995, laid down a definite line of action for the District Child Labour Project Societies. It included all aspects such as identification of child labour in hazardous environment, their educational and health status as well as their families' socioeconomic profile along with launching of awareness programmes at the grass root level, enforcement of existing legislations on child labour, organising facilities for education, health, nutrition, and skill development among children, and monitoring the progress of these programmes.

Child labour in India is multidimensional and complex. Millions are engaged in a variety of industries in very large numbers throughout the country. More than eleven million child labourers were recorded as per the 1991 Census.

There are 1.73 lakh children (42.63 per cent in the agricultural sector and 37.94 per cent in *bidi* making) who work as child labourers in Bihar with 15 of the districts which have been identified as child labour endemic. Jamui and Nalanda top the chart when it comes to hazardous occupations for child labour in *bidi* making.

The scenario of education has deteriorated in Bihar. According to the 2001 Census, the literacy rate of the state (47.5 per cent) was far below the national average (65.4 per cent). The author conjectures that the deterioration in primary education began with the introduction of the British education system. Earlier, the education was vocation based and addressed the needs of the people. During the 1830s, more than one lakh schools existed in Bihar and Bengal, mostly catering to the upper castes. Their curriculum was directly based on the life and work pattern of a common man. However, the first four decades of the 20th century, with the advent of English medium schools, saw a steep decline in vernacular schools.

Growth in all aspects in primary education could be seen in Bihar after independence. According to the State Plan of Action 1995, the numbers of primary and middle schools have grown three times, even the teachers have multiplied 5.6 times and the student enrolment has gone up eleven times during the same period.

In 1994, only 63.3 per cent in the age group of 6-14 years were enrolled, while the rest were out of the formal education system. The SCs/STs and girls fare even worse in this scenario. It was estimated that two-thirds of these children would be covered under formal primary education and the rest one-third under the non formal education. It is this one-third category that the child labourers belong to.

The author elucidates that child labour is rampant across the country in various industries such as glass, carpet, etc. Not much thought was paid to it earlier but with the increasing emphasis on protection of human rights, provision of education for all and the expansion of Indian exports, greater attention is being paid to it now.

The author cites a report released by UNICEF which states that there is a need for seven million dollars each year for the next decade to achieve universalisation of primary education. It further reveals that 1/6 of the world's population will be illiterate by the end of the century. Two out of three were girls are not being given primary education in developing countries. Just 62 per cent in India has reached class five and yet it has spent only 3.6 per cent of its GDP on education.

The expansion of Indian exports and the conditions laid down for international trade are also held responsible for the attention on child labour. Some countries have threatened to ban Indian goods if these have been produced with the help of child labour. Professor Amartya Sen, in an interview, emphasised that to produce competitive products according to specifications required education, which was very important from the point of view of having a successful opportunity in a globalising world.

It is not easy to answer the twin questions of elimination of child labour and subsequent education of the released child. Everyone, including the employer, parents, and even the child have over the years developed a vested interest in this practice due to many reasons such as cheap labour, etc.

To fulfil the constitutional obligation of Article 45 (free and compulsory education for all children up to the age of 14 years) and make it a fundamental right, a legislation (83rd amendment) was introduced by United Front Government. A few states and union territories, where compulsory education has been enacted upon, are yet to enforce these acts due to socioeconomic compulsions which have kept the children away from schools. International agencies such as donor agencies have always put enormous pressure on India to make elementary education a fundamental right, but it is not enough to resolve this major issue as it needs more comprehensive consideration.

Resistance to removal of child labour comes from all levels, including parents, as they require their earnings for their living. . Even the child may not be interested to study as the familial environment may be discouraging and the entire infrastructure and the curriculum of the school is uninteresting. The child is unable to force himself/herself towards achieving a non tangible reward, which is in stark contrast with the work he is generally doing and getting paid for. Also, he may face parents hostility if he does not perform well in school and this may lead to further frustration.

In tune with the constitutional provisions, the National Policy for Children (1974), the UN Convention on the Rights of the Child (1989), National Policy on Education for All by 2000 AD (1990), and the National Policy on Child Labour have equivocally stressed on the rights of children. The National Policy on Education, 1996, had set a target that all children who attain the age of 11 years by 1990 and who had five years of schooling would go through the non-formal system of education. Since, the central feature is based on area and population specific micro-planning, NPE centers for child labour are to be set up with the involvement of VOs and PRIs which would aim to educate children up to class V with arrangements for continuation of non-formal education up to class VIII level, along with part time and vocational courses. Special attention would be given to the girl child. The author talks about the National Child Labour Policy, 1987, which is a three pronged action plan to wipe out child labour and educate the children for their better future. He stresses on the formal as well as the non formal aspects of education (referring to the National Policy for Education (1986). He goes on to discuss the need to have avenues for the children for continuing their education. The author states that there has to be good linkages of primary learning centres with the centres for higher learning and this holds true for the children who pursue vocational courses. He also recognises the importance and the need to improve and remodel the anti-poverty programmes. These programmes are crucial as the families are usually caught in the 'vicious cycle of poverty' and such acute conditions force them to send their children to work.

The author takes special note of the National Child Labour Project (NCLP) which has made giant strides in removing child labour by opening schools that have enrolled 11,494 child labourers from various hazardous industries in the age group of 10-14 years. However, despite such a heavy enrolment, there are still 25,000 child labourers who are yet to be enrolled under the programme. There have been such cases in Bihar where students who were not child labourers have come under the ambit of these schools. The author also states that there has been wrong selection of untrained teachers in the NCLP schools in Bihar. Reasons such as these and many more have continuously reduced the effectiveness of this programme. The author concludes with the thought provoking statement of 'attacking the child labour' problem from all sides and refers to a comprehensive and a more inclusive approach. It would require a coherence of various schemes (like the Right to Education) and a combined effort from the policy makers, various agencies involved in the protection of rights of the children, and the NGOs which would ensure a total eradication of child labour and promote education among the children.

**11.12 *Regional Dimension of Inter-Caste and Gender Disparities in Literacy: A Case-Study of Bihar,***  
**K. Anurag, PhD Thesis, Centre for the Study of Regional Development, Jawaharlal Nehru University,**  
**New Delhi, 2001.**

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**Key Topics:** *Educational Disparities, Gender and Scheduled Castes*

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This PhD thesis aims at building up of a literacy scenario of Bihar, over the last four decades starting from 1961-1991, with the following objectives: firstly, to trace the temporal trends and spatial pattern of literacy for Scheduled Caste and non-Scheduled Caste population; and secondly, to measure caste and gender disparities in literacy therein. The standard deviation method has been used for division of categories for spatial pattern of literacy and disparity.

For this, first standard deviation (SD) has been calculated and the categories are decided on the basis of respective averages plus/minus 2 SDs. In addition, other statistical methods such as correlation have been used.

The study notes that the literacy rate of SCs was even less than one third of the non SCs literacy during 1961, 1971, and 1981, and was only half the rate for the non SCs during 1991. The female literacy gap between SCs and non-SCs increased over the period under observation, But gap of male literacy remained more or less the same from 1961-71.

The study observes sharp contrasts between the literacy rate of the SCs and non-SCs population in rural area and urban areas. The literacy rate in rural area is half that of the urban area. The study finds that, spatially, the literacy pattern of SCs population corresponds fairly well with the literacy pattern of non-SCs population. It can be said that high literacy among SCs was by and large characteristic of the areas having high non-SCs literacy.

It is also found that regional divisions based on literacy show that north of river Ganga is a region of low literacy, the central belt stretching west to east situated at the south bank of the river Ganga is a region of high literacy, and southern Bihar is a region of very high literacy. The area between the central belt and southern region is a region of low literacy.

The study argues that literacy patterns are historically persistent and they do not change very easily, a pattern that has been observed elsewhere in other cultural context as well. The low literacy among the SCs population could be understood in historical and socioeconomic context. The types of jobs taken up by the SCs such as agricultural labour, sanitary services, etc., do not require education. The general poor economic conditions do not allow them to join schools.

An interesting observation of the study is that female literacy for SCs as well as non SCs has not progressed even in the last three decades to the 1961 level of male literacy. From the overview of the literature, it is clear that the reasons for low female literacy are because of their engagement in domestic work, early marriage, importance given to male members, and discrimination against women.

According to the study, gender disparity pattern of SCs corresponds fairly with the gender disparity pattern of non-SCs. In terms of spatial pattern of disparity, lower literacy levels have higher disparity and vice-versa. The position of regions has not really changed over the period of time. Like literacy regions, gender disparity regions are also historically persistent.

The study explains that there are differences between SCs and non-SCs in terms of socioeconomic conditions, possession and access to resources, etc. The literacy level for the two castes is different, which causes the disparity. The inter-caste disparity has gone down over the period of time.

The study concludes that literacy levels of SCs, particularly female literacy, is extremely low in comparison to non-SCs population, the gender disparity for SCs is markedly higher than non-SCs gender disparity, and inter-caste disparity is also high.

### **11.13 Problems of Universal Education in Bihar and Jharkhand, J. P Singh, IASSI Quarterly Vol. 19, No. 3, 2001.**

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**Key Topics:** *Universal Education, Enrolment and Dropout*

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The present article takes a look at the ailing educational scenario of two of the most educationally backward states, Bihar and Jharkhand. It starts by giving a brief overview of the continuous efforts of the government to promote education by implementation of various schemes like the National Policy on Education, 1986, the universalisation of elementary education, etc.

To begin with, the article presents the facts and the figures to discuss the scenario and the trends in education in Bihar. The article refers to the Censuses of 1991 and 2001 (to an extent) to quote figures for literacy levels of Bihar and Jharkhand and finds them to be below the national literacy levels (as per Census 1991). A comparison of literacy rates for all the states reveals that Bihar and Jharkhand rank at the bottom (for 1991 as well as 2001 census figures). There are also strong gender differences when it comes to the literacy rates. In fact, as the article states, the Census figures claim that since 1961 'the male-female variance in literacy rates at ages 5-9 and 10-14' has been consistently higher in Bihar

as compared to other states. The article also observes that there has been an inter-temporal decline in the education status of Bihar (which had earlier included Jharkhand). It notes that the states of Rajasthan, Arunachal Pradesh, and Jammu and Kashmir lagged behind Bihar in terms of literacy rates as per Census 2001. But Census 1991 and 2001 put Bihar as the state with the lowest literacy level. The article calls it a failure on the part of the government to live up to the promises made of attaining universal elementary education. Looking at a more disaggregated analysis, the study finds that in Bihar there are strong inter-district variations in the literacy rates with many districts having literacy rates lower than the state average. However, the interesting aspect mentioned here is the fact that the North Gangetic Plains are educationally poorer than Southern Bihar (which is now Jharkhand) and this holds true for both males as well as females. This is a bit of a contradiction to the conventional view held which says that literacy rates in Jharkhand should be lower as majority of the population belong to the tribal communities. However, the study justifies it to be an outcome of the ever growing urban migration in Jharkhand. It also sights better financial standing of the masses in southern parts of southern Bihar due to higher per capita agricultural productivity and greater equity in land ownership, as a reason for higher literacy rates. The study sums up this section by laying slight emphasis on the educational disparities among the various social groups. It reports that Muslims (especially the females in the Katihar and Purnia district) are worse off due to widespread poverty among them.

The article, in order to examine the education trends in a more careful manner, discusses the various aspects of education separately.

**Enrolment:** Bihar is one of the states with lowest enrolment rates. For this section, the study uses the Fifth All-India Education Survey, Bihar 1991 and finds the enrolment rate of the state to be 73 percent, which is one of the lowest when compared to the other states. As in the states of North India, there are strong gender variations in enrolment rates (94 per cent for boys and 51 per cent for girls). As per the study, social neglect towards the women has caused such low enrolment levels among the girls.

**Dropout Rates:** The poor enrolment rates are complimented by the high dropout rates in Bihar, which makes the situation even worse. However, one pattern to take note of is that dropout rates are high for both the males as well as the females. The other noteworthy aspect is that there are differences in the dropout rates among various social groups. The SCs and the STs experienced higher dropout rates when compared to people from the general category. The study attributes high dropout rates to the widespread poverty among these deprived social groups. It further emphasises that the massive poverty stricken lives of these people compel them to send their children to work, which means that the students have to leave schools.

**Teacher Student Ratio:** The Fifth All-India Education Survey, Bihar, 1991 reports that the teacher-student ratio in Bihar ranges from 1:50 to about 1:75, which is way above the norm set by the Kothari Commission (which gives teacher-student ratio of 1:40). The state of affairs looks even more precarious when one finds that the teacher-student ratio has slowly worsened over time. The study reports that even the appointment of 25,000 teachers in Bihar, in 1994, has done little as the teachers have often remained absent. It cites that delays in payments have caused teachers to remain absent in schools as they have resorted to look for additional sources of income.

**Habitation and Location of School:** The study uses the Census 1991 figures and quotes that 67 per cent of the villages in Bihar have primary schools and 18 per cent of the villages have middle schools, which is again lower than the national average. However, the interesting finding with the location of schools pertains to their existence in the ST and the SC dominated villages. The article reports that only 58 per cent of the SC villages have a primary school whereas 74 per cent of the ST dominated villages have a primary school. Thus, the STs have had an edge when it comes to the presence of primary schools in their villages.

The article, in this section, has also referred to some of the infrastructural problems that have plagued the education system in Bihar. It reports that about one-third of the schools do not have a proper building complex and there are cases where 3–4 schools run in a single building. The schools that do have their own buildings have such buildings in poor shape. It also briefly mentions the schools that exist only on paper. The other problem areas relate to the government inefficiencies, which have resulted in limited impact of educational schemes. The article gives the example of the Mid- Day Meal Scheme where children have not been provided with cooked food and have only been given raw grains.

The article concludes by providing certain policy suggestions and highlights the need for increasing the number of schools in rural Bihar. It also stresses on the need to help the poor children attain education. Here, the need to

distribute free text books and uniforms to the students is mentioned. The article argues that the teacher student ratio is also an aspect that requires a lot of attention. It lays emphasis on the need to appoint more teachers, have head masters in various schools, and also on the need to pay the teachers well and on time. Lastly, it also emphasises on the need to have proper delivery of the various schemes provided by the government which would solve the illiteracy problem to a great extent.

**11.14 Is Education a Priority for Scheduled Castes? A Study of Three Districts of Bihar, S. K. Pant, *Indian Journal of Social Work*, Vol. No. 61 (1), pp. 66–88, 2000.**

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**Key Topics:** *Scheduled Castes and Education*

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The study seeks to spell out the current status of literacy among the SCs in three districts of Bihar namely, Bhojpur, Rohtas and Muzaffarpur. It also attempts to identify the various socioeconomic and other factors that affect the scope of literacy. More specifically, the study aims to study the pattern of enrolment and dropout among the SCs and its comparison with other socioeconomic group children. It also tries to look into the socioeconomic activities of the region and the role of children in it, to examine the facilities and amenities offered by the schools, and to provide appropriate strategies.

The study covers 54 villages, that is, 18 villages from each 3 sample districts. For identifying these villages, stratified random sampling technique was adopted. The selection of those 18 villages in each district was made by constructing a three by three matrix, using population size of villages as one set of indicators, and SC, ST and OBC as another set of indicators. In order to give more weightage to SC and ST villages, the remaining villages were purposively selected from SC and ST categories. The primary data for the study was collected through Participatory Rural Appraisal (PRA) technique.

The study provides an account of the working of primary schools, highlighting the forces that are operating within and outside the system which affect the access, achievement, and overall quality of elementary education in the sample villages. An analysis of the data pertaining to the enrolment, attendance, and retention of children shows that though enrolment level was high for the overall sample, its level in the SC category was much lower than the level of other caste groups. The dropout level was also the highest for this category and the overall result was the lowering of the enrolment level of children.

The study shows that a sizeable proportion of students were not attending schools located inside their villages on account of various reasons. The major reasons are highly skewed distribution of schools, forced closures of the schools in the hilly regions, low population in villages which lowered the number of schools, fear of high influential high castes, and geographical location of their habitats.

Another factor contributing to the poor performance of schools has been the poor quality of infrastructure facilities and basic amenities in the schools, on account of which many parents were not inclined to send their wards. Further, these schools also did not have many female teachers which discouraged the parents from sending their daughters to schools. This led to increase in the number of girls dropping out of school or not attending school at all. The multi-dimensional role played by an Indian child in supporting and supplementing household activities was also found to be a major factor responsible for depriving them of their schooling.

This study clearly brings to the fore that agricultural operations in these regions have a significant bearing on the enrolment, retention, and achievement levels. The crops cultivated in these regions demand high doses of labour input and on account of the rampant poverty among the SCs, the whole family, including their children, were included as casual workers from within the sample villages, but also outside the region during the busy months of the year. Another factor is that the school academic calendar invariably clashed with the harvesting seasons of the major and staple crops. Other factors like poverty, backwardness of the region, low level literacy among the SCs, and their limited perception about education did not help them to appreciate the concept of educating their children. The study also observed that many of these schools could not function during the rainy season on account of poor approach roads. Poor drainage system also contributed to their woes. The situation continued for weeks and even months, thereby forcing the closure of some schools.

The study clearly shows that the quality of education too requires to be toned up. The primary schools also lack proper teaching and learning material such as text books, teaching aids, teaching guides, and so on. A sizeable proportion of teachers have either not undergone training or that training was long overdue. This has also affected the quality of teaching as they have remained non familiar with the latest techniques and developments in the field of pedagogy. The schools were seen to be operating in isolation with the village community and the local people being hardly aware of their activities. The lack of interaction between the two has created a void which has affected the quality of teaching, the enrolment of students and their performance, and so on, as the teachers did not get regular feedback.

Absence of regular monitoring by concerned officials was also having a disastrous effect on the quality of teaching. The study reports that the only officials found to be visiting these schools were the BEEOs and their visit to schools were found to be of perfunctory nature, lacking academic support and the much needed guidance to the teachers. The study also found that a significantly high proportion of teachers do not reside in the villages and commute long distances to school every day, thereby, affecting their quality of teaching.



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**SECTION 12**

**Women and Gender Issues**

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## Overview

Patriarchy is a fundamental institution in India, and more so in Bihar, that defines men, women, and their interactions. Three major themes emerge out of the literature on gender in Bihar. First, as with most literature on gender, that gender cannot be studied in isolation from caste, religion, class, and other markers of identity. This is reiterated in Datta and Rustagi (2010). Second, is that the two key government-led potentially transformative measures targeted at women in the state are: the provision of quotas for women at the grassroots level and the creation of self help groups. Last, that while there has been a shift in academic discourse from the top-down women in development approach to a more participative and inclusive gender and development approach, this has not impacted policy processes in the state as yet.

Sachchidananda and Kumar (2005) explore the changing socioeconomic and political context and status of *Dalit* women in Bihar. The study identifies key facilitators of change in the context of *Dalit* women in the state. In their article (in the education section of the Compendium) on inter- and intra-religious, and gendered literacy, Alam and Raju (2007) present a nuanced understanding of the manner in which social markers of gender and religion intersect to produce and sustain inequalities in Bihar. In their comparative study of Purnia and Patna, the authors find that higher illiteracy leads to a higher gender disparity. They also find that Muslim women are often doubly disadvantaged given their identity as an educationally backward religious minority and women. This is also reiterated in the works of Hussain (2010, 2008) in this volume. A chapter on obstacles and interventions related to the educational attainment of Muslim women, a study of *Dalit* and Muslim *agarbatti* workers, and an article on Shariat courts and women's rights. Chaudhari and Roy (2009) make a comparative study of the gender gap in education attainment in Bihar and Uttar Pradesh, and find that caste plays a greater role in determining education attainment in Bihar than in Uttar Pradesh. Mathews (2006) analyses the Accelerated Female Literacy Programme in the state.

Of the various government led measures targeted at women, the provision of quotas for women at in the PRIs and the creation of self help groups (SHGs) in the state have been discussed most widely. While Kumar (2007) is highly critical of the ability of SHGs to remove poverty and 'empower' women, Sachidananda (2005) argues that even though SHGs are performing below par, key measures to improve their functioning may be implemented including training of members and tying up of SHGs with local *Panchayats*. Tiwari (2010) highlights that the SHG platform is an enabling factor in facilitation of social change in the state. The impact of reservation of seats for women in PRIs has been discussed at length here. Sundstrom (2007) argues against a dualist reading of women in politics as either 'proxies' or as empowered politicians and argues that both possibilities and obstacles exist.

Finally, even as mainstream development research has challenged the women in development approach and promoted a gender and development research, the literature presented in this section outlines the failure of the state to reorient policy accordingly (Unterhalter and Dutt, 2001, IHD, 2002, Kumar, 2007).

Other studies in this section include one on the relationship between inter spouse communication and fertility levels (Das Gupta, 2002), women's involvement in the Naxalite movement (Rai, 2009), prostitution in Bihar (Srivastava, 2005) and women's housework (Sourabh, 2008).



## 12.1 *Status of Women in Bihar: Exploring Transformation in Work and Gender Relations*, Amrita Datta and Preet Rustagi, Institute for Human Development, New Delhi, 2010.

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**Key words:** *Status of Women, Women's Work, Migration and Women*

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This study was conducted to ascertain broad insights into the status of women in rural Bihar with a view to examine any signs of transformation in work and gender relations. It is based on a survey of groups of women in 14 selected villages across 9 districts of north and south Bihar. For 12 of these 14 villages, this study is linked to a village resurvey undertaken by the Institute for Human Development (IHD) within the umbrella of its research programme on the *Dynamics of Change over 30 years (1980-2010) and the Emerging Policy Framework*. A total of 106 groups of women from 14 villages were administered the specially designed gender module. The main objective was to ascertain broad dimensions pertaining to women's lives with respect to their work, their access to basic amenities, the impact of male migration on women and children, and the influence of public policies. The nature and extent of transformation in the status of women with respect to work and gender relations is explored over time by eliciting information on economic, political, and social aspects, to ascertain whether transition towards gender equality and empowerment is witnessed in rural Bihar.

**Context of the Villages:** The 14 selected villages belong to 9 districts of Bihar. Villages of different sizes were surveyed, ranging from a very small village to a fairly large village. Almost all the survey villages (except Paharpur Deyal) have Scheduled Caste households and also OBC population. While Dewan Parsa and Samhuti Buzurg have some tribal concentration, Mahisan, Jitwarpur, Belabadan, Parsa, and Paharpur Deyal have some Muslim population. A few villages are predominantly inhabited by households of upper caste Hindus. Rural populations are severely lacking in access to basic amenities such as water, electricity, and sanitation. Even though water is abundant in this eastern state of India, there appears to be a differential in access to water facilities across social groups. Since managing the household chores is generally a woman's task, not having easy access to water can create problems for women. Provision of electricity makes mobility of women safer and easier to some extent. Poor sanitary conditions expose women to disease and make them vulnerable to assaults. Efforts to provide these basic amenities, especially in rural areas, can help in improving the condition of women tremendously. Inadequate communication facilities are also a deterrent to mobility and accessing higher education and healthcare, especially for women in rural areas.

**Work and Employment:** Women worker population ratio varies from a low percentage of 16 in Sheohar district to 62 per cent in Madhepura district (Census, 2001). However, a regional pattern can be seen in women labour force participation. Women from the northern Bihar districts are more active in paid work as compared to their sisters in the southern part of the State. This is linked to the landowning and sharecropping patterns in the region, as well as the level of rampant poverty.

The female worker population ratio range from a low of just 2 per cent in a small village in Gopalganj, which is on the highway, to a high of 46 per cent in Madhepura district. Even in areas where women's participation is relatively higher, a large proportion of them are marginal workers, except in the villages of Mohiuddinpur and Rupaspur Salempur.

As in the state as a whole, even in the survey villages, women's work is characterised by a preponderance of agricultural activities. It was observed that any other opportunities for work in the local economy were fairly limited for men, as well as women.

The sample of households, which are part of the panel study, reported quite a high rate of work participation for women when both main and subsidiary activities were taken into account across villages. Although it may be noted that this information pertains to a period of ten years later, approximately, yet the WPR of females for Paharpur Deyal is the lowest across the survey villages.

**Impact of Male Migration on Women:** Migration is ubiquitous from both north and south Bihar. From the household survey undertaken, only in the villages which were part of the panel study, it was noted that in the 12 census villages, the incidence of migration ranges from 35 per cent to 85 per cent. Bulk of the migration is into urban locations outside the state.

The migration of men has brought about profound changes in the work women do – within and outside their household. Similarly, the burden of work has increased tremendously for women in households that own land

or sharecrop after male members have migrated. *Kurmi* women in Paharpur Deyal said that they 'struggle more than the men.' For families owning large tracts of land, women now have to oversee work in the farms, supervise agricultural labourers, and often make decisions related to sowing, transplanting, weeding, harvesting, usage of seeds and fertilisers, and other such activities in the absence of their husbands. Secondly, it is also, evident that because of male migration, women were more involved in taking decisions. Thirdly, with their husbands away, women were more involved in managing money in the household. A woman in the Paswan tola in Belabandan said, 'it [managing money] was a bit hard in the beginning, but got used to it.' Fourthly, in the absence of male members of the family, women often faced barriers in both accessing credit and getting credit on favourable terms.

**Mobility:** At the survey sites, there was a unanimous sense that women, across all castes, had become more mobile, and were going out of the *tola* (hamlet) for work errands and leisure more frequently than earlier. Secondly, as expected, higher the caste of women in the hierarchy, the less mobile they were in rural Bihar. It was interesting to note that even if their economic condition was not that good, as with the Brahmins in Jitwarpur, they could access many services. Third, while mobility for women, in general, seemed to have increased, newly married women across most castes and social groups continued to face restrictions in their movements. In most communities, women were able to leave the *tola* around 1 to 3 years after their marriage, or after they had a child. Fourthly, it appears that women receive information mostly from other women in the *tola* and government officials. Male relatives and radio were other commonly reported sources of information. Finally, it appears that women, irrespective of their economic and social status, spent considerable time, energy, and resources in the pursuit of religious activities – whether it was a religious meeting in the *tola* or an excursion to a pilgrim place.

**Government Interventions:** There are various programmes and schemes that are operational with differential outreach and impact on the lives of women. They range from health, nutrition, education, employment generation, widow pensions, micro finance, housing, and so on. The different interventions, schemes covered or noted in the village, are mid-day meals, Balika Poshak Yojana, Balika Cycle Yojana, Akshar Anchal Yojana, Integrated Child Development Services, Accredited Social Health Activist (ASHA) NREGS, Janani Suraksha Yojana, Kanya Suraksha Yojana, Kanya Vivah Yojana, Widow Pension, Microfinance Interventions, and Indira Awas Yojana.

**Empowerment:** The discussions on the various government schemes and interventions are a reflection of the efforts being made to move towards gender equality and empowerment in Bihar. Amidst the continued presence of patriarchal norms and structures, gender stereotypes are less resilient to change. There are, however, certain forces that bring about changes over time. The introduction of reservations for women in PRIs is seen as a big measure for improving the political participation of women and, hence, their empowerment.

The priorities and opportunities for action suggested by the study aim to add value to the work of women in the agricultural sector, to create job opportunities linked to agricultural products, to create income generation opportunities outside agriculture, to organise women, to combat child labour, and to assist in the training of both women workers and government officials. Firstly, given the agro-ecological conditions of the region, there is tremendous potential for diversification into higher value crops, such as horticulture, floriculture, and medicinal plants which are crops likely to absorb female labour. Secondly, the limited local employment opportunities are a major drawback in most of the surveyed areas. Efforts should be made to create local jobs, whether through the establishment of small-scale enterprises, household industry or home based activities, self help groups or through expansion of the operation of the NREGA, given that Bihar displays a lower participation of women in the scheme than in many parts of the country. Thirdly, given the extremely low educational levels and lack of training among women, skill development and farm management can be routes to improvements in income earning and enterprise development. Fourthly, formations of *Mahila Samoohs* and credit /savings self-help groups have been initiated in some villages. The women members of these groups and the nominated leader were seen having acquired social recognition and power. The potential for transmission of diverse information in many areas of concerns, through such groups, is tremendous. Fifthly, migrants' remittances have so far been directed essentially to consumption and improving the living standards of the rural population. It would be necessary to foster investment in productive activities by exploring the possibilities for entrepreneurship development and the formulation of strategies for commercialisation of products with elements of product standardisation, marketing, and income generation, in order to enhance employability of women. Sixthly, the survey has shown that though school enrolment has increased, child labour remains significant in some villages. Lastly, given the low literacy levels and the absence of training facilities, especially for women, their participation in local community and

ability to participate in decisions regarding local development (*Gram Sabhas* for NREGA or non-NREGA, and membership in the 3-tier of PRIs).

The study has shown that there is an urgent need to upgrade the livelihood opportunities for women workers livelihood in Bihar. Given the current situation of the labour market, various avenues to increase income and empowerment opportunities for women need to be explored and strengthened. Support to a diversification of activities through access to credit, market linkages, improved skill development, etc., are only but a few alternatives.

**12.2 Educational Attainment of Muslim Women in India: Obstacles and Interventions (A case study of Bihar), Sabiha Hussain in A. Waheed (ed.) *Minority Education in India: Issues of Access Equity and Inclusion*, Serial Publications, New Delhi, 2010.**

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**Key Topics:** *Educational Attainments, Muslim Women, Government Intervention*

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This chapter, in an edited book, notes that there is no doubt that Muslim women are educationally backward and their work participation rate is low. In this context, the present paper raises questions on why the percentage of Muslim women attaining education, particularly higher education, is low? Are women not interested in going for higher and job oriented education? What are the factors affecting their aspirations? What action is needed to make an improvement in their educational status? Whether the number of Muslim girls in higher education has increased or decreased in the last one and half decade, 1992 to 2007, and what were the reasons for this change.

The study was conducted in Darbhanga town in Bihar, in early 2000, to assess the trends of education among Muslims girls, particularly matriculation and onwards. The study was mainly conducted in a Muslim-dominated Karamganj area of Darbhanga constituency, where over 10,000 small traders, primarily Muslims, who supply seeds and saplings across north Bihar and Nepal, reside. There are 70 high schools, 312 middle and 1,165 primary schools in the district. There are 63 middle and 36 primary schools in Darbhanga Nagar. There is one government polytechnic college, 1 ITI, and 4 private dental colleges. At present, there are two teachers' training colleges, one is for women called Rajkiya Primary Teacher's Training College and one is a minority teacher's training college, which has an admission fee of Rs 41,000.

A sample of three hundred married and unmarried students, including dropouts, still pursuing education, and passed out were selected for the interview on different aspects of education, and their aspirations, obstacles, and reasons for discontinuation. The sample consisted of students from all socioeconomic strata. A purposive sampling method was used to select the respondents. Men were also included in our sample to know their attitude and approach towards the education of women in this highly competitive environment.

The study found that 37 per cent of the female respondents stated that they could not meet their aspirations due to the poor economy of the family. The study reports that lack of government commitment to provide adequate infrastructure facilities in terms of building with a boundary wall, basic amenities (toilet and drinking water, libraries, hostels) and in opening up job oriented professional courses in government colleges and institutes, coaching facilities for competitive examinations in girls' schools and colleges, government girls' colleges imparting technical and professional courses in Muslim concentrated areas, as the major hurdles in meeting their goal. Another factor stated by the respondents was the absence of lady teachers, especially in mathematics and science, and lack of female laboratory assistants in colleges.

The study found that the social and cultural reasons, especially the low functional value attached to girls' education, as an important reason at the societal level. Another major factor hampering girl's aspiration for higher job oriented education, found in the present study, was parents' lack of farsightedness to link girls' education to future employment. The majority of the respondents stated that their parents were not in favour of providing job oriented education as parents thought it would lessen the chances of their marriage. Observance of purdah and parents' reluctance to send their daughters to co-educational institutions, for any technical or job oriented course, is another major factor found in the present study that obstruct girls' educational aspirations. The study reports the feeling of insecurity arising out of communal riots, and the overt and covert discrimination against the community as another major factor which hampers their aspirations to go for higher and skilled education.

The study argues that if we look at the economic situation of the Muslims in Bihar, we find that nearly 41.5 percent of Muslim families living in rural areas are debt-ridden and in the urban areas the percentage of indebtedness is 24 per cent, and in government's much publicised IRDP only 5.8 percent Muslim households were benefited, while the total Muslim population of the state is 13 per cent.

The study suggests that there is a need to collect and disseminate gender disaggregated community wise data for evaluation on education and the reasons for their drop out at higher level. There is a need to form the core of the planning and a separate gender budgeting for women's education, particularly women from backward religious minority. The growing economic marginalisation and the privatisation of education— especially higher and job oriented education of Muslims, in general, and their women, in particular—are a major concern for the community and the state. Transparency is required for evaluating the reasons for educational backwardness of the Muslims, in general, and their women, in particular, from a multiple perspective. Last but not least, economic planners and educational experts, particularly Muslims, will have to focus on the training and development of Muslim women folk. A progressive culture is to be infused, so that Muslim women are exposed and their talents are harnessed for their contribution in the development process of the society and the nation.

**12.3 Experiencing Abortion among Unmarried Young Women in Bihar and Jharkhand, India: Delays and Disadvantages, S. J. Jejeebhoy, S. Kalyanwala, A. J. Francis Xavier, R. Kumar and N. Jha, *Reproductive Health Matters*, Vol. No. 18(35), pp. 163–174, 2010.**

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**Key Topics:** *Abortion and Unmarried Women*

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The objective of the study was to explore and compare the experiences of abortion among married and unmarried women, and the difficulties and delays associated with it. Given that the research into abortion experiences among unmarried women are few and far between, this study was conducted among nulliparous women seeking abortion, aged 15-24, (246 married and 549 unmarried) over a period of 14 months in 2007-08. This was followed by in-depth interviews of 26 respondents among the above, who agreed. The two states have similar socioeconomic indicators in terms of access to health services, literacy rates and large proportion of pregnancies. The data collected was from a certified hospital and provider of abortion services, called *Janani*, operating in both states and known for good quality services at nominal prices. Eight of the 23 operating branches were chosen across both the states (operating in Ara, Gaya, Patna and Purnea in Bihar and Ranchi, Jamshedpur, Hazaribagh and Latehar in Jharkhand, which accounted for over 90 per cent of adolescent abortion seekers. The data collection tools comprised surveys conducted among respondents before and after the abortion and followed by in-depth interviews of the few selected, of those who consented, on the basis of purposive sampling after one week of abortion.. Factors associated with delays and difficulties in abortion were explored through the above methods. The findings were to help design and inform policies to help young women, particularly the unmarried girls, gain timely and safe access along with appropriate support.

The study found that most of the women, married as well as unmarried, had consensual sexual relations with boyfriends/husbands but among 18 per cent married and 2 per cent unmarried, relations were not consensual. Reasons for abortions among over 90 per cent of the unmarried girls was their marital status, followed by conceptions due to force (11 per cent) and desire to continue education (13 per cent), while among the married women almost 50 per cent wanted to abort due to lack of readiness due to age, 40 per cent due to financial constraints and about one-third wanted to complete their education. Overall findings indicated that unmarried women were more vulnerable and disadvantaged compared to their married counterparts and were seen to experience more difficulties and delays in abortion were mostly attributed to delays in recognising pregnancies, participating the decision of opting for termination, failed attempts to terminate pregnancy through other methods, fear of disclosure and lack of partner support. They experienced delays due to inability to determine pregnancy in time much more as compared to married women (17 per cent against 6 per cent). More unmarried women had tried unsuccessfully to terminate pregnancy (28 per cent as against 18 per cent of married women) and, similarly, concerns regarding confidentiality were also significantly higher among unmarried women as compared to married women (18 per cent as compared to 5 per cent of married women), indicating the vulnerability of unmarried women facing the choice of abortions.. Partner support was also more among married women, although this varied as per different aspects of support.



Logical regression analysis to look into the relationship between marital status and delay in abortion along with the other delaying factors, and controlling for confounding factors such socioeconomic indicators revealed that unmarried women are more likely to delay abortion till the second trimester in this study, but this relationship was not found regarding other delaying factors like late recognition of pregnancy and also participation in decision to abort. This is when socioeconomic factors are not taken into consideration.

But late abortions were associated with unmarried women which indicates that they are vulnerable to risks. The study found that marital status had some impact on the experience of women undergoing abortion. Unmarried women were more likely to delay their pregnancy as well as face delays due to delay in recognising pregnancy, or lack of partner support, exclusion from decision making and failed attempts at abortion. All these led to unmarried women being two to three times more likely to get an abortion during the second trimester. Findings also revealed that unmarried women were more vulnerable and disadvantaged and, hence, programmes need to take steps to improve access to safe and timely abortion for unmarried young women.

**12.4 Association between Early Marriage and Intimate Partner Violence in India: A Focus on Youth from Bihar and Rajasthan, Ilene S. Speizer and Erin Pearson, *Journal of Interpersonal Violence*, Vol. No. 20(10), pp. 1–19, 2010.**

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**Key Words:** *Intimate Partner Violence, Marital Violence, Child Marriage*

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This paper studies the connections between intimate partner violence (IPV) and child marriage in the states of Bihar and Rajasthan. The hypothesis of the paper is that women who marry before the age of 18, i.e., the legal age of marriage, will be at an increased risk of IPV than women who married at age 18 or older. It studies women in the age-group of 20-24 and asks for their experiences in IPV in the last 12 months.

The data source for this study is the 2005-2006 India National Family Health Survey (NFHS-3). Here information was used from the domestic violence module, which was administered to only one eligible woman per household if her privacy could be ensured. The module was administered by trained female investigators. The sample includes currently married women in the age group 20-24, in the states of Rajasthan and Bihar, the states with high rates of IPV (56 per cent in Bihar and 45 per cent in Rajasthan, as reported by women), and these are states where more than half of the women are married off before the legal age (64 per cent in Bihar and 58 per cent in Rajasthan).

The key dependent variables were lifetime experience of physical or sexual IPV and experience of physical or sexual IPV in the last 12 months, and the key independent variable was age at marriage. Data was analysed using Stata statistical software, version 10, and all univariate, bivariate, and multivariate models were weighted and controlled for the sample survey design.

The paper finds that 76 per cent of adult women and 71 per cent of youth were married before age 18 in Bihar and 70 per cent and 68 per cent in Rajasthan, respectively, among currently married women, as against the corresponding all-India figures of 58 per cent and 59 per cent, respectively. Among these three categories of women 56 per cent to 60 per cent of women agreed that spouse abuse was acceptable in at least one scenario. The paper reveals that in Bihar and Rajasthan, about 20 per cent of women report witnessing their father beat their mother.

The analysis reveals that lifetime IPV and recent IPV (last 12 months) experiences differ for each state; in Bihar, 64 per cent of currently married adult women and 60 per cent of currently married youth report lifetime IPV experience. The corresponding figures for Rajasthan were 48 per cent and 46 per cent, respectively. The paper also reveals that recent IPV experience is high in Bihar, where 46 per cent of adults and 51 per cent of youth report IPV within the past 12 months, against 37 per cent and 26 per cent in Rajasthan. Not surprisingly, the all-India figures for lifetime recent IPV experiences are lower.

The paper reveals that women who married before the age of 18 are more likely to have experienced IPV in their lifetime than women who married at an older age in the states of Bihar and Rajasthan, as well at the all-India level. It argues that the pattern of early age at marriage and recent IPV is different for adults and youth. Recent IPV experience was reported higher for currently married female youth who married before age 18 than in the adult woman sample in all the three categories.

It is interesting to note that in Rajasthan and at the all-India level, a positive and significant association is found between early marriage (before age 18) and recent IPV experience for the youth sample. However, in Bihar, this pattern is not found. The paper attributes this to the fact that both early marriage and IPV are common in Bihar and, thus, there is less variability to be found.

The paper also reveals that for adult women in all the three categories, women with supportive attitudes toward spouse abuse were women who have witnessed wife beating and are significantly more likely to have experienced recent (and lifetime) IPV. This paper finds this pattern to be inconsistent in the youth sample. Husband's alcohol use was another consistent factor which was associated with lifetime and recent IPV. The paper finds that women who reported that their husband consumed alcohol are significantly more likely to report IPV than women who reported that their husbands did not drink alcohol.

The paper acknowledges five limitations of the study. First, since the data source is a large demographic survey, it is possible that there would be biases at the data collection phase, such as women not reporting or underreporting sensitive information. Second, some of the independent variables may not be precursors to IPV but rather may be affected by the experience of IPV and, thus, the problem of causality. Third, some types of abuse which were not a part of the module and used to collect information on violence may have been missed. Fourth, as only a subsample of women were administered the domestic violence module, it should be kept in mind that the sample size was small for detailed analysis. Fifth, the paper notes that a number of factors such as dowry harassment, being in a 'love marriage,' and women's power and decision making that have been found to be associated with increased risk of IPV were not included in the analyses and, thus, the results may be biased.

The paper finds that young women from Rajasthan, in particular, and from India, in general, who marry before the legal age at marriage of 18 are at increased risk of IPV. The study suggests that for the case of Rajasthan, this can be attributed to the practice of early childhood marriage during *Akha Teej*, which, the paper argues, leads to even fewer educational opportunities for young women and married girls. The study throws light on the fact that IPV is still pervasive, especially among youth who married before age 18. Even after controlling for key factors known to be associated with IPV, such as attitudes toward spouse abuse, witnessing the father beat the mother, and husband alcohol use, early age at marriage remains a risk-factor for lifetime and recent IPV experience. In conclusion, the paper argues that in spite of rapid development in India, progress in achieving women's rights remains slow.

In a context, where the legal age of marriage is not enforced, and the findings that early age at marriage is associated with IPV, the study recommends that IPV prevention programmes need to work in convergence with other related interventions. Working with men and communities is crucial to change norms and, thus, reduce early marriages and IPV for the next generation of youth. The paper argues that this is crucial for reducing human rights violations of women and for improved reproductive health for all women in India and throughout South Asia.

### **12.5 'Didi' of Rural Bihar: The Real Agent of Change?, Meera Tiwari, *Economic and Political Weekly*, Vol. No. 45 (33), pp. 27-30, 2010.**

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**Key Topics:** *Self Help Groups, Jeevika Programme, Women's Empowerment*

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The article starts with the meaning of the term *Didi*, which in northern India is used to address an elder sister. It embodies the notion of respect given to an elder sibling. Traditionally, the term has remained within the social domain. The article provides an insight into the emergence of rural self-help groups (SHGs) for women – the Bihar Rural Livelihoods Promotion Society (BRLPS): JeeVika in Bihar, where the term is formally deployed to address member colleagues. The paper also explores how this nomenclature might influence in mobilising the immense underutilised social capital of rural women. Based on primary research, it seeks to highlight the potential role of the individual rural women – the *Didi*, in driving the social and economic shifts necessary for sustainable poverty reduction in rural Bihar.

A sample of 240 rural women from 6 BRLPS participating villages, from 2 of the 6 districts where the programme has been adopted, forms the subject of primary research. The research is a pilot towards developing a framework for the poverty and social impact assessment of the livelihoods programme. A semi-structured enquiry tool comprising

qualitative and quantitative methods was used to capture the shifts in the social and economic lives of the JeeVika participating rural women.

The paper notes that, launched in September 2007, JeeVika is a state owned World Bank funded initiative. Based on 'savings-led' self-help-groups, it comprises the poorest and the most socially excluded women. It is conceived in terms of (1) individual institutional building: situated within the discourse on well-being and empowerment (2) individual and collective capacity building, drawing on the discourse on the capability approach, and (3) adoption and participation in self-selected livelihoods opportunities. The focal point of the process is the individual rural woman and her 'agency'. The study argues that by addressing each other as *Didi*, numerous social barriers are broken and new bonds of collegiality and social networking are created. Complexities of caste and religion based exclusion are engrained even within the lower caste communities. The nomenclatures – JeeVika and *Didi* – may weaken such social rigidities and have an equalising influence. First, since the women understand the meaning of JeeVika, it is easier to identify with the movement to improve their livelihoods, irrespective of their social background. Second, the social attributes of the term *Didi* usher in reverence for each other beyond that conveyed by *mahila*, *bahin*, or *sakhi*, irrespective of their caste, religion, or age. The newly created bond is reinforced at the weekly group meeting held in rotation in the social space outside the dwelling of each member.

According to the paper, the circular seating practice in the group enables dispelling of any hierarchical notions that may arise out of social status or being office bearers of the group. Each member first introduces herself then greets all *Didis* with not just a *namashkar*, but *pranam*. This again has higher connotations of respect in the cultural context, further strengthening the bond. The encouragement given to the shy and less articulate *Didis* from the bold and vocal ones is a lesson for any researcher of adult learning. There are individual member passbooks as well as the group ledger. Savings and repayment are passed down the circle to each *Didi* who is encouraged to count, add their input and say it aloud, to finally reach the treasurer. The practice aims to instil a sense of ownership and entitlement by visually and physically handling savings and repayments. A Rs 10 note growing to Rs 150 at the end of the round certainly appeared to provide a sense of material security – the group has Rs 600 at the end of each month and the assurance of accessing this money with dignity. The social and economic implications of borrowing at 2 percent compared with at least 10 percent from the local moneylender are clearly understood. The members assess the loan applications for the group money through a participatory process. Each applicant makes a case by outlining her need, urgency and how she expects to pay. In clear contrast to a commercial lending process, the group appeared to relegate the 'ability to pay back' to a much lower priority where the need was either for life-threatening treatment or a daughter's marriage. 'Softer' repayment terms extended over a longer period were offered to such applicants. However, concerns of accountability, defaulting repayment and savings, as well as inadequate information indicated a strong sense of ownership of the process. *Didis* are not wanting in vociferously expressing their views, be it a criticism of their treatment at the bank, by the village head, by PRI officer, or how much they wish their children to be educated so that they can live a better life than their parents.

The paper notes that members use their thumb mark as signature or have learnt to sign while being in the group. The sense of pride in being able to sign even at age 65 or more, instead of the thumb mark or *angutha chap*, for their identity is fathomless. Though their wealth of knowledge and awareness reflected in both articulating and suggesting solutions to social problems of alcoholism, poor delivery of public health services and irregularities in PDS, teacher absenteeism, and lack of infrastructure is remarkable. It provides fertile grounds for research on knowledge at the grassroots and the meaning of literacy.

The study shows that the *Didi* is clearly demonstrating the ability to act and bring about change, with the SHG platform as the enabling factor. Second, rudimentary and scattered evidence indicates the JeeVika SHGs influencing the public service delivery and local governance through the collective action of *Didis*. Some noteworthy examples used in the study are: measures being taken by the local officials to correct the irregularities in the PDS and this having a self-regulatory impact on other PDS, bank officials coming to the village to open group accounts, daily availability of mid-day meals in schools, and improvements in teacher absenteeism. The shifts in the status of the most disadvantaged women are critical tenets of the current thinking on well-being and human development. The changes can be conceptualised as pro-wellbeing and pro-development driven by a bottom up approach.

The JeeVika SHG from the very start have embarked upon a remit that spans well beyond just facilitating micro credit to the most deprived women. Yet, limitations and pitfalls must be anticipated. The emerging more empowered status of the women is bound to affect the gender relations and the traditional male-female dynamics in the village

communities. More research is needed to enable synergies in the male-female dynamics in rural Bihar. A bigger threat to the success of the SHGs in Bihar is the economically better off from lower castes joining the group while the poorest are left out. The study suggests that this could jeopardise the group dynamics and create a divisive structure with skewed power relations. The selection of the most deprived cohorts is a challenging and complex process. The third but not the last impediment is in letting the already formed SHG to break up. It could have an all around dampening effect through distrust and unmet expectations.

The study concludes that while much work remains to be done to address these and many other limitations, the SHG endeavour through the rural *Didi* of Bihar, the agents of change, has much to offer towards driving the development agenda in Bihar.

## **12.6 Gender Gap in Educational Attainment: Evidence from Rural India, Kausik Chaudhuri and Susmita Roy, *Education Economics*, Vol. No. 17(2), pp. 215–38, 2009.**

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**Key Topics:** *Gender Difference, Grade Attainment*

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The objective of this study is the identification of state specific factors influencing primary and middle school graduation probabilities of male and female children in the two states of Bihar and Uttar Pradesh (UP). In both the states, the education of the parents and development of village infrastructure seem to be the most important channel of narrowing the schooling gap.

The study not only includes individual level and household level variables in its analysis, but also explores community level factors that have a favourable influence on the primary and upper primary school completion rates. They estimate separate equations for UP and Bihar as the two states are not alike in terms of education policy or even the socio-political environment. They present results from a simple probit model of primary and upper primary school completion rates. Finally, they also estimate a censored ordered probit model of grade attainment. They use the Uttar Pradesh–Bihar Survey of Living Conditions, 1997/98 (LSMS) for their empirical investigation. The data-set covers a total of 2,250 households (120 villages) in rural UP and Bihar.

The paper demonstrates the importance of state-specific factors while explaining the completion probability of primary and upper primary schooling. They estimate primary school completion probability independently for UP and Bihar. However, given the small sample size, they are forced to estimate a common equation for the upper primary section. They find, for primary school attainment, that the education of both the mother and the father is important in Bihar. In UP, the education of father is significant in both the female and male samples, whereas, mother's education is significant only in the sample of male children. They find that the mother's (father's) education has a bigger marginal effect than father's (mother's) education in the sample of female (male) children.

The caste of the household is a significant determinant of the primary school graduation probability for the male children in Bihar and female children in UP. The BPL status of the household is a significant determinant of graduation probabilities of the female children in UP. In general, it seems that caste variables are more important in Bihar than in UP. Incidence of violence is a significant deterrent of graduation probabilities in Bihar but not UP. A higher level of homogeneity is often associated with few inter class clashes. However, in rural India, a higher level of homogeneity in the population hurts graduation probabilities of the female children in Bihar and male children in UP. Better roads and access to electricity in the village increases the primary school probabilities in Bihar. For the upper primary section, father's education is a significant variable in both the male and female samples. In Bihar, access to all-weather roads improves the probability that the girls will graduate middle school, whereas, in UP, access to electricity improves the probability of middle-school completion in the male sample. A higher incidence of violence against women reduces the girls' middle school completion probability.

The results from censored probit model additionally reveal that the presence of both the public and private schools in the village improve the middle school graduation probability in UP for the male children and reduce the primary school probability for the female children in Bihar. In Bihar, the presence of both the types of schools increases the boys' graduation probability, even though the variable is not significant.

The decomposition exercise reveals that, in both states, girls are less likely to finish primary (post-primary) school as compared to boys. The characteristic effects are modest relative to the coefficient effects. This implies that

either the 'discrimination component' is large or there are other important variables not accounted for in the existing literature. The study estimated a within-sibling regression, which suggests that the discrimination component exists and that the entire female–male gap is not due to omission of important variables. The only silver-lining is the fact that differences in the endowments of the girls and boys in terms of education of the parents and the economic and social status do not contribute to the gap in a big way. Parental education and investments in the village infrastructure seem to be most effective channels in narrowing the female–male gap.

### **12.7 *Naxalwadi Andolan mein Mahilayen [Women in Naxalite Movement]*, Ghanshyam Rai, Prachya Publication, Patna, Bihar, 2009.**

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**Key Topics:** *Women in Naxalite Movement, Freedom Movement and Women*

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The book begins with a brief introduction of the development of the Naxalite movement which has become an important political, economical, social, cultural, and administrative issue in contemporary India. The main objective of the study is to explore the contribution of women and their participation in the Naxalite movement and the effect of movement on the women's movement in India, with particular reference to Bihar.

The study has found that women have played an important role in each and every national and reform movement, but they never got their actual share in glory. The leaders of these reforms had raised 'women's issues' to fulfil their own needs and targets, but never fully integrated these into the objectives of their movements – these include issues such as the equal participation of women in economic world, economic production, and their economic freedom. Women have historically actively participated in the Naxalite movement. A survey reported that there are 40 per cent women members out of total members in Naxalite organisations. According to the study, seven women were killed in the Naxalite rebellion in May 1967, the incident which transformed the kisan movement to the Naxalite Movement. The study has also given a brief overview of 33 women who were killed in different Naxalite movements in different states.

The study includes interviews with 243 women who played active roles in the Naxalite movement in Bihar, focusing mainly on the women who participated actively during the first phase of CPI (ML Liberation). It finds that out of the 243, there are 3 per cent in jobs, 35 per cent landless, 43 per cent belong to the lower middle class, and 19 per cent belong to the middle class. Further, 32 per cent are illiterate and 44 per cent are literate. Twenty four per cent are highly qualified, and with regard to age, 25 per cent were between 18–25, 13 per cent to 26–30 and 52 per cent above 31 years. The study also included interviews with 65 Naxal women from Assam, 41 from Uttar Pradesh, 31 from West Bengal, 49 from Maharashtra, 12 from Andhra Pradesh, 14 from Tamil Nadu, 5 from Rajasthan, 3 from Tripura, 4 from Gujarat, 1 from Orissa, 1 from Karnataka, 4 from Delhi, and 7 from Punjab. This data shows a great contribution of women in Naxalite movement in India.

The women's movement started in the 19th century with the movement for women's rights in France, England, and America and gradually became wider in its scope and reach. This wave of thought has also come to India towards the end of the 19th century, with the establishment of women's organisations such as that of Swaran Kumari, established in Calcutta in 1886 under the guidance of the Brahma Samaj. But these organisations were limited to mainly urban areas and few educated women. It affected rural areas later and, according to the study, mostly because of the Naxalite movement. Naxal organisations often make women in their cadres more aware of their rights such as those to economic work, right to education, and equal pay for equal work. This translates into greater empowerment of women and contributes to their demands framed through the women's movement in India. The origins of the women's movement among rural farmers can be traced to the Naxalite movement. The first organisation was created by middle class women in Hyderabad in 1974 and was named Progressive Organisation of Women. Thus, the Naxalite movement has historically influenced the women's movement in India and made women more aware of issues surrounding social justice, security, and economic equality.

The study concludes with the argument that Naxalite organisations and, more broadly, the Naxalite movement has played an important role in fostering the women's movement, especially women's movement among rural peasants, and the contribution of women in Naxalite movement is appreciable and must not be forgotten.

**12.8 Exclusion of the Excluded: Gender, Labour Market and the State [A study of women Agarbatti workers from Muslim and Dalit communities in Gaya district of Bihar], Sabiha Hussain, Centre for Women's Development Studies, New Delhi, 2008.**

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**Key Topics:** *Informal Sector, Unorganised Workers, Agarbatti Workers, Muslim and Dalit Women*

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The study notes that a majority of women workers in India, especially in the unorganised sector, live and work under many socio-cultural and economic constraints. Mostly these workers belong to poorer families of backward castes, Scheduled Castes, or a minority group. In such a situation, the study of women of these groups as workers becomes a complex issue that needs to be analysed both at the micro-level of the households and the macro-level of labour market, and also the policies and programmes. The main objectives of the study are to examine whether Muslim women face more problems as being Muslim, than being workers and being women; to gauge whether the norms of seclusion led women to enter into home based work or is it other structural, programmatic, and gender related factors that led them to enter into home based work; what were the reasons that led women to enter into home based occupation; do the larger bodies (community, market, and the state) perceive their income generating activities as 'Work' and also what were their expectations from these larger bodies? Whether increased participation in income earning activities has reduced gender inequality and their access to and control over resources? What are the industrial constraints faced by the traders of the industry? What do women think about forming a union for themselves and their expectations from larger unions.

Three *panchayats* in Bihar, namely, Rasalpur, Amraha, and Bara *panchayat* of town block were selected for the study on the basis of population composition, caste, community, income, and the percentage of women engaged in *agarbatti* rolling. From each *panchayat*, two or three villages were selected using the above criterion and from these villages. A total sample of four hundred women was selected for interviews. Efforts were made to include one village with an overwhelming *Dalit* population and one village with an overwhelming Muslim population. This was done with the intention to ensure that problems of workers is not community or religious specific, rather it is the problems of women workers which they face at various levels. The data was collected through an interview schedule, case studies, and group discussion with women, and, sometimes, men also participated in the discussion. Selection of sample was made on the basis of a pilot survey. The household survey for the study was conducted in the households of women workers working in this industry. Women were in the age group of 16 to 49 and who were still rolling *agarbattis*.

The study found a clear cut division of labour based on gender and not on any religious basis. For example, the work which requires more manly power, such as grinding of raw material, loading and unloading and packing of these raw materials, and where entry of women is socially unacceptable is done by men. Again, mixing and measuring of mixed material and measurement of finished product is done by men. Other work such as screening of defective *agarbatti*, making bundles containing half kilogram of *agarbatti*, wrapping of two bundles in one piece of paper with a rope, colouring of one end of *agarbatti*, etc., were done by women as, first of all, these works did not require much skill and, secondly, socially accepted by the society. The study reveals that women viewed themselves more as 'workers' than 'Hindu' or 'Muslim' women. There was a gender difference in the perception of women's work stated by men of the community, which was irrespective of their being of different faiths.

The study reveals that women get engaged in the rolling of *agarbatti* due to varied reasons. Poverty linked stressed migration, 26 per cent (27.3 per cent Muslim and 19.4 per cent *Dalit* women); lack of other employment opportunities, 24 per cent as per the skill and norms of the community (35 per cent Muslim and 17 per cent *Dalit*); home based work, 20 per cent (35 per cent Muslim and 16.6 per cent *Dalit*) as no outside movement is required, falls under socially defined norm of women's work; Divorce, desertion, widowhood, and lack of family support 6 per cent (5 per cent and 1 per cent); landlessness and indebtedness 17 per cent (23 per cent and 43 per cent); Marketing incapability 9 per cent (7 per cent and 13 per cent), Religious reasons (0.03 per cent) are some of them.

*Agabatti* rolling is seasonal and, hence, during the rainy season, the workers had to sit at home without any work that led them to live in poverty. Wage of these workers varies from Rs 7 to 9 after rolling one kilogram of *agarbatti* by sitting for 5-6 hours. Deduction of wage was higher than the received wage. No equipment is provided by the employer for rolling *agarbatti* and no job security is given by the employer in the off season. Lack of any union of

*agarbatti* workers had worsened the situation of *agarbatti* rollers in the region. Lack of any initiative by the State government to fix minimum wage for these workers has further worsened the conditions of these workers.

The common grievance made, especially by Muslim women, was the absence of any union and the lack of effort on the part of various NGOs to form a union for the *agarbatti* workers in terms of wage fixation and also organizing women for forming self-help groups for generating income under various government schemes. Women were very much aware of the fact that their income was essential for the survival of the family, and, hence, they wanted that their income generating activities need to be seen as 'work' not only by the community, State, and other agencies who promote women's economic empowerment.

The study points out that the limited access of Muslim women to various income generating schemes was due to their lack of awareness, various stereotypes, and prejudice against the community, along with the indifferent attitude of the government. The NGOs have further marginalised these women from availing the benefits provided by the government under various welfare schemes and, hence, led them to enter into this exploitative home-based work. The illiteracy and poverty adds to their economic marginalisation. For instance, as stated by a few women, when they wanted to start their own business of livestock, dairy, poultry, embroidery, and tailoring and they approached for a loan, they were not given a loan as they did not have any guarantor. However, there was no business rivalry between the women of two communities.

The non-existence of any women's groups, particularly in Muslim concentrated villages, had made Muslim women more ignorant about micro credit, forming self help groups, and other source of capacity building, particularly, the destitute and divorced women from the community have been further marginalised.

From the policy perspective, the study draws attention of the reader towards the lack of any policy for these workers to improve the socioeconomic condition of the largest religious minority. The percentage of Muslim women is lowest in construction and other work done outside the home. Another concern is that how will the National Rural Employment Guarantee Act, which is mainly giving work outside the house, would further exclude Muslim women to get work. Its third and most important concern is the new economic policy which would push the Muslim women to take up more exploitative, contractual, and less remunerative, work which would not only affect their health but would further add to their poverty. Women belonging to the category of destitute, deserted, divorced, and women from the female headed households need to be taken into account in the planning of the government. Looking at the present inflation rate coupled with the low the wage rate, the government must take some measures to increase and fix the minimum wage of these workers. The study suggests that organisations like the Self Employed Women's Organisation to intervene in this region and alternate employment opportunities have to be generated for these women.

### **12.9 The Culture of Women's Housework – A Case Study of Bihar, India, Naresh Chandra Sourabh, PhD Thesis, Department of Sociology, University of Helsinki, Helsinki, 2008.**

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**Key Topics:** *Division of Labour, Economy of Housework*

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This PhD thesis examines gendered housework in India, particularly in Bihar. The perspective adopted in the study was in part derived from the data but also from sociological literature, published both nationally and internationally. Primary attention is, therefore, paid to modern and traditional aspects in housework. The study shares that the aim is not to compare Indian practices to those of western societies, but rather to use western studies as a fruitful reference point. In that light, Indian housework practices appear to be traditional. Consequently, traditions are given a more significant role than is usually the case in studies on gendered housework, particularly in western countries. The study approaches the topic mainly from the socio-cultural perspective as this provides the best means to understand the persistence of traditional habits in India.

To get a wide enough picture of the division of labour, the study applies three methods in the study: detailed time-use data, questionnaire, and theme interviews. The data was collected, in 1988, in two districts of Bihar, one rural and the other urban. In the analysis of the data set, four principal themes are discussed. The study uses the concept of responsibility to understand the reasons for the persistence of traditional housework practices in Bihar. The power of tradition, the early socialisation of children to the traditional division of labour, and the elusive nature of modernity are all discussed separately.

According to the study, the survey gave an astonishing result, as it proved that the respondents were quite commonly of the opinion that women and men should be equally responsible for household tasks. This means that their attitudes were more modern than their conduct. But the findings derived from the oral interviews give reason for an opposite conclusion. When telling more in detail about their daily family life, the interviewees revealed that the division of labour was put into practice in a much more traditional way than the survey gave reason to suppose. The study must be situated within the larger context of the trajectory of modernity in India.

The study argues that tradition, in order to be powerful, needs supportive mechanisms, otherwise its power tends to fade away. One very important mechanism to support the persistence of the traditional division of labour in housework proved to be the socialisation of children. The socialisation of children in housework most often took place with punctuality and rigidity. For this purpose, traditions provided detailed rules of who has to learn what kinds of domestic tasks. Boys were usually socialised to a limited number of domestic tasks which were either not specified on gender lines or located outside the home, whereas, girls were socialised to most of the housework that was performed in the household and defined as feminine. However, the interviews also showed that some boys were socialised to feminine familial tasks, though this was rare and explained by special family circumstances. This indicates that socialisation was not totally fixed on gender lines. This can be a source of the weakening of the division of labour in familial tasks between women and men.

The significance of socialisation was strengthened by the fact that the majority of children were socialised to housework responsibility at an early age. In many cases, children actually started learning housework at the age of 5 or 6 years. An early socialisation to the traditional division of labour makes the circumstances favourable for it to sustain. This was supported by games that were strictly separated on gender lines. Together, these two socialisation mechanisms seemed to be so effective that the interviewees remembered, when recalling their childhoods, that they were quite seldom forced to perform housework. Instead, they saw it as their natural responsibility. The socialisation to housework seemed to be more vital for girls than for boys. This was legitimated by the daughters' future lives when settling in their own household after their weddings.

The study notes that although the interviewees were conscious of traditions as organising their conduct in housework, they admitted, when asked that factors other than tradition also made them favour housework as it has been performed from one generation to another. Amongst these other factors love and affection form a specific argumentation of its own. When integrating love with housework, the interviewees did not refer to their personal feelings or self-fulfilment, but to the well-being of the family. The significance the interviewees gave to love and affection is in contrast to answers the respondents gave in the survey. A great number of them were not so willing to perform housework. The contradictory results may be due to the tendency of the interviewees to link the question about love and affection to the ideal family life.

In addition to tradition and emotional commitment, the purity principle proved to be a significant factor framing the argumentation of housework and the division of labour. The purity principle was by nature such that it made the interviewees favour home-made products (for example, food) and services (for example, child care). The purity principle was partly derived from age-old traditions, which strictly regulate the performance of housework: who is allowed to do what. In this respect, purity as it influences the allocation of household tasks could have been handled in connection to the power of tradition. This was not done, because the purity principle also seemed to be linked to more purely practical notions. References to the quality of food, for example, signified this type of argumentation. It does not stem from traditions, or, at least, it modifies them by adding more modern aspects to the purity principle.

Finally, the significance of housework and the traditional division of labour proved to be highly dependent on economic factors. The overall rule seems to be that housework plays a vital role in the household economy as long as the average income is low. The respondents demonstrated in their opinions that they were not so willing to do housework. This may mean that when economic conditions become better in the Indian population, the amount of housework will diminish.

The study, thus, outlined key reasons for the prevalence of the traditional division of labour in the household, using a case study of Bihar. The pointed out that concepts of responsibility, familial love, purity, and economic factors contribute to the continued division of labour, along gender lines, within the household.



## 12.10 Shariat Courts and Women's Rights in India: A Case Study of Darbhanga in Bihar, Sabiha Hussain, *Pakistan Journal of Women's Studies*, Vol. 14 No.2, pp. 73–102, 2007.

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**Key Topics:** *Muslim Women, Shariat Courts, Women's Rights*

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The study notes that India's 65 million Muslim women, often called a minority within a minority due to their double handicap of gender and faith, are challenging medieval religious laws that have oppressed them for centuries. The recent release of the model *Nikahnama* by the All India Muslim Personal Law Board (AIMPLB) and its campaign for establishing and strengthening the *Shariat/Darul Qaza* courts to dispense quick justice to women, in accordance with the Quran, has created confusion and debate, both within and outside the community, and this move has not only complicated the matrimonial issues and problems faced by women but also stirred a debate about the legality and sanctity of these courts under the Indian Legal system. This paper draws upon the experiences of twenty women who went to these courts for *Khula*, *Fask-e-Nikah*, and the settlement of maintenance, *mehr*, and the articles of dowry.

The paper seeks to study why should women go to these courts to settle matrimonial disputes while there are provisions for them in the secular courts? Do women get less harassment and get quick justice according to Islamic law by approaching to these courts? Who are the women who approach to these courts? Should the mode of justice not be left to the women to decide? Who would guarantee the efficacy of *Darul Qazas*, the quality of the presiding judges, and the efficiency of the proceedings? Can the Board be allowed to take away the right of Indian Muslim women to knock at the doors of secular courts? Does the Board have the authority to restrict Muslim women access to the courts for justice?

The study was conducted in the towns of Darbhanga, Madhubani, Sakri, and Jale of Darbhanga Commissionery of Bihar province. The information was collected through in-depth case studies of each woman. Divorced women were identified by visiting *Darul Qaza* and *Imart-e Sharia* and, accordingly, they were chosen for the study. The chosen cases were from the central Shariat court at Phulwari Sahrif, Patna, and the district Shariat Court, Muzaffarpur (this court covers Muzaffarpur, Sitamarhi, and Vaishali).

The study found that four women, who sought *Khula* from the district Shariat court, had to accept the terms and conditions laid down by their husbands as they did not want to live with their husbands. The records collected from *Darul Qaza* show how the process of *Khula* is institutionalised, and also the inadequate role of the *Qazi* in putting pressure on the husband to follow the true path of Islamic teaching and give women their due, particularly after divorce.

Of the women who were the victim of triple divorced, only two women got their *mehr* and maintenance, rest of them did not get their *mehr*, maintenance and *Jahez* back after divorce, despite their repeated appeal to the Shariat court. Claims for maintenance of their children were also not reinforced by the court.

In case of women who approached the Shariat court for *fask* expecting quick justice, as per Islamic provisions (as promoted by the AIMPLB) in shorter duration, without much physical, mental, and financial hassle. However, the judgment took two to three years' time.

Despite the women's continuous appeal to the jury to get back their *mehr*, maintenance allowance, and *jahez*, no concrete step was taken by this court. Rather, the *Qazi* showed his inability by saying that they are not the enforcing body and, hence, they should go to the secular courts.

Woman also complained against the *Qazis'* gender biased attitude, absence of the other party, and non-perusal tendency of the court to the recovery of maintenance, *mehr* and *Jahez*, were commonly stated by all those women who approached to these courts.

Stigma related to divorce, losing the family honour, and an assumption that less hassles would be there, led women to take recourse to these Shariat courts but their experiences were quite contrary to their expectations. Advocating for Shariat courts for quick dispersal of matrimonial disputes in accordance with Islamic teaching seems to be contrary as the experience of women revealed. However, while talking to Muslim women, it was quite clear that now women are making their desire for change and are coming forward for a debate about reform/change in personal law. They have started raising their voices against the misinterpretation of the teachings of any clergy of the religious board that contradicts the teachings of Islam and gender equality. But the study points out that one must keep into mind that reforming personal law in India is not a simple issue, rather it has to be seen in the overall social, economic, and political climate of the country, and the insecurity arising out of frequent riots.

**12.11 Leaving the 'Proxy Woman or Politician' Dichotomy: A Qualitative Study of the Possibilities and Obstacles for Elected Women's Participation in Indian Local Governance, Aksel Sundstrom, PhD Thesis, Department of Political Science, University of Gothenburg, 2007.**

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**Key Topics:** *Political Participation of Women, Elected Women Representatives*

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The thesis focuses on the discrepancy between formal and effective power of elected women. By studying perceptions of female representatives in local governance in Indian Bihar, this study aims to develop a more nuanced theoretical view on the possibilities and obstacles for effective use of power of elected women in a context of low economic development. The main result of this study is presented in a mapping of perceptions of elected women on their possibilities and obstacles for effective use of power. Another main result is that supporting possibilities for elected women should be seen as derived from the same context as hindering obstacles. The coexistence of obstacles and possibilities for elected women in a context of low economic development is an argument against the dualistic theoretical view that tends to picture the elected women either as 'proxy women' or as empowered politicians. With this more nuanced analysis of the possibilities and obstacles for elected women, an understanding of their scope for effective use of power can be given. Collection of data was executed through a field study in the surroundings of the district Purnia, in Bihar, where qualitative respondent interviews were held with twelve elected women in the months of April and May 2008.

The perceptions of elected women were divided in three broad categories of factors that all together have 42 different sub categories of perceptions, of which 21 were deemed to be new in relation to previous research. These different categories of perceptions contribute to a more nuanced knowledge of obstacles and possibilities of effective use of power for elected women in a context of low economic development.

The results of the study show that there exists a discrepancy between the formal and effective use of power of elected women. A number of gender-based obstacles are perceived by the respondents. As Phillips and other scholars have noted, this points to the fact that presence of women is in itself not enough to ensure the possibility of an effective use of power by them. Furthermore, also in line with previous research, her results indicate that reservation is not a guarantee for participation of the elected women. One of the main findings of her study is the coexistence of possibilities and obstacles for participation of the respondents. In the earlier research, the picture is often given that on the way towards empowerment of elected women certain obstacles can be present, but there is seldom a discussion of the actual possibilities. On the contrary, she has found that possibilities indeed are absolute factors working as a support for the elected women, be it somebody that helps an illiterate elected women to read, a bureaucrat that makes the elected women sit in front in the meetings, or any of the other perceived possibilities the respondents have explained. In analysing the identified perceptions, it becomes clear that the elected women's situation is more multifaceted than often described. This coexistence of possibilities and obstacles can be seen as an argument against the view in earlier research where the elected women are pictured either as 'proxy women' or full feathered politicians. Her results indicate that it is possible that even empowered female politicians could experience hinders and that the shyest elected women could perceive some sort of supporting factors in their work. This diversity should be recognised to a bigger extent.

In the Indian debate over reforms of quotas for women, there is a tendency among scholars to argue that elected women either become 'proxy women', or empowered politicians. The research indicates that possibilities and obstacles exist at the same time and that a dualistic view is not very useful. Only with a more nuanced analysis of the supporting possibilities and hindering obstacles for elected women, an understanding of their room for effective use of power can be given.

**12.12 An Analysis of Accelerated Female Literacy Programme in Bihar, UP and Orissa, J. Mathews, Indian Institute of Public Administration, New Delhi, 2006.**

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**Key Topics:** *Accelerated Female Literacy Programme*

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The study aims at an analysis of Accelerated Female Literacy Programme (AFLP) in Bihar, UP, and Orissa. It has been done by employing the following techniques: the qualitative and quantitative treatment of the primary data generated by the *Zila Saksharata Samitis*, which implemented the AFLP and analytical treatment of the secondary data generated at the Ministry of Human Resource Development, Government of India.

In many ways AFLP was an innovative programme because previously literacy programmes were area specific and time specific, but the AFLP also became gender specific. The increase in the involvement of development organisations and local civil society, along with the addition of skill development training at the ground level, made AFLP a better rooted programme. Consequently, it has a public appeal which was previously missing.

The holding of skill development programmes immediately after the teaching learning exercise was over, also added the sense of purpose that the regular one lacked. The involvement of the National Literacy Mission and state level officers in the supervision and monitoring at the teaching learning centre level too was a new addition. This along with the involvement of the external SRCs in the material preparation, scheduling, and programmes implementation generated enough pressure on the stake holders including learners to perform. In fact, this additional dimension made AFLP 'task' oriented rather than 'target' driven.

The lessons learnt from the AFLP could be summed up as: firstly, women have to be addressed as an independent target group. Secondly, a specially structured programme within the TLC, PLC, and CE mode is required to be included for females, especially in low female literacy districts. Thirdly, both at the campaign level and at the programme stage, gender specific tools and pedagogic materials will be more effective. Fourthly, a larger participation of civil society and dedicated institutions would get better results. Fifthly, the Self-Help Group-NGO channel provides a good entry point to reach the marginalised sections. Finally, clubbing the programme with livelihood related programmes brings about larger and fuller participation of rural women.

**12.13 Dalit Women on the Move – The Bihar Scenario, Sachchidananda and Niraj Kumar, Serial Publications, New Delhi, 2005.**

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**Key Topics:** *Dalit Women*

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The study explores the changing socioeconomic and political context and status of *Dalit* women in Bihar. The study identifies key facilitators of change in the context of *Dalit* women in the state.

The constraints in the process of empowerment have been identified and some suggestions have been made as the agenda for future action. The study suggests that there is still a long way to go, and both the state and society have to alter their strategies to accelerate the whole process. Illiteracy among *Dalit* women is a big hurdle in the path of their development. Although many formal and non-formal programmes are in progress to address this issue, their participation is still poor. Mahila Samakhya as a programme meant for the empowerment of women, especially women belonging to weaker sections, has over the years extended over a large area. However, there is an acute shortage of staff for carrying out the programme. *Dalit* women face a life of deprivation and discrimination. They remain deprived of basic health facilities which government provides them free. There is an urgent need to address this problem at the grassroots level.

The micro credit SHGs is taking place, but its area and coverage is still below the mark. There is vast regional disparity in its formation. The study suggests that training of SHGs members should be according to available local resources and the prevailing situation. They also suggest that efforts should be made to tie up the SHGs at *panchayat*, block, and district level in a multi-layer cluster so that the working capacity, resource management, and entrepreneurship of its members may improve.

Indebtedness is still prevalent among *Dalit* women and they part with a hefty amount of their earned income in repaying it. Banks, SHGs, and cooperatives should try to provide them with loans. The government should carry out its programmes in Naxal affected areas as well.

Some *Dalit* women suffer from social stigma. The study highlights the internalisation of caste norms, even among the women themselves. They suggest that efforts should be made to ensure their maximum participation and economic prosperity. Efforts should also be made to identify certain castes which are still relatively backward among the *Dalit*. Greater awareness among men with the help of the government and NGOs, to bring about attitudinal change, is also required. Sensitisation workshops for government functionaries on *Dalit* and women's rights are necessary to reduce their bias and indifferent attitudes towards the marginalised sections of society.

The study suggests that institutional support can be through government, civil society organisations, and the media. Promotional efforts are also needed to facilitate co-operation of spouse and family members of certain *Dalit* women, who are engaged in any entrepreneurship activity, to share the burden of household and agriculture work. Finally, the study recommends that every programme meant for the empowerment of *Dalit* women should be implemented in a transparent manner and the implementing agency should be accountable to the beneficiaries.

**12.14 *Who? Her Father. 'I Don't Know. But, Yes, I Am Her Mother': Voices of Anguish and Aspirations from Chaturbhuj Sthan, where Prostitution is a Way of Life (An Ethnographic Study on Women in Prostitution in Bihar)*, Nina Srivastava, Presentation made at Forum 9, Mumbai India July 2002 - January 2003, Global Forum for Health Research, 2005.**

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**Key Topics: Prostitution**

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Since ancient days, prostitution has been a profession in India. Presently, there are about three million prostitutes in 400 red light areas in India. Almost 80 per cent of the prostitutes belong to the lower castes, *Dalits* and tribals, who are forced into the profession for sheer survival. A considerable section of women are forced into prostitution due to patriarchal oppression in the family and society, victims of rape by the male chauvinists, and deception by lovers. There was a strong indication from the available information that women and children were becoming vulnerable to prostitution as they were unable to survive with dignity because of lack of livelihood options. In the absence of awareness of human rights, the economically and socially deprived people at the grassroots have become easy prey to this trade. Migrating populations have become most vulnerable to exploitation by pimps and traffickers. In this context, the present study tries to focus on the violation of human rights that occur in prostitution. The broad objectives of the study are to understand the trends and patterns of prostitution, the structural and functional mechanisms that reproduce and reinforce the processes that perpetuate the phenomenon, and to analyse the roles and functions of the formal and voluntary agencies that were involved in containing and combating this phenomenon.

Through interviews with 55 female sex workers in the Chaturbhuj Sthan area of Muzaffarpur, which is one of the biggest red light area of Bihar, this paper explores sexual negotiations between men and women in the sex industry. This paper focuses on factors that affect sexual decision-making, including safer sex practices. Further, this paper examines other elements of the sex industry that contribute to unsafe sex, such as competition between women for clients and violence in the industry.

The study reveals that the sex workers were of the age 15-45 years. Most women were forced to choose prostitution because of poverty or lack of education. Lives on the streets exposed sex workers to a number of health problems in addition to HIV/AIDS and sexually transmitted diseases (STDs).

The study points out that 75 per cent of the sex workers were illiterate. Among the sex worker population, almost 10 per cent were adolescents. More than 50 per cent were unmarried. A large number in the 22-35 age groups had been pushed into the 'trade' while they were children. About 50 per cent of the sex workers had their first sexual encounter when they were between 10 and 14 years of age. The study reports that 75 per cent of the respondents had their first sexual encounter forced on them and 30 women reported being raped since entering prostitution. While a few received incomes from the brothel owner, the others never received any income.

The study reports gonorrhoea as one major health problem among the sex workers. The respondents were aware of HIV/AIDS. However, none of them knew whether they were suffering from it or not. Ninety per cent of them said

they were willing to use condoms, but very few were able to use them. It mostly depended on the client's preference and consent. Eighty per cent had gynaecological problems. Some other diseases that were mentioned were asthma, high blood pressure, hepatitis B, dizziness and eating disorder. Depression, thoughts of suicide, and grief, caused by the loss of family, were some of the other problems mentioned by the women.

The study found that the 'immoral whore' image makes it difficult for them get good medical treatment. Illiteracy, ignorance, and fear of the medical establishment make the women vulnerable to exploitation and extortion. Medical staff at public hospitals has an unsympathetic, indifferent, and often humiliating attitude towards them. Doctors often refuse to treat or admit sex workers to hospital, saying they are AIDS carriers.

The study points out that lack of information and total isolation is another barrier to healthcare. Some women did not know where they could get healthcare. Others knew they should seek medical care, but, it seemed to be low on their list of priorities.

Sex workers in Bihar claim that harassment, extortion, and occasional arrests on soliciting charges usually characterise police intervention. The police seldom are seen as a positive force that addresses the violence of pimps and traffickers while protecting underage girls from bonded sex labour. The study reports that local police and politicians are responsible for the red light areas and they receive bribes from organised crime networks to protect the lucrative sex trade.

The study recommends that public awareness campaigns and community participation with the partnership of police and NGOs hold the key to prevention of trafficking. Provision of adequate number of rescue homes would also prevent the re- trafficking to a certain extent. The intervention of media, provision of legal literacy, and political will play a major role in preventing prostitution. Apart from these, empowerment measures, including education, health services, childcare, employment, housing, counseling, and legal assistance should also be promoted.

### **12.15 Empowerment of Women through Self Help Groups in Bihar, Sachidananda and Niraj Kumar, *IASSI Quarterly*, Vol. 22 No. 4, 2004.**

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**Key Topics:** *Women's Empowerment, Self-Help Groups*

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The article is a twin approach to women, their downtrodden status, and their consequent empowerment. The authors trace the pitiful socioeconomic condition of women to the organic conception of the society which is based on the division of functions into intelligence, spirit, and production service. As far as policy making for women is concerned, voluntary organisations for women, women of eminence, and women activists play a very major role in policy formulation. The formal (legislative and executive, both political and bureaucratic, and the Planning Commission) and the informal (political parties, NGOs) channels of planning are also involved in policy making for women.

The authors affirm that the law and policy makers have tried to ensure a social space enlarged with dignity, equality, and opportunity for employment in a protective framework to the women. They especially take note of the position of Hindu women in the society in this regard. Various governments have tried to uplift them through the implementation of various acts like Hindu Succession Act (1956), Hindu Marriage Act (1955), Hindu Adoption and Maintenance Act (1956), Child Marriage Restraint Act (1976), Dowry Prohibition Act (1961) and such others. Each of these acts makes a conscious effort to strengthen the status of Hindu women by giving them the right to divorce, ask maintenance from husband, prohibiting dowry, increasing the age of marriage, giving them a share in paternal and husband's property. The Planning Commission too played an important role in this regard by the creation of two major organisations; the National Commission on Women aimed at their social and the Rashtriya Mahila Kosh for their economic and empowerment.

The authors have defined empowerment as a state of mind which reflects self confidence, self reliance and the determination to fight for one's rights and interests which can be acquired through self-actualisation and sustained through action. They state that personal empowerment must be supplemented by collective empowerment.

The question of empowerment assumes greater significance in a state like Bihar where women constitute 47.93 per cent (2001 Census) of the total population. Their literacy rate is just 33.57 per cent. The authors opine that it is imperative for the women to be empowered, emancipated, and enlightened if a state is to progress. However,

social and cultural restraints have hindered the women in their path of development. According to the authors, empowerment of women is beneficial for the society as well as humanity for it is their empowerment and involvement in the decision-making process that leads to sustainable development. What women need most for empowerment is financial assistance. The authors have suggested that provision of micro credit through an organised set up will help them turn enterprising. Many different banks efforts to do so have been futile. Their recovery percentages have gone down. Even though there are enough banks with provisions available, the rural poor are hesitant to approach banks as most of them lack awareness due to their life style and poor literacy. The needy are yet to reap benefits of the rural development programmes.

In such a scenario, the role of SHGs is crucial in helping the rural poor to meet their productive and consumption needs out of the savings supplemented by institutional credit support provided by the rural financing institutions. Its main features are self-help, mutual aid, and institutional credit support. It basks on the features of saving first and no credit without saving, credit decisions are taken by the members of the group regarding the loan, interest rates, and other terms can be decided by the group, joint and several liability for proper use, membership from the poorest sections, specially women. The success of the pilot basis programme launched by NABARD in 1992-93 for bringing the poor within the fold of institutional credit through the mediation of SHGs promoted by NGOs resulted in RBI making SHGs enter mainstream banking in 1996-97.

The authors opine that SHGs in Bihar have abundant potential for their formation and credit linkage. The NGOs working in the districts are involved in their promotion. About 43 per cent SHGs are located in only two districts, Gaya and West Champaran. Different success stories of SHGs have been reported from different districts of Bihar. In districts like Nawada, Purnia and Jamui, because of the poor bank linkages many SHGs are not delivering their full potential. In most cases the respondents face problems in opening accounts. They also allege that bank officials adopt an indifferent attitude towards their problems. However, there are districts like West Champaran, the most backward district in terms of literacy and poverty, where NABARD has created 3,887 SHGs and the rate of recovery of loans is almost 100 per cent.

The authors reiterate that women empowerment is a combination of attitudinal and material empowerment. The SHGs have played an integral role in bringing about this and revolutionising the lives of millions. Women from particularly poor socioeconomic backgrounds have attained dignity, self-reliance through their association with SHGs. They are in a position to buy assets like tractors, auto-rickshaws, stone crushers, open schools, as well as create employment for others. They are free from the clutches of money lenders and being in a group has given them a sense of identity, status, and security. As far as the State of Bihar is concerned, women's participation in developmental schemes is still sketchy. This is primarily because here neither the NGOs nor government institutions have conducted mass capacity building work for SHGs. Hence, the author urges for imperative remedial action in this area for extending the micro-credit delivery system in Bihar.

**12.16 Inter Spouse Communication, Family Size and Nation Building: Patna- A Case Study, Ashesh Das Gupta, *Man and India*, Vol. No. 82 (1&2), pp. 177-84, 2002.**

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**Key Topics:** *Inter-spouse Communication, Fertility, Socioeconomic Status*

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This article deals with communication among married couples in India. Generally, the trend in India and in many Asian countries is that married couples have very poor communication and hardly ever discuss issues like the desired family size. This mental gap narrows down with time, but by then they usually have a family size which is larger than their desired levels. However, this type of problem is minimised to an extent in nuclear families. In fact, the article quotes a study by Hill, Stycoss and Back, in 1954, where a strong and positive correlation between the adoption of nuclear families and better inter-spouse communication is found. It also refers to another study by Murthi, Guio and Dreze, in 1995, which has shown that with better schooling and proper education, girls are more likely to express themselves better and this provides them with greater autonomy in the family. Such educated girls have a strong say in deciding the family size.

Based on the above literature, the present article formulates two hypotheses: 1) higher the level of inter-spouse communication, lower will be the fertility; and 2) couples with higher socioeconomic status have higher inter-spouse

communication. The data for analysis has been taken from two villages (Rampur and Raghapur from Naubatpur Block) in areas near Patna and also from the three localities in the Patna Municipal Corporation (Rajendra Nagar, Lohanipur, and Nehrunagar). Two hundred women (100 each from rural and urban areas) have been sampled, using the quota sampling method where the focus is on important socioeconomic groups. In the present study, the level of fertility for women is taken as the dependent variable and the level of inter-spouse communication has been considered as the independent variable. In order to measure the independent variable, a scale that has 18 items (such as size of family, expenses on children, etc.) has been constructed.

The results of the above mentioned analysis, shown in the article, depict the fact that the high fertility category is dominated by the rural contingent of the population, whereas, the low fertility category is dominated by the urban masses. Then the study has also classified the samples into the High Communication Group and the Low Communication Group. The above classification shows that most of the people (82 per cent) with high communication with their spouses have had low fertility rates, whereas, most of the people with low inter-spouse communication (90.7 per cent) have had higher fertility rates. As far as the significance of the above results is concerned, both the results are found to be significant (via the Chi-Square test). The above conclusion holds true for the rural as well as the urban areas. However, the impact of inter-spouse communication on fertility rates is lower for the people in the rural areas. This is seen from the fact that even among the couples who have had high inter spouse communication; the percentage of people with a high fertility rate is 32 percent. On classifying the couples on the basis of their socioeconomic status, the article has found that 91.3 percent of the couples, who are highly communicative, come from high social status families. It further points out that, out of this highly communicative group, the couples who have a higher social status, have lower fertility rates (and the result is again significant). The results for the couples in the low communication group are an exact opposite to the above findings and the results are again significant.

The article, thus, clearly shows that couples who have proper communication have a family size they can sustain. It concludes that easy communication among the partners helps them to share information about birth control. It further goes on to state that women empowerment, something that is crucial for 'nation building', must start at the family level. It stresses on the importance of education for such empowerment and also emphasises the need to revolutionise formal and informal education from their conventional modes. Lastly, the article also appreciates the importance of the family in enhancing better communication among couples as the family is the most important socialising unit.

### **12.17 Gender and Poverty in Rural Bihar, Institute for Human Development, New Delhi, 2002.**

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**Key Words:** *Gender and Poverty*

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The study examines whether there had been a redistribution of private and public resources in favour of women within the household, whether state policy has facilitated women's autonomy, and the extent to which transformation of unequal relations between women and men has occurred in Bihar. The components of status (of women) that have been taken as tools for analysis in the study are access to private assets and resources (food, income); access to public resources (education, health, water, fuel, political participation); control over their labour and income; control over their body, sexuality, reproduction, and control over physical mobility; and control over political spaces.

The primary study uses the survey method to measure the extent to which various indicators related to women's position and autonomy have changed. In addition, it collects information through the use of certain tools belonging to the Participatory Rural Appraisal (PRA) method, which include transect walks, social mapping, wealth ranking, focus group discussions, and seasonal food calendar.

Chapter one is an introductory chapter, followed by a profile of the selected villages, in Chapter 2, in the context of the broad political economy in which they are situated. This chapter also includes an introduction to the women in survey villages, with a broad description of their everyday lives. Chapter 3 analyses in detail the work situation of women in terms of their employment and income opportunities. Chapters 4 discusses the intra-household disparities in private resources like food and other household expenditure, and chapter 5 analyses the trend of intra-household disparities in access to and control over public resources like education, health facilities, and basic infrastructure like water and fuel. In chapter 6 the study examines how the restrictions on physical mobility affect the lives of the

women and the extent of political participation that our women enjoy. The last chapter summarises the study with relevant policy recommendations.

The study finds that in rural Bihar, like in other parts of rural India, the day to day struggles of women are vast and complex, their lives hovering precipitously on the brink of survival. Caste-class variables distinguish the life of upper caste-class women from those belonging to lower caste-classes. However, an overwhelming number of women from Bihar are from small peasant and landless agricultural labour households, the most basic struggle of this strata revolving around getting enough to eat for their families and for themselves. It notes that a common element in the life of rural women throughout Bihar, irrespective of caste-class, is that the responsibility of running the household falls exclusively on her shoulders, involving hours and hours of toil. It argues that the powerlessness of rural women in Bihar is compounded by lack of control of family land. As land becomes more valuable as a commodity, its control becomes an increasingly important determinant of power and wealth, both within the family and in the larger society.

The study finds that with education reaching upper caste women to a greater extent, expectedly the age of marriage and cohabitation is highest among Brahmin women and landlord classes, and lowest for SC women. Though the average age of marriage has increased, the rise has been marginal reflecting very little improvement in the status of women.

The study reveals that caste and class barriers have a strong role to play in the work participation of women. Work being a symbol of family, class and caste status, the work women do is closely regulated, depending on the caste and class they belong to. The value system of upper castes such as the Brahmins and the *Bhumihars* are such that the honour of the family and caste is closely associated with seclusion of women from public activity and, hence, any outdoor work, let alone waged work, is frowned upon. Similarly, for the women who enter the wage labour market, gender discrimination is evident from the fact that they get roped into low quality occupations, as is the case in our survey, where there is a concentration of female workers in agricultural labour, while their participation in service, petty business, and other occupations is negligible. Moreover, even in their engagement in these low quality occupations, casual labour forms a much larger proportion of the female workforce compared to their male counterparts. On the contrary, the proportion of regular workers is relatively high among the male force.

The study argues that their bargaining power being less, women garner lesser wages than men. The survey results reveal that wages in agriculture are structured in such a manner that the tasks normally delegated to women, such as harvesting and paddy transplantation, are allotted lesser wages than traditional male activities like ploughing, even though both the male and female activities are equally tedious. This arises naturally from the gender bias which deems men to a right to higher wages rather than stemming from any qualitative difference in the efforts put in at work.

According to the study, the unfavourable condition of women's employment can have a direct impact on their individual households. It has generally been postulated that women tend to utilise their earnings more on basic needs of the households, and particularly in improving the well-being of children, their education and health, which has great poverty alleviating impacts in the short as well as the long run.

The study reveals that more than two-third of the women keep their earnings in their own hands, a positive factor as it indicates autonomy in terms of control of income. However, the study finds it disheartening to note that women in our study spent extremely miniscule amounts on themselves, most of their incomes getting drained in household expenses. The study finds that in two-fifth of all cases, the woman takes decisions regarding the amount and quantity of vegetables to buy and in one-fifth of the cases, it is a joint decision between the husband and the wife. The study argues that, interestingly, control over food expenditure does not again guarantee equality in food intake between the genders. Cultural constructs of female subordination and deprivation are instilled into women in such a manner that even when decision-making is in their hands, they themselves chose to allocate more food to the male members of the household, to feed their husbands more than themselves, and feed their sons more than their daughters.

The study finds that the socioeconomic strata of the respondents acts as a variable in food deprivation with women belonging to higher castes in a better off position in terms of food intake as compared to women of lower castes. Periods of food shortages differ across districts in our area of study and can range from *Bhado* (August-September) to *Kartik* (October-November). Starvation periods for all villages run over 2 months either from *Bhado*



to *Ashwar* (September- October) or from *Ashwar* to *Kartik*. The problem of food security becomes so severe during these periods that people are forced to depend on food items like *sattu*, *ghor*, wild *saag*, rats etc. Foods which may be nutritious but generally looked down upon as inferior quality food.

The study reveals that a vast majority of women in the survey villages remain outside the reach of education; the achievement levels in education of girls are not completely satisfactory. Similarly, the study notes a dismal lack of reproductive health care for women. A majority of women gave birth in their homes with help from untrained dais, rather than in hospitals under the care of doctors.

The study finds that on an average, women spend 23 minutes to fetch water from any source for household use and in places like Nalanda it takes over 45 minutes. Same was the case with fuel collection. Statistical analysis reveals that in terms of access to and control over public resources, therefore, the women in our study still fare poorly, women of lower castes and classes with a greater disadvantage.

The study finds that nearly one-fifth of all women feel physically insecure during caste tensions but this sense of insecurity is higher among SC and Muslim women and far lower among forward and dominant castes like *Yadavs* and *Kurmis*. At the same time, the study finds that there has been an increase in women's participation in the electoral processes. However, it argues that this increase in the turnout of women voters, particularly of the lower castes and classes, may be attributed to a high degree mobilisation, rather than one's own political consciousness.

The study concludes that on the whole, little seems to have changed in the status of women in rural Bihar over the last 20 years. There continues an adherence to an ideology which thinks of women as the subordinate gender and, thus, to be discriminated against in all walks of life. This necessitates a serious attitudinal change. Changes in institutional, infrastructural and economic arrangements in education, health, food intake, and political participation need urgent attention. The key challenges facing the newly formed Bihar, therefore, remain. Empowering the vast majority of its women so that they are able to access basic resources and exercise basic rights of which they continue to be deprived of. This improvement in the situation of women is imperative for the future of Bihar, as no state, especially as underdeveloped as Bihar, can afford to waste the capabilities of half its population.

**12.18 Gender, Education and Women's Power: Indian State and Civil Society Intersections in DPEP (District Primary Education Program) and Mahila Samakhya, Elaine Unterhalter and Sushmita Dutt, *Compare: A Journal of Comparative and International Education*, Vol. No. 31(1), pp. 57-73, 2001.**

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**Key Topics:** *District Primary Education Programme, Mahila Samakhya Women in Development, Gender and Development*

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The study examines different understandings of gender equity and women's empowerment in two linked programmes – the District Primary Education Programme (DPEP) and Mahila Samakhya (MS). They provide a detailed theoretical analysis of different approaches to democracy, education, and women's empowerment; a rich description of the structures, constituencies, and work of the DPEP; and MS, the manner in which the two have worked together in Bihar; and, finally, the implications of the partnership between the two programmes for understanding the process of democratisation, gender equity, and women's empowerment.

This paper is based on the understanding that DPEP and MS give gender equity different emphases – while DPEP approaches gender equity from a Women in Development (WID) perspective, MS approaches it from a Gender and Development (GAD) perspective. The WID perspective looks at including women into the development agenda, while the GAD approach aims at transforming women's lives. Their study is divided into four major sections covering theoretical approaches to democracy, women's education, and empowerment; a comparison of the structures, constituencies and work processes to understand the differences and similarities in their approach to equity, empowerment, and democratisation; the manner in which DPEP and MS have worked together in Bihar; and implications of the relationship between DPEP and MS for understanding the processes of democratisation, gender equity, and women's empowerment.

They find that in Bihar, the DPEP and MS are useful to each other; DPEP officials provide MS officers with infrastructural resources and the work of the MS is used by DPEP to help mobilise villages into education campaigns. DPEP's enrolment and retention success of girls has often grown out of MS initiatives. They argue that the limited

vision of the DPEP in terms of gender equity cannot produce the levels of social change that MS desires, however, without DPEP, MS would have limited resources. For DPEP, MS helps bring new insights to its work which help make it more sustainable. While DPEP is committed to gender equity in schools, it allows only certain education and social development demands to be met. They conclude by pointing out, large educational programmes like DPEP, or transformative initiatives like MS, each working alone, cannot redistribute power, but together they must make a powerful start. According to them, the hegemony of patriarchy is being challenged often by a confluence of MS activists at the village and state levels but also DPEP officials, senior bureaucrats, and international agencies. However, holding together this block of interests is very difficult. This article is useful for its rich analysis of theoretical concepts such as democracy, women's empowerment, and education, as well its nuanced analysis of both the DPEP and MS, individually and comparatively.

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**SECTION 13**

**Public Policy and Governance**

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## Overview

Low levels of socioeconomic development in Bihar can, to a considerable extent, be attributed to weak public policies and institutions in the state. This section consists of 24 studies which examine government policy with regard to the socioeconomic development in Bihar. It covers a wide range of themes including employment, public distribution of food, child development, social protection for the elderly, socioeconomic development of marginalised sections of society, climate change, population, information and communication technology, and housing, among others.

The literature in this section provides empirical data on the implementation of existing schemes, looking at socioeconomic profiles of beneficiaries, the ability of schemes to reach intended beneficiaries, and outlines key challenges to the efficient implementation of these schemes.

Studies on NREGS, ICDS and PDS, and other government schemes points to a lack of awareness among the beneficiaries of the schemes (Raabe et al., 2010; Arya, 2008; Tiwari and Sarmistha, 2008; Tyagi, 2008; Pankaj, 2008; Pankaj, 2006; Nayak and Saxena, 2006; Government of Bihar and UNICEF, 2007; PACS, 2006; Mooij, 2001). Even though Pankaj (2008) finds high levels of awareness about NREGS in Bihar (and Jharkhand), he points out that most intended beneficiaries are only aware of the provision of 100 days of guaranteed wage employment in the scheme. The awareness about entitlement, minimum wages, and other provisions is low in both states. As Vikash Jha (2010) points out, institutions in South Asia have been marked by non transparency and non accountability. His research looks at the impact of evidence based research in making the Right to Information Act effective in Bihar and Uttar Pradesh. He argues that policy influencing must be planned carefully after analysing the political context, various stakeholders, suitability of communication, advocacy strategies, and partnership building. Arya (2008) recommends the computerization of records which facilitates public scrutiny of government schemes. In the Tribal (Indigenous People's) Development Plan, there is a focus on providing communities with social accountability mechanisms to enable greater transparency. A study on the NREGS suggests greater transparency regarding funds at the *panchayat* level may attract more beneficiaries (PACS, 2006).

A shortage of trained functionaries is another major challenge outlined by the studies in this section. For example, in their study of the ICDS scheme, Nayak and Saxena (2006) find that while ICDS has been sanctioned in 73 per cent of development blocks in Bihar, less than half the sanctioned projects have been operationalised, partly due to a lack of trained functionaries. Secondly, while there are less than 5 per cent vacancies for positions of *anganwadi* workers, close to 85 per cent of positions for supervisors are vacant. Another study of the ICDS finds that while three-fourths of the functionaries had some level of training, it was usually inadequate and did not include practical field exposure (Government of Bihar and UNICEF, 2007).

Bihar has traditionally found it difficult to arrange for state funds and, unfortunately, even funds provided by the central government are not fully utilised due to procedural bottlenecks. Bihar has one of the lowest rates of utilisation of central funds today. Under the ICDS scheme, for example, of the funds released by the state government in 2003-04, Rs 160 lakh remained unutilised. Under the additional central assistance for supplementary nutrition made from the Pradhan Mantri Gramodaya Yojana (PMGY), Rs 3,626 lakh were allocated by the government of India in 2003-04 and Rs 224 lakh remained unutilised. Referring to the National Population Policy, Sinha (2008) recommends a greater transfer of funds, functions, and functionaries to PRIs for more effective utilisation of funds. Bhattacharya (2009) critiques intra-state resource allocation in Bihar using Myrdal's metropolis-satellite framework, and argues that in Bihar there is a concentration of growth and resources in the leading urbanised, industrialised regions or the 'metropolis' that becomes the resource frontier, while there is an absence of resources and growth in the backward regions or the 'satellite'. He points out that very few districts have received benefits from development initiatives launched by successive governments and this has widened the disparity across the districts enormously.

Apart from the MNREG, ICDS, and PDS, research in this section has examined a diverse range of policies including housing (Kumar and Singh, 2010), climate change policies (Somanathan and Somanathan, 2009), the

Indigenous People's Development Plan (Mishra, 2007a) issues relating to the elderly population in Patna (Kumar, 2007), and social inclusion (Mishra, 2007b). A compilation of studies on various aspects of governance including the right to information, corruption, and administration in the state (Sachidananda and Mandal, 2009) is also included. However, there is much greater scope and need for research on these themes.

An important issue that emerges from this section is also the critique of centralised policy making in India. For example, Mooij (2001) argues that policy-makers who design policies often do this far away from sites of implementation. There is not only a geographical distance, but also a social one. Those involved in policy formulation are less aware of the practical and political difficulties at the local level resulting from their policies. In the current context of 'inclusive growth', Prabhat P Ghosh (2010) outlines a development strategy for Bihar centred around four pillars – a high priority for agricultural growth, increasing human capabilities, improving infrastructure for market integration and, finally, improving the efficiency of all poverty alleviation programmes.

Research in this section also examines the relationship between social fragmentation and the provision of public goods (Bros, 2010); the ecological impact of flood control policies in the state (Fatmi and Matin 2007); the positive relationship between rural electrification and agricultural growth (Oda and Tsujita, 2010); and the role of self help groups in women's health and empowerment (Kumar, 2007).

### 13.1 Social Fragmentation and Public Goods: Polarisation, Inequality and Patronage in Uttar Pradesh and Bihar, Catherine Bros, *CES Working Papers, Documents de Travail du Center d' Economie de la Sorbonne*, 2010.

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**Key Topics:** *Social Fragmentation, Polarisation, Public Goods, Inequality*

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The article throws light on the issue of public goods and the related debate as to whether a fragmented society helps in the provision of public goods or not. The general consensus on the above issue is that social fragmentation hinders the provision of public goods and this primarily happens due to three reasons. First, given that people have varied preferences and it is difficult to have a unanimous choice of public goods, claims for a particular public good may not be a vociferous one. Second, people may not cooperate properly in groups for the provision of a particular public good. Last, people fail to recognise the private benefits they may experience from a public good and, hence, there is a tendency to 'free ride'. The literature survey made in the paper suggests mixed results, but most of the studies have looked at the above problem from a macro perspective and have found that fragmentation does not help in the provision of public goods.

According to the study, two forms of public goods that can be provided for: a) the ones that can be produced 'locally' like drains, etc., and b) the ones that need proper planning and involvement of the authorities with adequate participation from various sections of the society (like the people, in general, government agencies, etc.). The study analyses a World Bank data set from 1997-98 which has considered the two states of Bihar and Uttar Pradesh (that spreads over 2,250 households, across 120 villages in 25 districts). For proper analysis, the paper has constructed the two indices: the fractionalisation index (which is defined to be as 1 minus the summation of the population shares for various social groups) and the polarisation index (where the index calculated by Esteban and Ray has been used). An effort to look at aspects that affect the provision of public goods in an indirect manner has also been made. For example, the paper looks at 'wealth inequality' and suggests that it has a strong correlation with fractionalisation. This affects the provision of public goods through an indirect channel in the sense that in places where there is a divide between the rich and the poor, the richer contingents (or individuals) have a strong say in the provision of a given public good if they find that such an initiative suits their interests.

The empirical approach undertaken by the paper consists of a few regression equations where the probit regression model has been used. Three main relationships are tested via the regression equations. First, whether the fractionalisation/polarisation indices have positive/negative relationships with the provision of public goods like schools, electricity, telephones, etc. Second, if 'wealth inequality' has any significant effects on the provision of such public goods. Last, whether membership of a certain caste influences the access to a public good or whether the caste that dominates a particular village determines the provision of public goods.

The results for the first hypothesis suggest that fractionalisation has a positive impact on the provision of public goods. However, it has no effect on the provision of the public goods like electricity and middle schools, as they are influenced by the programmes for removal of poverty. This, according to the paper, is a contradiction to the generally preserved theory as social fragmentation should ideally result in all kinds of 'antagonisms' which should discourage people agreeing on a given issue. The paper argues that as one moves to 'polarisation', the coefficients lose their significance, and 'intergroup antagonism' has very little to do with the provision of public goods.

The results for the inequality analysis throw up interesting results. The paper finds that general inequality has very little to do with the provision of public goods, excepting for telephones and electricity, where inequality has a positive effect on the provision of these two public goods. However, by a deeper probe into this issue, by looking at the effects of inter and intra group inequality, the study finds that inclusion of these two inequality measures has not changed the results for the polarisation coefficients, excepting that of the 'phone connections'. It is also found that 'within group inequality' has a significant impact on the provision of public goods (telephone, electricity, *Anganwadi* Centres – AWCs, and public primary schools). The effects are positive barring the AWCs which is again a part of the government programmes to counter the widespread malnutrition. The paper further goes on to find evidence of the Olson's effect showing that the richer the landowners are, the greater is the chance of a given public good being provided in the village.

The paper also tries to find evidences of caste influences and, hence, estimates a 'patronage' model where it considers the Backward Agricultural Castes (BACs). It examines the public goods like the AWCs and schools, and tries to investigate issues like whether being from a BAC raises one's probability of going to school, having sanitary facilities, etc. The paper finds that people from the BAC enjoy better access to the public goods, especially when their caste is dominant. However, she finds mixed results with regard to school attendance. In fact, it is argued that, given that BAC households tend to live in areas close to the facilities, there are no evidences that they attend schools more than others. With respect to having toilets and sending their kids to AWCs, the paper finds that belonging to the BAC households reduces the probability of people having toilets as well as sending their kids to the AWCs.

Thus, contrary to the earlier findings, this study does a micro level analysis and finds a positive relationship between social fragmentation and provision of public goods. The paper claims that such a relation is largely present due to the strong presence of caste patronage (also giving evidences of the Olson effect). The paper concludes by prescribing the need to look at the 'local conditions' and at the 'use' made of the public goods rather than just focusing at the provision level.

### **13.2 Interstate Disparity in India and Development Strategies for Backward States, Prabhat P. Ghosh, ADRI Working Paper, Patna, 2010.**

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**Key Topics:** *Regional Disparity, Development Strategy*

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The phenomenon of substantial regional inequality has been a part of the overall Indian economy for a long time and it has been widening faster in the recent decades. It is indeed a reflection on the national strategy of growth, where the regions that were better off to start with have continued to grow faster leaving the disadvantaged regions even more disadvantaged.

On the issue of why Bihar's economy has been continuously experiencing low growth, the study notes that it is relevant to remember the expected roles of the state and the market in the development initiatives. Before liberalisation, Bihar's economy suffered, first, because of the policy of freight equalisation and then because of being left out of the scope of Green Revolution. The second area of discrimination was related to the abandoning of the agenda for structural change in the agrarian sector, a case of wilful default of the local agrarian polity and a convenient default of the national industrial polity. In any case, all these discriminations occurred because of the state, either directly or indirectly. Since liberalisation was introduced, Bihar's disadvantage was indeed deepened as with its small industrial sector, it was unable to exploit the opportunities of market-led growth.

According to the study, fortunately, the prospect of an alternative development strategy for Bihar, which will also address the problems of regional inequality in India, is brighter today than ever before for three reasons. First, the national planning exercise now underlines inclusive growth as one of its key goal along with the earlier goal of accelerated growth. The second important indicator, a boon in disguise, is the threatened food security of the nation, which should force the planners to pay more attention to agricultural growth benefiting states like Bihar. Finally, the present government of Bihar has got elected on the basis of its promised development initiatives, providing a strong political base for the task.

The study argues that the above triad of forces call for an alternative strategy for development of Bihar. It underlines four pillars of this development strategy in terms of: a high priority for agricultural growth, increasing human capabilities, improving infrastructure for market integration and, finally, improving the efficiency of all poverty alleviation programmes. Except for the last of these pillars, all others require the resources of the state government. Thus, even in an era of liberalisation, the states of the poorer regions have a substantial developmental responsibility. Once the development process gains momentum through appropriate state interventions strong market forces are almost certain to emerge, providing a fillip for a sustained growth process of the presently disadvantaged regions like Bihar.



### 13.3 Evidence-Based Research Mobilising Action for Policy Influencing in Two Provinces: Policy Changes under the Right to Information Act in India, Vikash Jha, Society of Participatory Research in Asia (PRIA) India, March, 2010.

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**Key Words:** *Right to Information, Social Accountability, Advocacy, Civil Society*

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With a long history of colonial rule, South Asia has carried forward the legacy of public institutions marked by the culture of secrecy, non-transparency, and non-accountability. Due to political instability, the public institutions in South Asian countries have failed to evolve and mature. This has led to the dire need of social accountability. South Asian countries have been trying to experiment with various social accountability tools and these models have been quite successful in some regions. One similar experiment that India has initiated is the Right to Information Act.

The present article, which has taken up two case studies of the states of Bihar and Uttar Pradesh (UP) on, Policy Changes under the Right to Information Act in India finds rationale in this context. The case studies in question document the experiences of evidence-based research in making RTI effective. It describes and analyses the efforts of civil societies in India and their suggestion to some policy changes in effecting a far reaching impact on the implementation of RTI in India.

This paper spread over twelve sections, deals with the comparative analysis of citizens' action in two states, namely Bihar and UP, and unravels the dynamics of civil society collaboration and the mix of ingredients which bring about policy change. The paper is based on the synthesis of research, undertaken by the PRIA in support with the Centre for Poverty Analysis, in the provinces of Bihar and UP in India, selected on the basis of their similar socio-economic-political contexts and the two being incidentally placed at the bottom of the HDI in India. It makes an attempt to bring out that the trajectory of policy changes in RTI has been quite different in the two states. Civil societies in both the provinces have been quite active in demanding amendments in the state rules, but the two have responded differently.

In the backdrop of the framework of positive linkages between evidence-based research and policy-level changes, the paper describes and analyses the factors that affect the incorporation of evidence-based research into policies and practices in the RTI in two provinces of India. To this effect, the paper undertakes a review of secondary sources together with semi-structured interviews with civil society organisation actors for changes in the RTI rules and policies in the states of Bihar and UP.

To put the issue in perspective, the paper discusses the political-socioeconomic scenario of UP and Bihar. The paper reads that the two states, despite being politically hypersensitive, have failed to build up responsive and accountable public institutions. To vindicate the same the paper provides a comparative picture of the two states based on National Human Development Report, 2001. The paper reveals that the socioeconomic scenario in the two states is similar and discouraging and is mainly caused by the crisis of governance. Public institutions in the two states have largely become non-accountable and non-responsive to citizens. Hence, the social accountability tools, as the paper upholds, deserve to be strengthened in these two states.

Moreover, the paper, in order to probe the implementation of the Act in the light of evidence-based research in the provinces, discusses the people's opinion on accessing information under the RTI. It reads that the people in rural areas have faced tremendous difficulties in accessing information. The role of the Information Commission and the state governments has been found to be grossly inadequate. Nonetheless, the people were able to solve small service delivery problems and expose cases of corruption in some districts.

Based on the research findings, the paper also brings out the fact that rules framed by state governments related to RTI are arbitrary and contrary to the provisions of the RTI Act. Hence, it is against the well settled principle of delegated legislation in the federal structure of India which clearly reads that the rules made by the states to enable legislation cannot go against the provisions of the parent Act they seek to enforce. For instance, the paper highlights that in UP, the rule relating to mode of payments of fee was restrictive and, hence, came the demand for more affordable payment modes, like easily available postal order. On the other hand, the Bihar rule provides for a fee of Rs 50 for the first appeal, but does not lay down any particular mode of payment. It stands out clearly in contrast to the Central Act which does not prescribe for fees for the first appeal. Hence, there has been need for suitably amending

the rule to exclude any appeal fee. Moreover, the paper adds that mere voicing of concerns may not lead to policy level changes, hence, research should be combined with communication strategies, partnership and networking.

In UP, intensive mobilisation by networks of civil society and researchers to launch advocacy campaign, backed up by media publications, though created pressure on the information dispensation system, but the policy level changes could not be effected. The UP government yielded to people's demands, though not completely. In Bihar, on the other, the similar agencies advocating policy level changes focused on pro-change actors in bureaucracy and elected representatives. But the political context, i.e., re-election of Nitish Kumar on the promise of good governance provided the right environment for policy changes resulting in the inauguration of the RTI call centre, an innovation for the whole of the country, ensuring transparency in the functioning of public institutions and expanding the reach of the RTI Act to the villages. Thus, it is interesting to find out that while the focused strategy worked in Bihar, the huge advocacy, on the other, failed to deliver policy changes in UP.

Thus, the paper concludes that the advocacy campaign based on evidence and community based research should always be designed in keeping with the socio-economic context in general and the political context in particular. It further reads that in the context of South Asia, as seen in this case study, sectoral reforms would only prove effective if there is simultaneous pressure for comprehensive reforms. Otherwise even a good law like the RTI can be made ineffective by poor governance system. The paper further prescribes that launching advocacy for reforms in governance can be effective only when research organizations involve small community-based organizations or community leaders. This makes research credible and a representative of the true opinion of people and hence trusted by the government agencies. In sum, the paper underlines that the policy influencing must be planned carefully after analysing the political context, various stakeholders, suitability of communication, advocacy strategies and partnership building. Over and above these, the prominent role of the international donor or aid-provider in policy influencing in South Asia cannot be overlooked.

#### **13.4 Report on Right to Housing and Homestead Land in Rural Bihar: Status, Issues and Challenges, Sanjay Kumar and P. D. Singh, Deshkal Society, New Delhi, 2010.**

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**Key topics:** *Housing, Rural Homestead*

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This report analyses the various dimensions of the issue of the right to housing and homestead land in rural areas, focusing particularly on its status, issues, and challenges in Bihar. The report discusses the assessment of rural housing shortages; provisions under existing laws, rules, and regulations in Bihar pertaining to access and ownership rights over homestead land; the process and procedures involved in implementation of laws, policies and provisions, and patterns of displacement and settlement of landless rural households, and its impacts on the right to housing and homestead.

The report is based on secondary as well as primary data. Secondary data and information were used to locate the right to housing and homestead land as a fundamental human right; to analyse the magnitude of the problem of shortage of rural housing; and to discuss the provisions in the laws, rules and regulations in Bihar. Primary micro-data was taken from an action research conducted by Deshkal Society in partnerships with GNK and LSSK in Gaya District, in Bihar, for a project, 'Capacity Building and Advocacy for Development Change among the *Musahar* Community,' under the PACS I programme of DFID India, in 2006. This was used to analyse the administrative practices and procedures involved in the process of acquiring access and ownership rights over homestead land in rural Bihar and to identify the reasons for the large number of eligible landless rural and marginalised community households being denied these rights.

According to the study, some major issues need to be addressed with regard to the right of the rural poor to acquire homestead. For instance, the government needs to adopt a bottom-up, proactive approach to identify, record, and process for settlement of all eligible cases of landless households that need to be granted homestead rights. The report argues that while *raiya* land can be settled by the Circle Officer and the *gairmazarua khas* land by the DCLR/Sub-Divisional Officer, cases pertaining to *gairmazarua aam* land go up to the Revenue and Land Reforms Department, on the recommendation of the Divisional Commissioner. According to the report, the process of settlement of *gairmazarua aam* land can be further simplified by giving the District Collector the authority to

settle such land. The provision of the maximum area currently fixed by the government for allotment of house sites needs to be revised and enhanced. Land records have not been updated for a considerably long period of time in Bihar. The report also recommends that the government should update land records and revenue maps of all the villages. These records should be properly maintained and made available to the public on demand. The government should compile copies of laws, circulars, and policy guidelines, as well as prepare an official manual which can provide guidelines to officials at various levels to take appropriate action.

### **13.5 How to Overcome the Governance Challenges of Implementing NREGA: Insights from Bihar Using Process-Influence Mapping, Katharina Raabe, Regina Birner, Madhushree Sekher, K.G. Gayathridevi, Amrita Shilpi, Eva Schiffer, IFFPRI Discussion Paper 00963, April 2010.**

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**Key Topics:** *NREGA, Governance, Process-Influence Mapping*

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This article throws light on the public works programme, the National Rural Employment Guarantee Act (NREGA), passed in 2005 which upholds the constitutional mandate of everyone's right to work and to promote livelihood security in India's rural areas by providing 100 days annual employment at statutory wage rates to people of rural households. Though the authors appreciate the social safety net provided by the act in rural areas, yet they also point out the two types of governance challenges that make the comprehensive realisation of such safety nets tricky. First the challenge of excluding the creamy layer and actually reaching the needy, and, second, management of allocated funds to avoid leakages and corruption. NREGA, although, being implemented in a decentralised manner with innovative design features aimed at overcoming such issues, yet considerable implementation problems remain. The article offers an insight into the administrative implementation procedures of NREGA so as to support the efforts being made to adjust the implementation procedures to resolve the above challenges. For this, a participatory mapping technique, Process-Influence Mapping has been used. This technique combines elements of various tools to analyse stakeholder reaction and political processes. The authors have applied this technique in two districts of Bihar, to analyse the implementation of NREGA.

As far as the implementation of NREGA in theory is concerned, it is a decentralised one and involves institutions at the centre, the states, and at all three levels of local government in India. In order to throw light on the NREGA implementation in reality, the authors have emphasised on the performance assessment results of the 2008 Comptroller and Auditor General (CAG) social audit (implementation of NREGA in 558 *gram panchayats* and 141 blocks in 68 districts) and the 2007 Poorest Area Civil Society (PACS) Programme, and Civil Society Organisation survey (6 states) for the assessment of the procedural challenges of NREGA implementation in the first phase (2006-07).

The administrative and technical implementation of NREGA is in a poor state with ill maintained computerised records which causes employment generation under NREGA to be a non-transparent and unaccountable process which raises the chances of fraud and misappropriation of funds. This is due to the absence of a large number of trained support staff, especially at the block and village level. In the absence of a block program officer, the brunt of work falls on the block development officer. In general, there is a lack of technical support staff and their capacity strengthening is urgently needed which would facilitate maintenance of accounts, books and Muster Rolls.

The CAG report points out that at the district and village level, annual plans were neither, or inadequately, prepared nor checked. While at the district level, it is a lackadaisical attitude on the part of the district programme coordinator, at the village level it is ignorance and unawareness of the elected *gram panchayat* representatives. Other problems in the implementation of NREGA relates to the requirement that all planned activities be technically and administratively sanctioned. This inadvertently results in delays of 7-60 days of NREGA related work to start. This article confirms that the speed at which the projects are technically sanctioned depends on the payment of commissions to the block level functionaries. *Gram panchayats* that paid commissions and had sufficient number of well trained personnel had projects approved. It is the willingness of the *gram panchayat* secretaries and executive officers to pursue and support NREGA related activities that is needed to avoid such delays.

The resource utilisation is not complete in Bihar with 60 per cent of NREGA related funds utilised in 2006-07 while it is 73 per cent for the average Indian state. The authors conjecture that it reflects noncompliance with explicit funding guidelines at various levels. By and large the Indian states have maintained a wage to material ratio in excess

of 60:40 but Bihar has a comparatively low ratio (58.73 per cent) which can be attributed to material-intensive construction of brick soling roads and the failure of the *gram panchayat* to identify low-wage projects. The authors have suggested that care needs to be taken while interpreting and filling up of formats as the functionaries lack the capacity to do so.

Number of job cards, the number of work days received per household, and the wage rate earned are the evidences of the extent to which NREGA supports livelihood. The study shows that almost 70 per cent of the rural households of India were provided job cards but this figure is lower for Bihar. This, in turn, reflects people's ignorance of this act and lack of publicly organised NREGA campaigns. The article also points out to a substantial delay in issuing and distributing job cards, job cards being taken back and kept with the village authorities due to wrong entries. Unemployment payments are not paid to households due to a number of reasons. NREGA's instructions on the manner and the time frame in which workers can receive their entitlements on time are; 25 per cent of wage payments in cash, while 75 per cent can involve both cash and in kind. However, delay arises due to the payments based on the amount of work done in a day and not the number of days worked.

Although one of NREGA's important provision is employment generation without gender discrimination, it does exist in wage payment. It is particularly strong in the northern states of India, where less than one-fourth of all work days are given to women. Only 40 per cent of all NREGA employment in India is by women. The reasons for these are basically the old traditions, norms and beliefs, cultural factors, and sometimes the insufficient childcare facilities which adversely affect women participation.

Effective NREGA implementation involves auditing, monitoring and grievance redressal. The article has highlighted that this aspect of NREGA was not properly met during 2006-07. Many *gram panchayats* did not even implement any social audits. Regarding monitoring, officials did not inspect the required number of projects at all levels. At the *gram panchayat* level, monitoring is complicated due to the nonexistence of Vigilance and Monitoring committees. At all levels, monitoring was complicated due to the absence of up to date information on key parameters of NREGA performance, such as number of registered workers, the registered demand for work, etc. The inadequate flow of information reflects the absence of a well functioning and integrated management information system (MIS), which contains timely and adequate data on the performance of NREGA at all stages of implementation.

The authors have presented their findings on the administrative procedures of NREGA implementation based on a case study conducted in two districts of Bihar using the Process-Influence Mapping technique, which are as follows:

**Registration and Issuing of Job Cards:** The *gram panchayat* is required to receive application for registration, register households, and then issue job cards. However, employment cards are reviewed by the *taluk panchayat* and issued by the employment guarantee assistant, where as the block programme officer does not receive information on the number of job card applicants as suggested by Process-Influence Maps. According to the respondents, employment demand is made to fit supply as employment cards are issued only after projects have been identified and funds received. It also points out to financial irregularities in the job card issue procedure; household applicants are asked to pay at different levels when there is a provision of issuing free job cards. Favouritism by the influential people in the village also affects the issuance.

**Allocation of Employment Opportunities, Work Execution and Wage Payments:** The authors point out that the *gram panchayat* never informs the block programme officer about the job allocation. People are also unaware of the Act's mandate of notification through a public notice at the offices of the *gram panchayat* and the block programme office and through mail to ensure the generation of 100 days of REGS employment per household per year. The Process-Influence Mapping exposes shortage of staff at all government levels in Bihar. As vacancies are not filled, block and district level staff is assigned several posts. To overcome this shortage 'Mate' was introduced who is supposed to be selected twice a month from the pool of REGS workers through a fair participatory process, who will be responsible for supervision and monitoring of the work sites. The Government of Bihar, in order to alleviate manpower shortage in REGS, hired staff on a contractual basis which resulted in misappropriation of funds. The Process-Influence Mapping tool suggests that corruption may also exist at the level of authority which assesses the technical feasibility of the project and provide cost estimates of project implementation and also at the level of the employee guarantee assistant and block programme officer. The authors opine that well functioning monitoring mechanisms are needed to control corruption along with incentive schemes for the technical staff. The 2008 operational guidelines introduced payment of wages through bank/post office network to separate payment

agencies from implementing agencies. But it has led to another problem of intermediaries imposing fee for opening of bank accounts. Even banks refused to open accounts for REGS workers due to the consequent administrative burden resulting in additional costs. Another problem is of scattered location of banks and post offices branches which reduces the accounts' accessibility and increases the opportunity costs of REGS workers.

**Influence of actors on the actual NREGA implementation outcomes:** The study throws light on the differences in the importance of actors for the generation of NREGA wage employment by varying size of nodes in the maps; the smaller the nodes, the less important a particular actor is perceived. The block programme officer, employment guarantee assistant, and NREGA beneficiaries are the most important as they initiate NREGA by demanding employment. However, the villagers believe that the *Zila Parishad*, as it sanctions all projects, to be the most influential and the district or state level functionaries the least, as their role is largely confined to the intermediation of funds. The study finally suggests that responsibilities in the administration of REGS, per se, may provide an imperfect view of the perceived importance of actors in the implementation of NREGA.

The authors in objectively analysing the implementation procedures of NREGA have taken the study to a logical conclusion:

**Elite Capture in the Definition of Projects:** District and block officials play a limited role in defining plans for the generation of NREGA employment in their respective areas. There is lack of capacity of district and block officials to define the respective plans, along with inadequate transparency and accountability mechanisms, which enables a few groups to exercise power in defining the priority areas in NREGA projects that favoured the interests of a particular group. The study also indicates that this problem may also arise in *taluk panchayats* and, in such a case, it would seem easier for them to exclude the *gram panchayat* members from participating in the decision process and instead involve interest groups that are close to them. This problem needs attention in future so that the work gets shared at all levels so that it favours the *gram panchayat*.

**Exclusion in Issuing of Job Cards:** Rural people are facing problems in either getting job cards or not getting them at all, the main reason being corruption on the part of the card issuer. Exclusion from receipt of employment cards can also arise due to the caste conflicts within the SC group and local politics. In order to improve upon this, it may be useful to concentrate more on awareness generation campaigns that are targeted on disadvantaged (SCs) regarding rights, duties, programmes, mechanisms, etc.

**Lack of Awareness and Capacity among Rural Citizens:** There is need to strengthen the knowledge and skills of elected representatives. The authors harp on the use of Process-Influence mapping as a tool to identify possible changes in the administrative structure, together with officials and stakeholders, which could help increase transparency and accountability of NREGA implementation. Local people need to be mobilised to provide demand-based, inclusive and adequate NREGA employment.

**Misappropriation of Funds:** According to the authors, misappropriation is fostered by the complex administrative structure and the programme design. The rural people with the strongest stake in the outcome of the programme need to be mobilised to become responsible for vigilance and monitoring. The government of India has mandated the introduction of bank-post office accounts to separate payment from implementing agencies to limit misuse of funds. Use of technology like internet and software tools can be used to improve vigilance over programme implementation. Biometric cards too can be used, which will not only ensure unique identification of NREGA beneficiaries but also eliminate all cash transactions once banks integrate it with their own technology.

**Lack of Capacity due to Staff Shortages and Lack of Training:** The operational guidelines emphasise the importance of strengthening the capacity of all agents involved in NREGA planning, implementation, measurement, monitoring, and evaluation to meet their respective responsibilities. But it is unfortunate that no one is taking responsibility for the specification of the envisaged training calendar and training modules. In order to facilitate access to training, information regarding its source, eligibility, etc., should be easily available. The authors have proposed strategies as training of master trainers with the active participation of NGOs which could increase the outreach of training. It is also suggested here that the Process- Influence Mapping instrument can be used to gain a better understanding of the channels through which the introduction of additional support staff, such as mate, affects the procedural and administrative implementation of REGS and, thus, employment generation. It confirms that in programme implementation, the 'devil is in the details', and catching this devil is important for identifying reform options.

### 13.6 Development and Intra-State Disparities in Bihar, Yuko Tsujita, Hisaya Oda and Prabhat Ghosh, *Economic and Political Weekly*, Vol. No. 45 (50), 2010.

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#### Key Topics: *Development Disparity*

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This article seeks to redress the intra-state disparity in Bihar in terms of economic and social development for accelerating progress in the state. The development track record of the Nitish Kumar government notwithstanding, the existing socio-economic disparities at the grass root level has led to uneven distribution of benefits from public investment and development initiatives.

The article notes that, Bihar, with an estimated population of 94.5 million, is considered to be one of the most under developed states in India. Per capita net state domestic product (NSDP) is only one-third of the national level. NSSO 2004-05 estimates show that the incidence of poverty is 42.1 per cent in rural Bihar, as compared to 28.3 per cent in rural India. Progress on social indicators like education and health is also slower than other states.

According to the article, recent reports citing accelerated economic growth in Bihar, particularly in sectors like construction, hotels, restaurants, communication and trade, implies that growth largely comes from the non-agricultural sector and urban areas rather than agricultural sector or rural areas. Quoting the state government data, the authors mentioned that Bihar is suffering from growing intra-state disparity. This is borne out by the fact that the per capita gross district domestic product (GDDP) for Patna district is by far the highest among the 38 districts of the state. And this difference has increased in recent years. Lower indicators on health and education among the backward castes, Muslims and girls reflect social inequalities stemming from caste, religion and gender. Even the allocation of public expenditures for development has been focused on only one district, i.e. Patna.

A study done by Asian Development Research Institute, titled, 'Poverty and Social Assessment: A District-wise Study of Bihar', is quoted to highlight the reasons behind the development in the state. The study was conducted in a four-staged randomly selected 80 villages in five districts in Bihar in 2008-09. When asked to assess changes in their villages in the last decade, 77 out of 80 respondents (comprising *mukhiyas* (village head), *gram panchayat* heads and village leaders) concluded that their villages were relatively better off than 10 years ago, mainly due to increased employment opportunities outside the village, followed by access to education and access to roads. All the villages surveyed supplied seasonal labour to prosperous urban and rural areas outside the state. And approximately two-thirds of the villages served as a source of domestic and international long-term labour migration.

The article finds that since 2006 when the Nitish government took over the reigns, there has been improvements in physical and social infrastructure with investments being made in power sector, education and road connectivity. Despite public investments for improving rural physical and social infrastructure, disparities exist across districts, blocks, *gram panchayats* and villages within the state. For example, all the 80 surveyed villages could access the main hamlet by road in the dry season, whereas only 26 villages were connected by *pucca* (paved or non-pitched) road, and 36 villages were inaccessible by vehicles during the monsoon months, the authors mentioned. Moreover, accessibility to the main hamlet does not mean accessibility to the periphery of the village, where the hamlets of the backward caste groups tend to be located.

Through ordered logit estimation of the implementation of five rural development programmes at the surveyed villages, namely the National Rural Employment Guarantee Scheme, Backward Regions Grant Fund, the Twelfth Finance Commission Grant, Indira Awas Yojana and the Total Sanitation Campaign, the authors have concluded that even the extent of implementation of development programmes differ in villages. These programmes are more successful in those villages which are easily accessible by road or are closer to a town and are significantly well-off. The role of a *mukhiya* is equally important as far as programme implementation is concerned. The programmes tend to have been executed in those villages where the *mukhiya* is a resident and is from a scheduled caste.

The article concludes with the authors stressing that the uneven distribution of benefits of development initiatives at the village level reflects the existing socio-economic structure at the grass root level in Bihar. They stressed that the deep-rooted fundamental problems of inequality in landholdings and empowerment have to be rigorously dealt with in the state for proper implementation of development initiatives, along with its efficiency and transparency, at the village level. Otherwise, Bihar will turn out to be a mere source of labour supply for the rest of India.

### 13.7 Intra-State Disparity in Government Expenditure: An Analysis, Govind Bhattacharya, *Economic and Political Weekly*, Vol. No. 44 (26-27), pp. 231–37, 2009.

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**Key Topics:** *Disparity in Government Expenditure, Development Disparity*

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This article analyses the intra-state disparities in government expenditure in six states, Bihar, Uttar Pradesh, Jharkhand, Chhattisgarh, Madhya Pradesh, and West Bengal, based on the actual treasury data on government expenditure made in the social sectors of education, health, and supply of drinking water, captured from the databases of the accountants general of these states.

For the analysis attempted in this paper, three major heads of accounts, viz., education, medical, and water supply and sanitation were selected. The paper found that a combination of historical, social, political, and economic factors has consigned Bihar to the periphery of India's economic growth. In addition to having a very low per capita income, Bihar today finds itself at the bottom of all the major states in India in respect of almost all socioeconomic parameters.

It is also one of the most rural states in India, with about 90 per cent of its population living in more than 39,000 villages, where poverty and deprivation have assumed endemic proportions over the past several decades. It is only now that an earnest attempt is being made to change this scenario. Until 1993-94, the poverty ratio in Bihar, both urban as well as rural, was the highest among all the major states of India. Even in 1999-2000, with about 44 per cent of the rural population below the poverty line, Bihar was the second poorest state in India, next only to Orissa. Poverty, especially rural poverty, remains the primary concern of the government's development policy in the state.

The paper suggests that the situation of Bihar may be contextualised in terms of core-periphery mapping, conceptualised by Myrdal, most appropriately in the politico-economic perspective of regional development and disparity to distinguish between advanced and backward regions, where the core develops at the cost of the periphery that is left impoverished. There is a concentration of growth and resources in the leading urbanised industrialised regions, or the 'core', that becomes the resource frontier, while there is an absence of resources and growth in the backward regions or the 'periphery.'

In the case of Bihar, Patna still remains the only visible urban centre in the state. The development and changes that have taken place in Bihar are visible only in a few districts like Patna, and the beneficiaries are only a handful, but the rest of Bihar continues to languish in acute poverty and severe backwardness. Very few districts have received benefits from the development initiatives launched by successive governments, and this has enormously widened the disparity across the districts in the state. The disparity that is seen within the states is self-augmenting, resources tend to get allocated to the few districts that form the core, while the others are left largely to fend for themselves and continue to be neglected and ignored.

According to the paper, states (with the exception perhaps of West Bengal), which share a common socio-political and economic background, suffer from various disabilities like poverty that show wide intra-state variations, low female literacy, high infant mortality, and high income inequality in urban areas. Education and healthcare still remain low-priority areas, especially in the rural areas of all these states, and households spend an insignificant share of their total income on these sectors. The household income is mostly spent on the most basic necessities of food and shelter. The per capita government expenditure on these sectors also remains more or less the same in these states, though the governments seem to spend a larger share of their total expenditure on these sectors.

The article concludes by asserting that in these poor states, government expenditure on social sectors, especially on education and health, remains the primary determinant of the standard of living of the people and has the potential of lifting them out of poverty. The expenditure on education empowers people with skills, knowledge, and abilities and is obviously an investment in the human capital of a state. If properly utilised, it has the potential of lifting millions out of poverty. In effect, the expenditure on education and health by the government creates an enabling environment that can uplift a state by releasing the creative energy of its people.

**13.8 Crisis of Good Governance – The Case of Bihar, Sachidananda and B. B. Mandal, Serial Publications, New Delhi, 2009.**

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**Key Topics:** *Good Governance, Panchayati Raj, Corruption, RTI, Public Administration*

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The book is a compilation of papers presented and discussed at a seminar held under the auspices of Shri Brajkishore Memorial Institute, Bihar Vidhyapeeth, Patna in August 2007. The 13 chapters of the book are on various aspects of governance in Bihar, and most of them deal with the crisis of governance in Bihar.

Sachidananda, in his chapter 'Democracy and the Crisis of Governance', regards democracy as the biggest reward of Independence and feels that the people of India value freedom and civil rights more than economic growth. He argues that while some scholars say that a democratic political system and high economic growth is not possible, India has been able to achieve a high rate of growth despite the pace of reforms being slower. Democracy is not an authentic remedy for all ailments. It opens up opportunities which have to be taken advantage of at the right time to achieve the desired effect. In the fifteen year period from 1989 to 2004, there was great political instability. This led to the shrinking role of the parliament, the politicisation of bureaucracy, and the weakening of democratic political institutions. The judiciary was overburdened. It has not been able to protect the rights of the people.

The chapter notes that the crisis of governance in India is visible at all levels. There is loss of faith in government. Citizens see their government besieged by uncontrollable events and are losing faith in political institutions. Although in recent years, Indian economic growth has been remarkable, there is a gulf between shining India and suffering India. The government has launched many programmes for removal of poverty, but the gap between the rich and the poor is widening. The public delivery system has failed. The authority of government, both at the centre and state, to enforce its decision has eroded over time. The processes and procedures for conducting business in government and public sector organisation have become non-functional. Human rights are being trampled with impunity. The rule of law is not operational. Transparency in the functioning of public agencies has disappeared. The common man has no share in the decision making process. Weaker sections of the society, the Scheduled Castes, the Scheduled Tribes, and minorities continued to suffer. Although *Panchayati Raj* has been introduced and due participation has been provided for women, the fruits of development have not been able to wipe out the wide spread poverty, illiteracy, and disease. All these show how the country and the state of Bihar are in the grip of the crisis of governance.

Ashok Pankaj's chapter uses the institutional approach to governance and development. He explains the institutional factors of low level of governance and development of Bihar. His main argument is that the state has been trapped in the process of low governance and low development which mutually reinforce each other. The first part of the paper highlights some general indicators and the nature and quality of governance and development, and their reinforcing character in Bihar. The paper then goes on to analyse and explain the causes of poor governance in the context of past and present trends. Towards the end, the paper analyses the vision and goals for better governance of Bihar. It also pinpoints some of the recent changes that may trigger forces of better governance in the state.

Uma Sankar Prasad conceives of three meanings of the rule of law. They are regulator of government power, ensuring equality of all persons before law, and dealing with procedural and formal justice. It is argued that promoting the rule of law does not mean elimination of rule of persons. Application of law is not automatic. It has to be applied by certain people. Even in most developed countries, human factors play an important role in shaping its application. The real question is how to strike a balance between the rule of law and the rule of person so that we can achieve liberty, equality, and justice. Prasad refers to what has happened in Bihar in the past, the expectations of the common man, and what can be done. Things can improve fast if bureaucrats seek to serve efficiently.

Subhash Sharma endorses the Marxist perspective on corruption. Corruption is regarded as a consequence of the capitalist system that is based on unequal relationships and hunger for individual profit at any cost. He goes on to delineate various dimensions of corruption. There are various dimensions of corruption—unnecessary delaying tactics, twisting interpretation of laws using different criteria for different persons, referring cases to other agencies, calling the petitioner to one's residence, demanding irrelevant papers for verification, directly demanding cash or kind etc. Later, the paper analyses the causes of corruption. The paper also observes that there is no coordination between different agencies dealing with corruption such as vigilance, police, of prosecution, judiciary and civil administration. Towards the end, the paper gives four case studies of corruption from the author's own experience.



K. K. Sinha deals with people's participation in the political process through democratic decentralisation, operationalised through Panchayat Raj. The chapter discusses the steps for decentralisation before and after independence. Attempts are made to examine whether village *panchayats* can rescue democracy. Towards the end, the paper builds up a model for panchayat to ensure fullest participation of people.

Prabhakar Sinha in his paper refers to the recommendations of a number of Administrative Reforms Commissions that were created by the government. He notes that none of the recommendations refer to the problems of the common man. According to him, the people of India have remained under the same authoritarian rule and they look upon bureaucrats as the representatives of the ruler. The demand for right to information came not from the top but from the bottom. Certain NGOs organised the movement and ultimately the Right to Information Act was passed in 2005. The paper holds that it is the most powerful law enacted after Independence. However, after passing the law the government appears to have developed cold feet. The entire machinery created for this work is headed by bureaucrats either working or retired. They are not likely to possess the mindset required for effective implementation of this law. The paper concludes that if the Act meets the same fate as many well meaning laws have met, India would lose a great opportunity for providing good governance.

The chapter by A. M. Prasad traces the elements of good governance in ancient Hindu polity. It reflects on ancient Indian texts such as the Mahabharat and Kautilya's *Arthashastra* and holds that rulers in those days were very responsive and sensitive to public opinion. It argues that in independent India, the legacy of British administration persisted. Social justice envisaged in the constitution and basic essentials of life of dignity remained a dream for the bulk of the population. The Second Administrative Reforms Commission refers to the need for responsive bureaucracy and spells out the way to operationalise it. Efforts have been made through *Panchayati Raj*, and the paper presents that it observes some silver lining on the dark clouds as a result of the passing of the Right to Information Act.

In his insightful paper on equity and making of an inclusive society, Vinay K. Kamath begins with explaining the difference between equality and society. The idea of justice and fairness is grafted to the flexible notion of equality. The paper analyses the Indian constitution and tries to explore why after 60 years of Independence we have failed to redeem the pledge made in the preamble regarding ensuring equity and justice for the downtrodden and destitute groups in India. Instead of bringing the dispossessed population closer to the development stream, they have been even more marginalised. The agenda of social justice needs to be revisited so that ideological heritage of the national movement on the promises of the Indian Constitution is kept. The paper is doubtful whether the agenda of inclusiveness could be pursued effectively in the competitive politics of vote banks. Analysing the contours of politics and the nature of state in Bihar, the paper concludes that the social transformation promised in the constitution remains largely elusive.

K. Sinha's chapter views accountability the sine qua non of governance. In public service, this is determined by the system of closed monitoring of execution of programmes and implementation of policies at both the field level as well as in the offices. Inspection of offices by seniors is the basic mechanism to enforce accountability of junior level officers in public administration. At higher levels, review meetings and appraisals of performance are the ingredients for assessing the level of accountability. Insubordination and indiscipline are opposed to the desired qualities in a responsible public servant. In Bihar, the system of speedy trials has demonstrated accountability of police as well as of the judicial system. Continuance of Section 197 CrPC prohibits prosecution of public servants. The absence of such sanction by the government acts to shield a public servant who in a democracy is accountable for all his acts.

Uma Sinha's chapter makes the point that good governance cannot be achieved without bringing all sections of the society under the development net. Since the bulk of the population depends on agriculture, full attention must be paid to agricultural development. For inclusive growth, increased stress on different social sectors like education, health, and rural infrastructure is essential. The paper expresses that it is doubtful whether *panchayat* will be empowered enough to take up such activities. Also the indifference to land reforms has undermined the use of small farms for better productivity. Thus, the paper argues for support for small farming.

Govind Sharma's paper deals with intimate relationship between good governance and the media. Besides providing news and other information, media helps people to achieve a better quality of life. Media should cooperate with the government and the administration should take media into confidence. The paper highlights that the ideal role of media should be to publicise the good actions of the government and also make critical appraisal of government policies and their implementation. It should not be influenced by people in power.

Shiv Dayal's chapter on the priorities of the media in the context of development and governance throws light on the emergence of the media world and its expanding influence on society due to the development of information technology and electronic media. He argues that both the print and electronic media are largely owned by business houses. They have distinct world view and system of values. Their political commitment is not very clear. At present, the most important question is 'for whom does the media work', Can it work as a voice of the larger society and influence government decisions on its behalf, when it is not the mouth piece of the society. The paper concludes that media has still a long way to go to perform this role.

Ram Karan Pal in his chapter emphasises the need for good governance without which all sections of the community could not prosper. Even after 60 years of Independence, good governance is still a far cry. The paper expresses the concern that the four pillars of governance, the legislative, executive, judiciary, and the media have not put in their efforts to promote it. However, towards the end, the paper makes certain suggestions for improving the situation.

### **13.9 Climate Change: Challenges Facing India's Poor, E. Somanathan and Rohini Somanathan, *Economic and Political Weekly*, Vol. No. 55 (31), pp. 51-8, 2009.**

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**Key Topics:** *Kosi Flood, Climate Change*

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Briefly summarising the existing literature on the causes and the characteristics of expected climate change in India over the coming years, this paper discusses the ways in which climate changes affect the lives of the poor affected by Kosi flood of 2008.

The study has used survey data (village and household) on household and state responses to a major flood in northern Bihar in 2008. An attempt is made to examine the role of geography on household behaviour and flood damage in 10 villages. Equidistant villages were chosen starting from the north-eastern corner of Supaul district.

The study reveals that there were very only few fatalities or missing people in the sample villages and most individuals returned to their villages after most of the relief camps closed in November 2008. Of all 1,655 household members, 96 per cent were present in the village both before and after the flood, 3 per cent were there before but not after, and under 1 per cent moved into households after the flood. The state relief apparatus seemed effective, both in terms of getting large numbers into relief camps and ensuring that cash and grain transfers reached flood victims.

With regard to employment and earnings, wages appeared to be relatively inflexible. Median wages for those with positive earnings in both years was Rs 70. One-third of those working in February 2008 were unemployed at the time of the survey. Only a small fraction of households had any bank savings. For all villages taken together, mean bank savings between the two dates (for those with positive savings) went from Rs 28,000 to Rs 4,912 and cash savings declined from an average of Rs 4,462 to Rs 743.

The study argues that it does not appear that existing social programmes such as the NREGS or the PDS did much to insulate households from large income shocks. The study reveals that the NREGS was completely ineffective as a stabilisation scheme in providing work to the rural poor at a time when they had lost their usual source of employment. The study finds that the outreach of the PDS seems to be most limited in the villages where food scarcity was the greatest. For families that did have access to the PDS, the prices paid were about half of those prevailing in the open market. According to the study, a sizeable fraction of previously cultivated land is likely to remain fallow over the next few years, and there is large scale unemployment. Moreover, the state apparatus has done very little so far to help with adaptation to this dramatically changed physical environment.

From the policy perspective, the Kosi case study highlights the importance of the need for social security. For the poor, whose major asset is their own labour, the impact of a fall in the demand for labour as a result of the destruction of complementary assets is life threatening. The only unemployment insurance for the unskilled, the NREGS needs to be operated far better than it is now, and particular attention has to be paid to ensure that areas hit by disasters are well served by the scheme in the months and years that follow.

The study emphasises the need to distinguish between greenhouse gases and particle emissions, and shows that the latter are a major source of climate-related problems. Since these emissions are directly affected by Indian policies and there are some low-cost options for particle emission reductions, it is important that these opportunities be seized.

In conclusion, the study highlights that the flood in Bihar rendered much of the land in the area uncultivable and resulted in large-scale unemployment. Though the state was impressive in providing immediate relief to flood affected victims, it has so far been completely ineffective in facilitating long-term adaptation. The study is sceptical of the extent to which the state will help poor rural populations deal with the effects of climate change.

### **13.10 *The National Rural Employment Guarantee Act and the Bihar Employment Guarantee Scheme: A Case Study*, A. Arya, PhD Thesis, Punjab University, Chandigarh, 2008.**

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**Key Topics:** NREGA, Bihar Employment Guarantee Scheme

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The aim of this dissertation is to critically understand the NREG Act in its entirety, its history and evolution leading to its formulation, its vision and its various clauses. Both primary and secondary sources of data were used in the study. They included both qualitative and quantitative data. Primary data was obtained by direct interaction with the villagers, PRI representatives and officials at all levels in Bihar. Secondary sources primarily comprised of qualitative data. These included articles and news reported in the print and electronic media about the rationale and efficacy of the Act along with a critical look at its implementation. A short field study was also conducted to get a firsthand experience of issues in the implementation of the Act. For this purpose two *gram panchayats* were selected in the state of Bihar.

The study summarises the fundamental principles of the Act as employment on demand, legal right, universal entitlement, participatory approach, accountability to PRIs, and full transparency. The basic entitlements can be summarised as: employment within 15 days of application, unemployment allowance, work within 5 km radius, minimum wages, payment within 15 days, no gender discrimination, and basic worksite facilities.

The study gives recommendations for NREGA, suggesting the guarantee of 100 days employment should be extended to 2 persons per household to make an effective intervention, especially in times of distress, and the entitlement should also be extended to physically challenged members. It feels the need to include construction of buildings of public use in the list of permissible works in the Act. According to the study, the SGRY has been subsumed by the Act. SGRY had the provision of allocation of 22.5 per cent of the annual allocation earmarked for individual/group beneficiary schemes of SC/ST families living below the BPL. These provisions could be incorporated in the SGSY, which is a parallel scheme focusing on the employment for the rural poor, below the poverty line. Considering the ground realities and the vulnerabilities of the weaker sections, the study argues that NREGA may also make it mandatory to earmark some allocation for creation of infrastructure in SC/ST habitation wards. Since NREGA also aims at environment protection and regeneration, the study advocates that it may therefore insert a clause that the district planning bodies may consult the National Disaster Management Authority (NDMA) or the State Disaster Management Authorities (SDMAs) for advice and information on the vulnerability of the district to natural hazards, and converge the requirements with the schemes under NREGA without compromising on the essence of the Act. As transparency and accountability are the two pillars of strength for NREGA, the study indicates that all opportunities should be given for capacity building of the PRIs. NREGA, *Gram Sabha*, and Social Audit should become the buzz words amongst the rural poor. *Gram panchayats* should be encouraged to hold *Gram Sabha* and improve the quality of participation in it. It also highlights the need to effectively computerise all stages of NREGA work, from registration of workers to issue of job cards, and preparation of work estimates to muster rolls. This not only makes up for greater efficiency, it also opens up NREGA for public scrutiny, thus, engendering greater transparency. For ensuring transparency, it recommends that a provision may be made for videography of the scheme at predetermined milestones. It also considers it worthwhile to include monitoring the time duration of pendency of the works, that is, how many schemes pending for three months, six months, and so on. The study asserts that the Act should create an obligation on other departments to go through the Annual Action Plan for NREGS in the district and take it into account before finalising their annual action plan. In conclusion, according to the study, the right to employment should be given more teeth in the scheme by laying down clearly the process of registering the applications for employment. Greater awareness of the Act needs to be worked at. The government as well as civil society groups will need to put lot of energy and resources in this respect.

### **13.11 Processes, Institutions and Mechanisms of Implementation of NREGA Impact Assessment of Bihar and Jharkhand, Ashok Pankaj, Institute for Human Development, New Delhi, 2008.**

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**Key Topics:** *NREGA, Institutions, Implementation of NREGA*

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The study discusses the processes, institutions, and mechanisms of implementation of the National Rural Employment Guarantee Scheme in Bihar and Jharkhand. It points out that the NREGA covers 90 per cent of the total population in Bihar and 78 per cent in Jharkhand, the highest in the country. The high incidence of rural poverty, high level of seasonal and often distress migration out of these states, and the low level of agricultural and rural development make these states ideal test cases for the study. The NREGA is being implemented in these states in the backdrop of the poor record of development delivery, including public works and poverty alleviation programmes; ineffective PRIs in Bihar and non-formation of formal PRIs in Jharkhand; and weak traditions of civil society mobilisation. Various primary and secondary methods of data collection were used in the study. The former included household survey, worksite visit, and focus group discussions.

The study found that the demographic characteristics of the beneficiary population indicate that they are generally poorer than the non-beneficiaries in both the states. Even though land continues to be an important source of livelihood in both the states, 65.56 per cent of the households in Bihar and 25 per cent in Jharkhand are landless. The overall asset base of the rural households is quite low in both the states. But, more importantly, the asset base of the beneficiary households is much lower than that of the non-beneficiary households. About 27 per cent of the beneficiaries (overall of Bihar and Jharkhand) were indebted. Every fifth household was migrating. However, the incidence of migration was a little less from the beneficiary than from the non-beneficiary households.

The study found that the intensity of demand for wage employment under the NREGS is much higher in Jharkhand than in Bihar. The demand for wage employment under the NREGS has a correlation with the caste and land category of the households. Most of the demand for wage employment in both the states is from the SCs, STs, lower OBCs, and the landless and near-landless households. The most important finding in this relation is that the demand for wage employment is inversely related to the size of the landholdings, as it declines with an increase in the size of the landholdings.

The study also found that there was a very high level of awareness about the NREGS in both the states. However, the quality of awareness was lacking in both the states: most of the people were aware only of the provision of 100 days of guaranteed wage employment in the scheme. The awareness about entitlement, minimum wages, and other provisions was low in both the states. Also, people were unaware of the procedural details required for availing of the rights-based guaranteed employment.

The study noted that even though the average number of employment days provided per households is relatively low in both the states, the scheme has been able to generate some impact on the livelihood conditions of the beneficiaries. The most obvious impact is that the income from NREGA has contributed to about 8 per cent of the total annual income of the households in Bihar and to about 2 per cent in Jharkhand. It also found that NREGA had contributed to food security of the beneficiary households and played a role in the reduction of indebtedness and reduction of migration.

The study also highlighted that macro level impacts of the NREGS are more visible in terms of the community assets created. But there are also impacts on village and community life in terms of the mobilisation of society and strengthening of PRIs. A remarkable impact is in terms of the increase in awareness about the concept of minimum wages and the claim that a worker has over this. It has inculcated a new level of consciousness about entitlement to minimum wages. It must also be noted that the NREGA has not been able to create a significant impact on the local wage rate so far primarily because of the abundance of the labour force available there and also because of the low level of employment generation under NREGA.

The study notes that the basic deficits in the implementation of the scheme can be reduced to two points: one, the entire process has yet to become demand-driven and civil society-based, more so in Jharkhand than in Bihar. Two, the average number of person-days generated per household is quite low in contrast to the scheme's objective of providing 100 days of minimum employment and the existence of a high level of demand for the maximum number of employment days in the two states.

Nevertheless, there are indications that the NREGA has had a small but potentially effective impact manifest by the increase in livelihood security, reduction in indebtedness and distressed migration from the beneficiary households, increase in the WPR, and the creation of community assets.

**13.12 Hungry People and Empty Hands: Need for Vigorous Implementation of N.P.P.-2000 in Bihar: An Empirical Study, C. Sinha, PhD Thesis, Department of Economics, B. R. Ambedkar Bihar University Muzaffarpur, 2008.**

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**Key Topics:** *National Population Policy, Gender, Health, Quality of Life*

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The thesis aims at achieving the goal of population stabilisation and poverty alleviation and, thereby, improving the quality of life of people in the state of Bihar. The methodology used in the study included primary data as well as review and analysis of secondary data. For primary data collection, 9 districts of Begusarai, Bettiah (West Champaran), Darbhanga, Motihari (East Champaran), Muzaffarpur, Samastipur, Sitamarhi, Purnia, and Vaishali were selected. In each district, two blocks were selected randomly. From each block 4 villages were selected randomly. Finally, 75 households were selected from each selected village for survey work. For secondary data review, the following sources have been extensively utilised: National Family Health Survey 1998-99, DLHS-RCH 1998 and 2004, National Population Policy 2000, reports of working groups, Planning Commission, National Sample Survey Organisation, and other relevant documents.

The study found that the rapidly growing population in Bihar is adversely affecting health and quality of life of its people. The proportion of currently married women is higher than the never married women in all districts of Bihar. The proportion of widower/divorced/separated females is higher than males in all districts. About more than half of the women age 45 or older are widowed/divorced/separated in all districts.

It has been found that slightly more than half of currently married women in Bihar report some type of reproductive health problem, including abnormal vaginal discharge, symptoms of urinary tract infections, and pain or bleeding associated with intercourse, much higher than the all-India level of 39 per cent. About 75 per cent pregnant women belonging to the low and middle groups in Bihar are zinc deficient. This deficiency advanced with pregnancy. Awareness of AIDS is particularly low among women in rural areas, women living in households with a low standard of living, Muslim women, women who are illiterate, and women who are not regularly exposed to any media. Even among women who have heard of AIDS, however, more than half (52 per cent) do not know of any way to avoid infection.

In course of interaction with people in rural, urban slums, and tribal areas of Bihar, the study finds that several groups of children have particularly high levels of anaemia. These include children of 12-13 months, children of high birth orders, rural children, children whose mothers are illiterate, children from SC/ST categories, and children from poor families. There is a strong positive relationship between the haemoglobin levels of mothers and prevalence of anaemia among children.

According to the study, governance issues need to be addressed and utilisation of allocated funds in the state for general health, family welfare, and Kala-azar in particular requires to be improved. Funds allocated for Kala-azar were meagre in view of the dangerous consequences of this disease. It is pity that even the meagre amount was not fully utilised for all the years.

Comparison of Bihar with all-India in terms of important indicators, the study highlights that prevalence of tuberculosis, including medically treated tuberculosis, Jaundice as well as Malaria is much higher in Bihar as compared to all-India and infant mortality and child mortality rate continue to be higher in Bihar as compared to the all-India level. The ANC coverage levels as well as immunisation coverage levels are much lower for Bihar as compared to all-India and institutional deliveries are also much lower in Bihar as compared to all-India.

The study finds that the utilisation of Government health facilities for pregnancy related complications and for post delivery complications was 11 per cent each in the state as a whole. Further, in Bihar about 1 out of 10 women availed Government health services for ANC and RTI/STI. Further, a large variation has been observed among the districts in the utilisation of Government health facilities. In the state of Bihar, more than 3/4th of the districts fall in

the category of demographically weak districts. These are the districts where the availability of health infrastructure is poor and, therefore, required to be strengthened. In better performing districts, the female literacy is also very high as also low proportion marrying below 18 years. Improvement in literacy as well as in availability and access to family welfare services are needed in the demographically weak districts in order to achieve a faster decline in fertility rates.

The study notes that the PRIs have been given critical role through a resolution by the Central Council of Ministers of Health and Family Welfare (2003), stating 'that the State would involve PRI in the implementation of HFW programmes by progressive transfer of funds, functions and functionaries, by training, equipping, and empowering them suitably to manage and supervise the functioning of healthcare infrastructure and manpower, and further to coordinate the activities of the works of different departments such as: Health and Family Welfare, Social Welfare, and Education which are functioning at the Village and Block Levels. According to the study, the factors which could influence the progress of decentralised planning and implementation are political will, people's readiness to engage with decentralisation as well as capacity of PRIs to effectively function as per the provisions in population and health policy documents.

### **13.13 ICTs in Rural India: User Perspective Study of Two Different Models in Madhya Pradesh and Bihar, Meera Tiwari and Uma Sarmistha, *Science Technology Society*, Vol. No. 13(2), pp. 233–58, 2008.**

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**Key Topics:** *ICT in Bihar and Madhya Pradesh, Gyandoot, Drishtee*

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Based on fieldwork in Dhar, Madhya Pradesh, and Madhubani, Bihar, the study presents the findings of two user perspective studies on the impact of ICTs in rural India. It undertakes an examination of the impact of a state led ICT initiative and the impact of a nongovernmental organisation led ICT initiative in two separate case studies. A comparison is made between the two models in their delivery of ICT services to the rural poor. It finds that the state led project has the capacity to reach more economically the socially marginalised people as compared to the NGO led project. However, the uptake of both projects is not at an optimum level, and the study points out that while the potential for the ICT to bridge the digital divide and improve the rural human capital remains undisputed, it is unlikely that this outcome can be realised with the current formats of delivery and without the appropriate stimulation of the demand side factors in the rural sector.

The study has collected data from 100 households from each survey area, comprising both users and non-users of the Gyandoot and Drishtee services. Efforts were made to select households from three economic categories: those below the poverty line, marginal, and 'comfortable' non-poor households.

A comprehensive primary dataset comprising two distinct categories of information, in terms of methods deployed and content, was obtained from each subject that was interviewed. The first category comprised general quantitative information on the household members' literacy levels, livelihoods, ownership of economic assets, and other demographic indices. The second set contained information on the usage of Gyandoot/Drishtee services and interviewee views on Gyandoot/Drishtee services. Semi-structured, open-ended questions focusing on the subject's understanding of poverty and its causes were used to obtain primary qualitative data in the second category.

The article notes that in January 2000, a government-owned computer network called Gyandoot was launched in Dhar district of Madhya Pradesh. Gyandoot is considered a pioneer experiment in taking ICT to the rural sector in India. The objective is to improve the accessibility and use of ICT services by the rural poor. It is a state-run initiative with private partnership at the delivery stage of the services. Drishtee, on the other hand, is an NGO founded in 2003. It has adopted a similar model to Gyandoot in facilitating rural ICT-based service delivery through franchising of kiosks on a revenue sharing basis. Drishtee has expanded its network to several states: Assam, Chhattisgarh, Bihar, Haryana, Madhya Pradesh, Maharashtra, Tamil Nadu, and Uttar Pradesh, with over 1,000 kiosks in all. Within the limited scope of this study, just one of the networks of Drishtee operational in Madhubani district of Bihar was examined.

The study finds that the overall awareness of Gyandoot services ranges from satisfactory to very low. The usage trends are far grimmer than the awareness levels. Just 2 or 3 of the 16 noted services were being used. The most used service was G6: providing certificates for land records (*Khasra Nakal*). It notes that users found the maximum benefit

in it in terms of savings in time and money. The kiosks are able to provide the documentation for a minimal fixed fee. This not only saves time, effort, and costs in commuting to the nearest government office, but also avoids rent seeking and opportunism by officials. According to the study, the usage pattern clearly indicates uptake of entitlement-enabling services, in particular physical entitlement. Land records certificates are used to confirm landownership. The entitlement is then used to avail a range of benefits and subsidised services. These include banking and financial assistance at concessional rates, subsidised agricultural and infrastructure inputs, as well as numerous social welfare measures. The human capital and capability-enhancing services listed in Gyandoot as education, healthcare and advice/information-related modules were found to have negligible uptake. The main reason for this, as it emerged from the survey findings, was the difficulty in comprehending the replacement of the human interface, a medically trained person with a 'machine'. Information services related to market opportunities, after an initial healthy usage level, appeared to be much on the decline through a possible crowding out effect of mobile technology. Information on current market rates is disseminated widely even if just one person from the village or a relative from another village visits the market. The information is communicated and shared in real time over mobile phones, which have a high penetration in the region. Market information through kiosks, on the other hand, is not always current, depending on when it is updated. The more efficient technology is, therefore, satisfying the demand for the market information, thus, diminishing the use of the kiosks for this service. In addition, all users and non-users reported poor information and publicity of Gyandoot services. On numerous occasions the survey team found themselves as ambassadors and propagators of the project. Drishtee services D1 to D11 represent: basic computing (D1), software programming (D2), Web designing (D3), desktop publishing (D4), accountancy (D5), English speaking (D6), eye care and glasses (D7), books/publications (D8), life insurance (D9), motor insurance (D10) and digital photography (D11). The awareness of Drishtee services ranges from very satisfactory—close to 60 per cent in two of its services: basic computer training and digital photography—to very low in the remaining services. The two high-use services appear to be the main income earners for the kiosk operator. The uptake of other services is low to very poor.

The study argues that while there is clearly a demand for this and it provides a good return to the kiosk operator, it is neither a Drishtee-listed service nor does it fit into the development programme. It does not enhance capabilities such that the users' opportunities in life are improved; it does not strengthen livelihood outcomes either. It does perhaps fulfil components of subjective well-being and happiness through ownership of photographs of loved ones. In addition, it fulfils the necessity of photographs for documentation and records. The healthy uptake of computer training and learning the English language (spoken and written) at Rs 1,000 to Rs 5,000 indicates a positive trend for the educated in the rural sector. Much of the IT-led progress in southern India is attributed to the availability of skilled labour with linguistic competencies. Thus, skill enhancement with English language proficiency in rural Bihar can act as a stimulant to IT services there as well.

The study finds the potential of the Gyandoot model to engage the socially and economically backward communities in an inclusive development format through education and well-being is robustly convincing. The outcomes, though, are far from being realised. Based on the information gathered through the field survey and the users' views, there is evidence of market imperfections through sluggish demand-side factors and information asymmetries. This appears to be the main cause impeding the uptake of the majority of services being offered by Gyandoot. Drishtee services in Madhubani, on the other hand, appear to target a cohort with sufficient educational levels and income. In this aspect, Drishtee initiatives are not engaging the socially and economically backward communities in rural Madhubani. Just two of the eleven services—computer training and digital photography—are shown to have a high uptake, while other remain sparsely used.

The study suggests that the areas where there has been notable success through the Gyandoot initiative are in providing invaluable physical entitlement enabling services and introducing a unique public-private partnership, encouraging entrepreneurship in the local economy. The latter bears the potential to act as a stimulant to the rural labour market for the skilled labour. Working on a similar model, Drishtee has also encouraged entrepreneurship in rural Madhubani. The linkages with other Gyandoot services of education and health, together with community engagement and the wider debate on entitlements and capabilities, remain weak. Information asymmetries, perceptual gaps, and poor receptive capacity of users emerged as the main causes for the poor uptake of services. These could be overcome through a concerted effort to inform and involve users in the delivery mechanisms of these services.

The study concludes that, overall, the uptake of Gyandoot and Drishtee services is not at an optimum level. While the potential for the ICT to bridge the digital divide and improve the rural human capital remains undisputed, it is unlikely that this outcome can be realised with the current formats of delivery and without the appropriate stimulation of the demand-side factors in the rural sector.

### **13.14 Corruption and Patronage Mark NREGS Implementation in Bihar, Juhi Tyagi, AMAN Trust, New Delhi, 2008.**

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#### **Key Topics: NREGA Implementation, Corruption**

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This survey of the NREGA by AMAN Trust in Jehanabad and Arwal districts of Bihar, aimed to find out how does the NREGA play out on the ground. It uses both qualitative and quantitative research tools to study corruption and patronage in the implementation of the NREGA.

The study finds that the survey sites, which consisted of 10 villages in Jehanabad and Arwal, had an average population of 2,000 people. Around 20-30 per cent of the men in these villages aged 14-26 had migrated in search of jobs and fair wages. Staying back in their villages meant feeding the family from a meagre 3 kilos of rice earned for an entire day of manual work. While the men were also given a meal, the women's pay was restricted to rice. Considering the villages' large *Dalit* population, landholding patterns were minimal or absent and cattle (a preferred way of earning additional income) were an unaffordable luxury. Of the 10 villages covered in the survey, 6 did not have a primary healthcare centre and the 4 that never saw a doctor. Instead, health centres became storage houses and large kitchens for village festivals. People walked an average of 5.8 km for medical assistance. Of the 10 schools surveyed, only 3 served midday meals; of the 10 *anganwadis*, none gave the prescribed quantity of food. Clean drinking water is scarce and people are dependent on the few public hand pumps in densely populated lower caste tolas of the village. The survey put the literacy rate in the 10 villages at an average of 29.29 per cent. It is significant to note that over 70 per cent of the population of Jehanabad and Arwal constitutes agricultural labour and marginal farmers. The former is characterised by landless labour, the latter get less than six months of work in a year.

In this background, the study reveals that 50 per cent of eligible households do not have access to the benefits of the NREGS. Awareness of the scheme is low, only 16.5 per cent of the beneficiaries are women, and caste/class hierarchies dominate. The survey found that in villages in Arwal and Jehanabad (of which the poorest were picked), every one in two households had a job card, implying that the other 50 per cent of households do not have access to the benefits of the scheme, despite the fact that the NREGS was launched over two years preceding the fieldwork done for the survey. Some villages were even worse off. For instance, Ward Number 12 in Parasi village in Arwal has around 150 *Dalit* households, many of which belong to the *Dom* (traditionally scavengers) jati or caste. Only seven of these households were provided job cards. Seventy five per cent of men from this ward migrate for more than 6 months of the year to states like Punjab in search of work. Fifteen per cent of people in this ward work as bonded labour.

In the village of Kemdar Chack, also in Arwal district, no job cards have been given at all. According to the people of this panchayat, job cards were distributed in the block at a *mela*, but they were given only to sympathisers of a dominant political party in the region. Kinari village in Jehanabad is another example where job cards were issued only to villagers belonging to the upper caste, *Bhumihar* and *Rajput* castes. People interviewed asked the survey team why those belonging to the upper castes were issued job cards when they would never agree to do manual work anyway!

The study finds that most job cards were found to be incomplete, that is they did not carry a photograph or the official's signature. Those who did have photographs paid for them themselves. In only one village did the job card also have a woman's name on it. The study suggests that to a large extent, this is a result of the longstanding feudal system where *mukhias* are upper caste powerful men running their own system. In Bihar, the *mukhia* has, in fact, become de facto implementer of the NREGA. A system of patronage extends to the worksite as well.

The survey showed that most people in the villages who stood to benefit from the NREGA had not even applied for work because they were unaware of the procedures to be followed. *Gram Sabhas* (village general body meetings) rarely take place, which is a violation of the stipulations and spirit of the NREGA where decisions about work to be



undertaken must be collectively made. In some villages, the launch of the NREGA was announced by the beating of a drum, and in three other villages surveyed, it was the *mukhiya* who informed the villagers about the scheme.

The study noted that in many instances, people from other villages were brought in to work. Women were not allowed to work at certain sites. While the NREGA stipulates that facilities like a shed for rest, crèche, first-aid box, and clean drinking water must be made available at all work sites, the survey showed that no such facilities were available in any of the 10 villages studied. There were instances when the workers did not have their own job cards as they were kept in the custody of officials ranging from the *panchayat sevak*, ward member, and *panchayat samiti*.

The study argues that despite NREGA being one of the best ways to challenge oppression, Bihar is descending deeper into corruption and nepotism as has been the case in a number of progressive government schemes launched in the past. If this continues to happen, people will become alienated and lose faith in the government. On a sombre note, the study concludes that in caste-ridden areas like Jehanabad and Arwal, where landlessness and feudal oppression are still dominant, it will not be surprising if people resort to extreme violence as a means of seeking justice.

### **13.15 Ecology, State Intervention and Impact: A Case Study of Bathipur, Syed Nadeem Fatmi and Abdul Matin, *IASSI Quarterly*, Vol. No. 25(4), pp-74-84, 2007.**

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**Key Topics:** *Ecology, Kosi River, Irrigation*

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This paper is based on a case study of the village Bathipur in Kursa block of Katihar district in North Bihar. Bathipur is located on the bank of river Kosi and is vulnerable to the ecological imbalances brought about by the river.

The report of the National Commission on Floods (1980) states that 16.5 per cent of the total flood affected area of the country lies in Bihar and 22.1 per cent of the population affected by floods lives in Bihar. However, according to more recent estimates, more than half of the people (56.5 per cent) affected by floods in the country belong to Bihar and 76 per cent of these people belong to North Bihar. This is because there are eight major river basins in north Bihar namely; the Ghagra, the Gandak, the Burhi Gandak, the Bagmati, the Adhawara group of rivers, the Kamala, the Kosi and the Mahananda and when these rivers reach the plains there is a decrease in their velocity which leads to deposition of sediments and deltas are formed. As compared to the other rivers in Bihar, the floods of river Kosi are the most devastating. It has a catchment area of 74,500 sq km of which only 15 per cent is located in India and the rest lies in Nepal. The river has a total length of 468 km of which 248 km is in the Indian territory. The maximum observed peak flow in the river is reported to be 25,880 cusecs at Barakhshetra in Nepal and it carries a silt load of 9,495 hecto meters annually. The average rainfall in the Indian portion of the Kosi catchment area is 1276 mm. The floods of Kosi bring in death, disease and devastation every year and this is the reason the river has been named 'Bihar's River of sorrow'.

The authors take note of the various proposals that were put forward to the British to tame the river Kosi since it had created unstable ecological conditions but they preferred to leave the river to its own course. It was because the British, after they had gained control over India, had tried to tame the Damodar with the help of embankments and had failed miserably. In 1953 it was decided to embank the Kosi considering the heavy loss it had been causing in terms of large scale inundation, crop destruction, breakdown of communication system and other human sufferings. The Government of India introduced its first flood control policy in 1954 and adopted a series of measures like; construction of new embankments, drainage improvements in the water-logged areas, town protection measures, strengthening of existing embankments etc to reduce the losses caused by floods.

The embankment of Kosi was started in 1955 and was completed in 1959. An expenditure of about Rs 403 million was incurred on it till 1977-78. Prior to the construction of embankments, the Kosi River had been inflicting an annual loss in the range of Rs 6-10 crore, flooding for 2-3 months at a stretch ([www.datakosicomandarea.com](http://www.datakosicomandarea.com)).

In 1954, the year of the promulgation of the country's first flood control policy, Bihar had only 160 km of embankment length while the flood prone area of the state was 2.5 million hectares. In 1998, after an expenditure of Rs 7460 million in the flood control sector the embankment length stood at 3,465 km and the flood prone area of the state was 6.89 million hectares. Thus, the huge investment to control floods, had on the contrary, led to a more than double increase in the flood prone area in the state. All the blame could not be put on the embankments alone since

the village roads constructed under various programmes without any regard to drainage led to enhanced floods and prolonged water logging. The canals of Kosi, by cutting the drainage lines of the river and through seepage, have also contributed to this problem. The Kosi embankments have been breached many times (1968, 1981, 1984, and 1987) and the breach in 1984 was the most notorious which destroyed eleven villages completely, inundated 196 villages and left 4.5 million people homeless. Initially, in 1953, it was claimed that the Kosi project would irrigate around 7.12 hectares of land. Later, in 1975 the Kosi Irrigation Committee (Ram Narayan Mandal Committee) stated this to be an inflated estimate and it claimed that not more than 3.74 lakh hectares of farmland could be irrigated through this project and finally in 1996 the project irrigated only 1.95 lakh hectares. Similarly, it was originally estimated, in 1962, that the western Kosi canal would cost Rs 13.49 crore and it would irrigate 2.61 lakh hectares of land but it irrigated only 16,000 hectares in 1996 that too when expenditures of around Rs 227 crore had already been incurred till then. The overall estimate of the project climbed to Rs 569 crore which was around 40 times the original estimate. The Government of Bihar anticipated the work to be completed by 2001 but the pace of work at the canal then had suggested otherwise. The same is the story for the eastern main Kosi canals on which more than ten times the original estimate was spent and these were still incomplete in the year 2007. Also, the area being irrigated by the eastern main Kosi canal was already being irrigated with the help of the traditional sources of irrigation there. Thus, funds were misused to provide irrigation facility to an area which already had traditional facilities.

According to an officer of the irrigation department of Katihar, there has been financial shortage for completing the project which leads to delays and this in turn leads to cost escalations. The project has taken as long as fifteen to twenty years to complete and costs have increased by as much as 400 per cent. Some of the optional structures or supportive investments of the project like; the lining of canals, the link drains etc, are not constructed because of the financial stringencies and are usually left to be constructed by the beneficiaries. These beneficiaries did not perform the expected tasks. Absence of lining leads to increased seepage losses, there are increased chances of water logging which then require additional expenditure on subsequent soil reclamation and the absence of link drains aggravates the drainage problems. These problems act as an obstruction to the full return on the entire investment. This project has problems not only related to its construction but also its maintenance and delivery system.

The authors opine that proper maintenance of the entire system would have led to greater utilisation of irrigation through canals but there was poor compliance with the maintenance requirements and this affected the ultimate discharging capacity of the canal. The allocation of funds for maintenance was done on a yearly ad-hoc basis but it was far short of the requirements. Water sharing for individuals whose fields were beyond a particular outlet was done through laying out of field channels and their maintenance was carried out jointly by all the stakeholders manually. But this organisation for maintenance has its shortcomings. Repeated manual clearance upset the level of the waterbed and since maintenance was a joint activity, if some did not participate; it would lead to others backing out which would then lead to consequent reduction in discharge and abandonment of the use of the canals.

The utilisation of the irrigation facilities is far below its potential because of delays in the construction of water courses, absence of field channels, lack of attention to land levelling, neglect of drainage and water management, failure to evolve suitable cropping patterns, fragmented nature of land holdings, inadequacy of agricultural extension and constraints in the supply of credit, seeds, fertilisers etc. A survey shows that about 3.37 lakh acres of the command area of the Kosi falls above the gravity command and thus, cannot be irrigated and there is serious water logging in about 6.48 lakh acres. This leads to siltation and obstruction in the canals. Also, this area experiences rainfall of about 60-65 inches on an average every year. Thus, the cultivators use water from the canals only when there are no rains and it is then that they are required to pay water rates. A committee appointed by the state government had suggested water rates for all cultivators within the command area irrespective of their usage but this is yet to take shape.

There are different impacts on the economic position of different classes of people through this investment in irrigation since these classes differ in, both, the access to irrigation and its utilisation. Thus, irrigation has also led to economic and social differentiation among the users. Also, if the source is very far off from the field the source becomes uneconomical for the cultivator (tail-enders' problem). The tube wells are not a reliable source of irrigation for the cultivators since most of them do not function properly.

There are four principal classes in Bathipur, *grihast*, tenant cultivator, petty cultivator and landless labourer. *Grihasts* are independent operators of land and belong to the upper and middle castes. They employ agricultural

labours in their fields for agricultural purpose and all *grihasts*, irrespective of their caste and the size of their landholding, can lease in a proportion of their land. *Grihast* women do not work in the fields but the women from the petty cultivators' class work for wages. Tenant cultivators lease in most of the land and hire labour for the purpose of cultivation since they own little land of their own. They do not work as labourers for wages either. Petty cultivators include both who own a little land but inadequate for subsistence and the landless. They both work as agricultural labourers.

The Kosi project has helped in the agricultural prosperity of Bathipur as most of the people here depend on agriculture for their livelihood. But it has benefitted the different classes differently since the socially and economically well-to-do have easy access and control over the irrigation resources. Over time, the tenant cultivators have lost their significance because the landholders prefer hired labour to tenancy and also because of the increased use of tractors. Even for the petty cultivators the only means of livelihood left is to work as agricultural labourers.

The authors have objectively analysed the Kosi project by stating that it protects the people of Bathipur from floods and also helps them in irrigating their agricultural lands. This has led to an appreciation in the prices of land here. Though, everybody has benefitted equally as far as flood protection is concerned, this appreciation has a skewed effect as people who own large lands have benefitted greatly and vice-versa. These small land holders have become more vulnerable after this value appreciation as the bigger landowners and the moneylenders are now after their land. The landowners, now, have got rid of the sharecroppers and have taken personal charge. Thus, sharecroppers have suffered badly. The landless labourers have stayed at more or less the same level.

The authors opine that sufficient attention has to be paid while planning large scale irrigation projects such as to the problems of water logging, salinity, declining water table, etc. It is these problems that have become acute in the command areas of the Kosi canal systems. Not only should the irrigation investment be well planned but the ecological, technological externalities, and those affecting the economic utilisation of irrigation need to be anticipated.

### **13.16 Rapid Assessment of ICDS Project in Bihar, Government of Bihar and UNICEF, Government of Bihar, Patna, 2007.**

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#### **Key Topics:** *ICDS, Rapid Assessment*

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This study attempts to initiate the process of re-examining and restructuring strategies in the Integrated Child Development Services (ICDS) programme, so as to identify gaps and also to overcome the existing challenges to a large extent.

The specific objectives of the study were to study the existing situation of ICDS programme at the state, district, project, and village level; to document the shortcomings in the ICDS programme at different levels, covering key programme areas such as infrastructure, resources, training, equipment and supplies, coverage of services, work schedule, monitoring, community involvement, and perceptions among community members; to develop a Plan of Action for the State, District, Block, *Anganwadi* Centres, and Community so as to provide clear directions for taking measures to overcome shortfalls that emerge out of the assessment study.

The study adopted a comprehensive approach to arrive at a holistic assessment of the ICDS scheme in Bihar. The assessment required deployment of both quantitative and qualitative methods to gather the information required for the study. Consequently, the target respondents for the study represented a wide array of stakeholders from the grassroots to the state level.

The assessment was carried out in two phases, viz., the exploratory phase and the survey phase. The exploratory phase was mainly to have an insight to the functioning of ICDS in Bihar. With context to the present assessment, an attempt was made to have a better understanding of ground realities of the organisational setup at all levels of programme implementation. This was accomplished mainly through interactions with ICDS officials and functionaries and also through preliminary visits made to state, district and block offices, training centres and *Anganwadi* centres. The survey phase of the assessment consisted of tool development, pre-testing and finalisation of questionnaires, data collection from secondary sources and also through survey, focus group discussions, observations and finally data compilation, data analysis, and report writing. We now look at the key findings of the study.

**Infrastructure:** Substantial investment is required for buildings and basic facilities, especially drinking water and toilets in the *Anganwadi* Centres. This will give a major boost in the use of the *Anganwadi* Centre and improving the basis sanitary practices. This also has to be located in the appropriate place for enhancing its use.

**Resources:** a) Disbursement of Honorarium for *Anganwadi* workers needs to be streamlined by establishing a finance monitoring mechanism by the project offices with CDPO made responsible for any delay; b) the State should ensure that disbursement of funds from CDPO's office should be on time to *Poshahar Samitis*; c) Frequency of disbursement of funds for *Poshahar* to be increased to at least once in 2 months as against the present frequency of once in 6 months; d) In order to ensure continuity in supplementary feeding by *Poshahar Samiti*, a system of revolving fund should be put in place to ensure backstop arrangement for purchase of food when the funds are awaited from CDPO's office; e) The funds allocated for the grains and utensils need to be increased and at par with the market rate. This could be decentralised so that the utensils could be purchased at the community level; f) The contents of the *Poshahar* need to be revisited so that there are adequate micronutrients in the food provided to the children; g) There should be adequate funds for the basic medicines and necessary equipment for *Anganwadi* Centre.

**Training:** a) The study found that training was received by over three-fourths of the ICDS functionaries, however, the duration of training to *Anganwadi* Workers was felt to be insufficient by the supervisors, and needs to be redesigned to include practical field exposure of the *Anganwadi* Workers as trainees; b) Information updates on health, nutrition and pre-school education should be added to the training programme and also to shared periodically with the functionaries; c) Trainings to focus on importance of growth monitoring, counselling, and communication skills, and scope for learning and improving to be provided; d) A separate training programme especially designed for *Poshahar Samiti* members sharing their roles, responsibilities, and duties needs to be implemented to activate the supplementary feeding programme.

**Equipment, Supplies and Logistics:** a) Basic supplies such as weighing scales, growth cards and basic medicines kit for treatment such as vitamin A, iron and folic acid tablets, deworming tablets and ORS need to be available in adequate quantities and in regular supply in every *Anganwadi* Centre. This will increase service utilisation and participation by the community for all other services as well. This will also serve as the point for them to refer to the other health facilities for the seriously malnourished children; b) With regard to utensils and equipment for supplementary nutrition, the problem of differential between the basis of fund allocation and market price of equipment could be resolved by allocating funds through either the *Panchayats* or through the *Poshahar Samiti* for procurement of suitable materials locally. In such case that local procurement is also not viable; the funding could be based on market prices and would need to be revised from time to time. The requisite materials could be procured through an open tendering and procurement process at the project level itself by the CDPOs; c) Relevant IEC materials with basic information and key messages which convey importance of ICDS and its services for counselling and display need to be developed and provided for *Anganwadi* Workers and *Poshahar Samiti* members. *Poshahar* committee members need to be made aware of their roles and responsibilities; d) Communication of the benefit ICDS programme is lacking. Therefore, information of ICDS programme and importance of different services through *Anganwadi* centres need to be communicated through various means including displays on highways, bus stations railways stations, offices hospitals, etc. in all 38 districts; e) Provision of registers for record keeping and training to maintain the same.

**Coverage of Services:** a) The study found that though the registration for supplementary nutrition follows the norms, coverage in the village is not comprehensive. It should be mandated that all the eligible beneficiaries must be registered irrespective of whether they are malnourished or not. This will enable them to access other services like immunisation, nutrition, health education, and referral service; b) Better coordination with health department, especially ANMs for improved immunisation, health checkups, Ante natal and post natal care needs to be ensured; c) Beneficiaries need to be educated on the schemes to ensure sufficient demand for the services.

**Manpower & Work Schedule:** a) Vacant positions of Supervisors, CDPOs and office support staff should be filled; b) As against 38 districts only 6 have DPOs. Thus, all districts to have the managerial positions filled for better programme functioning; c) CDPOs and Supervisors should review and provide regular feedback to *Anganwadi* workers on records and reports.

**Monitoring:** a) Lack of supervisory and project staff needs to be addressed in this regard; b) Monitoring of *Anganwadi* workers is inadequate by Lady Supervisors and CDPOs; c) Community monitoring by PRI should be

encouraged and a system to be put in place with appropriate training; d) Supportive supervision of functioning of *Poshahar Samiti* is of great importance and requires immediate attention; e) Vehicles and drivers or appropriate conveyance to be provided to the project offices; f) A system for tracking of beneficiaries and monitoring needs to be established at the various levels.

**13.17 *The Quality of Life of the Elderly Population of Bihar: A Case Study of Patna District*, Abhay Kumar, PhD Thesis, Centre for the Study of Regional Development, Jawaharlal Nehru University, New Delhi, 2007.**

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**Key Topics:** *Quality of life, Elderly Population*

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The objectives of this thesis are to study the regional variations in the demographic and socioeconomic characteristics of the elderly population in Bihar at district level; to study the various indicators of Quality of Life (QOL) of the elderly population in the study area (Patna district) pertaining to economic, health, housing and housing amenities, family and social relationships; to construct the Quality of Life Index with the help of the selected indicators and analyse the quality of life of the elderly with respect to their background characteristics; and, to suggest strategies for the improvement of the Quality of Life on the basis of the study.

The study is based both on the secondary and the primary data. The demographic and socioeconomic profile of the elderly population in Bihar as a whole has been dealt with the help of secondary data. The secondary data have been collected from sources like Census, National Sample Survey, Sample Registration System and National Family and Health Survey. The age-data from the Census of India, 1991, 2001 and 47th and 52nd round of NSS are also used in this study. From SRS, mortality and fertility figures have been obtained. Besides, life expectancy data has also been used to study the age-specific death rates and life expectancy at age 60 and above. The primary data is collected on the basis of the response to the questionnaire during field survey.

The study area is the Patna district of Bihar. The sample selection has been done at two levels,– one at city level and the other at the village level. In the city, the sample has been selected from two wards on the basis of average household size, one with the lowest average household size and, second, with the highest average household size. At the village level, again, the same procedure has been followed. Villages have been selected on the basis of the average household size. Three villages have been selected, one with the lowest average household, second with the medium average household size, and third with the highest average household size.

Quality of life measures are complex and diversified, and range from standardised quantitative instruments like the Philadelphia Geriatric Centre Morale Scale and Diener's Satisfaction with Life Scale to open ended, semi-structured questionnaires. Variables measured tend to encompass factors of health, economic, housing, family, and social.

The secondary level data have been analysed so as to present a general profile of the elderly population in the state of Bihar. This analysis has been done with the help of diversified techniques of tables, charts, and maps. Geographic Information System (GIS) has been used for the preparation of the district level maps of Bihar. Mostly, the maps are prepared with choropleth technique to represent different demographic, social, and economic phenomena. While handling the primary level data, the main techniques used are frequency distribution of the indicators, bivariate analysis, chi-square test, and composite index of Quality of Life. The Coefficient of old age and Measures of dependency like Karol Ballod's technique are the other statistical demographic techniques used to measure the ratio of the old population in the total and their dependency rate.

The Quality of Life Index has been calculated with the help of 42 selected variables from 5 broad categories, viz., economic, health, housing, family and social relationships. These indicators grouped into three to four categories under each head have been given scores on the basis of their impact on the quality of life. The indicators have been made unidirectional so as to score 0 for the low Quality of Life and 4 for the high Quality of Life. The aggregated score has been further standardised on 0 to 100 scale by dividing the observed total score from the possible maximum score and multiplying it by hundred. The obtained result then has been classified into three categories of low, medium and high quality of life.

The study notes that the size of the elderly is growing steadily. The sex-ratio of the elderly is contrary to the hypothesis that the old age sex-ratio is higher than all age sex-ratio. The longevity at age sixty and above has increased over the decades. In the socio-economic characteristics, the illiteracy is very high in the old population, as on an average four-fifth of the elderly are illiterate. In the rural areas, female elderly literacy rate is as low as less than 5 percent. Marital status analysis shows that widowhood is declining. Dependency ratio of the old age is increasing. Work participation rate is found to be more in the rural areas than urban areas. Almost nine-tenth of the total elderly workers are engaged in agricultural occupations. Health status of the elderly shows that in all the chronic diseases and in physical disabilities, people from Bihar show lesser prevalence than the national average.

According to the study, the economic profile of the elderly shows that more than half of them are economically independent. Agriculture in the rural areas and pension in the urban areas are the two most important source of income for the elderly. Almost 39 per cent of the elderly in the urban areas and 56 per cent in the rural areas are still active economically. In the urban areas, elderly are largely involved in small business, whereas, in the rural areas, agriculture keeps them busy. The income level of the elderly is low and most of the elderly in the rural areas have income of less than three thousand rupees. In the urban areas, the income of the elderly is mostly below ten thousand rupees. Seventy five per cent of the elderly in the rural areas and fifty one per cent elderly in the urban areas possess land. However, the size of the landholding is small as nearly three-fourth of the elderly own less than five *bighas* of land. Livestock possession shows that in the rural areas more than 90 per cent of the respondents have one or more cattle. Even in the urban areas, 12 percent of the elderly possess some milch cattle. It was found that even in their old age, the elderly in the urban areas have to support their family members as the family income is not sufficient and, in few cases, the elderly are the sole earning members in the family. As far as the satisfaction level of the elderly from their economic condition is concerned, the elderly in the rural areas are relatively more satisfied than urban areas. Bivariate relationship shows that income and land ownership have positive relationship with the satisfaction level of the elderly.

The health profile of the elderly shows that four-fifth of the total respondents have fallen sick during the last one year from the reference period. The morbidity profile of the respondents shows that ophthalmic diseases like cataract, night blindness, etc., have emerged with a high incidence in the study area. Followed by this are the orthopaedic diseases like joint pain, backache, kyphosis, rheumatism, etc. Disability profile shows that the elderly in the urban areas are more affected by it than rural areas. Visual disability occurs the most, followed by locomotor disability. Nutritional level shows that nearly 25.39 per cent of the elderly have low nutritional intake, 53.29 per cent of the elderly have medium level of nutritional intake, and 21.32 per cent of the elderly have high level of the nutritional intake. In the rural areas, however, the nutritional intake is low. The satisfaction level of the elderly seems to be affected by several variables. Those who are less morbid, treated and diagnosed, who need to walk shorter distance and who can afford to travel a long distance for the treatment, who use either personal and public transportation in comparison to those who walk to reach a nearest public health centre, who can spend more money on treatment and have high nutritional intake, and those who have sufficient family income are found to be more satisfied. Similarly, among the background indicators, elderly in the urban areas, from the general category, living in the joint family system, having higher standard of living, higher educational status and high income are more satisfied with their health status.

The study finds that that housing conditions for the elderly in the urban areas are far better than the rural areas. Be it the matter of type of house, source of water, source of drinking water, type of toilet, availability of kitchen in the house or type of fuel used in the households, all have been found to be relatively in a better state in the urban areas than rural areas. Even the availability of durable goods is higher in urban areas compared to rural areas.

As far as the family environment is concerned, field data reveals that almost 72 per cent of the elderly live in the joint family system. Their social environment is largely supportive. Neighbourhood in the rural areas, particularly, is quite helpful and the community extends help all the time. Neighbourhood in the urban areas is found to be relatively less responsive.

The study concludes that the hypothesis that the urban areas have better quality of life than rural areas does not stand valid and true for all the broad categories of QOL, as economic related QOL has shown rural areas with high QOL indices than urban areas. The hypothesis that the male elderly enjoy a better quality of life in comparison to the female elderly is also not valid for all the broad categories as health related QOL is higher for the female elderly than male elderly.

The study gives some key policy implications. First, in economic terms, the elderly need two kinds of intervention for improving their QOL. The first is direct intervention, where the elderly are given some kind of economic opportunity (for young elderly) and pensions (for the old elderly who are unable to contribute). The state should introduce the policy of old age social security as envisaged in the National Policy on Older Persons. Second, healthcare in the form of free check-ups, distribution of medicines, and cataract-removal surgery in the rural areas needs to be strengthened. Third, general infrastructure like roads, elderly-friendly transport system, and electricity, which enables good access to the health facilities, should be strengthened. Fourth, poor elderly, both in the urban areas and rural areas and those who are not welcomed in their family due to some reason or the other, are in need of some housing arrangements. Fifth, education of the elderly, in general, and their family members, in particular, is also very important. Sixth, the communities should develop programmes to prepare a base for family values and education, which teaches mutual respect and care for all in the family/society where elderly are also taken care off. Communities should also mobilise for any such help which the elderly require. Elderly should participate in large numbers in all these community level activities. And, last, the intervention in terms of mass media mobilisation will also prove to be beneficial for the elderly.

**13.18 Self-Help Groups and their Role in Women's Health and Empowerment: A Case Study of Patna District, Anant Kumar, PhD Thesis, Jawaharlal Nehru University, New Delhi, 2007.**

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**Key Words:** SHGs and Women's Empowerment

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The thesis notes that Self-Help Groups (SHGs) are small voluntary association of people from the same socioeconomic background with a purpose of solving their common problems through self-help and mutual help. In other words, it is a collection of people who have common problems that cannot be solved individually and have, therefore, decided to form a group and taken joint action to solve their problems. In India, usually, Self-help Groups are women oriented and most of their activities are concentrated towards saving and credit activities (apart from other activities focusing on women's empowerment, health and educational attainment, etc). There is a common perception that increased participation of women in saving and credit activities or economic attainment will empower women. Thus, self-help groups are considered as an important tool for empowering women.

This suggests that it is assumed by various scholars and policy makers that economic empowerment of women leads to social empowerment also. They also assume that this empowerment will be automatically translated to other fields of development and issues related with women, viz., their health, education, social status, etc. The study argues that these assumptions are guided by a neo-liberal agenda and the World Bank's strategy for tackling poverty in the developing world and particularly Third World countries, although there is no evidence supporting such assumptions.

It explains that there is another group of scholars who do not consider SHGs as a solution to tackle poverty. They think that SHGs can be used as a strategy for local level interventions and development, but it cannot be adopted as a strategy for women empowerment and community development. According to this view, economic benefits may not necessarily empower women economically and socially, and that women empowerment cannot be achieved by denying adequate environment like infrastructure, services, and facilities. They argue that socioeconomic and political conditions have greater impact on realisation and achievement of empowerment by the women. Without addressing these developmental issues and challenging the social structures (oppressive class and caste system), it is not possible to achieve empowerment of women.

It is in this context, the study indicates that the study was done with a purpose to explore and understand the role of SHGs in women's health and empowerment in Bihar. The thesis explores the implications of empowerment on health; it's inter-relationship with economic benefit, empowerment, development, and other inter-related factors. The thesis also looks into various views and perspective on SHG and empowerment. The findings of the study are based on field surveys, interviews, focus group discussions, and select case studies on sample of two hundred women SHG members in Patna district of Bihar. Both, qualitative and quantitative analysis were done, which critically explores the linkages between SHGs, women empowerment and their health. This study, it is hoped will help in understanding the debate whether SHGs can be used as an effective strategy of empowerment and to improve women's health and well-being.

The study concludes that it is the Government's, the international donor community's, and the World Bank's euphoria that SHGs can be used as strategy or tool for enhancing women's empowerment and eradicating poverty. The data and findings of the study do not support this assumption and argument. No doubt, it may have an impact (as extensively and widely reported in various reports and papers), but the data and findings of the study show that without understanding and addressing the socioeconomic context and developmental issues, it is not possible to achieve the target of eradicating poverty and empowering women. The data and findings also do not support the assumption that economic empowerment will also be automatically translated into other spheres of women's life such as health. The data and findings show that social structure (particularly in a state like Bihar, caste and class) economic development (such as availability of basic infrastructure like health services and facilities, educational institutions, and transportation, etc.) does play an important role in development and empowerment of women. In conclusion, the study argues that by denying these basic infrastructural facilities and an enabling social, cultural, and economic environment, it is not possible to empower women economically and socially. Thus, there is need to promote overall development of women, contextualise the programmes, and promote participation of beneficiaries in planning and implementation of these programmes.

**13.19 Social Assessment Including Social Inclusion: A Study in the Selected Districts of Bihar, Rajeshwar Mishra, Asian Development Research Institute, Patna , 2007.**

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**Key Topics:** *Social Exclusion, Social Assessment*

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The basic objectives of the social assessment study included identification of socially marginalised and excluded section in Bihar society, analysis of current access of the poor over socioeconomic opportunities, analysis of the dynamics of inclusion/exclusion of the poor in various institutions like SHGs, cooperatives, producers cooperatives, preparation of Tribal Development Plan for the district with substantial tribal population, and making recommendation for the Bihar Rural Livelihood Project considering its key objectives and findings.

The study is concentrated on the 6 identified districts where the Bihar Rural Livelihood Project is planned for implementation, based on a spatial analysis of poverty. In the first phase, the study was conducted in Khagaria, Gaya, and Nalanda districts followed by Purnia, Muzaffarpur and Madhubani in the second phase. One administrative block in each of the identified districts were jointly finalised with the BRLP professionals and authorities. Subsequently, 7 blocks, namely, Alauli (Khagaria), Bodh Gaya (Gaya) Harnaut (Nalanda), Dhamadaha(Purnia), Bochaha (Muzaffarpur) and Rajnagar and Jaynagar (Madhubani) were identified and selected. In each of the blocks, the study further identified three villages according to the demographic dominance of different caste groups. The collection of the data was made at different levels, the district, block and villages, using relevant familiar tools which included secondary sources data, participative tools, and stakeholders' consultation to have their feedback and triangulation of the findings.

The study reports that the rural landless and those belonging to the scheduled caste community form an integral part of poverty stricken and marginalised groups. Access to education and other capacity building inputs, sources of production, technology, and institutions define and determine level of poverty as they are important tools to ensure access and control over opportunity and productive assets.

The findings further indicate that the poor have restricted access to social and economic opportunities, as the elite and dominant, within the society, do not allow their easy entry. The externally designed and crafted institutions do not represent the needs and aspirations of the poor. SHGs and cooperatives have been found to have been co-opted by the elite and the dominant, and the state opportunities for the poor to be delivered through such institutions are usurped and misappropriated.

PRIs, as instruments of decentralised governance, have too been found not quite favourable to the poor although the constitutional mandates of the PRIs with certain affirmative provisions have helped the poor assert their constitutional rights and privileges. There is a definite nexus between the state agencies, the elite and the dominant and local level governance institutions who outmanoeuvre the poor and marginalised.

The study argues that tribal communities and poorest of the poor among the *Dalits* (say *Musahars*) are still at the fringe of development and they find themselves helpless and outmanoeuvred at the hands of the dominant and



the rich. The governance structure which follows a rule by number, ignores the interest of the marginal groups like the small population of tribal communities who are inconsequential in determining the electoral outcome. This seemingly innocuous population falls victim to the apathy and indifference of the dominant ruling classes who dictate and dominate governance within the garb of democracy. The study points out that the *zamindari* system, the post independent authoritarian, bureaucratic, and centralised governance also contributed to the exclusion of the poor from the mainstream.

The study recommends that there should be opportunity for dialogue among different sections of society to share their concerns and opportunities. Local level planning, development of local leadership, and stakeholder's involvement in the design and implementation of the development programmes meant for the poor can facilitate and ensure inclusion. The study strictly forewarns using financial and monetary inputs at the entry level. Special groups like the *Musahars*, among the *Dalits*, and *Santhals*, among the tribal communities, need a carefully designed mobilisation and capacity building strategy combined with need based appropriate skill and enterprise development.

The study brings out that entitlements and demands are all that would ensure effective and strong access and control over assets and institutions as tools of reducing vulnerabilities and shocks. The poor need to be prepared to assert their rights and entitlements, and the state should be sensitised to support their rights and entitlements through appropriate policy interventions. The findings further indicate that the poor can open up, build capacity for articulation and innovation given an enabling environment and participative framework.

### **13.20 Tribal (Indigenous People's) Development Plan, Rajeshwar Mishra, Asian Development Research Institute, Patna, 2007.**

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#### **Key Topics: Tribal Development Plan**

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The study, under the aegis of the Bihar Rural Livelihoods Development Project, outlines a Tribal Development Plan (TDP) for the state which aims at providing an enabling framework that will help to acculturate tribal people to the dominant society realities and economic activities, and to proactively respond to the hostilities of the environment. The current project is proposed to be implemented in only 2 of the 13 blocks in Purnia district in Bihar, namely, Banmankhi and Dhamdaha. However, the components of the TDP will be applicable to all the 13 development blocks with variations in the micro level.

The methodology followed for the study was of free, prior, and informed consultation with the tribal community. Discussions were also held with other stakeholders-members of the bureaucracy/PRI's/cooperatives, etc. Participatory approach and tools were adopted. Secondary sources of information were accessed for background information. The project team used structured consultations for triangulation.

Given the higher concentration of the ST population and also being the Bihar Rural Livelihood Project district, the TDP has been prepared based on free, prior, and informed consultation with ST households in Purnia district. The findings from Purnia highlight the low asset/endowments available to the tribal communities. The tribal communities, in Purnia, have low land ownership and they use obsolete technologies and cropping pattern. Availability of safe drinking water, proper housing and sanitation facilities are deficient, and below minimum quality standards. Absence of SHGs, in the studied villages, point to the inability of the tribal community to get organised into saving and thrift groups. The findings suggest that the tribal communities have been completely ignored for their partnership and participation in the decentralised governance. The benefits provided for them are said to have been misappropriated by the dominant communities.

The study notes that key elements of tribal strategy are institutional strengthening and development, endowment/asset and skill development, capacity building, enabling inputs, and policy influencing inputs. The project is to be implemented in the villages and blocks with significant tribal population through four major components, namely, the Community Institution Development, Community Investment Fund, Technical Assistance Fund, and Project Management.

According to the study, the first phase of Community Institution Development will involve strengthening and building vibrant and self managed primary institutions of the poor including SHGs based on internal thrift and revolution of savings. During the second phase, the SHGs will be federated at the village level to form village

organisations (VOs), which will be provided with project investments for various activities through a participatory micro planning process. The third phase would involve supporting federation of VOs to aggregate as higher level apex community organisations at the block or cluster level for taking up livelihood enhancement and income generating activities, and develop linkages with market institutions. The communities will also be provided skills and tools to develop social accountability mechanisms to enable transparency and good governance of the institutions of the poor and build effective service delivery partnerships with local government.

The Community Investment Fund (CIF) is designed to transfer financial and technical resources to the community based organisations on a demand driven basis, through a participatory micro planning process. This CIF will serve as a catalyst to improve their livelihoods, build their institutions, and leverage credit from formal sources on fair terms. The Technical Assistance Fund (TAF) will improve quantity and quality of service provision by public, cooperative, community and private service providers. The fund will also promote use of Public-Private Partnerships in improving the supply of key support services for the community organisations and federations in the areas of institution building, finance and livelihoods enhancement.

Project Management component would facilitate overall co-ordination, implementation and financial management, monitoring, and learning of the project at state and district levels. The project's institutional arrangements are built as a support structure starting from the community and village level, and going further to block, District, and State level, and BRLPS working as a promotional and umbrella agency for rural livelihood promotion in Bihar.

The Tribal Development Plan also proposes for an accountability and grievance redressal mechanism. The required budgets will form part of the Annual Plans and Budgets of the District Project Coordination Units with larger allocations for Purnia district, which has significant Tribal population, for institution building, capacity building, and livelihood investments. This will be reflected in the Micro-Credit Plans prepared by the target households, SHGs, and VOs.

### **13.21 Implementation of ICDS in Bihar and Jharkhand, Nandini Nayak and Naresh C. Saxena, *Economic and Political Weekly*, Vol. No. 41(33), pp. 3680–84, 2006.**

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#### **Key Topics: ICDS**

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The article examines the implementation of the Integrated Child Development Scheme (ICDS) in Bihar and Jharkhand, and discusses the performance of ICDS, particularly in terms of the coverage of the scheme, and the financial procedures and practices adopted in the appointment of personnel.

It notes that vacancies in the sanctioned posts are a serious problem in ICDS. In Bihar, only 4 per cent of *anganwadi* worker and *anganwadi* helper posts are vacant. This is because positive steps towards filling vacancies were taken in 2003, when the state government delegated powers of selection of *anganwadi* workers and *anganwadi* helpers to the *gram panchayats*. Figures available for 350 of the 393 ICDS projects, however, reveal that of the sanctioned supervisors' posts, a mammoth 85 per cent lie vacant.

It finds that with regard to finances, being a poor state, Bihar finds it difficult to arrange for state funds. But what is unfortunate is the fact that even funds provided by the central government are not fully utilised due to procedural bottlenecks. Funds released to Bihar under ICDS (general) stood at Rs 1,755 lakh in 2003-04 and Rs 7,408 lakh in 2004-05. The release of funds from the state budget stood at Rs 2,713 lakh and Rs 8,753 lakh in 2003-04 and 2004-05, respectively. Of the funds released by the state government in 2003-04, Rs 160 lakh remained unutilised. Under the additional central assistance for supplementary nutrition made from the PMGY, Rs 3,626 lakh were allocated by the government of India in 2003-04 as well as in 2004-05. Of the PMGY funds released in 2003-04, Rs 224 lakh remained unutilised. In Bihar, the CDPOs are required to inspect at least 50 per cent of the centres under their jurisdiction every month. This is not being observed for want of supervision or vehicles. Sometimes, even when there are vehicles, these are requisitioned for law and order, or stay idle for want of timely release of POL/maintenance funds.

The study laments that the problem of 'supervision in absentia' or the complete absence of supervision clearly emerges when one looks at the registers of the AWCs. It is unfortunate that *anganwadi* registers frequently reveal that the weight of children is not recorded properly. Further, there is no understanding of how to check whether

malnutrition is decreasing or increasing. Creative ways of plugging this lack of supervision are needed. In its objectives and original structure, the ICDS set out to achieve laudable goals.

While the study notes that since 2001, the vision of the scheme has been strengthened by the interim orders of the Supreme Court. The poor administrative arrangements for implementation of ICDS in Bihar and Jharkhand are especially unfortunate, given the fact that many other poor states have managed to get the scheme off the ground. Procedural corrections are critically required for positive change.

To conclude, the study argues that both state governments have failed with regard to coverage, use of finances, and appointment of personnel. For example, while ICDS has been sanctioned in 73 per cent of development blocks in Bihar, less than half the sanctioned projects have been operationalised. Secondly, while there are less than 5 per cent vacancies for positions of *anganwadi* workers, close to 85 per cent of positions for supervisors are vacant. The study provides a detailed analysis of the failure of Bihar and Jharkhand to implement ICDS on the three fronts. It suggests certain recommendations to operationalise ICDS projects based on their findings, including: effective utilisation of financial resources, filling vacant posts, training for staff, and better supervision along with giving the programme a higher priority than it is currently given.

### **13.22 Evaluation and Impact Assessment of National Rural Employment Guarantee Scheme in Bihar, Ashok Pankaj, Institute for Human Development, New Delhi, 2006.**

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**Key Topics:** NREGA, Evaluation, Impact Assessment of NREGA

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The study aims at documentation and evaluation of the process and status of NREGS implementation; impact assessment in terms of improvement in livelihood conditions and income security of the rural households, reduction in migration from rural areas, impact on the labour market and local wage rate, women empowerment through work participation and creation of community assets; and suggesting strategies and policies for its better and effective implementation in the state.

It is based on primary and secondary data and information collected from the field and government sources. Methods of non-participatory observation, structured and non-structured interviews, focussed group discussions, worksite surveys were also applied for the purpose. First, 6 districts were selected on the basis of composite development indicators and where NREGS works were already in progress. Then, 12 Blocks (two blocks from each district); 60 villages (five village from each block); and 38 worksites (three worksites from each selected block from each selected district) were selected. All the households (13,154) in the sample villages were listed and surveyed first and, then, 1,214 households from 60 villages across 6 selected districts were comprehensively surveyed.

The study found that demographic features of the sample households/population indicate average household size of 6.2 and positive correlation between the size of land and size of household; dependency ratio of 0.47 per cent; and literacy rate of 57.11 per cent and a correlation between caste, land, occupation, and literacy. There is a high level of disguised unemployment, rural household indebtedness, and migration from the rural area.

It reveals that despite the low level of literacy rate in the rural areas of the state, 62.45 per cent of the rural population were aware of the NREGA. However, the level of awareness was not uniform across the districts and across socioeconomic groups. Quality of awareness was generally lacking. Access to radio, newspapers, TV still appears to be very low among the rural population of the state. *Gram Pradhans* and informed villagers are the most important source of information for NREGA awareness in the state.

Although 62.45 per cent of the total population were aware of the NREGA, only 25.32 per cent applied for the job card. However, the proportion of those who applied for job cards varied among different socioeconomic groups, indicating that the need for manual work was not the same among different sections of the society. Merely 3.92 per cent of the rural households and only 27.66 per cent of the applicants had been provided job card by the survey period. Merit of the job card distribution gives the impression of a non-discriminatory process (to the disadvantaged groups), as job card distribution did not indicate pronounced variation across socioeconomic groups. Moreover, it appears to be favourable to the expected beneficiary groups, landless, SCs, STs, and casual labour in agriculture and non-agriculture. However, there was an overall low coverage in terms of both population and applicants, and coverage across districts was not the same. Rather, very pronounced differences exist across the districts. Further, job

card registration and distribution has been vitiated by difficulties in getting forms, charging payment for forms and job cards as well, not pasting of photographs and applicants bearing the payment for photographs, considerably long time in preparation of job card, poor verification, and non-issue of job cards.

The study found that amidst regular complaints received from other states regarding violation of minimum wage payment, the overall impression of the actual wage payment in the state is better, though not free from complaints and violations. Though actual wage payment varied across districts and worksites, yet the state average of the actual payment to the workers was Rs 62.19 per day, only Rs 5.81 less than the minimum wage rate of Rs 68 rupees per day in the state. While cash was the mode of wage payment throughout the state, more than 50 per cent of the workers reported their preference for wage payment both in cash and in kind.

The study found the impact of NREGS to be manifold. Due to the sheer magnitude of poverty and unemployment in the rural area of the state, the amount of jobs created so far under the NREGS appears to be insufficient to make any major impact on livelihood conditions or migration from the rural areas. However, once the NREGS takes off, it would be able to create conditions for better livelihood, reduce migration, and improve village and community life.

The study highlighted two potential impacts of NREGS. Firstly, Rs 6,800 per household as guaranteed by the provision of a minimum of 100 days employment at the minimum wage rate would be able to wipe out the household indebtedness of SCs, STs OBCs-I, casual labour in agriculture, and landless families, as the average amount of debt of these households is approximate to the guaranteed earning through NREGS. Secondly, the average earning of the migrant workers outside state is Rs 91, only Rs 23.16 higher than the minimum wage of Rs 68 per day. However, the average surplus of the migrant workers, keeping in mind the expenditure required for staying outside, would be less than that of the NREGS workers getting a job at home. Moreover, the happiness of NREGS workers would be greater while enjoying family and community life. This would help in substantial reduction of seasonal migration.

The study highlighted operational difficulties of NREGS, which included, first, coincidence of *panchayat* elections and commencement of NREGS hampered the initial operationalisation process. However, NREGS implementation in the state has been constrained by a number of structural and temporal, NREGS, and Bihar specific problems. Second, massive shortage of staff, particularly *panchayat* secretary and junior engineer, incapacity of *panchayat* secretary, almost 75 per cent are promoted from Dalpati, and absence of pre-implementation training and capacity building programme created the greatest hurdles in implementation. Overburdened BDOs being given additional charge of Programme Officer is another problem related to personnel. Lack of institutionalisation of *panchayat* offices, poor habit of record keeping, and limited exposure of *panchayat* secretary to paper work resulted in a slow and tardy process of job card registration, distribution, apart from poor maintenance of record, incomplete muster rolls, and incomplete job cards. Macro level structural problems pertained to the absence of power, road, infrastructure in the offices, vehicles, as about 50 per cent of the blocks are without vehicles. And, third, some NREGS specific structural problems are: low level of literacy that fundamentally constrained awareness programme through audio-visual media, lack of credible NGOs, other grassroots organisations, outsourcing agencies, social power relations, incapacity of PRI representatives, etc. Scheduled task revision, constitution of State Employment Guarantee Council, appointment of Gram Assistants, etc., are the temporal problems. Low development of delivery capacity of the state, low capacity of development related technical agencies, implementation of development works through the administration, poor quality control, absence of social and political mobilisation for development, Naxalism related problems like levy and insecurity of officials, politicisation of administration over the years, decline of discipline in the offices, and excess exposure to politics are some Bihar specific problems.

The study concluded that despite the coincidence of the commencement of NREGS and *panchayat* elections that staggered into 10 phases and well up to the end of June 2006, structural and temporal constraints; low level of infrastructural supports, poor capacity of implementing agencies, NREGA implementation in the state in the very first few months had some good results like moderate level of general awareness, commencement of works in almost all the districts, relatively better enforcement of minimum wage payment, benefits reaching the target group, female household participation only a little less than the fixed target, etc. Further, some of the districts have done reasonably good. Like overall performance of Rohtas and Kishanganj is appreciable. Nevertheless, there is much to be done to make it a successful rural upliftment programme. Moreover, districts with lethargic performance need to be alerted and warned.

### 13.23 National Rural Employment Guarantee Scheme in Bihar, Poorest Areas Civil Society Programme, PACS – SCBA, Kankarbag, Bihar, 2006.

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**Key Topics:** NREGA, PACS

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This study portrays the picture of NREGS in Bihar six months since it was launched in February 2006. It gives a picture of where the NREGS is moving and what could be the action points to guide and expedite its progress. The analysis is made on the basis of the data provided by the Rural Development Department, Government of Bihar, and also on the figures and experiences that came up during PACS-NREGS Week.

Following are the key findings of the study:

**Applications registered and job cards issued:** This part totally reflects the initiatives taken by government where application has already been entertained, registered and job card has to be issued to applicants. It shows that almost half of the applicants got the job cards. Two major challenges come up in making and issuing job cards are related to taking photographs of beneficiaries and their delivery to the right person. The NREGA spells out clearly that the administration is responsible for the photographs, but there are many instances where villagers have paid 60 to 80 rupees for photographs. The lower level machinery needs to be oriented regarding this, as many poor villagers prefer not to spend as much as a day's income in getting a photograph. Corruption is prevalent at the *panchayat* level around photographs and job cards, which needs to be monitored. At some places delays are made in issuing the job card due to the lack of work design, while at others, the inadequate number of *panchayat* level staffs hinders this process.

**Job cards issued and demand for employment:** In some districts, almost all the villagers who have the job cards have demanded for employment, but in many the ratio is almost half. One of the important reasons is the confusion regarding the nature of work, place of work, payment, and facilities at job sites among the villagers. Hopefully, functional gram *sabha* may change the scenario at the *panchayat* level. Transparency at the *panchayat* level about funds available for their village schemes may attract more people to come forward for employment under this scheme.

**Job cards issued and employment provided to individuals:** Referring to the district wise data relating to job card issued and those lucky enough in getting employment, it can be concluded that out of 23 districts only 7 districts have provided jobs to almost every job card holder. It seems that the rest have hastily issued the job cards not taking care of the proper work design that includes proper holding of *gram sabha* meetings, selection of schemes, use of PRA techniques, preparing proper muster rolls, and providing jobs, etc.

The study suggests some action points which may help in expediting and managing NREGS more effectively. First, it reflects on the lack of awareness and misconceptions among the villagers which shows the need for a comprehensive and collective mass awareness strategy at the state, district/block, and *panchayat* level. At the block and village level, awareness building is required not only of the direct beneficiaries of this scheme but also of the teachers, village elders, *panchayat* members, media reporters, along with others who play important roles in disseminating information and to whom the villagers look for information. Second, it recommends that appointments of the specified authorities at different levels to carry out the responsibilities under this scheme should be immediate. Presently, with no extra manpower, such huge data flow relating to money transaction, wage payments, man-days calculations, and other minor details are being maintained by the same manpower of the government, which is already overburdened. In some districts of Bihar, many BDOs are in additional charge of more than two blocks and, similarly, there are many *panchayat sewaks* who are in charge of more than 5 *panchayats*. Third, it documents the unavailability of application forms and problems in taking photographs for this scheme which are just some of the problems at the administrative level. The block and *panchayat* members and officials need to be oriented about their roles and responsibilities as they are the key to the success of NREGS. Fourth, it reveals that there are irregularities in issuing job cards. This should be strictly monitored by the non-government organisations and also the CBOs present in the village. They can use RTI (Right to Information) as a tool to regulate the irregularities. The NGOs should find ways to promote social audit and the local administration should set up grievance/monitoring cells. Moreover, accountability of the roles and responsibilities should be established and some mechanism should be developed to penalise the officials responsible for any irregularities or delays. Fifth,

one of the problems in NREGS, at the local level, stems from the lack of work design for employment. The NGOs and the local administration should jointly come forward for proper work designs. Moreover, wherever NREGS work is in progress, the NREGA guidelines should be strictly enforced. Scope of public private partnership for the work design can also be explored at the micro-level. Sixth, the proportion of BPL persons who get job cards and employment to the total BPL population is very low. NGOs and the administration should target them in the villages, as they are the ones who would really benefit from this scheme. NGOs should ensure that all the persons who are living below the poverty line (who may/ may not be officially enrolled) should avail NREGS benefits. Seventh, the *panchayat* winners from the PACS-SHG have provided a moral boost to the co-villagers and also a link between the government and the villagers. Training should be provided to them on their responsibilities for the effective implementation of this scheme. And last, it advocates that at the state level a closer relationship is required with the rural development department, media, experts and policy makers, so that consistent guidance is provided to the district and block level efforts.

**13.24 Food and Power in Bihar and Jharkhand: PDS and its Functioning, Jos Mooij, *Economic and Political Weekly*, Vol. No. 36(34), pp. 3289 – 3299, 2001.**

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**Key Topics:** *PDS Functioning, Food and Power*

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The article describes the PDS in Bihar and Jharkhand, not only in terms of how it fails and what it does not accomplish, but also in terms of what it is and what it does. It is shown that while many people do benefit from the present set-up, there are also people, within almost all categories of stakeholders, who are dissatisfied with the large-scale misappropriation of foodgrains. It is argued that there is scope for change, but change requires strategic political manoeuvring and, initially, a low-key approach in order not to awaken and antagonise strong vested interests.

The paper is based on fieldwork done in 1999. The main findings are from 15 villages on the basis of 10 interviews in each village, with randomly selected villagers and occasional group interviews. The villages are spread over the blocks, some close to the block capital, others more remote.

The paper analyses the way in which the public food distribution is implemented in Bihar (now Bihar and Jharkhand). This analysis showed that there are many problems. There is large-scale misappropriation of foodgrains at all levels, the distribution of cards to BPL families is unsatisfactory, the Bihar State Food and Civil Supplies Corporation is financially not able to perform its task. Many people benefit from the way the Public Distribution System functions at present. Some PDS dealers get a reasonable income, as do many civil servants and others who are involved in monitoring the system. The food minister as well as some other politicians, also have a vested interest in the way the system works.

According to the paper, the problems with the PDS are not exceptional; in fact, they are part of larger patterns of governmental ineffectiveness. The reasons behind this failure on the part of the government are economic stagnation and underdevelopment, and the changing political landscape. Given this political and economic context in which the PDS is implemented, the observed problems are not surprising. There is almost no growth, so whatever scarce resources are available, they are appropriated through legal or illegal means. In the case of the PDS, these are public resources. They include foodgrains, posts (PDS shop licences, vigilance committee memberships, official postings), and also the discretionary powers to decide about these licences and postings. These are different kind of resources, but they are all scarce and highly valued, and people fight for them. These public resources are all misused and the benefits are (mis)appropriated to a large extent. The appropriation happens partly along caste lines, as this is one of the important mechanisms of how access to state resources is organised in Bihar.

So, the first important point which the article makes is that the form PDS has taken in this state reflects the wider political economy and cannot be understood without contextualisation within this political economy. A second point is that when this is the case, proposals for reform and improved performance should take this context into account and are likely to fail when they do not, that is, when they assume a political economic vacuum in which policies are implemented. These two points may seem fairly obvious, but they are often not sufficiently realised and there are structural reasons for that.

The article argues that policy-makers who design policies often do this far away from where these policies have to be implemented. There is not only a geographical distance, but also a social one. Food policies are shaped at the central level, by central and state politicians. The involved bureaucrats are also less aware of the practical and political difficulties at the local level resulting from their policies. The implementation arena, at the state and local level, is a very different one. The state politicians are potentially much closer to the people for whom the policy was meant to make a difference, but also much closer to others who have a vested interest.

In a state like Bihar, where there is no articulate demand for a proper implementation, these state-level politicians allow various malpractices around the PDS and continue to benefit from these. The same is true for many of the local bureaucrats involved in policy implementation.

However, according to the paper, there are seeds for change. It could be attempted to bring the dissident voices together and to mobilise them to make some improvements on a small scale. Change could be initiated on a small scale by bringing dissatisfied stakeholders together in an attempt to develop practical solutions to the various problems. A number of conditions have to be fulfilled for such a project to work. There has to be a dynamic food secretary/commissioner, who is committed to the PDS. There has to be some financial support and political backing from within, but perhaps also from outside the state. There should be a sufficiently large number of people from all normally benefiting stakeholder groups (PDS dealers, officials, local politicians, MLAs) who are dissatisfied and who can be brought together. And last, but most important, there should be some political awareness and willingness to fight amongst the expected beneficiaries.





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## *Appendices*

***Appendix 1: List of Research Documents by Type***

***Appendix 2: Authors Index***

***Appendix 3: List of Abbreviations***

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## Appendix 1

### List of Research Documents by Type

#### Books

1. Barik, R. K. (2007), *Land and Caste Politics in Bihar*, Shipra Publications, Delhi.
2. Chakravarti, Anand (2001). *Social Power and Everyday Class Relations: Agrarian Transformation in North Bihar*, Sage Publications, New Delhi.
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### **Appendix 3**

## **List of Abbreviations**

AAA	Availability, Access and Absorption
AFLP	Accelerated Female Literacy Programme
AGL	Agricultural Labour
AIDCA	All India Depressed Classes Association
ANM	Auxiliary Nurses/Midwives
APEDA	Agricultural and Processed Food Export Development Authority
APMC	Agricultural Produce Marketing Committee
ASHA	Accredited Social Health Activist
ASI	Archaeological Survey of India
ATMA	Agricultural Technology Management Agency
AWC	Anganwadi Centre
B:C (Ratio)	Benefit cost (Ratio)
BAC	Backward Agricultural Caste
BAP	Block Action Plan
BDO	Block Development Officer
BEP	Bihar Education Project
BJP	Bhartiya Janata Party
BMW	Biomedical Waste
BO	Block Office
BPKS	Bihar Provincial Kisan Sabha
BRLPS	Bihar Rural Livelihoods Promotion Society
BSUP	Basic Services to the Urban Poor
BTT	Block Technology Team
BTW	Bamboo Tube Well
CAA	Constitution Amendment Act
CAG	Comptroller and Auditor General
CDP	Community Development Programme
CDP	City Development Plan
CEPA	Centre for Poverty Analysis
CIF	Community Investment Fund
CMR	Child Mortality Rate
COMFED	Cooperative Milk Producers' Federation Ltd
CSP	Congress Socialist Party
CSS	Common School System
CWC	Central Warehousing Corporation
CWS	Current weekly Status
DCCB	District Central Cooperative Bank
DEM	Digital Elevation Model

DHS	District Health Society
DISE	District Information System for Education
DM	District Magistrate
EAS	Employment Assurance Scheme
E-E	Entertainment Education
EMIS	Educational Management Information System
EUS	Employment and Unemployment Survey
FCI	Food Corporation of India
FGD	Focus Group Discussion
FIAC	Farm Information and Advisory Centres
FMIS	Flood Management Information System
FO	Farmers Organisation
FRI	Flood Risk Index
FSI	Food Security Index
FSO	Food Security Outcome
GAP	Ganga Alluvial Plain
GB	Governing Board
GDDP	Gross District Domestic Product
GDP	Gross Domestic product
GEDI	Gender Related Education Development Index
GIS	Geographical Information System
GP	<i>Gram Panchayats</i>
GSDP	Gross State Domestic Product
GWDP	groundwater development potential
HDI	Human Development Index
HH	Households
HIV	Human Immunodeficiency Virus
HUDCO	Housing and Urban Development Corporation
HYV	High Yielding Variety
IADP	Intensive Agricultural District Programme
IAY	Indira Awas Yojana
ICAR	Indian council for Agricultural Research
ICCR	Inter-Class Concentration Ratio
ICDS	Integrated Child Development Services
IDD	Iodine Deficiency Disorders
IDE	Internation Development Enterprises
IHD	Institute for Human Development
ILO	International Labour Organisation
IMT	Irrigation Management Transfer
INC	Indian National Congress
INLD	Indian National Lok Dal
INM	Integrated Nutrient Management
INMCI	Integrated Management of Neonatal and Childhood Illnesses

IPM	Integrated Pest Management
IPV	Intimate Partner Violence
IRDP	Integrated Rural Development Programme
IRR	Internal Rate of Return
ITD	Innovations for Technology Dissemination
JDU	Janata Dal (United)
JMM	Jharkhand Mukti Morcha
JNNURM	Jawaharlal Nehru National Urban Renewal Mission
JRY	Jawahar Rozgar Yojana
JSY	Janani Suraksha Yojana
JUH	Jamiyat-al-Ulama-i-Hind
KA	Kala-azar
KCC	Kisan Credit Card
KMRC	Kala-azar Medical Research Centre
KVK	Krishi Vigyan Kendra
LEO	Labour Enforcement Officer
LJP	Lok Janashakti Party
LSS	Living Standards Survey
MCC	Maoist Communist Centre
MDG	Millennium Development Goals
MDMS	Mid Day Meal Scheme
MGP	Middle Gangetic Plain
MIP	Muslim Independent Party
MIS	Management Information System
MKSS	Majdoor Kishan Sangram Samiti
MP	Madhya Pradesh
MSL	Mean Sea Level
MSP	Minimum Support Price
NABARD	National Bank for Agriculture and Rural Development
NACL	Non-cultivating Agricultural Labour
NAFED	National Agricultural Cooperative Marketing Federation
NATP	National Agricultural Technology Project
NCAL	Non-Cultivating Agricultural Labour
NCLP	National Child Labour Project
NDA	National Democratic Alliance
NDMA	National Disaster Management Authority
NDVI	Normalized Difference Vegetation Index
NES	National Extension Service
NFE	Non Formal Education
NGO	Non-Government Organisation
NHB	National Horticulture Board
NOAPS	National Old Age Pension Scheme
NPM	Non-Chemical Pesticide Management



NPV	Net present value
NREGA	National Rural Employment Guarantee Act
NRHM	National Rural Health Mission
NSDP	Net State Domestic Product
NSS	National Sample Survey
NSSO	National Sample Survey Organisation
NUEPA	National University of Educational Planning and Administration
OBB	Operation Black Board
OBC	Other Backward Classes
PACS	Primary Agricultural Cooperative Credit Society
PAP	Poverty Alleviation Programme
PCA	Principal Component Analysis
PDS	Public Distribution System
PFAE	Policy Framework for Agriculture Extension
PIM	Participatory Irrigation Management
PMC	Patna Municipal Corporation
PPS	Probability Proportionate to Size
PRA	Participatory Rural Appraisal
PRI	<i>Panchayati Raj</i> Institution
PRIA	Society of Participatory Research in Asia
PSK	Prakhand Shiksha Kendras
PUA	Participatory Urban Appraisal
QOL	Quality of Life
RCH	Reproductive and Child Health
RDA	Recommended Dietary Allowance
REM	Range Equalisation Method
RGVY	Rajiv Gandhi Grameen Vidyutikaran Yojana
RIW	Relative Importance Weight
RJD	Rashtriya Janata Dal
RRB	Regional Rural Bank
SEC	State Election Commission
SES	Socioeconomic Status
SEZ	Special Economic Zones
SGSY	Swarnjayanti Grameen Swarojgar Yojana
SHG	Self-help Group
SHS	State Health Society
SIPB	State Investment Promotion Board
SJSRY	Swarna Jayanti Shahari Rojgar Yojana
SREP	Strategic Research and Extension Plan
SSA	Sarva Shiksha Abhiyan
SSG	Sodium Stibogluconate
STI	Sexually Transmitted Infections
T&D	Transmission and Distribution

T&V	Training-and-Visit
TAF	Technical Assistance Fund
TDP	Tribal Development Plan
TFP	Total Factor Productivity
TP	Treadle Pump
ULB	Urban Local Body
ULCRA	Urban Land Ceiling and Regulation Act
UNODC	UN Office of Drugs and Crime
UP	Uttar Pradesh
UPA	United Progressive Alliance
UPBEP	Uttar Pradesh Basic Education Project
US	Usual Status
VL	Visceral Leishmaniasis
VO	Village Organisation
VSS	Vidyalaya Shiksha Samiti
WALMI	Water and Land Management Institute
WELPMGP	Women's Empowerment and Livelihoods Project in the mid-Gangetic Plain
WRD	Water Resources Development
WUA	Water User Association

## Development Research on Bihar, 2000-2010: A Compendium

This Compendium is a collection of summaries of research documents related to overall economic and social development of Bihar during 2000 to 2010. Prepared with support from the Department of Planning and Development, Government of Bihar by the Institute for Human Development, New Delhi, the Compendium covers 268 summaries spread over 13 thematic areas. Given the wide interest of researchers and policymakers on Bihar, it is a valuable resource and public document, not just for academicians and scholars, but also for civil society organizations and policymakers.

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