



**WEST BENGAL  
HUMAN  
DEVELOPMENT  
REPORT  
2004**



**DEVELOPMENT AND PLANNING DEPARTMENT  
GOVERNMENT OF WEST BENGAL**

*West Bengal Human Development Report*

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Government of West Bengal

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## FOREWORD

A major feature of our understanding of human development is that just as poverty is multi-dimensional, so are the processes of human self-realisation and social progress. No economic policy that aims at equity and social justice can concentrate on income-enhancement alone.

In India, the basic tasks of nation-building in the socioeconomic sphere have been entrusted to the States. It is an irony of the present situation, particularly after the early 1990s, that as these tasks become ever more urgent, the changing structure of centre-state relations has made it ever more difficult for individual State Governments to craft and implement alternative, independent, people-oriented policies.

Over more than 25 years, the Government of West Bengal has enhanced basic freedoms by implementing a programme of land reform, establishing India's first comprehensive system of democratic decentralisation and extending rural electrification and irrigation. Its record of secularism and communal harmony must be seen as a major achievement with respect to ensuring human security and freedom in the State. Nevertheless, it is clear that, despite progress, there are many foundational aspects of well-being and development where we have very far to go.

Any government that is committed to providing basic needs and enhancing standards of living needs continually to monitor development outcomes, whether they be achievements, shortfalls or failures. We look forward to being helped in this regard by the publication of the first Human Development Report for the State of West Bengal.

We are grateful to the Planning Commission, Government of India, and the United Nations Development Programme for their initiative and participation in the preparation of this Report. We of the Development and Planning Department of the Government of West Bengal were particularly keen that the Report not be a routine departmental document, but an independent document based on the shared experience of scholars, policy makers, elected representatives at all levels, and other social activists and political workers. The Government entrusted the task of coordinating the research and consultative process and writing the final Report to Professor Jayati Ghosh of the Centre for Economic Studies and Planning, Jawaharlal Nehru University. Her commendable efforts and the collective endeavours of all others associated with this task have made this Report possible.

April 29, 2004

  
(Nirupam Sen)

*Minister-in-Charge*

Departments of Commerce & Industries, IR,  
Public Enterprises and Development & Planning  
including Uttarbanga Unnayan Affairs &  
Paschimanchal Unnayan Affairs



## MESSAGE



CHIEF MINISTER  
WEST BENGAL

The first West Bengal Human Development Report is an important research-cum-policy document. Economic development does not mean the growth of income alone; genuine socio-economic development requires that the quality of life of our people be improved and that the production process and the polity be organised in a just and humane manner.

The Report focuses on the current levels of achievement, the areas of concern and the possible ways of progress with reference to crucial socio-economic indicators. The purpose of the Report is to provide an independent and objective assessment of the status of human development in the different districts of West Bengal and in the State as a whole. This assessment will help us in deciding inter-sectoral as well as inter-regional financial allocations within the State, and enable us to identify areas that require particular policy attention. We intend to give high priority to the steady improvement of human development conditions in the State.

May 12, 2004

  
(Buddhadeb Bhattacharjee)

## MESSAGE



सत्यमेव जयते

Planning Commission



We congratulate the Government of West Bengal for preparing its first Human Development Report.

West Bengal and Kerala have been considered as important models for achieving human development through the mechanism of decentralisation and land reforms. It is, therefore, with great interest that one reads the first West Bengal Human Development Report as a candid reflection of the State's successes and failures.

Land reforms and decentralised governance are considered as two pillars of human development. This proposition is validated by the Report which also now extends the debate. In its examination of the relationship between decentralised governance, land reforms and human development, the West Bengal Human Development Report opens a new chapter in human development analysis, which would be of interest to other State and also globally.

The Report while documenting the success of land reforms in the State that provided land to the tillers and revitalised the rural economy points to certain limitations of the strategy, particularly with respect to gender aspects.

The Report also documents the role of decentralisation as the key to social mobilisation and generation of active local interest for better utilisation of public services. It highlights the current need of economic decentralisation along with decentralised governance, that is, creation of a stable macro-economic environment at the community level.

The Report highlights concerns of the State with regard to health, education and basic services and lays emphasis on creating social and physical infrastructure. This would be critical for the State's achievement of human development goals as stated in the Tenth Five-Year Plan.

We once again felicitate the Government of West Bengal for this exercise which, along with the follow-up, is important for achieving the human development goals as stated in the Tenth Five-Year Plan for the State.

**Rohini Nayyar**

Adviser (RD), Planning Commission  
Government of India

**Maxine Olson**

UNDP Resident Representative &  
UN Resident Coordinator

## ACKNOWLEDGEMENTS

This report is the outcome of the collective effort and participation of a large number of people, mostly from within the state and some from outside the state. From the start, the state government indicated its desire to have an independent Report, and therefore provided full facilitation but avoided interference. The constant support and encouragement of the honourable Minister-In-Charge of Development and Planning and Industry, Shri Nirupam Sen, was crucial not only in ensuring that the process of preparation was smooth, but also that it remained an independent and objective process. The Co-ordinator of the Report preparation, Shri Asok Gupta (currently Chief Secretary, Government of West Bengal), played an extremely important role and handled all the matters that came up with ease and efficiency.

A number of Ministers of the Government of West Bengal displayed an active interest and contributed greatly, by participating in the various workshops, commenting on chapters, and providing insights and information as requested. Prominent among them were Shri Surjya Kanta Mishra (MIC of Health and Rural Development), Dr. Asim Dasgupta (MIC of Finance) and Shri Kanti Biswas (MIC of School Education). It should be emphasised that while they made numerous suggestions and provided a lot of help, none of them sought to influence the writing of the Report or its conclusions.

Within the Development and Planning Department, where the organisation of the Report preparation process was located, we are grateful to Shri Swapan Chakrabarti, currently Principal Secretary. Shri Bijan Kundu (currently Additional Secretary) played the most significant role in enabling and assisting the process in various ways, from organising the workshops to ensuring access to data and ensuring the completion of some Background studies. Critical logistical support was provided by Shri Partha Manna, along with Shri Pannalal Datta and Shri Atin Ghosh and other officers and staff of the Department. The Steering Committee provided continuous guidance and encouragement.

A large number of Background Papers and Studies by noted scholars were commissioned for the Report (a full list is provided with the References). Background papers were written by Sarmila Banerjee, Basabi Bhattacharya, Rabindranath Bhattacharya, Ajit Narayan Bose, Indira Chakravarty, Charvak, Pabitra Giri, Samir Guha Roy, Ratan Khasnobis, V. Nagi Reddy, Jeta Sankrityana, Priyam Sengupta and Ranja Sengupta. They also participated in several of the workshops. In addition, a special statistical study using NSSO data was undertaken under the supervision of Arijit Chaudhuri and Nikhilesh Bhattacharya, with the assistance of BAES staff. Nivedita Roy provided a set of individual case studies based on primary

surveys across the state. In addition to writing a background paper, Priyam Sengupta provided background research support for the entire Report, with assistance from Narender Singh.

The preparation of the Report included five workshops in different parts of the state, dealing with particular issues. A workshop on “Decentralisation” was held at Orgram in Bardhaman district; that on “Regional issues, with special reference to North Bengal” was held at Balurghat in Uttar Dinajpur district; a workshop on “Diversification and sustainability” was held at Sandeshkhali in the Sunderbans; a workshop in “Health issues” was held at Purulia; and finally a workshop on “Primary education” was held at Kolkata. All these workshops were marked by substantial involvement of people from within the particular region as well as across the state, and the participants included a range of people’s representatives, academics, policy makers, officials of concerned departments and activists.

These workshops proved to be extremely useful in identifying issues, clarifying questions and providing insights into understanding the processes affecting human development in West Bengal, as well as suggesting directions for future action. Several of the participants of these workshops also subsequently interacted with the team and provided much useful analysis and information for the preparation of the Report. The contributions and responses of the panchayat office bearers and members, along with social activists, proved to be especially useful. In addition, two workshops were held, with wide participation, to discuss the draft chapters of the Report.

Several eminent academics and policy makers participated in the workshops and also contributed very useful comments on the draft chapters. The most significant of such contributions were from Amiya Kumar Bagchi, Nripen Bandopadhyay, T. K. Basu, Malini Bhattacharya, Nikhilesh Bhattacharya, Ajit Narayan Bose, Nirmal Chandra, Nirmal Chatterji, Amalesh Chowdhury, Raghavendra Chattopadhyay, Gouri Pada Datta, Tapan Mitra, P. N. Roy and Subimal Sen. Detailed discussions with V. K. Ramachandran proved to be extremely useful throughout the process. Prabhat Patnaik and Abhijit Sen gave valuable comments on the entire draft.

Many others assisted the process in various ways, including providing comments and suggestions: Satish Agnihotri, Animul Ahsan, Swapan Banerjee, Alok Bhaumik, Deb Kumar Bose, C. P. Chandrasekhar, Amalesh Chowdhury, Mridul Eapen, Dalia Ghosh, Kalpana Ghosh, Sushil Khanna, Pankaj Mehta, Ashok Mitra, Gouri Mitra, Sanchari Mukhopadhyay, Narayanbhai, Jibananda Pandit,

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The Report was prepared with the encouragement and support of the Planning Commission, Government of India. We wish to thank Rohini Nayyar and B. N. Nanda.

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The co-ordination of the research for the Report was undertaken by the Economic Research Foundation. The statistical work involved in the Report would not have been possible without the active co-operation of the concerned Departments of the Government of West Bengal, as well as the Director of Census Operations for West Bengal, who have been extremely helpful in providing and validating the data used.

Translation into Bengali has been co-ordinated by Sukanta Dasgupta and Dinabandhu Bhattacharyya, who managed to ensure quality even while meeting tight deadlines. The printers, Shishu Sahitya Samsad, have been responsive and efficient, and we are especially grateful to Debajyoti Datta, Prasun Bhuit and Santanu Dastidar.

The process of preparation of this Report has been an interactive and enriching experience for the team involved in it. We hope that the final product contributes in some small way to furthering the improvement of human development conditions in West Bengal in the future.

Jayati Ghosh



# CONTENTS

## FOREWORD

by Nirupam Sen iii

## MESSAGE

from Mr Buddhadev Bhattacharyya  
Chief Minister, West Bengal v

## JOINT MESSAGE

from Rohini Nayyar, Adviser (RD), Planning Commission,  
Government of India and Maxine Olson, UNDP Resident  
Representative & UN Resident Coordinator vi

## ACKNOWLEDGEMENTS vii

## CHAPTER 1

Introduction and Human Development Indices  
for West Bengal 1

## CHAPTER 2

Land Reforms 25

## CHAPTER 3

People's Participation 43

## CHAPTER 4

Material Conditions 71

## CHAPTER 5

Employment Trends and Diversification 87

## CHAPTER 6

Health and Nutrition 117

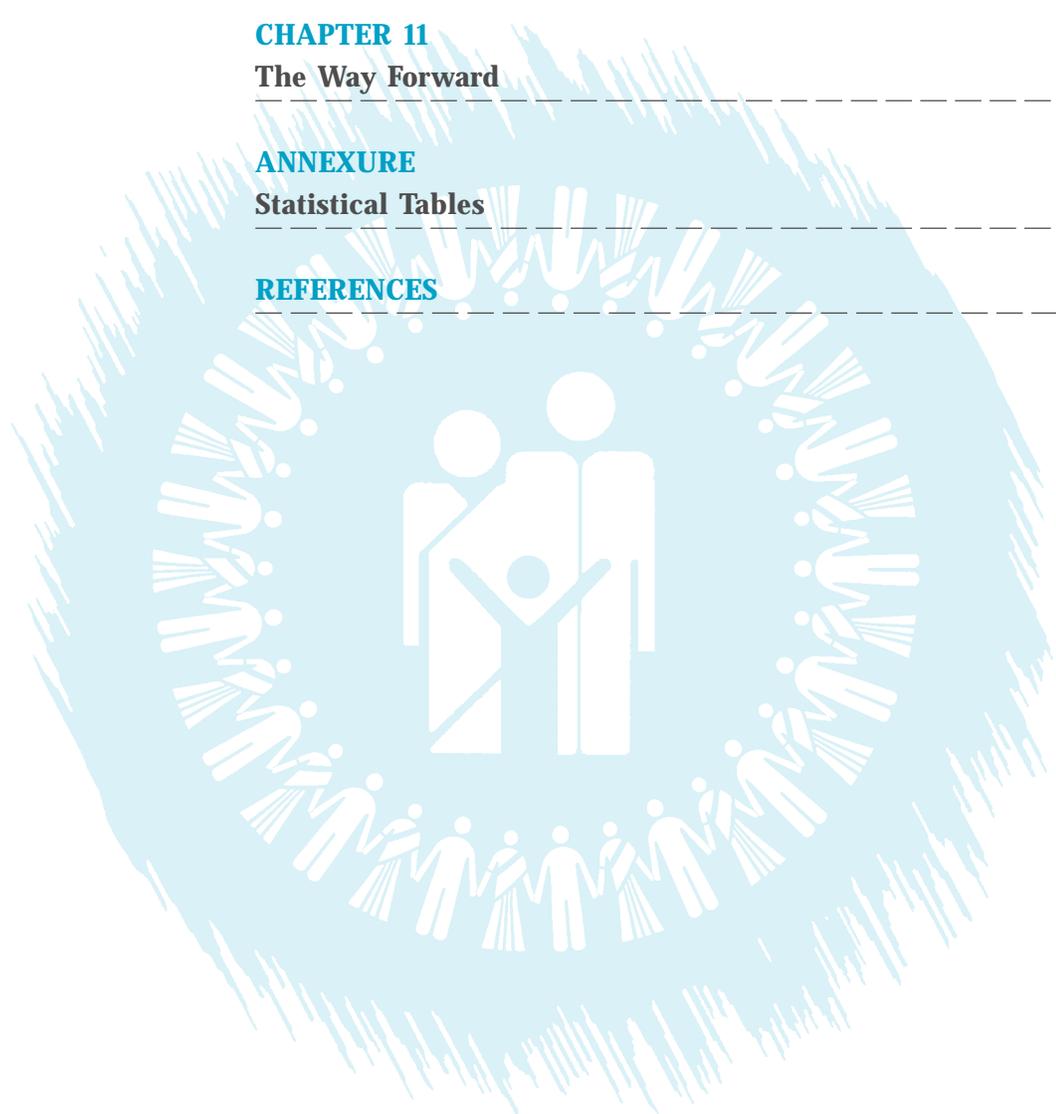
## CHAPTER 7

Literacy and Education 143

## CHAPTER 8

Human Security 165

<b>CHAPTER 9</b>	
<b>Environmental Issues</b>	173
<hr/>	
<b>CHAPTER 10</b>	
<b>Problems of Specific Regions</b>	193
<hr/>	
<b>CHAPTER 11</b>	
<b>The Way Forward</b>	205
<hr/>	
<b>ANNEXURE</b>	
<b>Statistical Tables</b>	217
<hr/>	
<b>REFERENCES</b>	227
<hr/>	



## LIST OF TABLES

- Table 1.1: Districtwise population density (persons per sq Km) \ 10  
Table 1.2: Vital rates of India and West Bengal (per thousand) \ 11  
Table 1.3: Life expectancy at birth (estimated for 2001) \ 12  
Table 1.4: Sex ratios by district \ 12  
Table 1.5: Human Development Indices by district \ 13  
Table 1.6: Gender Development Indices by district \ 14  
Table 2.1: District-wise recording of bargadars \ 33  
Table 2.2: Distribution of land reform beneficiaries \ 35  
Table 2.3: Distribution of joint pattas and single pattas to women \ 36  
Table 2.4: Loss of possession of patta land and eviction of bargadars since the land reform began \ 41  
Table 3.1: Occupational distribution of Panchayat Members \ 49  
Table 3.2: Structure of Planning Machinery after 1985 \ 53  
Table 3.3: Per capita district sector plan outlays, 1994 \ 61  
Table 3.4: Occupational distribution of panchayat members elected in 1993 \ 63  
Table 3.5: Social composition of panchayat members elected in 1993 \ 63  
Table 3.6: Panchayat members by occupation, 2003 (Bhatar and Bardhaman-I) \ 64  
Table 3.7: Panchayat members by caste and education, 2003 (Bhatar and Bardhaman-I) \ 64  
Table 3.8: Attendance at Gram Sansad meetings \ 68  
Table 4.1: Per capita State Domestic Product and average consumption expenditure in the major states \ 73  
Table 4.2: Average Annual Growth in Net State Domestic Product(at constant prices) \ 74  
Table 4.3: Credit-Deposit Ratios of Banks in West Bengal \ 76  
Table 4.4: District per capita incomes \ 79  
Table 4.5: Per capita consumption in rural and urban areas by district \ 80  
Table 4.6: Poverty estimates for rural West Bengal by type of household \ 81  
Table 4.7: Rank Correlation between income, HDI and achievement in rural roads \ 84  
Table 4.8: Population served per bank and Post Office with savings bank facilities (000s) \ 86  
Table 5.1: Census data on employment in West Bengal \ 90  
Table 5.2: Occupation of main workers according to the Census \ 93  
Table 5.3: Work participation and unemployment rates (in per cent) by social category in rural West Bengal, 1999-2000 \ 96  
Table 5.4: Occupational diversification by district in rural West Bengal \ 99  
Table 5.5: Urban work participation rates and changes over the decade according to the Census \ 108  
Table 5.6: Work participation and unemployment rates by social category in urban West Bengal, 1999-2000 (in per cent) \ 108  
Table 6.1: Basic demographic indicators for West Bengal and India \ 119  
Table 6.2: West Bengal's rank among all states for selected vital statistics \ 120  
Table 6.3: Per cent reduction in IMR, India and West Bengal \ 122  
Table 6.4: Per cent reduction of IMR in urban and rural West Bengal \ 122

## LIST OF TABLES (*contd.*)

- Table 6.5: Rural IMRs by district, 1996-2000 \ 123  
Table 6.6: Health and other socio-economic indicators \ 124  
Table 6.7: Nutritional Status of Children under 3 years of age, West Bengal and India \ 125  
Table 6.8: Nutritional status of ever-married women, West Bengal and India \ 126  
Table 6.9: Per capita production and consumption of selected food items \ 128  
Table 6.10: Age-wise food intake pattern in West Bengal (Proportion of population in each group consuming less than half the RDA) \ 128  
Table 6.11: Age-wise nutrient intake pattern \ 129  
Table 6.12: Incidence of selected diseases among children in West Bengal \ 130  
Table 6.13: Incidence of selected diseases among adult in West Bengal \ 130  
Table 6.14: District-wise burden of communicable diseases \ 132  
Table 6.15: Routine immunisation coverage \ 135  
Table 6.16: Antenatal care among ever-married women \ 136  
Table 6.17: Number of hospital beds, 1999 \ 137  
Table 6.18: Number of Health Care Providers \ 137  
Table 7.1: Literacy rates across districts \ 148  
Table 7.2: Age-specific school attendance ratios (per cent) in 1995 \ 154  
Table 7.3: School facilities \ 157  
Table 7.4: Primary school data as on 1 April 2003 \ 161  
Table 9.1: Land degradation in West Bengal \ 179  
Table 9.2: Districts affected by soil drainage problems \ 179  
Table 9.3: Districts affected by soil erosion problems \ 180  
Table 9.4: Coverage of water supply to rural households \ 185  
Table 9.5: Health effects of air pollutants \ 187

## LIST OF MAPS

- Map 1.1: WB Block Population Density \ 15  
Map 1.2: WB Block Decadal Population Growth 1991-2001 \ 16  
Map 1.3: WB Block Percentage SC Population 2001 \ 17  
Map 1.4: WB Block Percentage ST Population 2001 \ 18  
Map 4.1: Housing conditions 2001 \ 82  
Map 5.1: WB Block Change in Cultivators 1991-2001 \ 104  
Map 5.2: WB Block Change in Agricultural Labourers 1991-2001 \ 105  
Map 6.1: WB Block Female Mortality Rates 2001 \ 140  
Map 6.2: WB Block Child Female Mortality Rates 2001 \ 141  
Map 6.3: Health infrastructure \ 142  
Map 7.1: Literacy rates 2001 \ 146  
Map 7.2: Literacy rates and schools \ 147

## LIST OF FIGURES

- Figure 2.1: Progress in recording bargadars \ 32  
Figure 3.1: Sources of funds for panchayats, 1991-92 \ 59  
Figure 3.2: Expenditure pattern of panchayats, 1991-92 \ 60  
Figure 4.1: Foodgrain production (annual growth rates) \ 75  
Figure 4.2: Industrial growth in West Bengal (per cent per annum) \ 77  
Figure 5.1: Employment growth rates for all-India (per cent per annum) \ 89  
Figure 5.2: Annual growth rates of total population and workers \ 91  
Figure 5.3: Annual growth rates of male population and workers \ 92  
Figure 5.4: Annual growth rates of female population and workers \ 92  
Figure 5.5: Growth rates of rural employment by usual status \ 94  
Figure 5.6: Growth rates of rural employment by daily status \ 94  
Figure 5.7: Rural non-agricultural employment as share of total rural employment \ 96  
Figure 5.8: Growth rates of urban employment by usual status \ 106  
Figure 5.9: Growth rates of urban employment by current daily status \ 107  
Figure 5.10: Distribution of all urban workers by sector, 1999-2000 \ 109  
Figure 6.1: Rural and urban IMRs for West Bengal and India \ 121  
Figure 6.2: Reduction in IMR, India and West Bengal \ 122  
Figure 6.3: Neonatal mortality rates as a percentage of IMR in West Bengal \ 123  
Figure 7.1: Change in literacy in West Bengal \ 145  
Figure 7.2: Non-literacy by occupation in rural West Bengal \ 150  
Figure 7.3: Non-literacy by occupation in urban West Bengal \ 150  
Figure 7.4: Non-literacy by caste in rural West Bengal \ 152  
Figure 7.5: Non-literacy by caste in urban West Bengal \ 152  
Figure 7.6: Per cent of non-literates in the age-group 7-14 years \ 156  
Figure 8.1: Crime rate in West Bengal compared to rest of India in 2000 \ 168  
Figure 9.1: Land use in West Bengal in 2001-02 \ 176

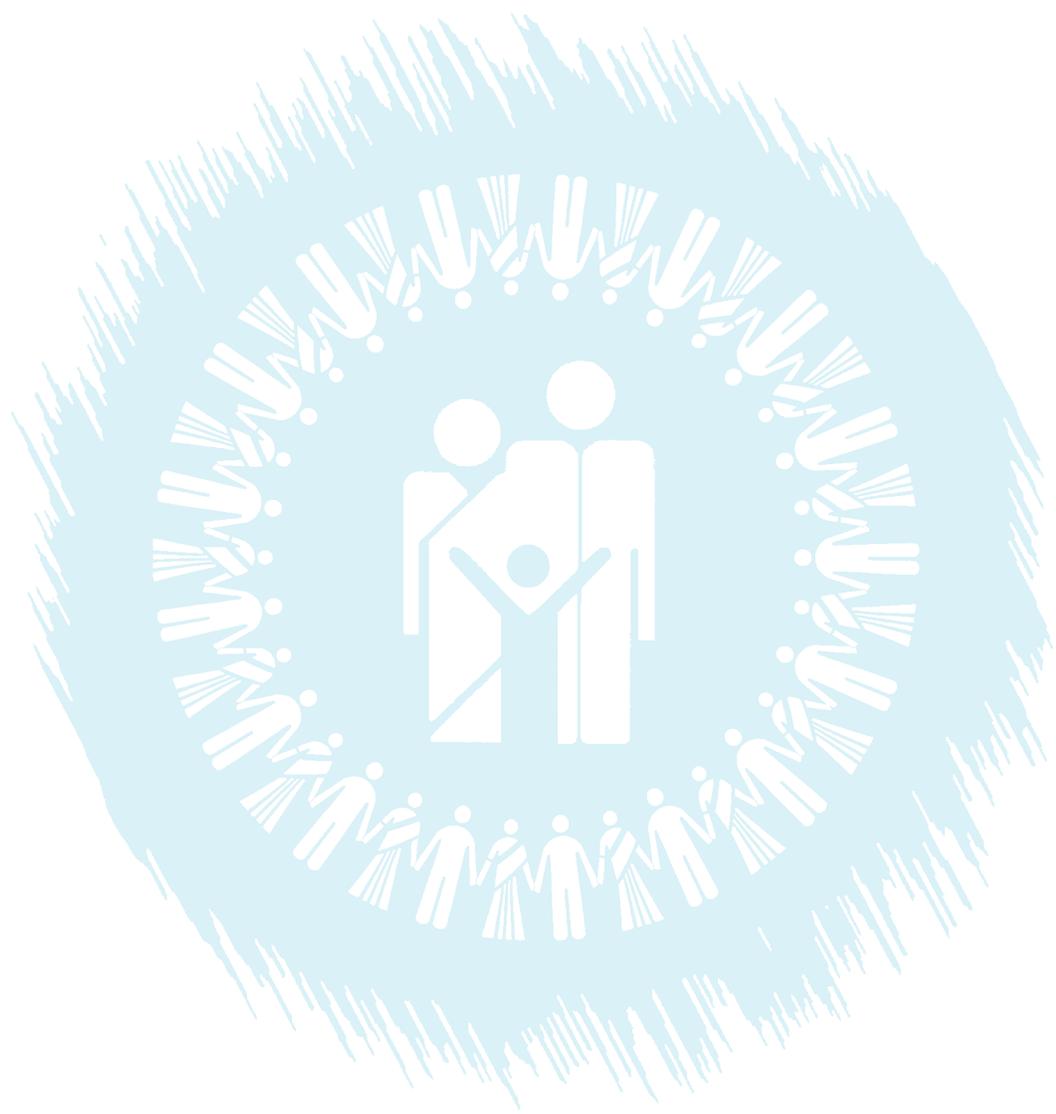
## LIST OF BOXES

- Individual experience with land reforms \ 38  
Development through people's participation \ 56  
Women and panchayats \ 66  
Some examples of rural non-agricultural employment \ 97  
The tea crisis and the conditions of plantation workers \ 101  
New forms of women's employment \ 102  
An urban working women \ 110  
Panchayats and co-operatives in rural water management \ 184

## **CHAPTER 1**

# **Introduction and Human Development Indices for West Bengal**





## Introduction and Human Development Indices for West Bengal

West Bengal is an unusual, indeed unique state in the country. It is the only one of the states in India to have been ruled continuously (since 1977) by a Left Front government for more than a quarter of a century. This government in turn has been motivated by a vision of political, economic and social change that has been different from that observed among most other state governments or the central government. This vision has determined a focus on two specific but inter-related strategies at the state level: land reform, including both greater security of tenure to tenant cultivators and redistribution of vested land; and decentralisation and people's participation through panchayat institutions. The West Bengal experience is therefore especially interesting, as it provides an insight into the possibilities and limitations of a particular strategy of change at the state level, in a wider federal context of rather different orientation of both the central government and other state governments.



This report will therefore have a particular focus on the nature and impact of the two major public initiatives which have characterised the state in the past 26 years: land reform and decentralisation. The central questions to be addressed are: how have these initiatives and the processes they have unleashed affected human development and the conditions of life of the people of the state? What specific effects have they had? Why have the positive effects not been even more pronounced? What explains the differences across regions and districts within the state in this regard? What are the factors constraining human development in the state at present and how can they be overcome?

It is important to remember that all states in the country are crucially affected by macroeconomic conditions that prevail in the country as a whole, and that the economic policies of the central government continue to have the dominant effects on the basic conditions of life and work of the people in all states. The division of economic responsibility between Centre and States which is part of India's federal structure has ensured that state governments have relatively limited powers in terms of resource mobilisation and control over basic economic processes, even while their responsibilities in terms of physical infrastructure and the provision of health and education facilities, remain onerous. Since the early 1990s, there has been even greater concentration of fiscal powers and reduced flow of resources to state governments from the Centre, which has dramatically affected both the fiscal position and the ability to engage in productive expenditure, of most state governments. Therefore, despite the fact that formally speaking the responsibility for several of the factors that affect human development (such as health and education) rests with state

*This report focuses on two major public initiatives of the past 26 years: land reforms and decentralisation.*

*Macro processes and historical legacies both affect current human development conditions in the state.*

governments, in reality their powers to alter these conditions significantly are relatively limited. More precisely, when broader macroeconomic processes are adverse, the likelihood of dramatic positive improvements in the conditions of life of most people in any one state is relatively small. The best that can be hoped for is that changes at the margin, in conditions of livelihood, nutrition, human security, health, sanitation, education and also in the extent of people's participation, will be positive.

To this more general effect of aggregate macro processes, must be added the burden of history. There are some states in the country – Kerala being the most obvious example – that have a long history of progressive state policies especially with respect to features such as education. There are others – such as Punjab – where again for historical reasons, the provision of physical infrastructure such as transport links and irrigation networks, was relatively well advanced. There are strong historical and structural factors that have influenced both the degree of development of individual states, as well as the relative backwardness of regions within states. In West Bengal, any discussion of the burden of history must also recognise the role played by the colonial administration in restricting access to education to certain social groups as well as creating a complex and oppressive system of land relations, along with the varied effects of final partition of the state at Independence.■

### About West Bengal

With a population of about 82 million in 2001 according to the 2001 Census, West Bengal is the fourth most populous state situated in the eastern region of India. Accounting for about 2.7 per cent of India's area (88,752 square km) but about 7.8 per cent of the country's population, this state ranks first in terms of density of 904 per sq km as per the 2001 Census. The boundaries of the state are Nepal, Bhutan and the state of Sikkim on the North, Goalpara district of Assam and Bangladesh on the East, Orissa and Bay of Bengal on the South and Bihar on the West.

About 72 per cent of the people live in rural areas. According to the Planning Commission, the proportion of population below the poverty line in 1999-2000 in West Bengal was 31.85 per cent. The percentages of scheduled caste and scheduled tribe populations are 28.6 and 5.8 respectively in the rural areas and 19.9 and 1.5 respectively in the urban areas.<sup>1</sup> Among the minorities, the Muslims are the dominant section and they account for about 28.6 per cent of the total population in West Bengal.<sup>2</sup> The corresponding figures for rural and urban areas were 33.3 per cent and 11.8 per cent

1 NSSO Report 469-Employment and unemployment among social groups in India— 1999-2000.

2 NSSO, Report number 468: Employment and unemployment situation among religious groups in India, 1999-2000.

respectively. Further, it may be noted that these three categories, namely SC, ST and Minorities, together account for more than half the population, and these are also the three poorest groups in rural Bengal.

A significant part of the state is relatively more backward economically, and also tends to be less advanced in terms of human development. These include large parts of the six northern districts (Darjeeling, Jalpaiguri, Koch Behar, Malda, Uttar Dinajpur and Dakshin Dinajpur), the three western districts (Purulia, Bankura and Birbhum) and the Sunderbans area of the two 24 Parganas districts in the south of the state. The specific problems of these areas are considered in more detail in Chapter 10.

*Recently, West Bengal has been one of the fastest growing states in terms of income.*

The aggregate state domestic product in 2000-01 was about Rs. 17860 Crores in current prices and the per capita SDP was about Rs. 16072. This is higher than the national average. It reflects a compound annual growth rate of 7 per cent and per capita growth of 5.4 per cent over the period 1993-94 to 2000-01, making West Bengal one of the fastest growing states in India in that period.<sup>3</sup>

For most of its post-independence history, West Bengal was a food deficit state, dependent upon the central government for a major part of its supply, to be routed through the public distribution system. For a long time, food production remained stagnant and the technology of green revolution bypassed the state. However, there was a significant spurt in agricultural production from the early 1980s and the state is now surplus in foodgrain. There has also been some diversification in cultivation, so that along with jute, West Bengal is now the major producer of vegetables in the country. Tea plantations, a major foreign exchange earner, also occupy a substantial proportion of land in North Bengal.

The share of West Bengal in the total value of industrial output in India was about 9.8 per cent in 1980-81 and it had declined gradually over time to 5.0 per cent by 1997-98. However, the services sector has expanded in the state, faster than the national average. These issues are discussed in more detail in Chapter 4. ■

### **The macroeconomic context**

Since aggregate macroeconomic processes are so important, it is useful to highlight the main patterns of change in the Indian economy and society as a whole over the past two decades. For the Indian economy as a whole, there were major changes in economic strategy that began in the mid-1980s but became much more marked from the early 1990s. The economic reforms of this

<sup>3</sup> BAES, Government of West Bengal, Report on the West Bengal Economy, August 2003.

*Economic growth in India as a whole has not led to much improvement in material condition for most of the population, and has increased economic vulnerability.*

period, which are typically described as a package of “globalisation, liberalisation and privatisation”, bore a strong resemblance to the standard “Washington Consensus” policies. The main policy changes included:

- very substantial reduction in direct state control in terms of administered prices, regulation of economic activity,
- privatisation of state assets, often in controversial circumstances
- rationalisation (usually also a euphemism for reduction) of direct and indirect tax rates, which became associated with declining tax-GDP ratios
- attempts (typically unsuccessful) to reduce fiscal deficits which usually involved cutting back on public productive investment as well as certain types of social expenditure, reducing subsidies to farmers and increasing user charges for public services and utilities
- trade liberalisation, involving shifts from quantitative restrictions to tariffs and typically sharp reductions in the average rate of tariff protection
- financial liberalisation involving reductions in directed credit, freeing of interest rate ceilings and other measures which raised the cost of borrowing, including for the government
- moving from administered exchange rates to open market intervention in exchange rate management and liberalisation of current account transactions
- allowing some degree of capital account liberalisation, including easing rules for Foreign Direct Investment, allowing non-residents to hold domestic financial assets and providing easier access to foreign commercial borrowing by domestic firms.

Despite some apparent successes in certain sectors, on the whole the process of global economic integration did little to improve the trend rate of GDP growth beyond the levels achieved from the early 1980s, did not cause a dramatic improvement in the material conditions of most of the population, and generally added to the greater vulnerability and insecurity. The rate of growth of aggregate GDP in constant prices has been between 5.5 per cent and 5.8 per cent in each five-year period since 1980, and the process of accelerated liberalisation of trade and capital markets did not lead to any change from this overall pattern. Accounting for annual fluctuations, the very recent period has not witnessed any departure from this trend of aggregate growth. Moreover, this growth has been marked by significant increases in regional and spatial inequalities.

More significantly, the period since 1990 has been marked by very low rates of employment generation. Rural employment in the



period 1993-94 to 1999-2000 grew at the very low annual rate of less than 0.6 per cent per annum, lower than any previous period in post-Independence history, and well below (only one-third) the rate of growth of rural population. Urban employment growth, at 2.3 per cent per annum, was also well below that of earlier periods, and employment in the formal sector stagnated. There has been, for the past three years, a severe crisis in the agriculture sector, as cultivators have been hit by lower or stagnant crop prices because of the threat of import competition from highly subsidised imports, even as they struggled to cope with higher costs because of cuts in domestic input subsidies.

Other indicators point to disturbing changes in patterns of consumption. Thus, per capita foodgrain consumption declined from 476 grams per day in 1990 to only 418 grams per day in 2001. The National Sample Survey data also suggest that even aggregate calorific consumption per capita declined from just over 2200 calories per day in 1987-88 to around 2150 in 1999-2000. Meanwhile, declining capital expenditure by the government has been associated with more infrastructural bottlenecks and worsening provision of basic public services. All these features: decelerating employment growth, declining access to food for ordinary people, and worsening coverage and quality of public services, have had particular impact upon the condition of women.

While there has been some overall stability of the growth process compared to the boom-and-bust cycles in other emerging markets, this basically reflects the relatively limited extent of capital account liberalisation over much of the period, and the fact that the Indian economy was never really chosen as a favourite of international financial markets over this period. In other words, because the economy did not receive large inflows of speculative capital, it did not suffer from large outflows either. Meanwhile, stability to the balance of payments was imparted by the substantial inflows of workers' remittances from temporary migrant workers in the Gulf and other regions. This has amounted to more than all forms of capital inflow put together.

While the actual capital inflows into the economy did not amount to much over the 1990s, the apparent desire to attract and maintain such inflows led to significant constraints on government policy. In particular, there were (self-imposed) limits on fiscal expansion, and more particularly on enhanced productive spending. This had unfortunate implications especially in the more recent past, which has witnessed hardly any increases in the state's productive expenditure, despite domestic recession, unemployment, crisis in

*All-India trends of concern include poor employment generation, problems of agriculture and falling per capita food consumption.*

*For India as a whole, there has been only slow progress in improving human development conditions.*

agriculture, and clear signs of slack in the form of high surplus holdings of foodgrain and large foreign exchange reserves. In sum, therefore, there were a number of adverse effects of such policies, which included increasing inequalities of income; worsening trends in per capita food consumption and nutrition; deceleration of employment generation; a relative decline of manufacturing, especially in the small scale sector, and the stagnation or decline of manufacturing employment; and deterioration in the quality of employment.

All this in turn meant that progress in improving human development indicators for India as a whole has been relatively slow.

Obviously, West Bengal was affected by all of these macroeconomic processes, which have affected pattern of growth and employment generation as well as the ability to progress in terms of human development. One feature which has been crucial for West Bengal as a state which is heavily dependent upon agricultural production, and whose performance in this sector has been well above the national average, is the decline in crop prices for farmers, which was strongly marked from 1996 onwards. Across India there is now an agrarian crisis related to this phenomenon, which has been associated with rising input prices as well. Agriculture was driving the West Bengal economy, so this naturally created enormous pressure upon the state. In addition, the state has faced even more adverse fiscal conditions than some other states, in some cases resulting from a relatively unsympathetic central government. ■

### West Bengal in the national context

Comparisons of West Bengal with the rest of India, in terms of economic growth and human development, are provided in the chapters that follow. Here, it is worth mentioning that in terms of the more obvious indicators of human development, the state is somewhere in the middle of all Indian states. Per capita State Domestic Product in West Bengal in the late 1990s was just above the national average. Per capita consumption expenditure in 1999-2000 (according to the National Sample Survey Organisation) in West Bengal was Rs. 572 per month, lower than the national average of Rs. 591 per month. The inequality in consumption was lower in the state than for all-India, and for most other states, in both rural and urban areas.<sup>4</sup> However, the difference between rural and urban per capita consumption was higher in West Bengal than the all-India pattern. When consumption is adjusted for different rates of inflation and inequality, per capita consumption in West Bengal turns out to be higher than the all-India average.<sup>5</sup>

<sup>4</sup> The Gini coefficient for rural consumption expenditure in West Bengal was 0.224 compared to the national average of 0.258, and for urban areas it was 0.328 compared to the national average of 0.341.

<sup>5</sup> Thus, the adjusted figure for West Bengal was Rs. 119 per month per capita, while for All-India it was Rs. 111 per month per capita. Planning Commission, National Human Development Report 2001, page 150.

According to the Planning Commission, the incidence of poverty in West Bengal in 1999-2000, at 27 per cent of the population below the poverty line, was only marginally higher than the national average of 26 per cent. However, it was more rurally concentrated: 84 per cent of the absolutely poor population of West Bengal lived in rural areas, compared to 74 per cent in India as a whole.

In terms of basic household amenities, West Bengal's performance tends to be lower than the national average. In the late 1990s, 68 per cent of urban households and only 16 per cent of rural households had pukka houses, compared to 71 per cent and 29 per cent respectively for all-India. Half the households had access to toilet facilities, which is the same as for all-India. Many more households – 82 per cent – had access to safe drinking water in West Bengal than the Indian average of 62 per cent. Electrification has proceeded more slowly than in the rest of India: in 1991, only 33 per cent of all households in West Bengal had electricity connection, compared to 42 per cent for All-India.

*West Bengal ranks in the middle of all Indian states in both per capita income and human development.*

As will be seen in Chapter 7, literacy and education indicators in West Bengal are well below what could be expected given the social and political orientation of the ruling state government in the last two and a half decades. The aggregate literacy rate (at 69 per cent in 2001) was only marginally above the national average of 65 per cent. Only 63 per cent of children in West Bengal in the age group 7-14 years were literate in 1991, compared to the All-India proportion of 64 per cent. Age-specific school enrolment ratios for children tended to be lower than the national averages in 1991, although these ratios have improved since then.

Health indicators, which are discussed in more detail in Chapter 6, suggest a very mixed performance. Infant mortality rates are among the lowest in India, child mortality rates are also relatively low, and life expectancy is higher than the national average. This seems to have occurred despite the relatively less developed conditions of health infrastructure, since the state has lower ratios of health care centres per population as well as higher ratios of population per hospital bed, than the All-India average. Nutrition indicators are rather poor, with higher incidence of anaemia and iron deficiency especially among women and young children, than for India as a whole. ■

## Demographic profile of West Bengal

A fundamental feature of West Bengal is the very high population density, which is nearly 3 times that of the Indian average. There has been a great concentration of population over the centuries in

*West Bengal is the most densely populated state in the country.*

the alluvial lands of the Gangetic plains of West Bengal. Historical and socio-economic factors have determined the present very high density of population in the state. Apart from the internal migration from the neighbouring states such as Bihar, Orissa and Uttar Pradesh to Calcutta, Haora and other industrial areas of the state, Partition led to an almost continuous stream of migrants into the State from across the Indo-Bangladesh borders. The phenomenal growth of population in some of the Northern districts such as Koch Behar and West Dinajpur and also in the Southern districts of Nadia and 24 Parganas in the first forty years after Independence gives an indication of the enormity of migration. The density of population consequently increased sharply in a number of areas of the State. With a population density of 904 persons per sq. km. in 2001, West Bengal is currently the most densely populated state in the country.

Greater population pressure inevitably puts more pressure on basic infrastructure as well as on the provision of health and education services. The extremely high population density obviously affects per capita resource allocation, so whatever West Bengal has achieved has been in spite of this critical negative factor of having the highest population density in the entire nation. The variation across districts in this regard also needs to be borne in mind when considering inter-district differences in human development indicators.

**Table 1.1 Districtwise population density (persons per square km)**

Source: Guha Roy (2003) using Census of India.

	1991	2001	Annual Population growth rate 1991-2001, per cent
Darjeeling	413	510	2.4
Jalpaiguri	450	547	2.2
Koch Behar	641	732	1.4
Uttar Dinajpur	604	778	2.2
Dakshin Dinajpur	555	677	2.9
Malda	706	881	2.5
Murshidabad	890	1101	2.4
Birbhum	562	663	1.8
Bardhaman	861	985	1.4
Nadia	981	1172	2.0
Kolkata	23783	24760	0.4
North 24 Parganas	1779	2181	2.3
Hugli	1383	1601	1.6
Bankura	408	464	1.4
Purulia	355	405	1.4
Medinipur	592	685	1.6
Haora	2542	2913	1.5
South 24 Parganas	574	694	2.1
<b>West Bengal</b>	<b>767</b>	<b>904</b>	<b>1.8</b>

As Table 1.1 indicates, there is substantial variation across districts even with respect to density of population, even if we exclude those districts which are dominantly urban (Kolkata) and suburban (Haora). Nor is there any clear pattern with respect to growth of population.

Contrary to some popular perceptions, it is not very likely that recent increases in population density have resulted dominantly from in-migration from neighbouring countries. Out of the nineteen districts (Medinipur has recently been bifurcated) of the State, nine have international borders with Bangladesh. Two such districts – Jalpaiguri and Koch Bihar – show uniformly a declining rate of growth over the decades from 1961-71 to 1991 – 2001. Nadia, another border district, also experienced a sharp decline in growth rate from 3.3 per cent in 1971-81 to only 2.0 per cent in 1991-2001. In the cases of 24 Parganas and Dinajpurs, the increase in growth rates from 1971-81 to 1981-91 was followed by a sharp decline in 1991-2001. The other two border districts Malda and Murshidabad contributed a little over 12 per cent to the decadal (1981-91) growth of population of West Bengal.

All the border districts together account for 44.5 per cent of the 13.4 million population that were added to 1981 census aggregate to make the State population size stands at 68 million in 1991. On consideration of the contribution of natural growth (that is, excess of births over deaths), which is not insignificant, a major concentration of recent migrants in the border districts does not seem to have occurred. Non-border districts accounted for 55.5 per cent of the total population growth of West Bengal in 1981-91. Given the moderate levels of vital rates, this implies that the reported increase in immigration over the decade was not confined to a few border districts, but has possibly undergone a spatial diffusion to other parts of the state.<sup>6</sup>

West Bengal has been successful in bringing down both birth rates and death rates, with one of the most rapid decline in birth rate in India. As Table 1.2 indicates, the decline in the birth rate has been nearly double that of the all-India average over the period 1990-2001, while the decline in the death rate has been one and a half times that of the national average. Infant mortality had also declined at a marginally more rapid rate than all of India.

Year	Birth Rate		Death Rate		Infant Mortality Rate	
	India	West Bengal	India	West Bengal	India	West Bengal
1990	30.2	28.2	9.7	8.4	80	63
1996	27.5	22.8	9.0	7.8	72	55
2000	25.8	20.7	8.5	7.0	68	51
2001	25.4	20.5	8.4	6.8	66	51

*Birth and death rates have declined more quickly in West Bengal than in India as a whole.*

**Table 1.2 Vital Rates of India and West Bengal (per thousand)**

*Source: Sample Registration System, Registrar General of India.*

<sup>6</sup> Guha Roy 2003.

Life expectancy in West Bengal is well above the national average, and the state is one of the better performing states in this regard, even in terms of increases over time. However, there are certain districts with life expectancy well below average, which require special attention, such as Malda, Koch Behar, Birbhum and Murshidabad, all of which have average life expectancy of below 60 years.

**Table 1.3 Life expectancy at birth, (estimated for 2001)**

Source: Guha Roy (2003)

	Female	Male		Female	Male
Darjeeling	71	67	North 24 Parganas	71	66
Jalpaiguri	63	61	Hugli	73	69
Koch Behar	57	53	Bankura	68	62
Dinajpur	63	61	Purulia	63	60
Malda	55	54	Medinipur	67	65
Murshidabad	60	58	Haora	73	70
Birbhum	58	56	South 24 Parganas	70	65
Bardhaman	71	68	<b>West Bengal</b>	<b>69</b>	<b>65</b>
Nadia	65	63	<b>India</b>	<b>65</b>	<b>64</b>
Kolkata	75	74			

**Table 1.4 Sex ratios by district**

Source: Census of India, 2001

	1991	2001	Per cent change
Darjeeling	914	943	3.2
Jalpaiguri	927	941	1.5
Koch Behar	935	949	1.5
Uttar Dinajpur	921	937	1.7
Dakshin Dinajpur	944	950	0.6
Malda	938	948	1.1
Murshidabad	943	952	0.9
Birbhum	946	949	0.3
Bardhaman	899	921	1.4
Nadia	936	947	1.2
Kolkata	799	828	3.6
North 24 Parganas	907	927	2.2
Hugli	917	947	3.3
Bankura	951	953	0.2
Purulia	947	953	0.6
Medinipur	944	955	1.2
Haora	881	906	2.8
South 24 Parganas	929	938	1
West Bengal	917	934	1.8
India	927	933	0.6

*Sex ratios have shown faster improvement in West Bengal than in most other states.*

The sex ratio in West Bengal has historically been worse for women than the national average, but it has shown greater improvement in the recent period, so that it is now just above the national average. Further, the sex ratio for the age group 0-6 years, which has recently shown rapid deterioration at the all-India level, does not indicate such a decline in West Bengal, where it was 963 in 2001 compared to 927 for all-India. This is higher than the sex ratio for all age-groups, which is a very positive sign. ■

## Human development indicators for the districts of West Bengal

It is evident that human development in West Bengal presents a mixed picture, and this picture is further complicated by the variations across districts in the state. Table 1.5 presents the calculations for the Human Development Index for the different districts, as well as for the state as a whole. The method of calculation of the index, as well as the statistical sources, are described in the Appendix to this chapter. It should be noted that the table refers to undivided Dinajpur, because of the nature of the data available for consumption, poverty and life expectancy. There are very substantial differences across districts, such that the HDI ranges from a high of 0.78 for Kolkata, to a low of 0.44 for Malda. ■

	Health Index	Income Index	Education Index	HDI	HDI Rank
Darjeeling	0.73	0.49	0.72	0.65	4
Jalpaiguri	0.61	0.38	0.60	0.53	10
Koch Behar	0.50	0.41	0.65	0.52	11
Dinajpur	0.62	0.39	0.53	0.51	13
Malda	0.49	0.36	0.48	0.44	17
Murshidabad	0.57	0.29	0.52	0.46	15
Birbhum	0.53	0.27	0.61	0.47	14
Bardhaman	0.74	0.47	0.71	0.64	5
Nadia	0.65	0.41	0.66	0.57	9
North 24 Parganas	0.72	0.49	0.76	0.66	3
Hugli	0.77	0.46	0.67	0.63	6
Bankura	0.67	0.26	0.62	0.52	11
Purulia	0.61	0.18	0.55	0.45	16
Medinipur	0.68	0.45	0.74	0.62	7
Haora	0.77	0.53	0.75	0.68	2
Kolkata	0.82	0.73	0.80	0.78	1
South 24 Parganas	0.71	0.40	0.68	0.60	8
<b>West Bengal</b>	<b>0.70</b>	<b>0.43</b>	<b>0.69</b>	<b>0.61</b>	

**Table 1.5 Human Development Indices by district**

## Gender issues

This report does not have a separate chapter on gender. Rather, the attempt has been to incorporate a gender perspective on all the issues considered throughout the report, and to assess the particular conditions and implications for women in each chapter. However, it may be worth outlining some of the important findings with respect to gender differences at this stage. Gender discrimination has been an important feature of economic and social processes in West Bengal, and while it has declined in some respects in the recent past, it remains significant. But it is more evident in economic variables and in literacy than in the longevity data, which indicate improving health position of women relative to men. This comes out very clearly in the calculations of the Gender Development Index which are presented here.

*Human development in West Bengal presents a mixed picture, complicated further by inter-district differences.*

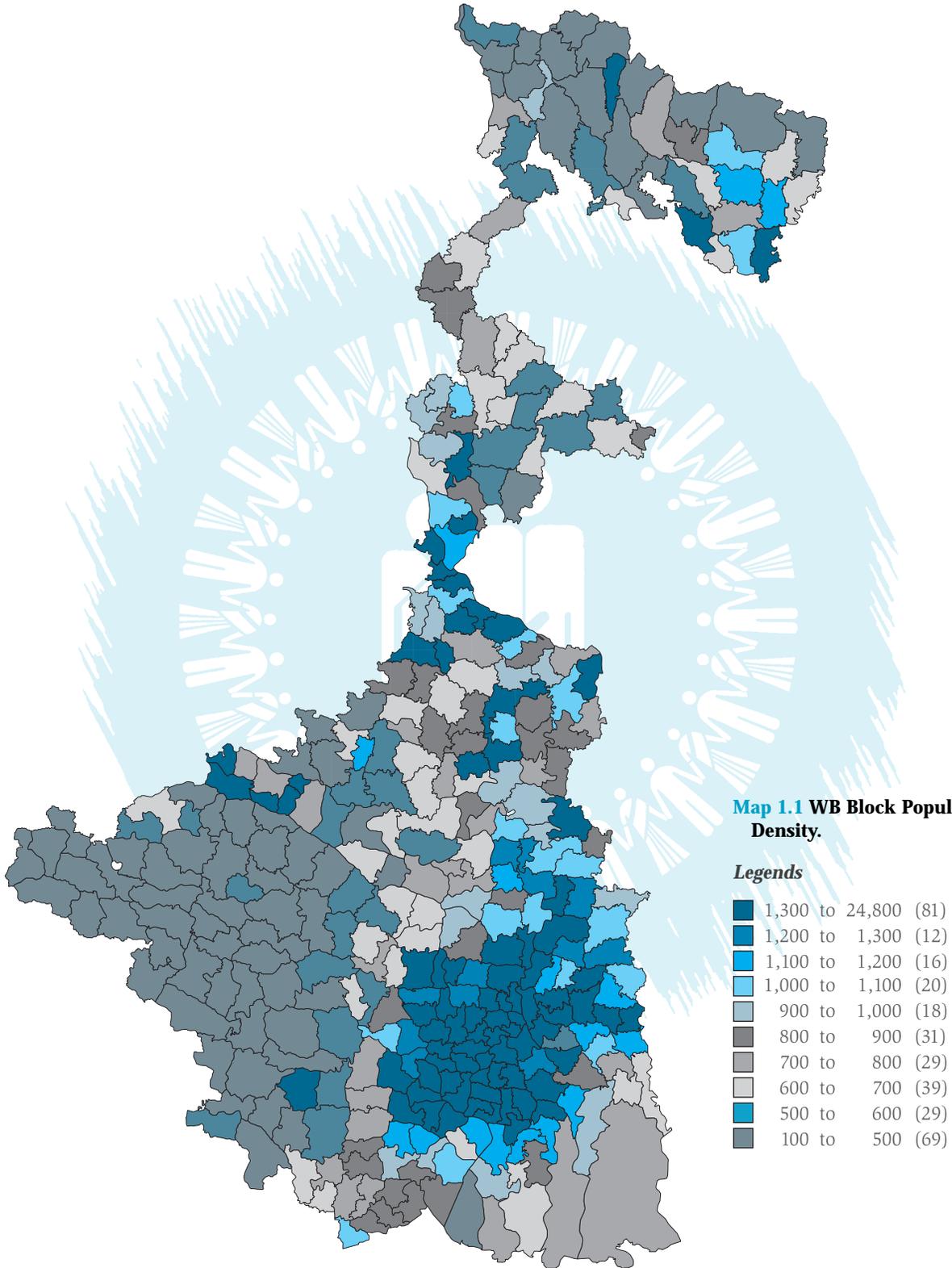
It is worth noting that the rankings of the GDI broadly follow the same pattern as the HDI rankings, in that districts with low HDI also tend to have low GDI. However, some districts such as Haora, North 24 Parganas, Bardhaman and Koch Behar tend to have worse ranking in terms of GDI than HDI, suggesting especially acute gender discrimination. The very low “Income index” component of the GDI essentially reflects the low workforce participation of women in West Bengal, which in turn suggests a combination of greater restrictions on women’s economic agency as well as social lack of recognition of women’s unpaid work. Both of these suggest a major undercurrent of gender discrimination in society.

**Table 1.6 Gender Development Indices by district**

	Health Index	Income Index	Education Index	GDI	GDI Rank
Darjeeling	0.731	0.356	0.714	0.600	2
Jalpaiguri	0.614	0.281	0.581	0.492	11
Koch Behar	0.497	0.287	0.628	0.471	13
Dinajpur	0.616	0.291	0.527	0.478	12
Malda	0.491	0.291	0.465	0.416	17
Murshidabad	0.566	0.176	0.527	0.423	16
Birbhum	0.533	0.178	0.595	0.435	14
Bardhaman	0.740	0.270	0.669	0.560	7
Nadia	0.649	0.215	0.653	0.506	9
North 24 Parganas	0.721	0.219	0.752	0.564	6
Hugli	0.764	0.259	0.720	0.581	3
Bankura	0.662	0.215	0.605	0.494	10
Purulia	0.606	0.161	0.506	0.424	15
Medinipur	0.683	0.323	0.728	0.578	4
Haora	0.773	0.194	0.742	0.570	5
Kolkata	0.824	0.320	0.783	0.642	1
South 24 Parganas	0.705	0.192	0.666	0.521	8
West Bengal	0.697	0.270	0.681	0.549	

*Gender concerns are mentioned throughout the Report, confirming an undercurrent of continuing gender discrimination in society.*

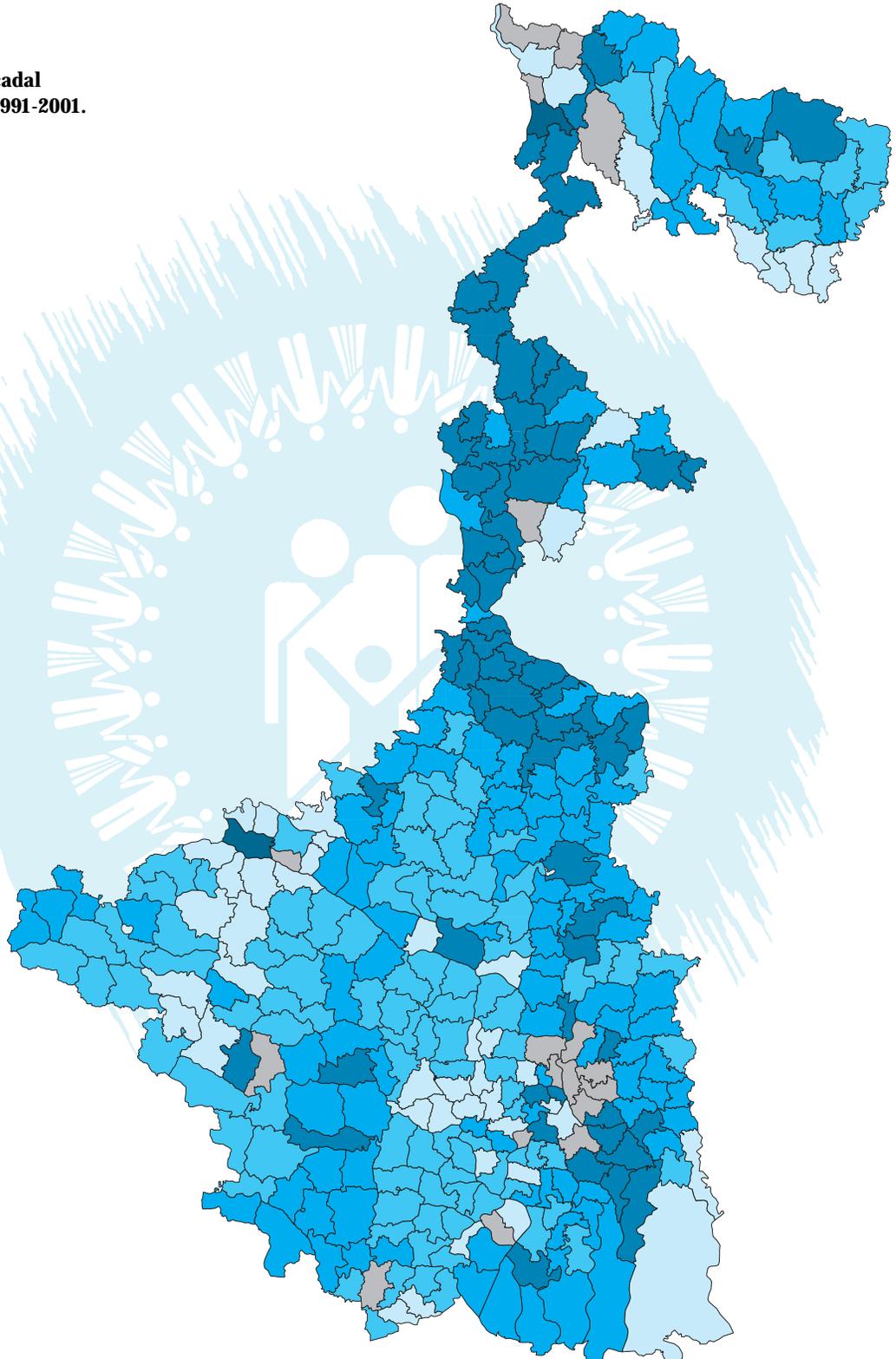
Such gender differences will be apparent throughout the report, in terms of differential rates of literacy and access to schooling, health and nutrition indicators. The policy interventions of the state government have had mixed effects in this regard. Until recently the choice of land reform beneficiaries tended to aggravate gender inequalities. However, women’s participation in panchayats has been greater and more substantive than in many other states, and there are some regions within the state where this has had very positive social effects, including more diverse forms of empowerment of women. With respect to human security issues, women in West Bengal tend to be relatively better placed than in many other parts of India. Economic exclusion remains one of the most significant problems for women in the state, which tends to have spill-over effects in other aspects of life. However, the trends in all of these variables are broadly in a positive direction, although the pace of change is not as rapid as could be desired. ■

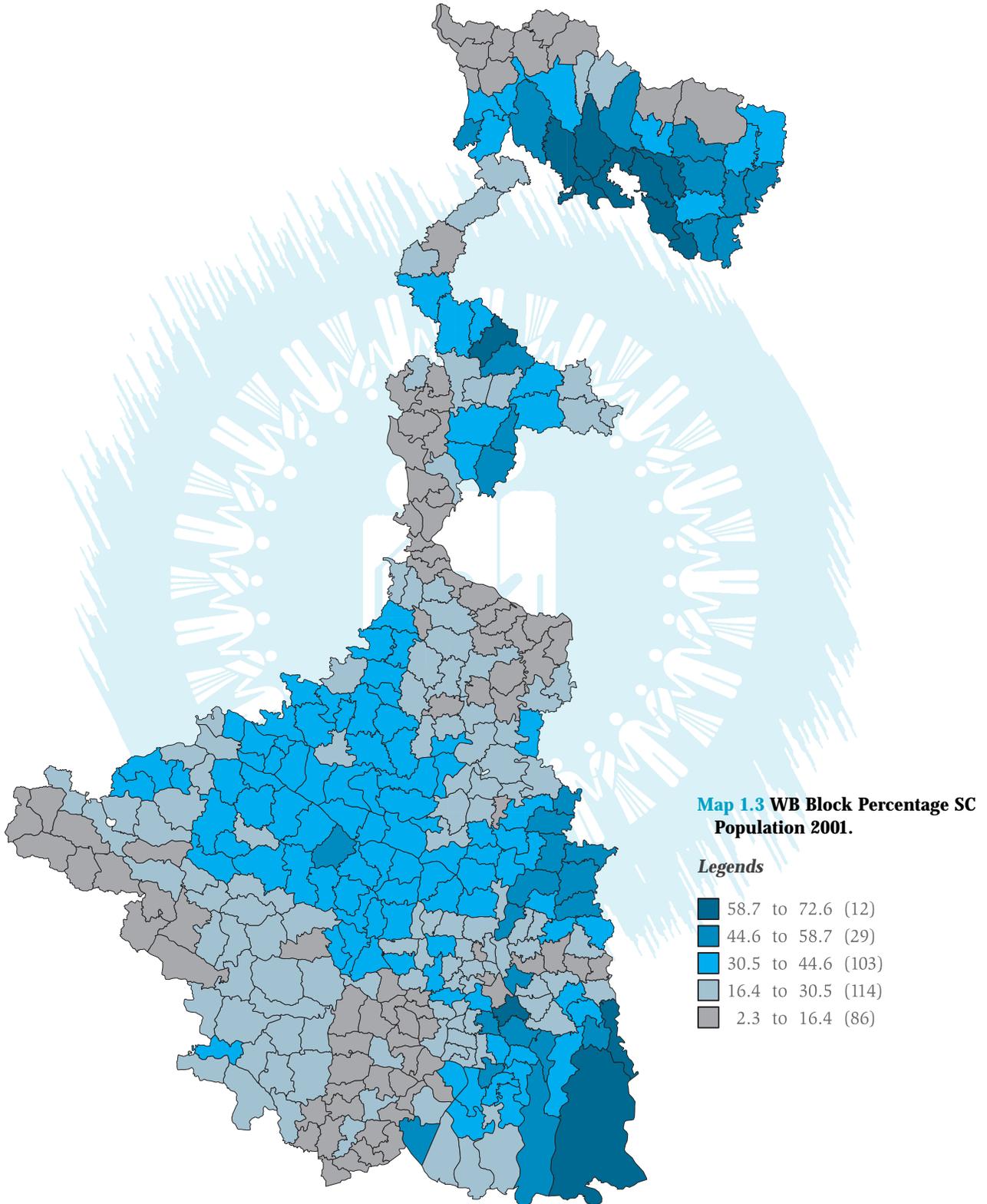


**Map 1.2 WB Block Decadal  
Population Growth 1991-2001.**

**Legends**

- 54 to 110% (2)
- 22 to 54% (67)
- 16 to 22% (107)
- 12 to 16% (103)
- 1 to 12% (47)
- -50 to 1% (18)

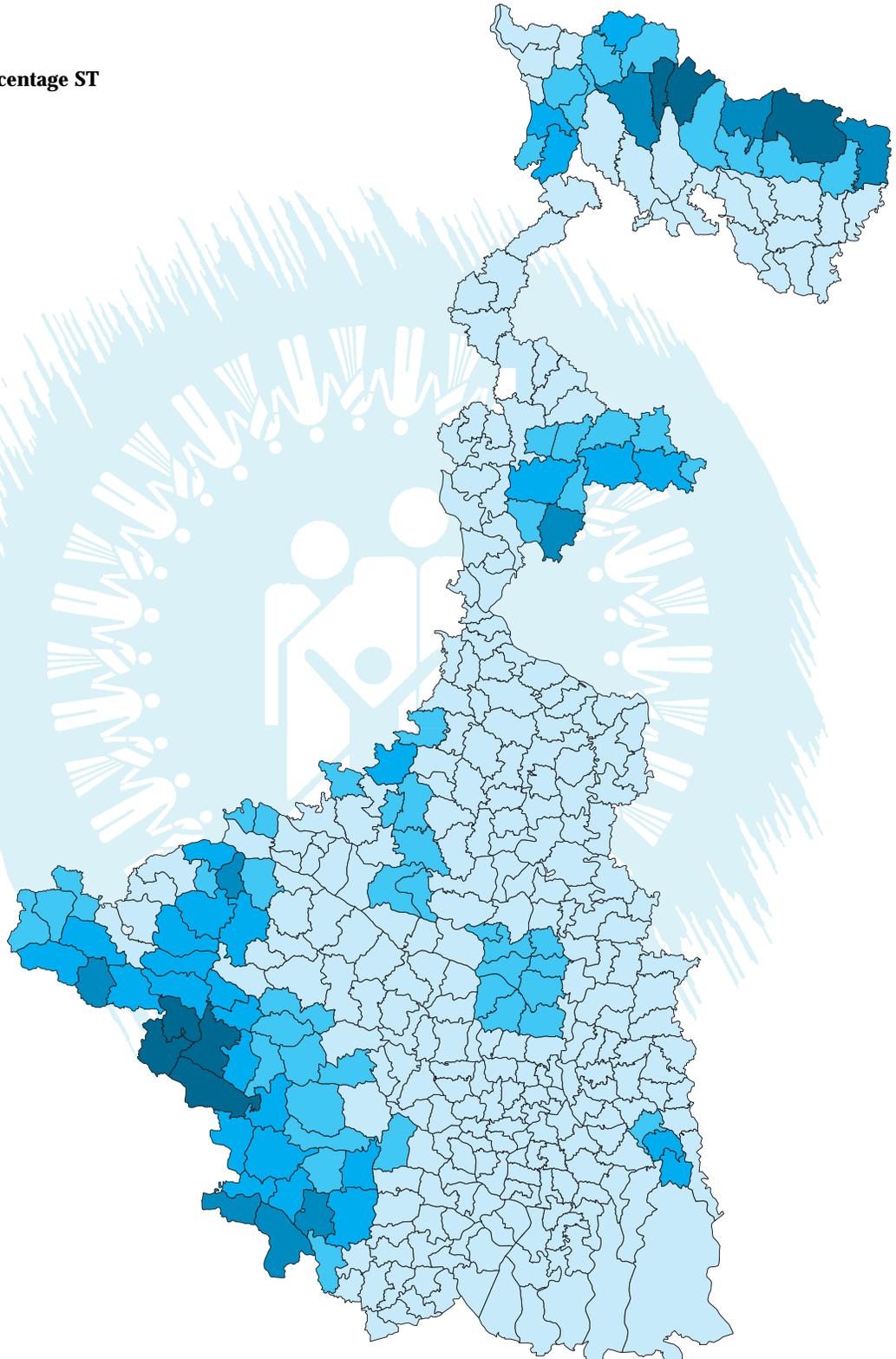




**Map 1.4 WB Block Percentage ST  
Population 2001.**

*Legends*

- 41.3 to 51.5 (7)
- 31.0 to 41.3 (9)
- 20.7 to 31.0 (28)
- 10.4 to 20.7 (50)
- 0.1 to 10.4 (250)



## Technical Appendix: Calculation of the HDI and the GDI

### The Human Development Index

The calculations of Human Development Index and Gender Development Index are similar to those followed by the UNDP, with some variations with respect to the estimation of the income index. The HDI attempts to capture in summary form, the three basic dimensions of health (expressed through longevity, that is, life expectancy at birth) knowledge (expressed as a combination of the literacy rate and the school enrolment ratio) and the standard of living (expressed as a combination of per capita income, per capita consumption expenditure and population living above the poverty line).

Each of these indicators is defined as a dimension with value between 0 and 1 with reference to maximum and minimum values. The general formula for calculating each dimension index is:

$$\text{Index} = \frac{\text{Actual value} - \text{minimum value}}{\text{Maximum value} - \text{minimum value}}$$

The HDI is then calculated as a simple average of the three different dimension values.

1. The health index has been worked out by simply using the district-level life expectancy ratios calculated for 2001 (details on this calculation are provided below) and using the UNDP norms of 85 years for maximum value and 25 years for minimum value. For illustration, consider the life expectancy rate for Nadia district estimated for 2001, which is 64 years.

$$\text{Health index for Nadia} = \frac{64 - 25}{85 - 25} = \frac{39}{60} = 0.65$$

2. The education index consists of a weighted average of the Census literacy rate (two-thirds weight) and the school enrolment rate provided by the NSS for age group 6-14 years (one-third weight). The maximum and minimum values of both of these are taken as 1 and 0. For illustration, consider again the case of Nadia where the literacy rate was 0.66 and the school enrolment rate was 0.64.

Education index for Nadia =  $(0.66 \times 2/3) + (0.64 \times 1/3) = 0.656$  (rounded to 0.66).

3. The income index differs from that typically used by other Human Development Reports, because it contains within it three different variables, in order to capture as far as possible the actual income of people. It is a simple unweighted average of the dimensions of per capita District Domestic Product, the per capita monthly consumption expenditure and the per cent of the population above the poverty line in that district.

3.1 Per capita District Domestic Product index, based on data for 2000-01 from the BAES and Census population figures. The normalisation is by using the highest per capita State Domestic Product for 2000-01, which is Goa at Rs. 45,105 and the lowest, which is Bihar at Rs. 5108. The formula for the index for any one district is (district pc DDP-lowest SDP)/(highest SDP-lowest SDP). Illustrating with the case of Nadia which had a per capita DDP of Rs. 16,211 in 2000-01,

$$\text{Per capita DDP dimension for Nadia} = \frac{16211 - 5108}{45105 - 5108} = 0.28$$

3.2 Per capita monthly consumption expenditure, based on data from the NSS, 55<sup>th</sup> Round 1999-2000. The normalisation is by using the highest state mpce, which is Chandigarh at Rs. 1382, and the lowest region within a state, which is Southern Orissa at Rs. 246. With per capita monthly consumption expenditure of Rs. 525 in Nadia,

$$\text{Per capita consumption dimension for Nadia} = \frac{525 - 246}{1382 - 246} = 0.25$$

3.3 Per cent of population above the poverty line, using the NSS 55<sup>th</sup> Round data for 1999-2000. The normalisation is by using the highest possible proportion of people above the poverty line as 100 per cent, and the lowest as the current rate in rural Southern Orissa, which is 12 per cent, corresponding to a poverty ratio of 88 per cent. Since Nadia is estimated to have a poverty ratio of 26 per cent (which implies that 74 per cent of the people are above the poverty line)

$$\text{Poverty dimension for Nadia} = \frac{74 - 12}{100 - 12} = 0.70$$

3.4 The three dimensions are then combined into a simple average to give the composite income index. In the case of Nadia,

$$\text{Income index for Nadia} = \frac{0.28 + 0.25 + 0.7}{3} = 0.41$$

The three different indices for health, education and income are then combined into a simple average to give the Human Development Index for that district. In the case of Nadia,

$$\text{HDI for Nadia} = \frac{0.65 + 0.66 + 0.41}{3} = \mathbf{0.57} \blacksquare$$

### Gender Development Index

The GDI adjusts the average achievement in respect of these three dimensions, in order to reflect the inequalities between men and women. For this purpose, each dimension is calculated separately for men and women, according to the formula mentioned above. The measures for life expectancy and education are straightforward since separate data exist for males and females. For income, the share of women (or men) in all workers (according to Census 2001) and the ratio of female to male wage are taken as proxies for the share of income, with equal wage. Since gender-based wage differentials are not available by districts separately, the average ratio of 0.73 is taken for all districts in the state, based on state-level data from the Rural Labour Enquiry 1995-96 and the NSS 55<sup>th</sup> Round.

Then, the female and male indices in each dimension are combined such as to penalise the differences between men and women, to generate what is called “the equally distributed index” in each dimension. This assesses the difference from what would have been the case had there been no gender differential.

The general formula for this is as follows:

$$\text{Equally distributed index} = \{[\text{female population share (female index}^{1-e})] + [\text{male population share (male index}^{1-e})]\}^{1/1-e}$$

If  $e=2$ , the formula then becomes the harmonic mean of the two indices:

$$\text{Equally distributed index} = \{[\text{female population share (female index}^{-1})] + [\text{male population share (male index}^{-1})]\}^{-1}$$

This is the formula used to derive the different equally distributed dimension indices. The simple unweighted average of these three is then to arrive at the GDI.

In the case of Nadia, the GDI is therefore calculated as follows:

1. *The equally distributed health index.* In Nadia the male life expectancy index is 0.633 and the female life expectancy index is 0.667. The male share of population is 0.514 and the female share of population is 0.486. Therefore the equally distributed health index for Nadia would be

$$\{[(0.667^{-1})0.486] + [(0.633^{-1})0.514]\}^{-1} = 0.649$$

2. *The equally distributed education index.* In Nadia the female education index (with two-thirds weight to literacy and one-third weight to school enrolment) is 0.601 and the male index is 0.711. With the same population shares as above, the equally distributed education index comes to

$$\{[(0.601^{-1})0.486] + [(0.711^{-1})0.514]\}^{-1} = 0.653$$

3. *The equally distributed income index.* The aggregate income index for Nadia is 0.41. With female share of all workers at 0.19 and the standard female-male wage ratio of 0.73, this gives the female share of income as  $(0.19 \times 0.73) / (0.19 \times 0.73 + 0.81) = 0.148$ . The male share of income would therefore be  $(1 - 0.148) = 0.852$ . The per capita income index for women is then derived by multiplying this share of income with the income index and dividing by the female population share, which gives the female income index as 0.125. A similar procedure is adopted for men, to yield the male income index of 0.68. With the same population shares above, the equally distributed income index comes to

$$\{[(0.125^{-1})0.486] + [(0.68^{-1})0.514]\}^{-1} = 0.215$$

The GDI is a simple average of these three equally distributed indices, as follows:

$$\text{GDI for Nadia} = \frac{0.649 + 0.653 + 0.215}{3} = 0.506$$

## Data Sources

As far as possible, the most reliable and universally accepted sources of data have been used. However, for many of these variables, district-level data have had to be generated through statistical techniques applied to the existing official data. Two major studies commissioned as part of the preparation of this report have generated the required district-level information.

The data on life expectancy by sex and district have been generated by a study by Professor Samir Guha Roy of the Indian Statistical Institute, Kolkata. This has used life-tables generated by smoothing the age-distribution of the 1981 and 1991 Censuses through the strong moving average method and then using the intercensal survival technique to generate age-distribution estimates for 2001 through extrapolation. Based on this, the estimation of life expectancies at birth for the districts used the Registrar-General's estimates for the state as a whole (65 years for men and 69 years for women) and the expected age-distributions derived from the intercensal data.<sup>7</sup>

The data on school enrolment, per capita monthly consumption expenditure and percentage of population above the poverty line, have been generated by a study organised by Professor Arijit Chaudhuri and Professor Nikhilesh Bhattacharya of the Applied Statistics Unit, ISI, Kolkata, with the assistance of staff from the Bureau of Economics and Applied Statistics, Government of West Bengal. This used Small Area Estimation techniques on data from the central sample of the NSS for the 55<sup>th</sup> Round (1999-2000), to generate district-level estimates for these variables. Therefore district-level data were made available in two forms: (1) estimates by the usual NSS procedures based on half-sampling; and (2) synthetic generalised regression estimates (GREG) derived from using the SAE technique. The SAE is supposed to yield improvements over the traditional NSS procedure in the form of lower standard errors; however, this was found to be not always the case. Therefore, in this report, both of these sets of data have been used: whenever the GREG estimate had a lower standard error, that estimate has been used, and otherwise the usual NSS estimate based on the central sample has been used.

The data on literacy rates are those provided by the 2001 Census. The data on District Domestic Product are those provided by the Bureau of Economics and Applied Statistics, Government of West Bengal. West Bengal is the only state to have a relatively long time series in the form of DDP data, which are estimated and published under the guidance and with the collaboration of the Central Statistical Organisation of the Government of India.

<sup>7</sup> Details of the methodology and nature of calculations are available in Guha Roy (2003).

## CHAPTER 2

# Land Reforms





## Land Reforms

Reform of land relations was one of the earliest and most consistent aspects of state government policy for the first two decades after the Left Front came to power in West Bengal in 1977. It reflected part of a more general vision of the ruling party and governing coalition in the state, that changes in property relations were essential for social and economic change in progressive directions, for greater empowerment of ordinary peasant and workers, and indeed for meaningful democracy. In addition, therefore, there was a strong correlation with decentralisation and greater power to panchayats, which was very much part of the same approach. The Left Front government organised elections to the panchayats in 1978, after a period in which they were effectively moribund, and became the first state in the country to have effectively functioning panchayats and regular elections to the panchayats every five years.



This involved much more than simply the revitalisation of the local government apparatus. From the start, this was envisioned as necessary for successful land reform, as the panchayats became closely involved with the process of registration of tenants as well as the identification of surplus land for redistribution. Not only have the panchayats assisted in better identification of beneficiaries, and contributed to the efficiency of the subsequent support programme to beneficiaries in terms of credit, and mini kits, but they have also coordinated programmes such as IRDP, FFW, NREP and helped to augment rural incomes. Similarly, the land reforms in turn have enabled the panchayats to have a more democratic character, as the economic and social composition of those elected as panchayat members indicated the growing significance of small and marginal peasants along with landless workers. Issues relating to decentralisation are considered in detail in Chapter 3; here we discuss the nature and consequences of the land reform.

West Bengal inherited very complex production relations, which were widely acknowledged to be the obstacles to the development of agriculture. This may be why West Bengal continued to be a poor-performing state in terms of agricultural output, until the end of the 1970s. These relations were historically the result of the 'Permanent Settlement' system adopted by the British in Bengal. The system created a class of parasitic, non-cultivating landlords who expropriated rent from the actual tillers who cultivated their lands. In particular, the system was associated with a high prevalence of sub-infeudation, with many layers of intermediaries between the actual cultivator and the "landlord", all of whom had some rights or claims upon the produce of the land.

*Land reforms and decentralisation have been interlinked in the development strategy of the state.*

Thus was created the system of share-cropping or 'bargadari' under which the sharecroppers cultivated the lands of absentee landlords

*The earlier pattern of land relations adversely affected both agricultural production and distribution.*

and received a share of the crop as income. This had come about because many landowners had started to live in the urban or semi-urban areas, and did not want to cultivate the land themselves. Others who still lived in the countryside were unable to cultivate all the land they owned. The high rents that the company extracted from the landlords made them, in turn, coerce the tenants into accepting a minimum share of the output. This was achieved with the threat of eviction and other extra-economic pressures. Over time, there was a shift in power balance, with greater direct power over the cultivators shifting from *zamindars* to *jotedars*, who were the local controllers of the labour of the peasantry.

This system continued even after independence, when the period of Permanent Settlement was over. There remained a large group of sub-infeudaries with varying types of claims to the land. Most of the cultivation was carried out by sharecroppers, who cultivated relatively small plots of land and were generally indebted and impoverished. They were not in any position to make improvements on lands, nor did they have any incentive to do so. However, there were some larger landowners who cultivated their land themselves, and many among them also hired out part of their land to sharecroppers. There was also a small group of middle peasants who based their cultivation on family labour with some use of hired labour. Finally, there was a large and growing class of poor landless labourers.



Both production and distribution were adversely affected by the existing state of land relations. The land tenure system served as an obstruction to agricultural production, affected incomes and access to productive employment for the landless, and created unequal access to social and political power as well. From the early 1950s, therefore, in West Bengal as in other states of India, land reform was a concern of the government. Nevertheless, West Bengal, is till date the only state in India, with the exception of Kerala, to have undertaken both tenancy reform and redistributive land reforms. The amount of land redistributed in West Bengal has by far surpassed that in any of the other states. More spectacular and widely discussed, has been West Bengal's programme of tenancy reform or 'Operation Barga' (OB), as it is more popularly known. This effort marked a solid departure from the earlier attempts at land reform. ■

### ••• A description of land reforms in West Bengal

Until the mid-1960s, there was very little in terms of land reform in the state. The small measures that were undertaken related

mostly to the abolition of intermediary interests and a small amount of vesting of surplus land above the land ceiling. There was growing political awareness of the need to incorporate tenants' rights into land reform, because of the impact of *tebhaga* movement which emphasised the concerns of bargadars (or sharecroppers). This led to the West Bengal Bargadari Act, 1950. While this provided for a sharing of output in the ratio 60:40 if the sharecropper provided the inputs, it did not provide any security of tenure. Later on, the more comprehensive West Bengal Land Reforms Act, 1955 came into force, which mainly provided for the abolition of intermediaries and the imposition of ceiling on land holdings. There were amendments to this Act, whereby the right of cultivation of a bargadar was made heritable (1970), there were more stringent requirements for termination of barga contracts, and the bargadar's share was made 75 per cent with input contribution (1965). However, since there was no complete official recording of bargadars, many of these rights were not realised in practice. Indeed, the problems of eviction and exploitation of tenants became accentuated over this period, often because (rather than in spite of) the legislation, since landlords attempted to downgrade the status of tenants and describe them as agricultural labourers, in order to prevent the realisation of the rights which had been granted to them. The regular eviction of bargadars or the threat of it seriously hampered the prospects of capital investment and technological progress in cultivation on sharecropped or barga land.

In the post 1977 era when the Left Front government came to occupy power, there was a major change in both the focus and the energy of land reforms. However, the land reforms should not be seen as only the result of administrative fiat. Rather, they represented the outcome of a long period of struggle by the peasantry and the social and political mobilisation of the landless in the countryside. This created the political pressure for land reforms, and indeed was one reason for the electoral victory of the Left Front government in 1977. Thus, an important factor in the ability of the state government to implement such reforms relatively rapidly and with some degree of success was the fact that such reforms had become part of the dominant social consensus of the time, notwithstanding opposition from landed elements.

These reforms took shape mainly in the form of (a) redistribution of vested land, and (b) securing of tenancy rights, which already existed in law, through a programme of universal registration of tenants called 'Operation Barga'. The West Bengal Landholding Revenue Act (1979) and the Revenue Rules (1980), introduced by the Left Front government, provided for key changes in the



*From 1977, the Left Front government enabled land reforms that were the outcome of long struggles by the peasantry.*

*The objectives of land reforms were to weaken landlord domination, improve equity and unleash productive forces in the rural economy.*

sharecropping system. These were in addition to two other means of land reforms that were undertaken in most other parts of India including West Bengal, namely, imposition of ceiling on large landholdings and the reduction of sub-infeudation through the abolition of intermediaries between the cultivator and the landlord. The radical reforms initiated by the Left Front government were supported by administrative measures as well as extension of supportive facilities. The latter included the supply of institutional credit, supply of modern inputs like HYV seeds, chemical fertilisers and of water (through government owned irrigation structures), to the beneficiaries of the programmes. It should be borne in mind that population pressure on land is very high in West Bengal, which makes any programme of land redistribution more difficult, since the parcels that can be distributed are correspondingly lower.

According to government sources, the land reforms had very clear economic, social and political objectives. The most obvious aim was to weaken the domination of landlords in rural Bengal, and therefore contribute to the redistribution of assets and wealth. This is why the focus was both on providing land to landless peasants as well as some security of tenure to sharecroppers. Second, the aim was to unleash productive forces which had been constrained by the prevailing pattern of land relations. Third, the purpose was to create a market in rural areas by increasing purchasing power among the peasantry, which in turn was expected to lead to the development of rural industries, trade commerce and other services. Fourth, it was believed that such land reforms would provide the basic conditions for the expansion of literacy, education and public health. Finally, the aim was to empower the weaker sections of society, including Dalits and women, and shift the balance of class forces in the state in favour of working people generally. ■

### Operation Barga

The major change in tenant relations involved the active recording or registration of sharecroppers who had cultivated on the same piece of land for a number of years. This registration with the Department of Land Revenue gave them permanent and inheritable rights to cultivate the land. Though this legal provision already existed, it had not been implemented properly. In the late 1970s, the government launched a serious drive to effectively implement the rights of the sharecropper. In particular, now the onus of disproving a claim to bargadari rights was very clearly put on the landowners<sup>1</sup>. The objective was to provide security of tenure to the sharecropper so that first, his/her livelihood is not threatened and second, he/she is encouraged to make permanent and more expensive improvements on land and adopt more modern

<sup>1</sup> Restrictions were also placed upon the landowners' rights to resume land for personal cultivation. This had more to do with the imposition of the landholding ceiling, but effectively provided some relief to the sharecropper as well.

technology. In addition, some recognised land title was recognised to be a precondition for access to formal agricultural credit. All this was obviously intended to increase the productive capacity of the land, which could then yield a stream of higher incomes for both the tenant as well as the landlord.

In addition, the earlier legislation that provided for a percentage share of output in the ratio of 25:75 between the landlord and tenant (when the tenant bore the entire cost of production), and a percentage share of 50:50 when the landlord bore the costs (except for labour), was now sought to be implemented properly. This was an attempt to directly improve the incomes of the tenants and attempt some changes in the distribution of incomes. The landlord's income was also supposed to increase in the longer run, once capital improvements on land, and or adoption of better but more expensive technology was under way. The registration under 'Operation Barga' also entitled the tenant to subsidised institutional credit and other support facilities in the form of cheaper inputs like seeds, fertilisers and water. Indeed, there was a positive attempt to support the programme by increasing on the ground access to credit and fertiliser in the early eighties.

However, what marked the departure from earlier trends was that the legislation was sought to be implemented with the active participation of the bureaucracy, workers' organisations and panchayats. Government officials undertook the task of informing the tenants to register themselves through group meetings and getting the paperwork done simply and quickly. The political apparatus was also very active. The peasant organisations and local Left Front workers played a major role in campaigning for and implementation of the programme. This was, however, banned later by the High Court of West Bengal in response to a petition filed by a representation of land owners. However, panchayats continued to play an active role in assisting the registration process and otherwise ensuring the success of this reform by confirming that the letter of the law and the rights of tenants were respected in implementing tenurial contracts.

*Operation Barga required the active participation of not just the bureaucracy, but also panchayats and rural mass organisations.*

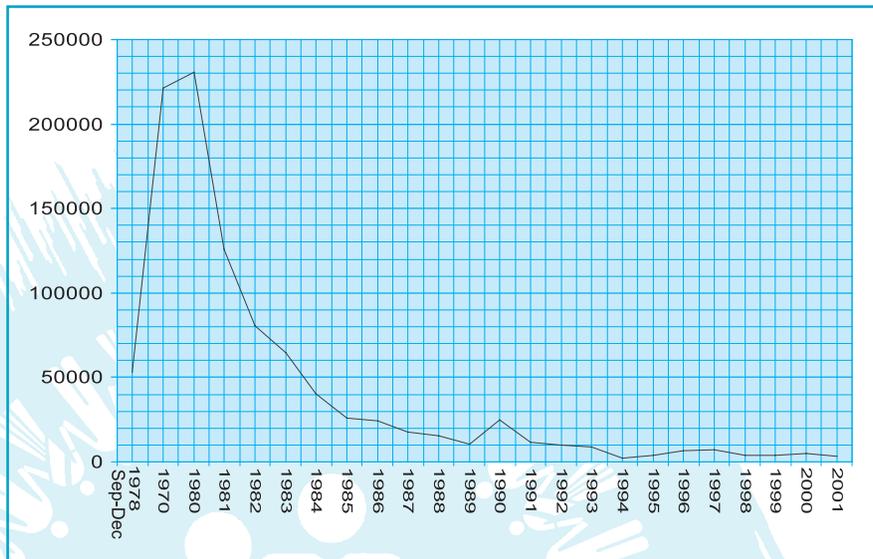
Because of the fact that political activism played a major role in effectively implementing the programme, the success varied from district to district according to the strength of the political machinery involved. However, the pace of the programme tapered off in the mid-1980s and since then the rate of additional registration has been negligible (see Chart 2.1). The total number of recorded bargadars in 2000 was 1.68 million, which accounted for 20.2 per cent of agricultural households, and the land covered amounted to 1.1 million acres, 8.2 per cent of arable land in the



state. Given the fact that about 18-22 per cent of arable land is supposed to be under sharecropping, this would definitely have affected a significant part of agriculture in the state.

**Figure 2.1 Progress in recording bargadars**

Source: Directorate of Land Records and Surveys, West Bengal



There are several factors behind the evident tapering off of tenant registration. To start with, there is the obvious point that at least for a significant period of time, such registration will involve a once-off activity, since bargadars once recorded will benefit from the advantages of continued tenure and reduced possibility of eviction, and therefore there is likely to be reduced mobility and consequently there would be fewer new contracts to record. Thus, in 2003, according to state government estimates, 86 per cent of bargadars in West Bengal had been recorded. If this estimate is correct, then obviously the rate of new registration would come down.

*The recording of bargadars has tapered off over time for several reasons.*

In addition, as Chakraborti et al. (2003) have pointed out, over time this issue has also become much less of a concern among district officials, panchayats and peasant organisations which have been more involved with other issues. With an active thrust on the recording of tenants no longer a major policy focus, the registration appears to have become fairly routine, and therefore very sparse in terms of numbers. This may also reflect changes in land relations and contracts such that the issue of sharecroppers' rights is no longer the dominant concern. For example, the growth of fixed rent contracts for *boro* rice cultivation may also have contributed to reduced interest in barga registration. It could be that the very empowerment of tenants that was the initial aim and result of barga registration has led to a situation over time where the registration itself is seen to be less necessary or important.

As mentioned above, there are substantial variations across districts in terms of the total number of tenants officially recorded over this entire period. This is evident from Table 2.1, which shows the number of bargadars recorded in each district by 2000. The column giving this as a percentage of total number of cultivators is given for purposes of comparison. However, it must be noted that this is not fully indicative, since cultivators can include a significant proportion of owner-cultivators, and the data refers to individuals rather than cultivating households.

	Number of bargadars recorded by 2000	Per cent of total cultivators in 2001
Darjeeling	12879	15.6
Jalpaiguri	61279	23.4
Koch Behar	84431	23.4
Dinajpur	103717	22.4
Malda	81171	29.3
Mushidabad	84426	23.1
Birbhum	111654	43.1
Bardhaman	131691	38.2
Nadia	64022	20.5
North 24 Parganas	73946	27.3
Hugli	112996	25.7
Bankura	111654	25.4
Purulia	9071	2.6
Medinipur	292112	27.8
Haora	42717	61
South 24 Parganas	112939	31.7
<b>Total West Bengal</b>	<b>1682193</b>	<b>30.3</b>

**Table 2.1 District-wise recording of bargadars**

Source: Economic Review, Government of West Bengal, and Census of India 2001

While a substantial number of bargadars appear to have been recorded in almost all districts barring a few, the extent of registration as a proportion of total cultivators appears to have been exceptionally large in Haora, Birbhum and Bardhaman districts., and also in South 24 Parganas. The proportion of cultivators registered is very small in Purulia (less than 3 per cent) but this is likely to be more reflective of the different pattern of land relations prevailing in dominantly tribal areas, with a greater prevalence of owner-cultivators among the peasantry. Similarly, Darjeeling, with a greater prevalence of plantations and tea estates, may have had less tenant-based cultivation which could account for the lower proportion of registration, although as mentioned earlier, the degree of political and panchayat involvement in barga registration has also been significant in explaining such differences. It emerges that in the aggregate, the number of bargadars recorded in West Bengal between late 1977 and 2000 amounted to nearly one-third the total cultivators in the state in 2001. This is surely an impressive performance. ■

*The number of bargadars recorded is nearly one-third of the total number of cultivators in the state.*

## Land redistribution

In contrast to the programme of tenancy reform, the process of land redistribution of land started much earlier in West Bengal. The two United Front Governments that were formed in West Bengal the late 1960s, showed some initiative in following the ceiling legislation and occupying of vested land with the government. The late Hare Krishna Konar, the revenue minister in the 1967 United Front Government, showed great intelligence in devising ways of identifying and procuring *benami* or illegally occupied land. As a result, the land redistribution movement transformed into a peasants' movement in the countryside and between 1967 and 1970, an additional 600,000 acres of such land were redistributed. In 1975, an act for securing rights of agricultural labourers was passed, but nothing much was done for bargadars or for redistribution. The fall of the United Front government brought an end to that phase. In fact, much of the redistributed land was reoccupied by landlords.

However, after the Left Front Government came to power in 1977, they pursued the programme of land redistribution to a much more significant extent. The 'West Bengal Estates Acquisition Act' (1953) and the 'West Bengal Land Reforms Act' (1955) provided the legal basis. About 1.39 million acres of land have been acquired by the government (18 per cent of total land acquired in India), of which 1.04 million acres were distributed (20 per cent of total land distributed in India). It should be noted that West Bengal accounts for only around 3.5 per cent of the total arable land in India, so this performance is well above that in any other state. (Mishra and Rawal, 2002). With more than 2.745 million pattadars (as beneficiaries are known in West Bengal) the state also accounts for nearly half (47 per cent) of the total beneficiaries of redistributive land reform across all of India.

*Land distribution started earlier in West Bengal and has continued even in the most recent years.*

It is noteworthy that the process of land redistribution continued into the 1990s, when it had virtually disappeared from the agenda of all other state governments, and certainly from the national policy agenda. Between 1993 and 1999, around 95,000 acres of land were acquired and 94,000 acres were distributed under the land reform programme in West Bengal. Overall, the land reforms programme (both tenant registration and land redistribution) is estimated to have covered 41.3 per cent of the rural population of the state by 2002. (Chakraborti et al, 2003) Even in the year April 2002 to March 2003, more than 16,000 acres were distributed to new pattadars.

The average land received by a pattadar is rather small, only 0.39 acre, and the ceiling of any holding of a pattadar who receives land

is 1 acre. This has resulted in holdings which are very small, and is one reason why West Bengal has one of the highest proportions of marginal farmers in India.

The pattern of land redistribution has also been weighted in favour of Scheduled Castes and Tribes. They constitute more than half of the pattadars in the state, which is well above their share of rural population, suggesting that these groups benefited from special priority in allocation. Table 2.2 provides official data on the extent of SCs and STs among the beneficiaries of land reform. Obviously, most pattadars were landless before they received some land, but approximately one-third of pattadars had small pieces of land, typically less than half an acre.

*Land distribution has benefited SCs, STs and minorities, but gender inequalities persist.*

Per cent of total	Scheduled Castes	Scheduled Tribes	Others
Pattadars	37.1	19.3	43.6
Bargadars	30.5	11.0	58.5

**Table 2.2** Distribution of land reform beneficiaries

Clearly, the land reforms were effective in terms of redressing certain social inequalities of caste. They also benefited minority groups such as Muslim peasant households, who were among the poorest in rural West Bengal. However, they were much less effective in terms of reducing gender discrimination; indeed, the pattern of land redistribution suggests that the allocation of pattas tended to reinforce existing gender inequalities.

The issue of ownership or titles to assets is one which is very significant for women in India, who have tended to be denied rights to landownership or control over other important assets. Land redistribution is potentially a very important instrument for redressing this imbalance, through the issue of single pattas in the name of women, or even joint pattas for women and their spouses. The land reform programme in West Bengal has been lacking in this regard. Joint pattas only started from the mid-1990s; prior to that, when most of the land was redistributed, pattas were granted only to the head of household, who was typically male. Some cases of pattas being granted singly to women patta holders did occur, as Table 2.3 indicates. Nevertheless, the incidence of joint pattas and single pattas to women remained very low, and joint pattas account for less than 10 per cent of the total, while pattas in the name of women as single holders account for less than 6 per cent of the total. West Bengal tends to have lower than average recorded work participation of women in agriculture and in the rural areas generally, as the chapter on employment will highlight; however, the pattern of land redistribution has been even more discriminatory in terms of the relative exclusion of women from land titles.

*Recently, allocation of pattas to women holders has picked up.*

As evident from Table 2.3, this also has not shown a uniform pattern across districts. In some districts, such as Bankura, Hugli and Haora, joint pattas have been more prevalent, while South 24 Parganas shows an impressive extent of allocation of single pattas to women holders, of nearly half. Once again, it is clear that the district-wise variations would have been strongly influenced by the degree of gender awareness and concern of local panchayat and peasant organisations, as well as the local level bureaucracy. The rate of allocation of joint pattas has picked up recently in the state as whole, and most pattas are now granted jointly to husband and wife, so that the most recent data now show 4.85 lakh joint patta holders and 1.5 lakh women patta holders.

**Table 2.3** Distribution of joint pattas and single pattas to women

Source: Chakraborti et al (2003, pages 50 and 51)

	Joint	% of total	Single female	% of total
Darjeeling	1360	2.75	3037	6.14
Jalpaiguri	6087	7.09	4851	5.65
Koch Behar	8764	6.6	2264	1.7
Uttar Dinajpur	14316	10.53	1105	0.81
Dakshin Dinajpur	3453	3.86	1148	1.28
Malda	8499	6.81	NA	NA
Mushidabad	10185	7.96	7075	5.53
Birbhum	6941	5.95	4005	3.43
Bardhaman	14565	8.07	5968	3.31
Nadia	2356	3.39	5234	7.53
North 24 Parganas	3797	4.96	5960	7.79
Hugli	9448	16.97	3819	6.86
Bankura	26855	19.21	6619	4.73
Purulia	4006	4.52	3514	3.96
Medinipur	63800	16.08	30210	7.61
Haora	3669	14.39	NA	NA
South 24 Parganas	1778	2.2	39548	48.93
<b>Total West Bengal</b>	<b>209855</b>	<b>9.7</b>	<b>128593</b>	<b>5.94</b>

One important feature of the land distribution programme has been the distribution of homestead land to agricultural labourers, fishermen and artisans under the West Bengal Acquisition of Homestead Land for Agricultural Labourers, Fishermen and Artisans Act, 1975. More than 3 lakh families have received homestead land under this Act, while another 2.42 lakh families have received homestead land under Section 49 of the West Bengal Land Reforms Act 1955, bringing the total number of homestead beneficiaries to 5.5 lakh people. ■

### Effects of the land reforms

While the land reform programme was certainly ambitious in terms of its overall objectives, subsequent patterns have suggested that several of these objectives have been met at least partially. There

is strong evidence that the economic, social and political domination of landlords in rural west Bengal has declined, and that the more traditional forms of oppression by landed groups, which are still found in other parts of eastern India, are no longer prevalent in this state. Other, more complex class configurations have emerged, as there has been the emergence of a “new rich” category in rural areas of the state, with salaried groups and traders emerging along with surplus farmers, and becoming more economically and politically influential.

The most significant effect of the land reforms has clearly been the unleashing of productive forces, which led to a dramatic expansion in agricultural output growth, making West Bengal the most agriculturally dynamic state of India in the last two decades of the century. This agricultural growth is discussed in Chapter 4, and while there were several factors behind it, it is clear that the combination of land reforms and the reorganisation and greater emphasis on panchayats created the framework which allowed the state to emerge from a long period of what has been described as “agrarian impasse”. This allowed for the systematic development of minor irrigation, encouraged small farmers to adopt new higher-yielding seed varieties (especially for *boro* rice) and other inputs, helped in the more efficient use of land, and generally assisted in other labour-intensive practices in cultivation which led to rapid increases in yields.

The expected indirect effect of such agricultural change, in terms of creating a wider market for mass consumption goods and expansion of non-agricultural activities, also seems to have materialised to some extent. As can be seen from Chapter 4, there has been a substantial growth of small-scale unorganised sector manufacturing and service activity in rural areas of West Bengal over the 1990s, such that manufacturing output in the state as a whole increased by nearly 7 per cent per annum in the most recent period, despite near stagnation in the organised sector. There has also been an apparent explosion in rural services. These processes could well be the result of increased local demand emanating from the mass of rural households whose material conditions have improved because of land reforms and enhanced agricultural output.

*Land reforms were associated with a dramatic expansion of agricultural output.*

The land reforms have had some effect in terms of improving the basic conditions for expansion of literacy, education and health, but it must be admitted that this is one area in which the expectations have not been adequately fulfilled and the state has lagged behind others. In fact, the relative sluggishness of the basic human development indicators, given the possibilities unleashed by land reform and decentralisation, gives rise to some important questions which will be explored further in this report.

In terms of social and political empowerment, the land reforms certainly operated to improve the class position of the rural poor in general. There have been substantial changes in tenurial contracts, and the growth of fixed rate tenancy suggests both that there is improved bargaining position of tenants, and greater ability of small tenant cultivators to provide their own inputs and take on the risks of cultivation for more profitable activities. The combined package of land reform and institutional provision of inputs enabled even small tenant cultivators to take on the new high-yielding *boro* rice cultivation, and otherwise improved their bargaining position. Some studies have suggested that land reforms had a significant impact on the reduction of poverty. ■

*Land reforms have improved the class position of the rural poor, but health and education changes have been slower and less marked.*

### Individual experience with land reforms

Sukul Tudu was a landless labourer in Birbhum district, from a very poor Scheduled Caste family. In the mid-1990s he became a pattadar, receiving one bigha of land as part of the land distribution process, and became a cultivator. In 2000, he was able to borrow Rs. 29,000 to set up a small poultry business, as part of the local panchayat samiti's scheme to encourage such diversification. This activity has been very successful, and Sukul's household income has increased manifold in consequence. The family of four (including his wife and two young sons) now lives in a pukka two-storeyed house with electricity and a range of consumer durables including a telephone and a television. Sukul is an active participant in gram sabha meetings, and plans to educate his two young sons, even though his wife remains illiterate.

Abani Barman is a bargadar in Bardhaman district, holding a very small plot of less than an acre as a tenant. This holding does not provide adequate income for his family, so Abani also works as a day labourer, earning Rs. 50 per day, while his wife and four children work on the plot growing potatoes and sugarcane. Operation Barga made a big difference to his tenancy conditions: earlier, the landlord took 60 per cent of the output, but now that has come down to half if the landlord shares equally in all costs. If not, the landlord now gets only one-fourth of the output. Abani also received fertiliser for the sugarcane crop free of cost from the panchayat. While material conditions are still difficult, they are substantially better than before. His younger son, who has just passed his Higher Secondary examination, is the first literate member of his family.

Nazaruddin, of Jalpaiguri district, was an activist in the tebhaga movement, who was arrested during that struggle. He and his son now cultivate waqf land of around 6 bighas and take on 3 bighas under share tenancy. Since the land is not fertile enough to ensure output to meet the family's needs, they also work as day labourers when jobs are available. He believes that the lot of share tenants has improved greatly over the past two decades, even though the consumption levels in his household are still quite basic. While he could manage to educate his son or five daughters, he has made sure that his grandchildren go to school. He still dreams of a renewed struggle to improve the conditions of peasants.

In an interesting way, the land reforms may also have contributed (along with the presence and activities of the panchayats) in maintaining a degree of peace among different communities and castes which may be unmatched in the rest of India. Communal and caste-based riots and violence, for example, have been much lower in this state than elsewhere. The day-to-day social oppression and harassment and exploitation of the lower castes and poorer groups, which are still common in many parts of rural India, are much less evident in West Bengal. This does not mean that they have disappeared or that there is no discrimination against Scheduled Castes and minority communities in areas such as education, for example. However, the disproportionate granting of patta rights to Scheduled Castes and Tribes is likely to have led not just to some degree of economic empowerment, but also a greater sense of social dignity as well. But, as noted above, the land reforms were sadly lacking in terms of correcting gender imbalances, and until recently did not make adequate provision for ensuring the economic empowerment of women. This remains an important area of economic inequality which needs to be addressed.■

*Recent increases in landlessness are disturbing.*

### Recent trends

A disturbing feature of the very recent past has been the rapid increase in landlessness among rural households, despite the continuing process of vested land distribution to pattadars. NSS data indicate that the proportion of landless rural households in West Bengal increased from 39.6 per cent in 1987-88, to 41.6 per cent in 1993-94, to as much as 49.8 per cent in 1999-2000. In other words, by the end of the decade, nearly half of the rural households in West Bengal were landless. (This compares with 41 per cent for rural India as a whole.) Of course, this occurred along with a substantial diversification of rural employment to non-agricultural activities, but the direction of causation in this regard is not clear.

It is possible that the growing difficulties associated with cultivation across India – rising input prices and stagnant crop prices, the reduced access to institutional credit and other agricultural extension services – have made farming a less attractive avenue of economic activity in West Bengal. At the same time, increased possibilities for income generation in non-agricultural activity in rural areas may have encouraged voluntary land alienation by small peasants in some cases.

There have been recent reports of increasing land alienation by pattadars, and of eviction of bargadars, thus suggesting that the benefits of the land reform have been relatively short-lived at least for some rural households. Alienation is reported to be more marked in Darjeeling because of the urban extension of Siliguri, in Uttar Dinajpur as tea gardens seek to cover more area, and in parts of the Sunderbans area due to the expansion of brackish water fisheries. Eviction of tenants is also reported from areas of North Bengal in particular. Because these tendencies are potentially so significant, they are worth considering in more detail.

A recent study sponsored by the State Institute of Panchayats and Rural development (Chakraborti et al) found that, on average, 13 per cent of the pattadars who received land had lost it by 2001. This is a relatively small percentage, given the original very small size of holding and the many forces that have made small peasant cultivation much less viable across India over the past decade. Of course, this percentage varies widely across districts, as Table 2.4 shows. The extent of land alienation of pattadars varies from a low of 5.62 per cent of pattadars in Medinipur, to a high of 22.35 (or more than one-fifth) in Uttar Dinajpur. Similarly, Table 2.4 shows that the northern districts are especially badly affected in terms of the proportion of bargadars who have been evicted.

*There is some evidence of recent alienation of land by pattadars.*

It should be remembered that the basic success of the land reform is illustrated by the fact that nearly nine-tenths of all those who had received land under the redistribution scheme, have retained the land, despite the evidence that small cultivators across the country have been facing growing economic difficulties over the past decade. Nevertheless, the fact of even some amount of such alienation within a generation, as well as the relatively high incidence in certain districts, are matters for concern, and clearly need to be explored further.

	Per cent of pattadars who have lost possession of land	Per cent of bargadars who have been evicted
Darjeeling	14.71	16
Jalpaiguri	16.72	31.6
Koch Behar	12.33	30.9
Uttar Dinajpur	22.35	31.49
Dakshin Dinajpur	19.17	30.73
Malda	10.41	5.66
Mushidabad	15.87	19.06
Birbhum	16.62	9.83
Bardhaman	11.93	14.5
Nadia	11.27	9.74
North 24 Parganas	16.99	16.65
Hugli	14.63	10.48
Bankura	15.45	11.09
Purulia	16.11	6.7
Medinipur	5.62	9.29
Haora	9.34	15.9
South 24 Parganas	22.07	10.31
<b>Total West Bengal</b>	<b>13.23</b>	<b>14.37</b>

**Table 2.4** Loss of possession of patta land and eviction of bargadars since the land reform began

Source: Chakraborti et al (2003, pages 53 and 57.)

Land alienation by pattadars appears to have been highest in those areas where the alternative use of land, typically by larger scale operators, has become more profitable. Thus, the extension of tea estates into Uttar Dinajpur, as well as the growth of brackish water fish cultivation and the appropriation of arable land for such purposes in the Sunderbans areas of South 24 Parganas could explain the higher rate of alienation in these districts. In any case, the generalised agrarian distress that has characterised much of rural India, because of the various problems affecting Indian agriculture – such as the higher costs of cultivation, the reduced access to institutional credit, the lower prices resulting from trade opening in a context of highly subsidised production elsewhere in the world, and the general squeezing of cultivators' margins – must have also been prevalent in West Bengal. This could have contributed to the phenomenon of growing landlessness.

In particular, in the 1990s, there has been a decline or adverse movement in the functioning of many of the supporting institutions which are essential for the success of land reform, such as the ready availability of credit for small cultivators. Chakraborti et al (1999) in a study of Bardhaman district, found that there was very weak linkage of pattadars with agricultural service institutions, and that only 40 per cent were involved in the co-operative credit system, which in any case was in total disarray. Most of these processes are the result of neo-liberal macroeconomic policies and processes which are outside the control of the state government, but there

*Declines in institutional credit and agricultural extension services have adversely affected small peasants in rural West Bengal.*

*The economic processes in the countryside that generate inequality still remain significant.*

are those, such as agricultural extension services, which can be improved through state government intervention. Extension services have generally been inadequate in West Bengal agriculture, despite the involvement of panchayats. Chakraborti et al (2003) found that only around 13 per cent of pattadars had received the prescribed minikits of inputs, and in general there is a lack of access to comprehensive extension services for cultivation and other related activities such as livestock rearing and fish farming.

It is also true that the very small holdings that were created by the distribution of pattas, meant that there could be problems of economic viability in terms of the land providing full subsistence for a rural household. So other, or subsidiary, sources of income would have to be sought by the members of pattadar households. It could be that the evident expansion of non-agricultural economic activities in the rural areas of the state, along with the growing financial difficulties of cultivation, has created a situation where a focus on non-agricultural activities has become preferable for many small-holder rural households. (See Chapter 5 on employment.)

The land reform programme was definitely the most radical that India has witnessed in the recent period, but it still remained a limited programme of reform, which could not completely transform the existing agrarian relations, even though it clearly mitigated some of the more oppressive features. Land reforms played an important role in unleashing productive forces in cultivation and in improving the balance of class relations in the countryside in favour of the poor and the working classes and peasantry generally. They have contributed to the economic (and therefore social and political) empowerment of Scheduled Castes and Tribes. However, they have been less effective in correcting gender inequities or in improving access to health and education facilities at a faster rate. While the land reforms have had some very positive social effects, the economic processes that generate inequality in the countryside still remain significant. For a state government interested in progressive transformation of economy and society, some new forms of institutional change will have to be considered and implemented, to carry forward the positive effects and develop them further in ways that impact upon gender relations and human development. In particular, the crucial importance of access to institutional credit and provision of adequate and timely extension services, must be recognised. ■

## CHAPTER 3

# People's Participation





## People's Participation

Reorganisation of the system of local government was one of the most important of the institutional changes brought about by the Left Front government from late 1977 onwards. In the process, West Bengal has created a history of participation of the common people through the process of decentralisation, which is unique in India. A system of democratic elections to local bodies at anchal, block and district level was instituted, and elections to these local bodies were held in 1978. They have subsequently been held every five years, making West Bengal the only state in India to have had regular elections to local bodies every five years for the past 25 years. The aim has been to provide a share of fiscal resources of the state to the local bodies, and the panchayats (at various levels) have also been assigned a large and substantial range of responsibilities, that were earlier seen as under the purview of the district-level bureaucracy. In addition, the composition of the panchayats has reflected the caste, class, occupation and gender composition of local society, (even if not completely) more faithfully than panchayats anywhere else in the country. There has been substantial representation of the rural poor and of socially deprived groups, as well as women, in the elected bodies. All this has helped to change the power equations in rural society as well as encouraged the social and political empowerment of women and social groups that were earlier marginalised.

*Panchayats have played a critical role in land reforms as well as in general development.*

The role of the panchayats in land reform has already been noted; but panchayats can also have a critical role to play in the process of development generally, as well as in transformation of human development indicators. This makes both the nature and the experience of this pattern of devolution and people's participation, an issue of particular interest with respect to its relationship with human development in the state. It has been the position of the state government that decentralisation and human development are intertwined processes that reinforce each other. This chapter will consider the West Bengal experience from this perspective, taking into account the interrelations as well as the constraints that have prevented decentralised lower-level governments from having an even greater effect on human development.

Since decentralised government and people's participation in decision-making can cover a very wide range of public activities, it is useful to divide the possibilities of decentralisation into various categories: functional decentralisation (in terms of administrative powers and responsibilities); financial devolution of both and resources and some powers of resource mobilisation; and planning and developmental activities. In addition, of course, there are other potential responsibilities which can be placed upon local government bodies, such as mobilisation for particular purposes.



*The colonial legacy of local government weakened the potential for decentralisation of power.*

Discussions on decentralisation have been heavily based on the principle of “subsidiarity”, which broadly can be interpreted to mean that all decisions which can feasibly be taken at lower levels should be taken at these lower levels, and that at every level there should be active participation of people, or of people’s representatives of the lower level, in decision-making. ■

### **A brief history of decentralisation in West Bengal**

There were some attempts at administrative decentralisation as far back as the colonial period in Bengal, as indicated by the Bengal Village Self Government Act of 1919, which provided for a two-tier structure of Union Boards at the lower level and District Boards at the higher level. However, the main colonial legacies with respect to local government in rural Bengal were low resource capability of local governments, the relative weakness of lower level tiers of local government, emphasis on mainly municipal functions, excessive bureaucratic or official control and above all, control by vested interests, particularly the landed gentry.

A decade after independence, the Act of 1919 was replaced by West Bengal Panchayat Act, 1957, reflecting the constitutional directive to promote panchayati raj. The Act provided for a Gram Panchayat in every village, which would function as the executive of Gram Sabha consisting of all the voters on the electoral role in the village. The number of elected members of Gram Panchayats varied from 9 to 15, and there was also provision for the State Government to nominate eminent persons from the locality. There were to be two elected executive posts, of the Adhyaksha or president and Upadhyaksha or vice-president.

The Act of 1957 was prepared before the publication of the Balwantrai Mehta Committee’s report, which proved to be a major influence in shaping the panchayati raj legislation elsewhere in the country during this period. As a result, the Community Development Project (CDP) Blocks were not integrated in the panchayat system in West Bengal. This created problems in the proper implementation of CDP, and at the same time, hindered meaningful involvement of the panchayats in development activities. In an endeavour to integrate the panchayat institutions with the CDP framework, the West Bengal Zilla Parishad Act of 1963 decreed that Zilla Parishads were to be set up in the place of the existing District Boards. Altogether 15 Zilla Parishads and 325 Anchalik Parishads were formed. These two new institutions, along with the 19,602 gram panchayats and 2926 Anchal Panchayats formed under the 1957 Act, constituted the basis of a four tier system of rural local government.



The mid-1960s marked a period of severe economic crisis in the state, particularly in the sphere of food distribution, which also generated serious social unrest. It also was a period of general political instability with a split in the ruling Congress Party in 1965, the ascension to power of a United Front government in 1967, its dismissal and return to power in mid-term elections in 1969, President's rule from 1970 and the installation of a new Congress government in 1972. In these circumstances, elections to the panchayats – most of which had been formed between 1959 and 1963 – could not be held.

*Elections to local bodies have been held regularly every 5 years since the Left Front came to power in the state.*

In 1973, the West Bengal Panchayat Act was passed, annulling the previous laws. The four tier structure was replaced by the emerging all India pattern of Gram Panchayat, Panchayat Samiti and Zilla Parishad. The new Gram Panchayats were similar to the Anchal Panchayats of 1957 Act and consisted of a group of villages with a population of 10 to 12 thousand. Following the Balwantrai Mehta Committee Report's recommendations, Panchayat Samitis were coterminous with blocks, and Zilla Parishads were coterminous with districts. The Act provided for the direct election of members of all the three tiers for a five year term. The Pradhans of gram panchayats were *ex officio* members of Panchayat Samitis and the Sabhapatis of Panchayat Samitis were similarly *ex officio* members of Zilla Parishads. The Act also provided for nominations of officials without voting rights into the standing committees of Zilla Parishad, and local MLAs and MPs as *ex officio* members of both block and district tiers.

As a framework for decentralised governance, the 1973 Act was a great improvement on the previous legislation in ensuring organic linkage between various tiers, improving executive efficiency through a system of standing committees, and providing greater clarity regarding the functions. The municipal functions were obligatory for Gram Panchayats while development functions were mostly discretionary in nature, unless so assigned by the government. Some of the traditional functions like control over construction were continued. The functions of higher tiers were related to developmental activities and planning.

However, elections to these bodies were not held until the Left Front government came to power in West Bengal in 1977. In June 1978 elections were held simultaneously for all the tiers of the rural local bodies for the first time. The event heralded a new era for the panchayati raj system in West Bengal. Since then, elections to the local bodies have been held at regular five years intervals as stipulated by law, with the most recent elections taking place in May 2003. More importantly, the powers and responsibilities of



*Panchayats in West Bengal have many more poor peasants and landless labourers than panchayats in any other state.*

local bodies so constituted were systematically enhanced overtime as the new institutions gained greater confidence.

In the first phase after 1978, the newly elected panchayats were increasingly involved with the execution of land reforms. Panchayats took the initiative in exposing benami land holdings, ensured the identification of excess land and the declaration of vested land and were also given charge of ensuring the legal rights of recipients of vested land and bargadars over land. The positive effect of this involvement of the panchayats on the land reforms themselves has already been noted in Chapter 2. The panchayats were also involved in arrangements for the provision of institutional credit for the beneficiaries of vested land and for bargadars. After the rural development projects were devolved to panchayats for implementation, the beneficiaries of land reform were given priority in the receipt of benefits from these projects.

This was possible because through the panchayat election of 1978, a new leadership was established at the helm of the rural bodies, with not only particular party affiliations but also from less privileged socio-economic backgrounds. The erstwhile village elite, including landlords and moneylenders, lost their dominance over the newly elected local bodies. The new leadership after 1978 came out of the tradition of peasant upsurge and struggle for land reform of the past three decades.

The occupational composition of the members showed a very significant increase in the proportion of landless and poor peasants, who constituted 43 per cent of the elected members. Table 3.1 presents the occupational distribution of panchayat members between 1978 and 1988, over three five yearly elections. On the basis of the results of 1983 elections, it was observed, "The new panchayats of West Bengal represent a break from the past political patterns in India. The panchayats in West Bengal or in most parts of India have seldom been so free of domination by landlords and rich peasants" [Kohli: 1983, p-794.] By 1988, 58 per cent of panchayat members were poor peasants or agricultural labourers. This was in sharp contrast to the earlier picture of panchayats dominated by the landed gentry and moneylenders - as 70 per cent or more of them were estimated to be from such sections.<sup>1</sup> It was also in sharp contrast to other states of India in which panchayat elections were held, in which landlords and other categories of rural elites continued to dominate.

<sup>1</sup> Before 1977, "nearly 70 per cent of Adhyakshas and Pradhans came from the landowning cultivating families, and were known to have considerable annual incomes." [Mukhopadhyay: 1977, page 186]

Occupation		1978-83*	1983-88#	1988-93§
1.	Landless agricultural workers	4.8	3.4	16.8
2.	Bargadars	1.8	2.2	11.3
	Landless agri. pop (1+ 2)	6.6	5.6	28.11
3.	Cultivators below 3 acres	21.8	-	}
	Landless & marginal peasants (1-3)		-	}30.17
4.	Cultivators 2-5 acres	14.3	-	}
	Landless & small peasants (1-4)	42.7	-	58.3
5.	Cultivators 5-8 acres	6.6	-	}
6.	Cultivators 8-10 acres	4.1	-	}28.5
7.	Cultivators above 10 acres	4	-	-
	Total owner cultivators (3 to 7)	50.7	51.7	58.6
8.	Non agricultural workers	3.9	2.3	2.4
9.	Unemployed	7.5	14.7	-
10.	Students	0.6	0.47	-
11.	Teachers	14.0	15.3	7.9
12.	Doctors	1.1	0.23	-
13.	Shopowners	1.4	6.7	9.4
14.	Others	14.2	3.0	1.57
	Total non agricultural (8 to 14)	31.3	25.7	18.9
	<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

**Table 3.1 Occupational distribution of Panchayat Members**

Source:

\* Results of a study conducted by the economic planning section of the Development and Planning Department, Government of the West Bengal. The sample consisted of all the elected members of 100 Gram Panchayats in 1978.

# Results of a study conducted by the Panchayat Department of the Government of the West Bengal. The sample consisted of all members of 200 Gram Panchayats after the 1983 election.

§ Survey conducted by G.K. Lieten, 1988 in Birbhum. This is the distribution of 127 candidates of CPI (M), for all the members of the 8 Gram Panchayats under a block. As 77% of these candidates won the election, this gives a fairly representative picture of the final composition of panchayat members in this area.

The ability of a local body to function efficiently is determined not only by the composition of that body, but the sheer administrative requirements which are imposed upon it. In this context it is worth noting that the lowest tiers of formal administration (the Gram Panchayats) face very different conditions in the various districts of West Bengal in terms of geographical coverage. A cluster of villages constitutes a Gram Panchayat, but this cluster can vary greatly in size. The average area of a Gram Panchayat is the smallest in Haora, where a typical Gram Panchayat covers only 8.17 sq. km. in geographical area. The average area of a Gram Panchayat is very high in Jalpaiguri (39.23 sq. km.) In Bankura, Purulia, Dakshin Dinajpur and Medinipur, the geographical area of a Gram Panchayat is also found to be quite large (in excess of 30 sq. km). In Murshidabad, Birbhum and some other districts of southern Bengal, the average Gram Panchayat area is, however, moderate. ■

## Functional decentralisation

From the early years, panchayats were given a range of fairly serious responsibilities and tasks, such as the organisation of relief and reconstruction after the severe floods of 1978. The involvement of the panchayats in such relief work substantially reduced the distress out-migration from affected areas that was usually associated with such calamities. Panchayats were also entrusted with the management of rural employment programmes – first the Food for Work, then RLEGP, and more recently the Jawahar Rozgar

*Panchayats in West Bengal have varied and onerous responsibilities...*

Yojana - as well as various other schemes and projects in the rural areas. In 1980, the West Bengal government entrusted the panchayats with the implementation of as many as 27 rural development programmes. Among the programmes devolved, some were of major national importance. The list included some of major developmental significance, such as the Rural Reconstruction Programme, Rural Water Supply, Rural Housing Scheme, distribution of mini-kits for agriculture, and Programme of Reconstruction of School Buildings etc. In the implementation of these programmes, the panchayats made a significant departure in the termination of contractor system.

What was of significance was the relative importance given to elected representatives rather than local bureaucracy, which was much greater than anywhere else in India. The Zilla Parishad was given representation on the governing bodies of the institutions that governed various public schemes. Further, the Sabhadhipati was made the chairperson of the District Rural Development Agency, while the most important government official in the district, the District Magistrate was vice-chairperson. The agency was thereby firmly tied into the panchayat framework. Also, the rural power balance was shifted away from the complete domination of the bureaucracy, towards the greater importance of locally elected and locally accountable people's representatives.

Indeed, one of the more interesting features of the West Bengal experience has been the extent to which the institutions of elected local government have been used not simply to participate in but to actively further various initiatives and programmes of the state government. These responsibilities placed upon the panchayats, and the consequent expectations generated, have sometimes been so heavy that they are extremely difficult to fulfil. For example, a 1994 directive of the ruling party (the CPIM) to its own panchayat members<sup>2</sup>, which was also widely circulated among the general public so as to get greater public response, listed a formidable, even daunting, set of tasks for the members of local bodies. Ordinary citizens in turn were encouraged to insist that the panchayat members actually did fulfil these various duties and responsibilities. Panchayat members were instructed to be concerned with and even be responsible for management of the following activities:

- Forestry management and land reclamation
- Public health, community disease prevention, public health campaigns
- Improvement in land use patterns and farming techniques
- Rural diversification, especially into fishing, livestock rearing and poultry, etc.

<sup>2</sup> "Panchayat parichalona prasange nirdeshika, 1994", West Bengal State Committee, CPI(M).

- Monitoring of literacy campaigns, continuing the progress of increasing literacy and ensuring universal school attendance
- Monitoring the Public Distribution System for food, checking ration card use and abuse, and keeping watch on the activities of Fair Price Shops
- Monitoring the IRDP, and encouraging diversified use of energy sources such as gobar gas
- Regulating and monitoring electricity theft, ensuring correct meter reading and billing
- Organising the repair and expansion of rural roads, the cleaning of water tanks and ponds
- Decentralised planning for the medium term , through an inventory of available resources and systematic listing of possibilities for the future
- Raising own resources for development and enthusing local people to contribute for community infrastructure
- Focussing on and prioritising less privileged groups such as Scheduled Castes, Scheduled Tribes and women in all general activities, as well as in special programmes designed for them.
- All this to be carried out with a proper class perspective and with sensitivity to the specific needs of local working people.

*...but the resources available to them remain constrained.*

In addition, panchayats were duty bound to hold regular meetings, not only of their own membership, but of the gram sabhas and gram sansads for periodic ratification and support for their activities. With such an exhaustive – and even exhausting – list of proposed activities, it is surprising to note that panchayats received very little in terms of resources or administrative support with which to carry out all of these functions. The most recent version of the ruling party's directive for panchayat members<sup>3</sup> contains a more realistic listing of priorities in terms of activities, with health and sanitation, education, water resource management and women's empowerment being at the top of the agenda.

One of the remarkable features of the local government institutions in rural West Bengal in particular, is how the range of activities they have been involved in has expanded, and even been fulfilled at least partially, while the resources they have received, and their capacity for autonomous resource raising, have been constrained. In addition, panchayat bodies do not have administrative or functional control over many of the social sector delivery institutions, such as in health and education. Government educational institutions, including primary schools, are under the administrative control of the line department and associated bodies; panchayats may only supervise and monitor the much more

<sup>3</sup> "Panchayat parichalona nirdeshika 2003", WB State Committee, CPI(M).

*Some administrative rules continue to limit the capacity and accountability of panchayats to local communities.*

recently started experimental schools, the Shishu Shikha Kendras. Similarly, public health institutions such as Primary Health Centres are also not under the control of the panchayats, although they are clearly expected to work closely with them for example in public health campaigns.

The law provides that the Sabhadhipati or Sabhapati is responsible for the financial and executive administration of the Zilla Parishad or the Panchayat Samiti, as the case may be. But this is not reflected in the financial and account rules that have been framed (as well as the orders and clarifications issued). This has meant that instead of the power of bureaucracy being curbed and the controlling powers of the panchayat and its elected representatives being established, there could be a counter-tendency of strengthening the bureaucracy. The District Magistrate, the Sub-Division Officer and the Block Development Officer have been appointed the authorities under those provisions of the Act relating to control over the panchayat and its office bearers. Obviously, this has negative implications for both the capability of the panchayat and its accountability to local people rather than to the bureaucracy. The legal-administrative framework may therefore need to be altered in order to preserve and strengthen the basic goals of decentralisation.

Some panchayat members do feel that direct control over local institutions of public service delivery would assist in making them more responsive to local people's needs, and there is certainly a case for increasing local panchayats' roles in both public health and education systems, as discussed in Chapters 6 and 7. Nevertheless, the relative success of panchayats, particularly in some districts, of success in terms of even partially fulfilling these many roles, is a tribute to the motivation of those involved as well as a comment on the huge potential for decentralised governance. ■

### Decentralised planning

As the panchayati raj institutions stabilised and matured, their greater involvement in the planning process became an imperative necessity, if their capabilities were to be tapped for accelerating rural development. A number of reforms were introduced in the planning process from 1983 onwards to ensure the participation of the local bodies in the planning process. At the apex of the institutional structure were the State Planning Board (SPB) and the State Planning Department. Even though SPB was an advisory body for the formulation of the state plan, it played a leading role in guiding and coordinating the lower level planning machinery. At the district level there were two tiers: the District Planning and Coordination Committee (DPCC), more of a deliberative body, and



the District Planning Committee (DPC) its executive arm. The DPCs were to prepare the plan, which would be approved by the DPCCs. The Block Planning Committee (BPC) was the planning agency at the block level.

*Attempts at decentralised planning began in the mid-1980s.*

The key institution in the decentralised planning structure, the District Planning Committee (DPC), was headed by the Chairperson of Zilla Parishad and the district collector was its member secretary. It had a mixed membership of non-officials and officials. It was the duty of the DPC to integrate the local Plans prepared by block and municipalities within the overall guidelines indicated by the State Planning Board. The District Planning Committee was empowered to approve schemes up to Rs. 5 lakhs while schemes of higher value and inter-district schemes would require the approval of the State Planning Board.

The Block Planning Committee, headed by the Sabhapati of the Panchayat Samiti, comprised Chairpersons of all the Standing Committees of the Samiti and also of Gram Panchayats as well as the block-level officers of various development departments. The block development officer (BDO) was its member-secretary. This Committee prepared block level plans and approved block-level schemes that costing less than Rs.50,000. Schemes involving more expenditure, and inter-block schemes, had to be submitted to the DPC for approval. A small planning committee at the block level was meant to prepare schemes and send them to the BPC for discussion and appropriate action, review and coordinate plan schemes being implemented within the block. Table 3.2 gives a summary idea of the structure that was sought to be created.

Level	Government	Planning Body	Plan
State	State Government	State Planning Board	Annual and Five Year State Plans
District	Zilla Parishad	District Planning & Coordination Committee (DPCC) and District Planning Committee (DPC)	Annual and Five Year District Plans
Block	Panchayat Samiti	Block Planning Committee (BPC)	Block Plans
Village	Gram Panchayat	–	Basic Needs Statements

**Table 3.2 Structure of Planning Machinery after 1985**

In the mid 1980s, the major source of plan funds that was expected to be available for local level planning was from the centrally sponsored schemes such as IRDP, NREP/RLEGP, which were expected to be significantly higher than the past. An important innovation was the provision of introduction of some untied funds which the district authorities could utilise to meet the critical gaps between their fund requirements (according to the District Plan)

*Some district panchayats prepared impressive local level plans...*

and the available funds from diverse sources. For the first year, a sum of Rs. 20 crores was provided under this head for the whole state, which was to be distributed to the different districts according to a formula arrived at State Planning Board. The sharing was to be based on population, extent of under-development (e.g., inverse of per capita power consumption), incidence of poverty (e.g., proportion of landless labourers and of *patta* holders of vested land), and a few similar criteria.

The State Planning Board also provided broad guidelines as to priorities to be borne in mind in the formulation of the local plans. The first priority was to be development of agriculture and allied activities which would generate the maximum employment and secure the rapid rate of growth. The focus of attention had to be on the marginal farmers and on the assignees of vested land. The provision of irrigation through appropriate technology to this group was to be the key link. The importance of scientific agronomy, in the selection of crops etc. so as to optimise the limited land and water resources, was also emphasised.

The State Planning Board also drew up a scheme to provide all *patta* holders of vested land with free mini-kits of seeds and fertiliser worth around Rs.100 per acre. The local plans were to provide complementary irrigation water and ensure measures to upgrade the soil. Construction of rural grain storage facilities was also to receive priority. Education and preventive health care were also to be on the agenda of the district plan. Overall, the suggestion of State Planning Board was that “at least one third of the funds available for district planning be spent for irrigation programmes, that no more than one third be spent on road construction, and that the balance approximately one third of the funds be spent on other programmes.”<sup>4</sup>

In this phase, district plans were successfully prepared in many districts, with the most outstanding perhaps in Bardhaman and Medinipur. On the whole, there was definitely substantial improvement in the process of decentralisation of planning over time. The State Planning Board also succeeded in getting the support of the Planning Commission for the appointment of an economist-cum-credit planner, sub assistant engineer and a couple of clerks for each District Planning Committee. The performance of different districts in decentralised planning naturally varied, depending on the ability, commitment, tenacity of *Sabhadhipati* and District Magistrate, the relation among them and their relations with other officials of different departments, the technical expertise that could be put to use, as well as the nature of mobilisation by panchayat members. Unlike in Kerala, however, there was no

<sup>4</sup> State Planning Board, Government of West Bengal, 1985: pp 12-13.

systematic attempt to mobilise locally available technical expertise such as retired engineers and others.

After 1988, however, no new measure was taken in terms of strengthening the process and further advancing it towards transparent financial devolution. The required administrative decentralisation was not also consolidated. The result was a roll back of the functional decentralisation of the 1980s to a great extent. Most of the districts stopped systematic attempts at district planning and local resource mapping after the mid-1990s. However, there has been a recent revival of the process, under the banner of “Community Convergent Action” (CCA), discussed below.

A major objective of the decentralised planning process was to coordinate the departmental schemes implemented at block and district level and make them more responsive to local level problems. The district sector schemes of the departments constituted the most predominant component of the local plans. Further, the proportion of district sector schemes in the State Plan has tended to rise overtime. During the latter half of 1980s, the ratio fluctuated between 24 and 41 percent, while in the 1990s it has been between 50 and 60 per cent. However this trend need not have been the result of any shift in the state plan formulation towards new local or district specific schemes. It might be only that, over time, more and more of the existing schemes have been redefined and identified and then included within the district sector.

This means that the main focus of the decentralised planning introduced in West Bengal from the state level, so far has been on integration or coordination of district-specific schemes of the departments at district and block level. The autonomy of the local planning authorities has been primarily limited to choosing the location within the district, selection of beneficiaries, or a choice between various schemes sponsored by the departments. However, with the process continuing, the local bodies can also insist, and often do ensure, that schemes are drawn up according to their needs.

Recent efforts at district level planning are based on a slightly different approach oriented towards community action for meeting the needs of the people. It was sought to incorporate the lessons of Medinipur, a district which had experienced evident success in local involvement in the first phase of decentralised planning. The basic idea behind the CCA programme is to focus on the participation of the local community in the planning, implementation and monitoring of services that have a bearing upon the well-being of the people, through the existing local

*...but lack of devolved resources has constrained the potential of local level planning.*



*There are ongoing attempts to revive the decentralised planning process.*

government structures which would ensure and institutionalise people's participation in the planning, implementation, and monitoring processes. Therefore the programme has sought first of all to integrate the planning, delivery and monitoring of public services (especially in nutrition, education and sanitation) under the local panchayats and with active participation of the community.<sup>5</sup> The CCA is now operational in 40 blocks, and it is intended to extend it to all blocks of the state within the next few years. Along with this, the State Government has also decided to revive the process of decentralised planning from Gram Panchayat level upwards. The official guidelines issued in 2000 and subsequently, all suggest that planning from the Gram Sansad level should now be given topmost priority by the district administrations and Zilla Parishads.

This has been associated with a renewed effort by the panchayats, especially in certain districts such as Jalpaiguri, Bardhaman, and Purulia, to map and estimate the available resources, which can then be used productively in a planned manner. In this current process, it is being emphasised among the villagers that the focus should be on using the existing surplus labour and productive assets available locally, rather than depending upon the government's resources. However, even in these cases, there is the need to think of how the resources will be garnered locally for the equipment necessary for planned activities (for example raising a bundh), even when the labour is available without cost through the voluntary participation of beneficiaries.■

### Development through people's participation

Kalchini Panchayat Samiti in Jalpaiguri district is at the forefront of current attempts in the state to involve people directly in the development process through panchayats and other local institutions such as Self Help Groups. The Panchayat Samiti has done a mapping of local resources and the village registers of all 198 sansads are complete; even the Draft Action Plan is ready. At the same time, the panchayat is encouraging particular local initiatives for development. One example is provided by the women of the Self Help Group belonging to Kalkut village, who have transformed a remote place into an attractive picnic spot using their own labour and resources out of small savings. These women, mostly belonging to the Garo tribal community, were earlier dependent upon firewood collection as their main economic activity. Using their own labour and resources accumulated through their own savings in the Self Help Group, they helped to build a bridge

<sup>5</sup> This programme was originally funded by UNICEF but subsequently has become part of the state government's own efforts without external assistance.

to the particular spot as well as cleared the forest scrub and cleaned up the area. The Panchayat Samiti provided necessary infrastructural support. The spot is now an appealing leisure park, complete with gardens, playing fields, elephant and horse rides, and other such activities. It has already been inaugurated and provides a source of employment and income for these women as well as other local people.

In Purulia district, a very different experiment using new advances in natural biotechnology and local community participation has resulted in better use of local land and water resources, and provided dietary supplements for local consumption. Once again, this has used dominantly local resources and labour, in an effort that has involved clearing the water tanks of the weeds that earlier covered the water and replanting with certain new plants that provide nutritious food for humans and animals. The success of this experiment at relatively low cost has encouraged its spread to other parts of the district.

Even the mapping of village resources (which is by no means a simple exercise) can have significant positive effects. For example, the members of the Sahebgunj Gram Panchayat of Bhatar block, Bardhaman district, found that the process of preparation of the village registers revealed aspects of their own villages, which were hitherto unknown, as well as the extent of resources available and the possibilities of using them. In this particular area, the exercise revealed a significant decline in the water table in the area which was not earlier known. As a consequence, the panchayat has attempted to create wider consciousness about the negative effects of *boro* cultivation on the water table, and to introduce better water harvesting techniques and changed cultivation practices, which are already having positive effects on groundwater levels.

*Some panchayats are innovatively using local resources and labour to initiate their own projects.*

There are at least three aspects to a successful decentralised planning process:

- Mobilisation of the common people. This is crucial to a planning exercise, and does not necessarily require plan funds as such. Mobilisation is an integral part of a range of panchayat activities such as health and vaccination campaigns, ensuring school attendance, and so on.
- Organisation or institution building. There is the issue of how to relate the three existing officially recognised levels to the gram sansads and ad hoc institutions like the gram committees, which may also need some form of official recognition. While



*Without complete commitment at all levels of government, the decentralisation process can get thwarted.*

gram sansads fulfil some crucial roles, they do not have any legal-institutional framework to support or govern their activities. In some areas, indeed, it may even be necessary to have sub-sansads. In addition there is the question of relating and linking all these levels to other community-based institutions like co-operatives and women's Self Help Groups.

- Planning. Here the issue of sustainability is crucial, and the initial enthusiasm has to be sustained over time, especially in a context of fiscal constraint in which the panchayats cannot expect very much in the form of resources from the state government. The other problem is that of resource generation for planned activities.

Obviously, for each of these aspects there are also constraints. One obvious constraint is financial, but this is not the only one. There are also potential problems stemming from the fact that there is a mindset, especially among the bureaucracy, which is actually opposed to decentralisation, so that there is a lack of the required inclination and incentive to implement. Similarly, there is a typical tendency for each tier to feel that the process of devolution should end at that tier, rather than extending further down the tiers and finally to the people themselves. Without full-scale commitment all down the line, the process can get thwarted. Similarly, there must be support from the process from all political parties, so that it does not appear as if the process is benefiting only one section of the electorate, or just the ruling party. This is not just undesirable from the point of view of social harmony; it can also create real problems of implementation. The state government appears to be aware of these problems, as some recent initiatives (discussed below) indicate.■

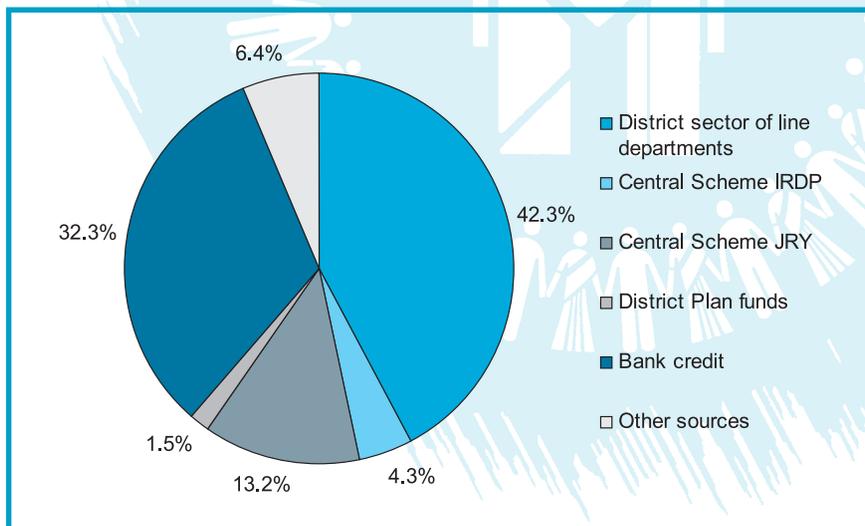
### Financial devolution



West Bengal was the first state in the country to make a serious effort at devolving funds from the state government level to lower tiers of administration. The provision of some amount of untied funds from the 1985-86 Plan, directly to the district bodies, was the first such measure by any state government, although subsequently the state government of Kerala in the 1990s provided a more large-scale and systematic experiment of local-level planning. Over the decade of the 1990s, the resources received by panchayats did increase. In constant price terms, there was a five-fold increase in the total funds received by panchayats, and a seven-fold increase in Plan funds between 1993-94 and 2000-01. For urban local bodies, total funds received in constant price terms increased by two times, while Plan funds increased by more than five times.

However, it must be said that the actual financial devolution has been relatively constrained, especially in the period when the state government's own severe fiscal problems reduced both the ability to make available untied funds and even the amount of planning and other departmental funds which could be utilised by the panchayats. This means that there has generally been an extreme paucity of untied funds which the local authorities can utilise to fill critical gaps to supplement departmental schemes, or independently pursue their perceived priorities. The district plan fund, which was supposed to be the basis of financial autonomy of the local planning authorities, has typically been too meagre to make any significant impact. In the first year (1985-86), the district plan fund released came to about 3 per cent of the Annual Plan, for all districts taken together. Subsequently there was a sharp decline in untied plan funds released to the districts. However, since 2000, there has been a recovery and some increase in the untied funds provided to panchayats. There have also been differences between the allocation made and the actual amounts released, with consequent uncertainties. Panchayat members from different parts of the state stress that a major difficulty is the absence of resources under government schemes or new projects, which can be utilised by the panchayats to implement the plans that they are now developing.

*Actual devolution of funds to panchayats has been limited.*



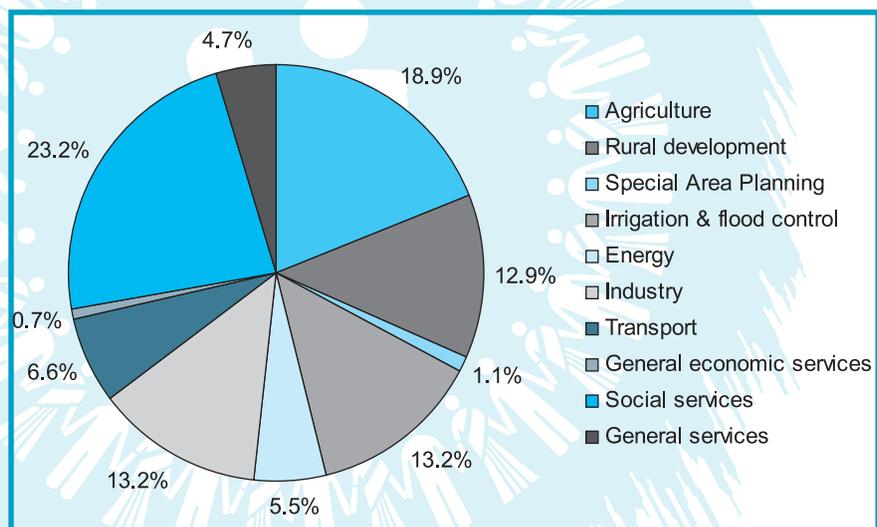
**Figure 3.1 Sources of funds for panchayats, 1991-92**

However, the picture of lack of financial autonomy may not be as bleak as the small amounts of untied funds suggest. Figure 3.1 provides some evidence of the sources for funds of panchayats in a representative year, 1991-92. Obviously, the untied element, district plan funds, was very low, at less than 2 per cent. By far the most significant portion, more than 40 per cent, came from the district sector allocation of line departments, while central schemes

such as IRDP and JRY contributed around 18 per cent. But, significantly, nearly one-third of the panchayat funds came from bank credit, which once again would provide some autonomy of spending decisions for the local bodies. If other sources are also counted as not being previously tied in terms of allocation, then it appears that more than two-fifths of the resources of panchayats came from sources that allowed for a reasonable degree of autonomy or local control over the allocation of resources. However, the revenue-raising capacity of rural panchayats in terms of taxation, unlike the urban municipalities, has remained very low.

Figure 2 indicates that the dominant part of panchayat spending – nearly half – has been directed towards agriculture and rural development through infrastructure provision. The second most important area of expenditure has been in what are termed “social services”, that is, in the areas of health and education, which have accounted for around a quarter of panchayat spending.

**Figure 3.2 Expenditure pattern pattern of panchayats, 1991-92**



Since a significant proportion of panchayat funds have come from the district sector plan outlays of line departments, the district-wise allocation can make a difference to regional inequalities as well. Table 3.3 provides evidence on per capita outlays by district for a representative year, 1994. There are substantial inter-district differences in per capita plan outlays, even though there is no evidence of any clear formula by which such allocations occur. However, it does appear that more backward districts have tended to receive larger per capita allocations, although the pattern is not uniform.<sup>6</sup> While in general the poorer districts or those with lower HDI appear to have received more than the average per capita district sector plan outlay, there are some clear outliers. For example, Darjeeling has relatively high per capita income and a

<sup>6</sup> The rank correlation of per capita district outlay with the HDI is -0.48 and with per capita DDP is -0.52 (both at 10 per cent level of significance).

high HDI, but it also received the second highest plan outlay in per capita terms in the mid 1990s. At the other end of the spectrum, Nadia received much less in per capita terms than most other districts, even though it is at best a middle income district and its HDI rank is also relatively low.

*Resource mobilisation by panchayats is now an urgent issue.*

District	Per capita district sector plan outlay, 1994	Human Development Index, 2001	Per capita DDP, 2000-01
Darjeeling	321.38	0.56	18529.18
Jalpaiguri	255.1	0.41	16749.07
Koch Behar	324.72	0.43	13855.35
Dinajpur	143.02	0.38	12473.45
Malda	197.88	0.29	14777.2
Murshidabad	147.51	0.32	13392.39
Birbhum	213.69	0.36	12791.72
Bardhaman	106.24	0.55	17537.98
Nadia	55.43	0.47	16211.46
North 24 Parganas	78.08	0.61	14768.32
Hugli	113.42	0.58	16279.65
Bankura	187.64	0.46	15741.64
Purulia	213.82	0.31	13044.67
Medinipur	145.51	0.55	15526.01
Haora	85.31	0.65	15591.44
South 24 Parganas	170.2	0.51	13630.22

**Table 3.3 Per capita district sector plan outlays, 1994**

Source: Column 2 from Charvak (2003) based on Annual Plan documents, Government of West Bengal.

Column 3 from data provided by BAES, Government of West Bengal  
Column 4 from calculations as provided in Chapter 1.

However, while there is a large role played by the district sector plans, some major anomalies remain in terms of financial devolution and the control, or even the financial information, provided to the panchayats. Zilla Parishads and Panchayat Samitis typically have no idea what the state government is spending on line departments in their own districts. Such data are supposed to be made publicly available, but there has been a delay in this process, and a generalised ignorance in this area still seems to be the norm.

One major area which probably requires urgent attention is the issue of resource mobilisation by panchayats, through taxation or other means. In the absence of more state level funds being forthcoming, local government institutions must be given some more authority for such resource generation. For example, local bodies could be given access to revenues such as water rates, and could be allowed to tax tubewells; also canal revenues could be shared with panchayats who could use the money for other minor irrigation work. It is clearly necessary to increase the use of local resources, and to allow greater revenue collection at the local level, but so far, even the bye laws for this have not been clearly established. ■



### People's participation and degree of representativeness of panchayats

It is sometimes argued that local level governance in rural India faces the problem that it will be dominated by village elites, especially large landlords, moneylenders and traders, along with other such categories, and that therefore it will tend to reinforce existing power equations that are already skewed against the poor and socially marginalised groups. But the experience of West Bengal since 1977 has indicated that this problem can be overcome if there is sufficient political mobilisation of the local people and if other institutional changes such as asset distribution also occur. The composition of the various tiers of decentralised government has shown a significant representation of occupational categories that are traditionally among the oppressed, such as agricultural labourers and marginal farmers, as well as social groups that were earlier politically marginalised, such as women and those belonging to Scheduled Castes and Tribes. Some of this was already apparent from Table 3.1, which indicated that agricultural labourers and small farmers dominated in the panchayats, and landlords and moneylenders were hardly represented in the 1980s. A similar pattern continued well into the 1990s, as the data on occupational distribution of panchayat members indicates. The data refer to panchayat members elected in 8 districts in the 1993 elections: Jalpaiguri, Uttar Dinajpur, Dakshin Dinajpur, Nadia, Hugli, Bardhaman, South 24 Parganas and Birbhum.

*Panchayats in West Bengal have large representation from traditionally "oppressed" occupations and marginalised social groups.*

The Gram Panchayat level shows a very substantial representation from the occupational categories that make up the rural poor, that is agricultural labourers, bargadars, rural artisans and those engaged in fishing and livestock cultivation. Cultivators are well represented at both Gram Panchayat and Panchayat Samiti levels. It is interesting to note that while the extent of representation of these categories does decline at the highest level of district government, the Zilla Parishad, such groups still are represented there, and the largest occupational group at that level is not that of landlords or moneylenders, but teachers.

Category	Gram Panchayat	Panchayat Samiti	Zilla Parishad
Agricultural Labour	13.5	7.7	2.8
Bargadar	3.3	2.8	2.5
Cultivator	23.9	20.1	7.3
Rural Artisan	2.6	2.1	1.1
Fisheries	0.8	0.6	0.4
Animal Husbandry	1.0	0.7	0
Shop Owners	2.8	2.5	0.4
Other Business	5.3	4.2	3.8
Teachers	6.7	15.5	32.5
Other Services	4.8	5.7	6.3
Students	0.8	1.1	1.8
Unemployed	18.3	23.3	23.1
Others/ Social Service	15.5	14.0	18.5
<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

**Table 3.4 Occupational distribution of panchayat members elected in 1993 (per cent of total members in 8 districts)**

Source: Charvak 2003, based on District Panchayat Profiles published by SIPRD

The social composition of the panchayats is indicated in Table 3.5. These are very disparate districts in terms of overall population characteristics and the presence of SCs/STs, but together they provide a representative picture of the state as a whole. It is apparent that the panchayats in West Bengal provided ample representation to Scheduled Caste groups, who accounted for nearly two-fifths of elected members at all levels of local government, including the highest, that is the Zilla Parishads. Scheduled Tribes had lower representation at around 7 per cent, but then their share of population in these districts is also lower. In general it certainly appears that the electoral process has provided representation at the local government level to the traditional politically marginalised social groups.

	Gram Panchayats	Panchayat Samitis	Zilla Parishads
Scheduled Caste women	14.4	14.5	13.3
Scheduled Caste men	24.1	25.3	24.5
Total Scheduled Castes	38.5	39.8	37.8
Scheduled Tribe women	3.0	3.2	3.2
Scheduled Tribe men	4.4	3.9	3.8
Total Scheduled Tribes	7.4	7.1	7.0
<b>Total Women</b>	<b>35.5</b>	<b>34.6</b>	<b>36.1</b>

**Table 3.5 Social composition of panchayat members elected in 1993 (per cent of total members in 8 districts)**

Source: Charvak 2003, based on District Panchayat Profiles published by SIPRD

Some information relating to the latest panchayat elections, held in May 2003, confirms that on the whole panchayats are representative in terms of occupational and caste composition. The data relate to elected panchayat members in the gram panchayats and panchayat samitis of Bhatar and Bardhaman-I of Bardhaman district. Table 3.6 shows that agriculturalists and household workers tend to dominate in terms of the major occupations, but agricultural labour is also reasonably well represented even at the panchayat

samiti level. Teachers do have disproportionate representation; however, landlords and those involved in business, who tend to dominate in the panchayats of most other states, are not very significant. Even in terms of caste representation, as indicated in Table 3.7, Scheduled Castes and minority groups tend to be well represented in panchayats at both levels.

**Table 3.6 Panchayat members by occupation, 2003 (Bhatar and Bardhaman-I Gram Panchayats and Panchayat Samitis)**

Source: State Planning Board, GoWB

By occupation	Gram Panchayats	Panchayat Samitis
Agriculture	25.4	11.8
Agricultural labour	14.1	11.8
ICDS/Child education	6	8.8
Teacher	6.4	17.6
Politics	1.2	0
Student	0.8	2.9
Business	7.3	0
Service	1.2	0
Non-agricultural labour	3.2	0
Household worker	17.8	35.4
Unemployed	9.3	8.8
Other & not stated	7.3	2.9
<b>Total number</b>	<b>248</b>	<b>34</b>

**Table 3.7 Panchayat members by caste and education (Bhatar and Bardhaman-I Gram panchayats and Panchayat Samitis)**

Source: State Planning Board, GoWB

By caste	Gram Panchayats	Panchayat Samitis
SC	28.6	29.4
ST	6	5.9
OBC	0	0
Minorities	21.4	26.5
General	44	38.2
<b>Total number</b>	<b>248</b>	<b>34</b>
By education		
Literate	4.4	0
Upto Class V	11.3	11.8
Class V-X	33.9	20.6
Madhyamik	22.6	29.4
HS	8.9	5.9
Above HS	16.1	29.4
Not stated	2.8	2.9
<b>Total number</b>	<b>248</b>	<b>34</b>

One of the most significant social changes that has occurred and is still being brought about by this pattern of decentralisation has been the empowerment of women. West Bengal has had a history of substantial representation of women in panchayats well before the 73<sup>rd</sup> and 74<sup>th</sup> Amendments were passed by Parliament; in fact, more than one-third of panchayat members have been women throughout the 1980s and 1990s. Furthermore, women have been relatively well represented not only at Gram Panchayat level, but

even at the higher tiers of district government such as the Zilla Parishads. The most recent panchayat elections in 2003 have created even more gender balance because of the active policy of the ruling party and its partners in terms of fielding more women candidates, and now the Sabhadhipatis of several districts are women.

*Women's participation as elected panchayat members has been above the required norm, and has had very positive.*

The participation of women in panchayats tends to have dynamic effects on the social and political empowerment of women in general, and also has been seen to have positive effects on the general functioning and responsiveness of panchayats to people's needs. Not only has it been found that schemes tend to be designed with more relevance for local conditions and requirements of all the population, but active women's participation also improves the local enforcement of the requirements of people, especially in terms of Fair Price Shops that provide goods as specified and at prices that are specified. Several monitoring problems, which have been noticed in schemes such as special meals for girl students or nutrition programmes for pregnant and lactating mothers or public health campaigns, can also be reduced with more active participation and control of women panchayat members over the actual implementation. In terms of employment schemes, panchayats operating with a gender-sensitive focus can encourage greater participation of women workers by reducing certain types of inflexibility, such as in the timing of work during the day, the patriarchal attitudes of supervisors, etc.

More significantly, the greater presence and participation of women in public life has powerful effects on the situation of women in local society generally. There are numerous examples of how local women leaders have emerged through this process, transforming their own lives and those of the society around them, and altering both social attitudes towards women and the aspirations of women and young girls. The significant increase in the proportion of girls in education, the better performance of girls in schools, and the strong motivation for schooling even among girls in low income or socially deprived groups, can be at least partly attributed to the influence of women panchayat members in raising consciousness and gender awareness in the local communities. Similarly, the emphasis on reproductive health issues in public health campaigns can be related to the importance laid on this by women representatives at the local level. What is most inspiring is the proliferation – even in relatively “backward” districts such as Purulia – of young women panchayat members from poor and socially disadvantaged backgrounds, who are increasingly more articulate and empowered, able to express the concerns of women in public platforms, and conscious of the need to influence policy making. The potential for social change in such a process is



enormous, and the effects are likely to be felt very markedly in the next generation. ■



## Women and panchayats

The involvement of women in panchayats in West Bengal has gone well beyond whatever is implied by the token representation of one-third of elected representatives, and in many areas it has genuinely empowered younger women especially. Manini Dhibar of Birbhum district is the second daughter of a Scheduled Caste fisherman, who also has two younger sons. Her father had studied up to Class V but her mother is illiterate. Manini is 19 years old; she has just completed her Higher Secondary examination, and has been actively involved in the local women's group for some years. In 2003 she was elected as a member of the local gram panchayat. She believes that the panchayats have over the years contributed to much material improvement in her village, from more and better roads to building and repair of the primary school, to undertaking health awareness programmes. Manini's mother does housework and rarely leaves the house, but Manini herself is certain that she wants to be employed and to contribute actively to public life.

In Purulia district, Sarmila Mahato is a health worker and also an elected member of the local panchayat samiti. She is a young woman in her twenties, coming from an agricultural labour household. Although her parents are illiterate, she has completed the Madhyamik examination. According to her, the panchayat and the women's groups that it helped to form have played an important role in encouraging her parents to allow her to complete this much education, and gave her and several of her friends the confidence to get involved in community activities. Sarmila is lively and articulate, and has very few of the social inhibitions that restricted her mother's generation. She is actively involved in health campaigns in the local community, and argues that it is very important to have many more women actively participate to ensure that the panchayats can fulfil all the many responsibilities that are being assigned to them.

There are instances of women benefiting from the panchayat institutions even when they are not involved as elected members. Jaleshwari Singha of Darjeeling district works on a tea estate near her village home. Because it is a new estate, she gets work for only six months a year, at Rs. 30 per day

Women have benefited from panchayats even when they are not involved as elected members.

without any food rations. Jaleshwari's husband earlier owned a small plot of land of 3 bighas earlier, which they sold to cover the expenses of their elder daughter's marriage. Her husband now cultivates 3 bighas as a bargadar. Jaleshwari became a member of the local women's group formed by the panchayat, and has been an active participant in the local gram sabha and gram sansad meetings. With the gram panchayat's help, she was able to take a bank loan to get a tin roof for her home; the panchayat also helped to build a latrine in the house. The women's Self Help Group also helps the household to ensure minimum consumption over the year. More than the material benefits, though, Jaleshwari feels that the panchayats have developed local women's awareness and knowledge about their rights, and given them more voice in matters that affect the community.

Decentralised governance is a very labour-intensive process, both for the elected representatives (whose duties in West Bengal, as seen above, are demanding, wide-ranging and onerous) and for the people themselves, who are thereby called upon to spend a lot of time and energy simply participating in decision-making. The framework for decentralisation in the state calls for meetings of the gram sansads and the gram sabhas at least twice a year. But for most rural people, especially the rural poor, the ability to participate in such meetings is not only a function of the inclination to do so, but also the ability, given the pressures of time involved in wage labour or cultivation, as well as other necessary activities, including the large amount of unpaid labour that is still regularly performed in rural areas. Therefore it would not be surprising to find that attendance at gram sabhas and gram sansads is sporadic and haphazard, even (or especially) when the local community is otherwise satisfied with the functioning and accountability of the panchayats.

Average attendance at Gram Sansad and Gram Sabha meetings has been relatively low and declining in recent years. Official data indicate that average attendance at Gram Sansad meetings declined from around 16 per cent in 1997 to around 12 per cent in 2001, while for Gram Sabha meetings, where attendance was 30 per cent in 1997, the decline has been even sharper.<sup>7</sup> There is also evidence of cases when the attendance at meetings falls below the quorum and these therefore have to be adjourned. In addition to the factors mentioned above, it is possible that low attendance reflects other tendencies which need to be addressed. One important reason is the lack of effective functional and administrative powers of the panchayats, as mentioned above. This creates a tendency for the local political forces controlling the panchayats to try and get their

*Average attendance at Gram Sabha and Gram Sansad meetings has been relatively low...*

<sup>7</sup> Annual Administrative Report 1997-98 to 2001-02, Department of Panchayats and Rural Development, Government of West Bengal, page 16.

decisions adopted at higher levels rather than mobilise local people. Further, there can be absenteeism of panchayat members themselves at Gram Sansad meetings, for fear of public criticism or opposition.

**Table 3.8 Attendance at Gram Sansad meetings**

Source: Column 2 from SIPRD, Govt of West Bengal referring to Nov 2000; Column 3 from study conducted by Chakraborti et al (2003)

District	Per cent of all voters	Per cent of bargadars and pattadars
Darjeeling	13	70.5
Jalpaiguri	26	65.4
Koch Behar	25	73.2
Uttar Dinajpur	10	50.8
Dakshin Dinajpur	11	65.0
Malda	11	85.4
Murshidabad	12	25.3
Birbhum	16	46.4
Bardhaman	12	74.7
Nadia	15	41.0
North 24 Parganas	11	55.7
Hugli	11	49.6
Bankura	12	63.2
Purulia	7	41.8
Medinipur	14	72.4
Haora	8	52.8
South 24 Parganas	8	65.9
<b>Total West Bengal</b>	<b>13.1</b>	<b>63.4</b>

*...but there is very high attendance by bargadars and pattadars.*

A recent study conducted in 2000 by the SIPRD found similar levels of attendance at Gram Sansad meetings. (Table.3.8) The average attendance at such meetings amounts to slightly more than 13 per cent of the electorate, which is not so little considering the overall circumstances. This actually compares fairly well even with other countries where there is an emphasis on people's participation in local government. There is some variation across districts, with Purulia showing the lowest rate of attendance at only 7 per cent of the electorate, and Jalpaiguri the highest at 26 per cent. But more significantly, it is clear that there is very high attendance at such meetings on the part of bargadars and pattadars, who are among the poorest sections of the rural society, and who account for nearly half the rural workforce over all of West Bengal. In most districts, the rate of attendance of these groups combined is above two-thirds, which is extremely high. In all cases (even Murshidabad, where the rate of attendance of bargadars and pattadars was the lowest at only 25 per cent) the attendance among these groups was several multiples of the general rate of attendance. This suggests that clearly these groups see themselves as gaining not only from the land reforms, but also from the process of decentralisation, and feel that involvement and participation in these meetings and in the

activities of the panchayats is worthwhile. The changing balance of class forces in the West Bengal countryside is certainly indicated from such evidence.

It is interesting to note that in recent times, especially in districts where the recent attempts at decentralised planning have proceeded further, attendance at gram sabhas has picked up. Thus, the renewal of the process of decentralised planning from 2001 has led to much greater enthusiasm for the institutions of decentralised governance generally in those parts of Bardhaman where it is working well. The extent of attendance at sansad meetings in Bhatar block of Bardhaman district has significantly increased in the recent past, from the earlier averages of 50-70 people to around 200-250 people per meeting, out of approximately 800-1000 voters. People of all parties now attend these meetings, and the attendance of women has increased from almost zero, although it still remains low at around 10-15 per meeting.



The state government is currently considering some new initiatives to strengthen further the system of decentralisation, and make it more flexible and responsive to people's needs. The concern for some change stems from the perception that elected representatives at each level tend to believe that the decision-making authority should stop at their own level. But of course, the main aim of the decentralisation process is that the ability to influence decisions should permeate down to the people who are affected by these decisions. This in turn means that people's participation has to be understood in a new way – it cannot be that the Panchayat Samiti or the Zilla Parishad decides what to do and then tells the people what they have to “participate” in. Rather, the representatives have to participate in the efforts of the people and the communities themselves.

There has recently been a decision of the West Bengal government to create Gram Unnayan Samitis, to be created by the Gram Sansads. These would be representative committees to carry out decisions and monitor the activities of panchayats. These would include not just the winners of panchayat elections but also the losers (that is, anyone who did not lose the deposit) as well as other relevant constituents, such as those involved in developmental activity and other citizens. These Gram Unnayan Samitis are to be watchdog bodies who also work in collaboration with the panchayats, and the attempt is clearly to make the entire process more transparent and non-partisan, and also to involve as many people from the local community as possible. While the law regarding this has been passed as The West Bengal Panchayat (Amendment) Act 2003, the rules are still being framed and the

*The effects of new initiatives in decentralisation are yet to be established.*



nature of participation has not yet been formalised. In addition to this, the new Amendment Act creates a Block Sansad and a Zilla Sansad where representation of lower tiers is adequately provided, and stipulates the constitution of functional sub-committees at the gram panchayat level. This is designed to improve the possibility of village-level planning. However, the full implications of this and the effects on the power and functioning of the elected panchayats are yet to be seen. It is important to ensure that such changes do not in any way affect the constitutional powers of panchayats as elected representative bodies. ■

## CHAPTER 4

# Material Conditions





## Material Conditions

West Bengal is a middle-income state, ranked ninth among the fifteen major states in terms of both per capita income (SDP) and per capita consumption expenditure, as indicated in Table 4.1. In 2000-01, the per capita SDP in West Bengal was 64 per cent of that of the highest among the major states (Punjab), and was nearly three times that of the lowest (Bihar). The average per capita monthly consumption expenditure in 1999-2000 was 70 per cent of the highest among the major states (Kerala) and 1.4 times that of the lowest (Orissa).

State	Per capita SDP per year, 2000-01 (Rs.)	Rank	Mean consumption per month, 1999-2000 (Rs.)	Rank
Andhra Pradesh	16373	8	540	10
Assam	10198	12	474	12
Bihar	5108	15	413	14
Gujarat	19228	6	677	6
Haryana	23742	2	770	3
Karnataka	18041	7	638	7
Kerala	19463	5	809	1
Madhya Pradesh	10803	11	474	12
Maharashtra	23726	3	697	5
Orissa	8547	14	409	15
Punjab	25048	1	795	2
Rajasthan	11986	10	606	8
Tamil Nadu	19889	4	709	4
Uttar Pradesh	9721	13	513	11
<b>West Bengal</b>	<b>16072</b>	<b>9</b>	<b>569</b>	<b>9</b>

**Table 4.1** Per capita State Domestic Product and average consumption expenditure in the major states

Source: GOI, Economic Survey, 2002-03 and NSS 55<sup>th</sup> Round, 1999-2000.

In the last two decades, the state has experienced relatively rapid economic growth, compared with the rest of the country. This is an improvement from the first three decades after independence, when the relative position of the state in income terms was deteriorating. Thus, while SDP growth in West Bengal was below the national average over the 1960s and 1970s, it increased more rapidly than the national average in the two subsequent decades. In the 1990s, West Bengal was one of the fastest growing states in India, and actually showed the second highest rate of aggregate SDP growth among major states, after Karnataka. Indeed, its aggregate rate of growth was faster than that of Gujarat and Tamil Nadu, both of which are more commonly described as dynamic states. This is indicated in Table 4.2. This tendency was even more marked in per capita terms, because West Bengal has been successful in controlling fertility to a greater extent than many other states, as discussed in Chapter 6.



**Table 4.2 Average Annual Growth in Net State Domestic Product (NSDP) (at constant prices) (In per cent)**

Source: Bureau of Applied Economics and Statistics, Government of West Bengal.

Notes: 1. Col. (2) base year 1960-61; Col. (3) base year 1970-71; Col. (4) base year 1980-81; Col. (5) base year 1980-81 from the year 1991-92 to 1993-94, and base year 1993-94 for the subsequent years.

State	1961-62 to 1970-71	1971-72 to 1980-81	1981-82 to 1990-91	1991-92 to 2000-01
1	2	3	4	5
Andhra Pradesh	3.11	3.46	6.58	5.52
Assam	2.63	3.70	4.14	2.84
Bihar	2.47	3.20	5.06	2.34
Gujarat	4.83	4.31	5.99	6.34
Haryana	10.29	4.82	6.84	4.71
Karnataka	4.36	3.38	5.09	7.51
Kerala	4.00	2.30	3.34	5.74
Madhya Pradesh	2.86	3.63	4.89	3.65
Maharashtra	2.95	4.51	6.12	5.74
Orissa	9.94	2.50	2.98	3.53
Punjab	5.67	4.64	5.40	4.61
Rajasthan	5.78	4.10	4.35	4.47
Tamil Nadu	2.59	2.10	5.71	6.25
Uttar Pradesh	2.79	3.39	5.03	3.38
<b>West Bengal</b>	<b>2.24</b>	<b>3.23</b>	<b>4.24</b>	<b>6.75</b>

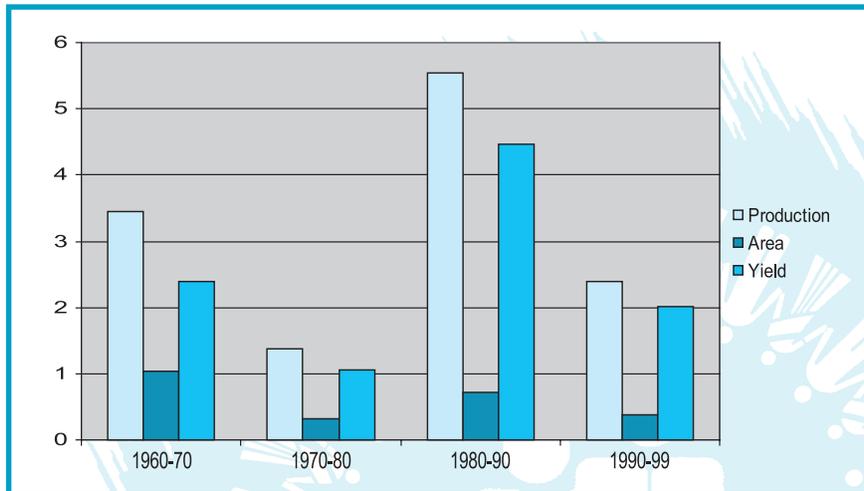
The most remarkable acceleration of growth occurred in agriculture. In the early 1980s, observers were talking of an “agrarian impasse” in the state, but in fact it was precisely from that period that agricultural output took off, making crop output in West Bengal the most rapidly expanding in India for the 1980s as a whole. Most of this expansion occurred in foodgrain, especially rice. The moving force of this agricultural output expansion has been small cultivators, unlike the rest of India, and this was substantially due to the fact that productive forces were unleashed as a combination of the land reform and greater power to decentralised elected bodies, as described in the earlier chapters. This reduced several institutional fetters to growth, making for more efficient use of land as well as greater utilisation of groundwater resources, affecting both area and yield. However, the high rate of foodgrain output growth was primarily the result of yield expansion, as Figure 4.1 shows. Today, West Bengal is the largest rice producer among the states of India, accounting for more than 15 per cent of all rice production.



The introduction of *boro* rice (high-yielding rice variety), which was itself enabled by the spread of minor irrigation and the greater availability of rural credit, played a major part in increasing rice yields. There was significant shift of cultivated area away from *aus* towards *boro*, although *aman* remains the most important rice crop, accounting for more than 60 per cent of rice production. There is still scope for improvement in rice yields, since the average yield in the state (2259 kg per hectare) is higher than the all-India average (1928 per hectare) but lower than the highest yields in India, which are to be found in Tamil Nadu and Punjab. However,

it is also true that there are several emerging problems associated with *boro* rice cultivation, in terms of greater requirement for irrigation and consequent effects upon the water table, and tendency to monocropping in the *boro* areas. These in turn tend may have adverse implications for soil quality, such as greater salinity.

*The rates of agricultural growth and crop diversification have been among the highest in India.*



**Figure 4.1 Foodgrain production (annual growth rates)**

Source: Rawal, Swaminathan and Ramachandran (2002, Table3)

Agricultural growth decelerated in the 1990s, although West Bengal still had the highest rate of growth of foodgrain production in India. Some of this deceleration reflected the fact that *boro* rice, which had expanded extremely rapidly at more than 12 per cent per year in the 1980s, slowed down to around 5 per cent per annum, largely because the area under *boro* expanded much less rapidly.

There was substantial crop diversification in West Bengal in the 1980s and 1990s. Both wheat and potato production increased: while potato production increased more rapidly in the 1980s at nearly 9 per cent per year, wheat production grew by over 6 per cent per annum in the 1990s. West Bengal is the second largest producer of potato (after Uttar Pradesh) and is first in terms of average yields. Jute output also accelerated to 5.4 per cent per year in the 1990s, after increasing by only 2.2 per cent per annum in the 1980s. Some of the more significant crop diversification relates to horticulture. West Bengal is now a major producer of vegetables, accounting for around 17 per cent of total vegetable production in the country.<sup>1</sup> It is worth repeating that all this has been the result of small to medium cultivators' operations, and that there remains a lot of scope for further expansion of horticultural production.

Nevertheless it must be recognised that the earlier expansion in crop output has slowed down in the 1990s, even though there is still potential for increasing yields in many crops. Many of the

<sup>1</sup> The govt. is providing cold chain facilities for preservation of perishable in producing areas. To preserve crops like potato, 20 multi-purpose cold storages with a capacity of 2 lakh tonnes have recently been set up.

*Recently, rising input costs and falling access to institutional credit have adversely affected cultivators.*

adverse features of greater market orientation and external liberalisation at the national level, which have affected farmers across India, also impacted negatively on peasants in West Bengal. Thus cultivators in West Bengal over the 1990s were hit by higher input costs, especially for seeds, fertilisers, pesticides, water and electricity; highly volatile, stagnant and even falling farmgate prices of foodgrains and some cash crops; sharp declines in access to formal credit and crop loans; inadequate investment in physical infrastructure such as roads as well as irrigation and water management; and declining access to agricultural extension services run by the public sector.

Of these many adverse processes, the effects of rising input costs, falling output prices and declining access to institutional credit, were probably the most serious. Even as farming became less economically viable, cultivators found it more difficult to access loans to continue their operations. By 2002, the credit-deposit ratio of all banks in rural West Bengal (commercial banks, regional rural banks and co-operatives) was as low as 26 per cent, as indicated in Table 4.3. The performance of co-operative banks has been far better than the commercial banks in terms of providing credit to small and marginal farmers; also co-operative banks have significantly improved upon their ability to raise deposits.<sup>2</sup> This suggests that future strategies of the government concerned with improving conditions for agriculturalists, may now need to focus on these issues, especially the revival of rural extension services and credit to agriculture, in particular small farmers.

**Table 4.3 Credit-Deposit Ratios of Banks in West Bengal (as on 31st December, 2002)**

*Source: UBI, Lead Bank Division.*

	Commercial Banks	Regional Rural Banks	West Bengal	All Banks Co-operatives
Rural	20	36	49	26
Semi-urban	18	37	73	21
Urban	17	24	42	19
Metropolitan	70	-	47	68
<b>Total</b>	<b>41</b>	<b>35</b>	<b>49</b>	<b>41</b>

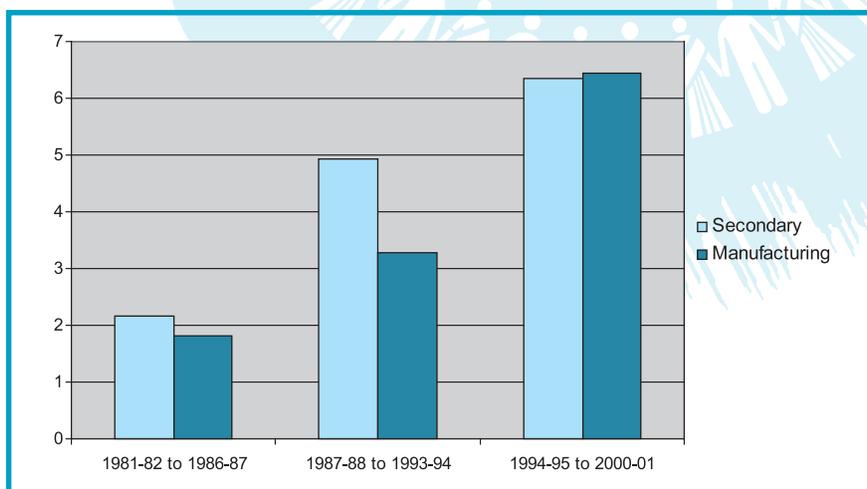
<sup>2</sup> Rawal, 2003. This success may be because the importance of the co-operative sector is increasingly recognised by the state government, which has been assisting the co-operative sector in diversifying its activities, by providing share capital assistance, risk fund, interest subsidy, ad hoc grants, loans for storage facilities, subsidies, etc. Economic Review, GoWB, 2002-03.

The performance of industrial growth has been less impressive than for agriculture overall, although there has been an acceleration of industrial output in the 1990s. The 1980s was a period of relative decline for industry in West Bengal, but the latter part of the 1990s exhibits an impressive recovery, as indicated in Figure 4.2. This is not really due to improved performance of organised industry, since growth in certain sectors such as jute and leather has been counterbalanced by the relative slowdown in other sectors such as engineering, which have been adversely affected by the decline in railway investment in the Eastern region. The traditional (mainly Marwari) business houses of Bengal have shown a tendency to

move new investment to other states, unlike the regional bourgeoisie of other states such as Tamil Nadu and Andhra Pradesh. The lack of development of a regional bourgeoisie has therefore played a role in determining the less than desired performance of organised industry. This may be why there has been no substantial tendency of private corporate capital to move from declining industries to more buoyant areas within the state. Public enterprises in the state began to decline in the mid-1980s, affected by the reduced share of West Bengal in all-India public investment, and by the general stagnation of the Durgapur-Asansol industrial area.

*Organised industry has performed poorly but unorganised manufacturing has shown dynamism.*

However, the unorganised manufacturing sector in West Bengal has exhibited much greater dynamism than earlier, and it is really that which has contributed to the acceleration of aggregate industrial growth in the state. The share of unregistered manufacturing in the manufacturing GDP of the state almost doubled from an average of 30 per cent in the early years of the 1980s, to nearly 60 per cent by the closing years of the 1990s.<sup>3</sup> There was a substantial increase in the number of informal sector manufacturing units, especially in the rural areas. Aggregate manufacturing employment over the 1990s increased in rural West Bengal even as it decreased in urban West Bengal. According to official sources, even in the three years from April 2000, more than 11,300 new small-scale and cottage industrial units employing more than 36,500 people, came up in the state.<sup>4</sup> Therefore, it seems plausible that the combination of institutional changes and agricultural growth that occurred over the 1980s in particular, put greater purchasing power into the hands of rural masses, and this contributed to the expansion of rural industrialisation.



**Figure 4.2 Industrial growth in West Bengal (per cent per annum)**

Source: Bureau of Applied Economics and Statistics, Government of West Bengal.

The services sector has experienced very large output expansion over the past decade in particular. In the period 1994-95 to 2000-01, the tertiary sector as a whole in West Bengal grew at an annual

<sup>3</sup> Calculated from data provided by Debdas Banerjee (2002, page 45 Table 1).

<sup>4</sup> Department of Cottage and Small Scale Industries, Government of West Bengal.

*Income disparities between Kolkata and all other districts have increased over time.*

rate of well over 10 per cent per year. However, as in the rest of India, this expansion of services contains many very different components which deserve greater disaggregation. Some of the output increase actually reflects the increased wages of public sector workers consequent upon the Fifth Pay Commission awards from 1997 onwards. Some of it also reflects the increase in certain sectors such as transport, distribution and trade, which are positively related to real output growth. There has been some expansion in IT-enabled services and related activities in the urban areas of the state, but mostly limited to the metropolitan area of Kolkata. There is also some part of the increase in services which represents a distress movement of workers who are unable to find employment in agriculture or industry, as will be considered in the chapter on employment patterns. The fact that labour productivity in the services sector has lagged behind other sectors in West Bengal, suggests that this latter tendency may have been the more prevalent pattern for a range of service activities. ■

### **District-wise income, consumption and poverty**

West Bengal is unique among the states of India in having district-wise estimates of Domestic Product.<sup>5</sup> These are available from 1980-81 onwards; however, frequent changes of base and in methodology mean that a continuous time series cannot be derived which would provide some indication of district-wise growth of Domestic Product. However, assessments at any one point in time are possible, and Table 4.4 provides information on the per capita income in 2000-01 (at current prices) and the relative ranking of districts then as well as twenty years earlier.

<sup>5</sup> The estimates of District Domestic Product in West Bengal are prepared under the detailed guidance of experts of the Central Statistical Organisation of the Government of India.

		In Rupees, 2000-01	Rank in 2000-01	Per cent of highest in 2000-01	Rank in 1980-81	Per cent of highest in 1980-81
1	Darjeeling	18529.18	2	55.6	2	70.8
2	Jalpaiguri	16749.07	4	50.3	11	38
3	Koch Bihar	13855.35	13	41.6	16	31.7
4	Uttar Dinajpur	11182.86	18	33.6	14	34.5
5	Dakshin Dinajpur	14579.15	12	43.8	14	34.5
6	Malda	14777.2	10	44.4	17	31.2
7	Murshidabad	13392.39	15	40.2	18	31.1
8	Birbhum	12791.72	17	38.4	8	46.1
9	Bardhaman	17537.98	3	52.7	4	67
10	Nadia	16211.46	6	48.7	12	35.2
11	North 24 Parganas	14768.32	11	44.3	6	56.7
12	Hugli	16279.65	5	48.9	5	63
13	Bankura	15741.64	7	47.3	10	41.9
14	Purulia	13044.67	16	39.2	9	43.2
15	Medinipur	15526.01	9	46.6	13	34.6
16	Haora	15591.44	8	46.8	3	70.3
17	Kolkata	33299.5	1	100	1	100
18	South 24 Parganas	13630.22	14	40.9	6	56.7
19	West Bengal	16072.26		48.3		51

**Table 4.4 District per capita incomes**

Source: Bureau of Applied Economics and Statistics, Government of West Bengal.

Note: For 1980-81, the data refer to the undivided districts of 24 Parganas and Dinajpur.

It is clear that per capita income in Kolkata is substantially above that in all other districts. Furthermore, this disparity has increased over time, despite the pattern of growth which has emphasised agricultural output expansion by small cultivators and rural industrialisation. Of course, this does not mean that per capita income in other districts has come down; on the contrary, it has increased, as per capita income in West Bengal as a whole has increased by nearly 4 per cent over this period. But the increase in per capita incomes in Kolkata has been even more rapid, widening the gaps with all other districts.

While the richest (Kolkata and Darjeeling) have retained the highest positions among districts, there has been a lot of change in the middle and lower ranks. Thus, for example, there has been a significant improvement in the relative positions of Jalpaiguri, Nadia and Malda, and to a lesser extent of Bankura and Medinipur. By contrast, there has been significant deterioration in rank for Birbhum and Purulia, and also for both the 24 Parganas districts.

Of course, it is true that per capita District Domestic Product does not adequately reflect the true state of consumption in the different districts. Table 4.5 provides estimates of average per capita consumption expenditure, based on the NSS 1999-2000. Clearly, per capita District Domestic Product is not strongly correlated with per capita consumption; some of the richer districts like Darjeeling and Jalpaiguri show relatively lower average consumption expenditure,



while some poorer districts in DDP terms such as Koch Behar, Haora or North 24 Parganas show relatively higher per capita consumption. Further, it is evident that in West Bengal, rural per capita consumption is less unequal across districts than aggregate output. Haora, the district with the highest rural average consumption, shows per capita consumption to be more than twice that of the lowest (Purulia), while in per capita DDP terms the difference between highest and lowest districts is nearly three times.

The third feature is that there are very sharp urban-rural differences in average consumption across most districts, with urban per capita consumption being much higher, and typically more than one and a half times, rural average consumption. Purulia, South 24 Parganas and Dinajpur show the highest rates of rural-urban inequality in consumption. Jalpaiguri is an exception, in that per capita consumption seems to be both relatively low and evenly spread across rural and urban areas. Incidentally, Jalpaiguri also shows relatively high rates of poverty in both rural and urban areas.

**Table 4.5 Per capita consumption in rural and urban areas by district**

Source: Chaudhuri et al (2003) SAE study using Central Sample data of NSS, 55<sup>th</sup> Round 1999-2000.

Note: The results of the SAE study have been used whenever the estimates have a lower standard error than the NSS usual estimates; otherwise the NSS usual estimates have been used.

	Rank in terms of per capita District Domestic Product	Rural monthly per capita consumption (Rs.)	Rural poverty ratio (per cent)	Urban monthly per capita consumption (Rs.)	Urban poverty ratio (per cent)	Ratio of urban to rural consumption
Darjeeling	2	465.42	19.66	744.9	15.21	1.6
Jalpaiguri	4	416.43	35.73	465.23	61.53	1.12
Koch Behar	13	466.43	25.62	797.92	15.44	1.71
Dinajpur	12/18	484.56	27.61	843.27	19.29	1.74
Malda	10	428.67	35.4	655.18	6.6	1.53
Murshidabad	15	385.69	46.12	522.27	49.56	1.35
Birbhum	17	382.81	49.37	669.37	21.83	1.75
Bardhaman	3	501.58	18.99	707.92	17	1.41
Nadia	6	458.29	28.35	774.12	15.51	1.69
North 24 Parganas	11	550.84	14.41	839.81	9.99	1.52
Hugli	5	486.9	20.43	723.03	11.43	1.48
Bankura	7	353.28	59.62	500.4	52.38	1.42
Purulia	16	280.15	78.72	603	6.47	2.15
Medinipur	9	490.2	19.83	864.26	19.25	1.76
Hzora	8	590.19	7.63	839.81	1.33	1.42
Kolkata	1			992.53	11.17	
South 24 Parganas	14	453.2	26.86	828.6	8.5	1.83

The wide disparity of terms of the incidence of poverty is the fourth important feature. Poverty is lowest in the Kolkata metropolitan area and its surroundings, to the extent that urban poverty appears to be negligible in Haora and even rural poverty is very low in this district. The district of North 24 Parganas also shows relatively low poverty. However, there are some districts with very high poverty,

which has persisted even to the end of the 1990s. In fact, the rural poverty figures for Purulia and Bankura are so high as to be alarming. Other districts with high rural poverty are Birbhum, Murshidabad and Jalpaiguri. It is noteworthy that Jalpaiguri and Murshidabad are the only districts where the urban poverty rate is higher than the rural rate. In fact urban poverty in Jalpaiguri is extremely high at more than 61 per cent, while Bankura and Murshidabad also have urban poverty rates of around 50 per cent. Surprisingly, Malda shows a very low incidence of urban poverty.

*Agricultural labourers remain the poorest group.*

However, on the whole the incidence of poverty in West Bengal has come down. While there are some problems of comparability of the 55<sup>th</sup> Round NSS data for 1999-2000 with the earlier rounds, it is possible to introduce some degree of comparability by making some adjustments. Table 4.6 provides such estimates. It is evident that poverty has indeed come down over the 1990s (although the decline is slightly less than is suggested by the unadjusted 55<sup>th</sup> Round data). However, the variation in incidence of poverty by household occupational category is substantial. Agricultural labourers remain the poorest section of the population, and have also experienced the lowest decline in poverty rates. Even in 1999-2000, nearly half of such households were absolutely poor. The groups with the second highest incidence of poverty is that of other labour, but here it is worth noting that the poverty ratio at the end of the decade was less than one-third, and also that this group had experienced the largest drop in poverty over the 1990s. The lowest poverty ratio was for the miscellaneous category “others”, although for this group the incidence of absolute poverty seems to have increased marginally. The group of cultivating households showed a broadly stable extent of poverty, at around one-fifth of such households. ■

	% of pop in Household type		% of population below poverty line			% of Household type in total poor population	
	1993-94	1999-2000	1993-94	1999-2000	1999-2000	1993-94 adjusted	1999-2000 adjusted
Self employed in non-agriculture	20.45	22.95	30.18	27.96	29.20	17.40101	20.26504
Agri labour	30.10	38.57	54.75	45.10	47.03	46.46589	54.94525
Other labour	9.65	5.41	50.77	31.75	32.74	13.81685	5.421506
Self employed in agriculture	31.31	23.33	22.80	20.79	21.24	20.12467	15.32448
Others	8.48	9.74	9.17	13.14	14.59	2.191577	4.043729
<b>All</b>	<b>100.00</b>	<b>100.00</b>	<b>35.47</b>	<b>31.66</b>	<b>32.91</b>	<b>100</b>	<b>100</b>

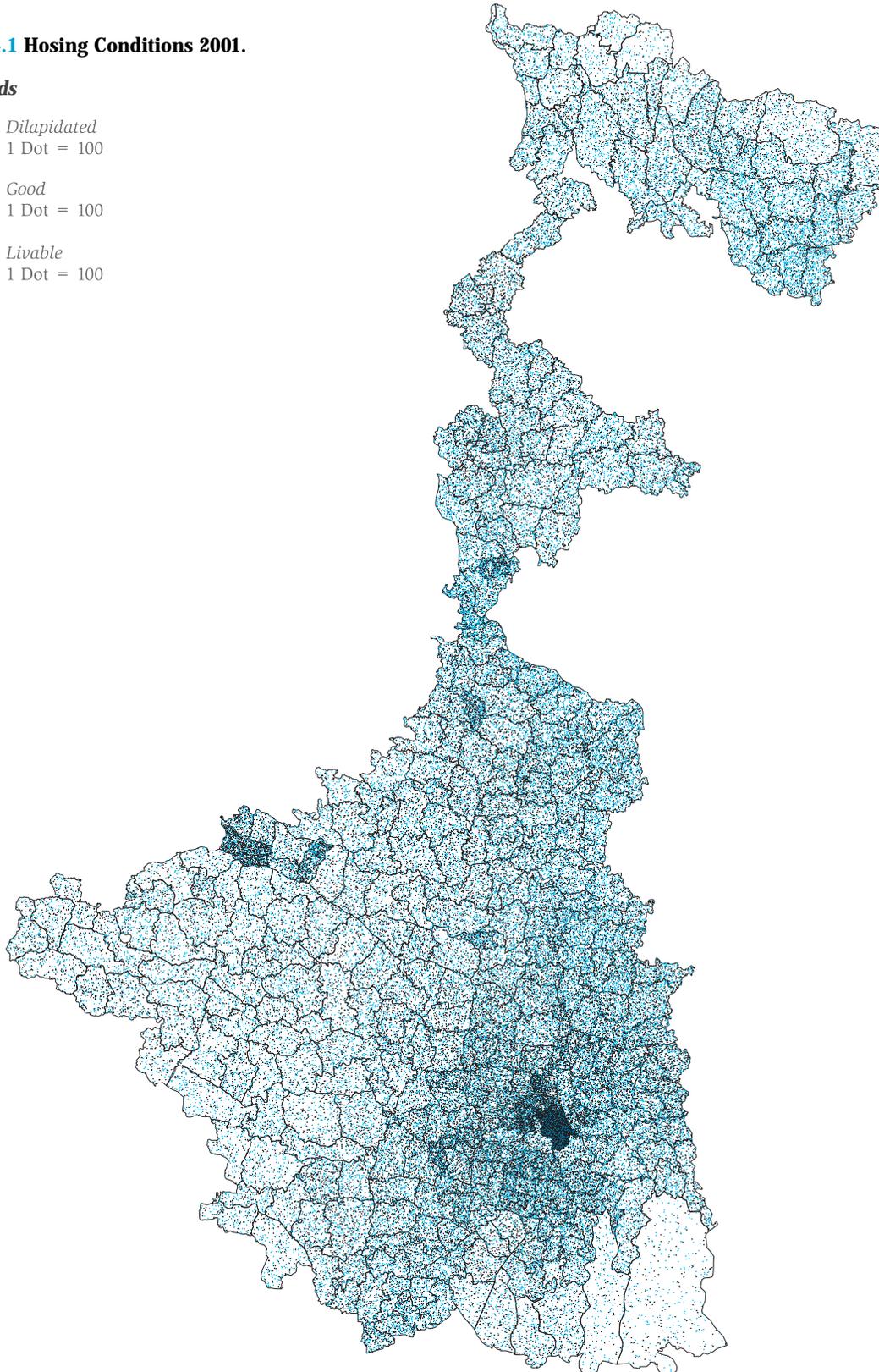
**Table 4.6 Poverty estimates for rural West Bengal by type of household**

Source: Abhijit Sen, 2003, unpublished, Calculated from NSS central sample for West Bengal.

**Map 4.1 Hosing Conditions 2001.**

**Legends**

-  *Dilapidated*  
1 Dot = 100
-  *Good*  
1 Dot = 100
-  *Livable*  
1 Dot = 100



## Infrastructure conditions

Physical infrastructure conditions form an important part of the basic material conditions faced by ordinary people. It should also be remembered that West Bengal is among the most densely populated states in the country, and that such population pressure, even in the rural areas, involves substantial burden upon the prevailing infrastructure, both in terms of physical availability and access to facilities.

As far as transport infrastructure is concerned, the spread and condition of roads is one of the most important indicators. West Bengal has performed reasonably well in terms of progress of roads, as revealed by the fact that the road length per 1000 sq. km in West Bengal (753.40 km for the five major categories of roads for which comparable data is available) is much higher than the all India average (484.96 km). However, the rate of road expansion in the recent past in West Bengal (decadal growth of 21 per cent) has been lower than the all-India average, which was at a decadal growth rate of 37 per cent.<sup>6</sup>

*More roads in West Bengal are now under the control of local authorities than in other states.*

Such data may not provide a complete picture, because in the general ethos of decentralised governance, much of the responsibility for rural road construction and maintenance was transferred to the Zilla Parishads from the late 1970s onwards. The roads under Zilla Parishads in West Bengal have registered a very impressive increase over the last two decades, from 270.84 km per 1000 sq. km. in 1977-78 to 349.03 km per 1000 sq. km. in 1997. No such decentralisation took place at the all India level. Therefore, the performance of the state had been quite impressive if we take into consideration the fact that West Bengal tried to develop the physical infrastructure in form of roads in a different institutional set up – a set up in which the local level authorities enjoy more power in this regard. It can be argued that this devolution of authority, with the Zilla Parishads also devolving power and responsibility for road construction and maintenance to lower levels such as the Panchayat Samitis and even Gram Panchayats, has meant a discernible change for the better over the 1990s. With respect to Municipal Roads, roads under urban authority of self governance, the performance of West Bengal also appears to be better than those in other states. However, the quality of roads remains an important concern.

In terms of village connectivity, 56.55 per cent of the villages in India were connected by roads in 1995-96, according to data provided by the CMIE. The corresponding figure for West Bengal at that time was 48.67 per cent, which makes it one of the poorly

<sup>6</sup> Khasnobis, 2003 page 28.

performing states in this regard. This means that more than half of the villages in West Bengal lacked connection by roadways in the mid-1990s. This obviously has important implications for the provision of a range of basic services and utilities, as well as health and education infrastructure. However, the Census village directories provide a slightly better impression of the extent of village connectivity.

**Table 4.7 Rank Correlation between Income & Achievement in Rural Roads**

Note : PWDsur = Roads under the control of the PWD

ZP(t) = Roads under the control of Zilla Parishads

PCI = Per capita income.

Source: Columns 2 and 3-

Khasnobis 2003, page 52.

(Add rank correlation with HDI once final figures come in.)

Rank Correlation Coefficient between:PWD (surfaced) & PCI = .248 ZP (total) & PCI = .896

Districts	Rank of PWDsur	Rank of ZP(t)	Rank of PCI	HDI Rank
Darjeeling	14	6	1	2
Jalpaiguri	9	16	3	11
Koch Behar	7	9	12	13
Uttar Dinajpur	11	18	17	12
Dakshin Dinajpur	18	14	11	12
Malda	13	13	9	17
Murshidabad	8	8	14	16
Birbhum	6	10	16	14
Bardhaman	4	12	2	7
Nadia	5	11	5	9
North 24 Parganas (N)	3	17	10	6
Hugli	1	1	4	3
Bankura	15	15	6	10
Purulia	17	7	15	15
Medinipur (East)	12	2	8	4
Medinipur (West)	16	4	8	4
Haora	2	5	7	5
South 24 Parganas	10	3	13	8

Using the available data, it is possible to draw up a road achievement index by districts. While there appears to be little rank correlation between the extent of surfaced PWD roads and the per capita income of districts, the rank correlation of per capita income with the total roads controlled by Zilla Parishads is very high. Further, the rank correlation of the extent of Zilla Parishad roads with the HDI index is even higher. It is possible therefore that the intervention that took place in West Bengal for development of roadways through the institutions of participatory local government had a strong positive impact on the economic well being and human development of the state, particularly in its rural areas. Obviously, much more needs to be done in this regard.



West Bengal had nearly 27,000 buses in service in 2000-01. Among the sixteen major states, West Bengal ranked 9th in the number of buses plying over its roads. While it is true that the rank of West Bengal is below the median, the state accounts for only 2.7 per cent of the surface area of India and only 4.2 per cent of the road length of the country. Indeed, West Bengal appears to have better facilities

in the public transport than some bigger states such as Madhya Pradesh or Rajasthan if we consider the availability of public transport per 1000 sq. km of area of the state. Even in terms of the number of buses for public transport West Bengal is marginally below Andhra Pradesh and Tamil Nadu. However, public sector buses, which account for only 9 per cent of the total, do not play an important role in providing transport services in the state.

*Rail connectivity is good but road transport connections are only moderately developed.*

There are 845 bus routes operating in the districts of West Bengal. There are fourteen blocks in the state which are connected through only one bus route. Six of such blocks belong to the delta region of the Sundarbans, in 24 Parganas. In Koch Bihar and Medinipur, there are two blocks in each of the districts which have only one bus route. In Darjeeling there is one block with only one bus route. The majority of the blocks in West Bengal have between two and five bus routes connecting the villages under the blocks. There are forty five blocks in West Bengal in which the number of bus routes is more than ten. The ground reality appears to be that road transport is moderately developed connecting a high number of rural points in the state. Even among the roads with road access, however, every village is not connected through bus routes. However, in most of the blocks there is a point from where people can get connection through bus routes for various points of the district and for places outside the districts. Some of the bus routes serve as feeder to rail routes (as in case of Uttar and Dakshin Dinajpur). But in other cases bus routes are now developing as substitutes for passenger movement through railways.

In 2000-01, there was 3662 km. of railway route length in West Bengal. This appears to be quite high, particularly since West Bengal is a small state of the country in terms of geographical area. That West Bengal has a better railway infrastructure compared to the larger states of India is indicated by the fact that the route density in West Bengal is 41.26 which is higher than most of the states. If we consider the rank of route density for 30 states, it appears that West Bengal ranks fourth.



**Table 4.8 Population served per bank and Post Office with savings bank facilities (000s)**

Source: Khasnobis 2003, page 84. Change ranks.

District	Population served in 000s			
	Bank	Rank	Post Office with savings Bank	Rank
Darjeeling	13	1	8	5
Jalpaiguri	22	12	11	13
Cooch Behar	24	16	10	9
Uttar Dinajpur	25	17	13	17
Dakshin Dinajpur	21	10	11	13
Malda	21	10	10	9
Murshidabad	23	13	11	13
Birbhum	13	1	7	2
Bardhaman	17	3	9	6
Nadia	23	13	9	6
North 24 Parganas	18	4	10	9
Hugli	18	4	9	6
Bankura	18	4	7	2
Purulia	23	13	6	1
Medinipur (East)	20	8	9	6
Medinipur (West)	15	2	7	2
Haora	18	4	10	9
South 24 Parganas	20	8	11	13

*Infrastructure provision remains an important concern.*

Darjeeling and Birbhum both have best networks of commercial banks in the sense that the population per bank is the lowest in these two districts. This is interesting given that Birbhum is otherwise not ranked high in terms of other infrastructure development. Medinipur (West) ranks second and the third position is enjoyed by Bardhaman. The worst is the position of Uttar Dinajpur which is followed by Koch Behar. With respect to post offices with savings bank facilities, Purulia appears to have the most advantageous situation, despite its relative backwardness in some other infrastructure indicators. This is followed by the adjacent districts of Bankura and Medinipur (West). The lowest position in this regard is that of Uttar Dinajpur, although other districts such as Jalpaiguri, Dakshin Dinajpur, Murshidabad and South 24 Parganas also have low ratios. It is worth noting that this aspect of infrastructure does not appear to be strongly correlated with other infrastructure indicators, or with per capita income.

This brief review of material indicators indicates that while incomes have increased and poverty has declined in the recent past, average consumption is still low and there are pockets of particular concern and deprivation. Infrastructure provision still remains an important issue, with direct links to achieving better economic growth and improved human development conditions. ■



## CHAPTER 5

# Employment Trends and Diversification



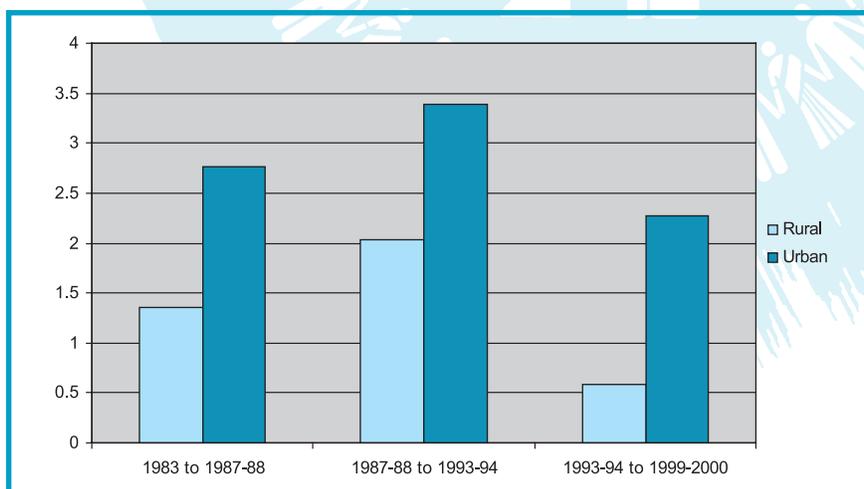


## Employment trends and diversification

Employment is clearly one of the most significant issues in terms of the living conditions of the people in West Bengal today. Quite simply, there are not enough jobs for all the people who are willing or forced to work. The rate of employment generation in terms of aggregate main work has been lower than the rate of expansion of the population, and substantially lower than the rate of income growth. As a result, the pattern of job creation has shifted towards more casual, marginal, part-time and insecure contracts or self-employment.

*Employment generation is the most pressing concern in West Bengal today.*

In this respect, the state's experience has been similar to the rest of the country, although slightly better than the all-India average. All over India, the period since the early 1990s has been quite dismal from the point of view of employment generation, with sharp, and even startling, decreases in the rate of employment generation in both rural and urban areas. For India as a whole, the collapse in rural employment has been the most marked, with all forms of rural employment (principal as well as subsidiary activities) increasing by less than 0.6 per cent per year over the period 1993-94 to 1999-2000, that is around one-third the rate of growth of rural population. Most of this poor employment generation was because of the decline in absolute employment in agriculture for India as a whole; non-agricultural employment in the rural areas did not increase fast enough to make up for this decline. Even in the urban areas, aggregate employment grew less slowly than before, although the deceleration was less marked than for rural areas.



**Figure 5.1 Employment growth rates for all-India (per cent per annum)**

*Source: Based on NSS employment rates and Census population figures*

*Note: Employment here refers to all workers, that is Principal Status plus Subsidiary Status*

*Job creation has shifted towards more casual and marginal work for both men and women.*

In West Bengal, much as in the broad all-India trends, employment growth lagged well behind output growth. The macroeconomic forces which contributed to the slowdown in employment elsewhere in the country, such as reduced public investment and expenditure on public services, effects of import competition on manufacturing activity, and inadequate flows of bank credit to small producers in all sectors, were also in operation in West Bengal. However, unlike most of rural India, rural West Bengal did not experience an absolute decline in agricultural employment, which continued to grow, albeit at a slower rate.

Table 5.1 indicates the change in work participation rates between 1991 and 2001, according to the Census of India. The Census defines main workers as those whose main activity was participation in economically productive work for 183 days or more in the previous year. Marginal workers are those whose main activity was participation in economically productive work for less than 183 days. While this is a measure of underemployment, obviously it would be an underestimate, since even those with more than 183 days of work could be underemployed.

**Table 5.1** Census data on employment in West Bengal (as per cent of total population)

Source: Census of India, 2001

	Rural		Urban	
	1991	2001	1991	2001
Male main workers	51.18	46.00	49.34	50.61
Male marginal workers	0.91	8.30	0.31	3.47
Male non-workers	47.91	45.70	50.36	45.93
Female main workers	8.74	8.87	5.79	8.82
Female marginal workers	4.33	11.83	0.41	2.31
Female non-workers	86.93	79.30	93.79	88.87

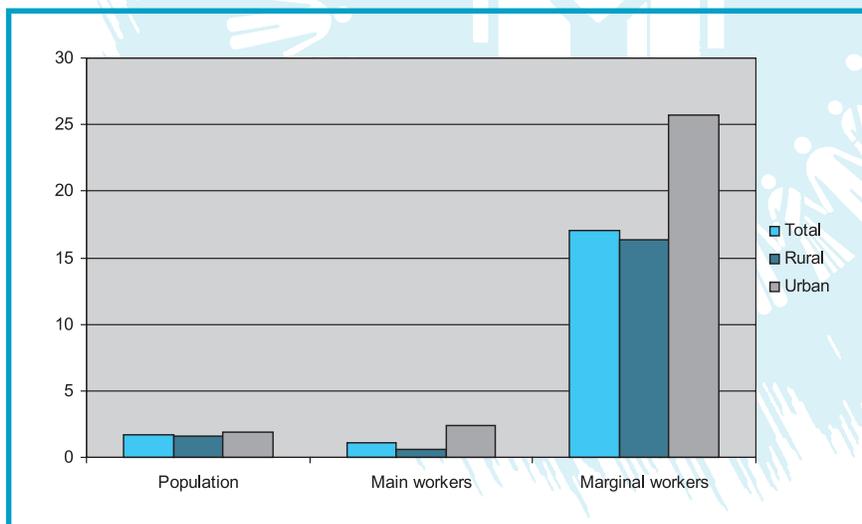
The ratio of main workers to total male population fell quite significantly over the decade. Some of this was because more of them were in education, especially those in the 15-19 years age group, a trend which is obviously welcome. But that was not enough to explain the decline; the inadequacy of productive employment opportunities could be a main factor behind this. The shift from main work to marginal work among men suggests that fewer days of employment are generally available and that more secure forms of employment are being replaced by less secure forms.

As is shown by Table 5.1, West Bengal has among the lowest recorded rates of female work participation in the country. Low work participation rates for women have typically been seen as evidence of gender discrimination, not only because they can reflect a resistance to women working outside the home, but more

significantly because they may reflect under-reporting due to the social invisibility and lack of recognition of women's unpaid work. This has been a problem across India, and especially in northern and eastern parts of the country. However, the difference is that, unlike the rest of the country, female work participation rates in West Bengal have been rising in the recent past according to the Census, both for main and marginal workers. It is not clear how much this is due to better recognition and enumeration of women's work, and how much was actually the real trend. Even in this case, however, by far the more significant increase was in terms of marginal work, that is less than 183 days in the year.<sup>1</sup>

*Women's work participation has been very low but is recently increasing.*

The increase in marginal work is clearly indicated in Chart 5.2, which shows the pattern of growth of aggregate population and number of workers in terms of compound annual rates. Clearly, rural employment has suffered more than urban employment in the 1990s, contrary to some popular perception. In the rural areas, population growth has been more than double the rate of growth in the number of main workers, while the number of marginal workers has increased at a rapid rate. In urban areas, the employment picture looks slightly better: while marginal work is clearly the most dynamic with a very high annual rate of growth, main workers grew faster than total population growth.



**Figure 5.2 Annual growth rates of total population and workers**

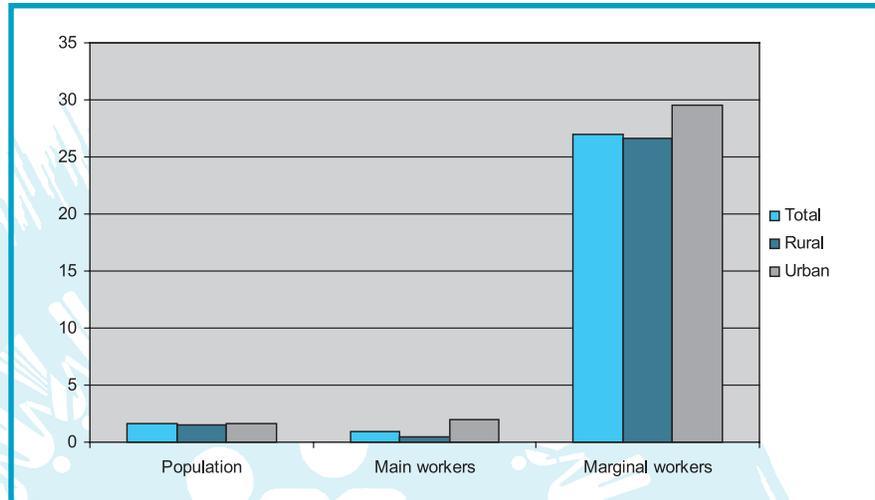
There are substantial differences between men and women workers, as shown in Chart 5.3 and 5.4. In general, the increase in female workers has been much faster than that for male workers, which may also have occurred because the number of recorded women workers was so much lower to start with. This may reflect better recognition of the work performed by women, as well as greater involvement in economic activities outside the household in the

<sup>1</sup> It should be noted that the Census definitions and coverage of “economically productive work” are still rather restricted and tend to leave out a range of household related economic activity. This is one of the reasons why women's work participation as indicated by the Census is so low in West Bengal. The coverage by the NSS is slightly better in this regard, but still does not capture the full extent of women's economic contribution in the state.

recent past. In the urban areas, more women are entering into the workforce as paid main workers, as well as self-employed, especially in various services, and the increase in the number of female main workers has been more than three times the rate of growth of urban female population.

**Figure 5.3 Annual rates of growth of male population and workers**

Source:



**Figure 5.4 Annual rates of growth of female population and workers**

Source:

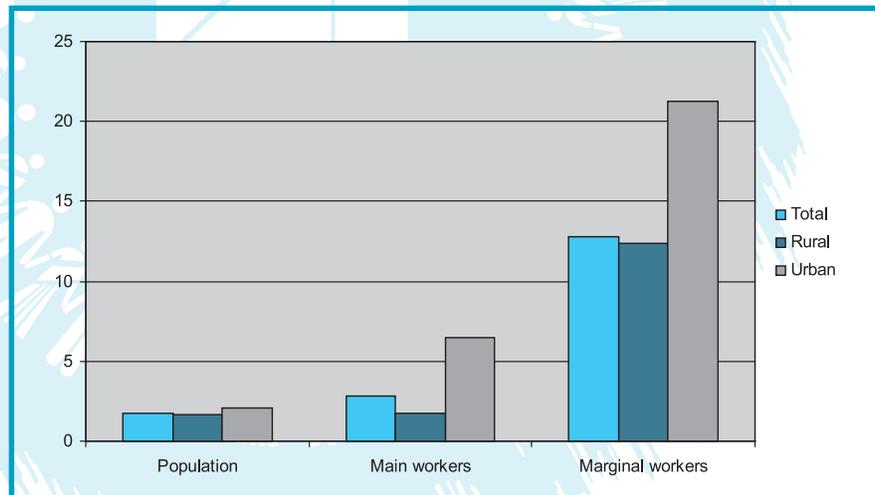


Table 5.2 indicates the changes in terms of main occupation, between 1991 and 2001, for men and women separately. The most significant feature in both cases is the relative decline in agricultural work. For male workers, the big shift has been in terms of decline in the share of cultivators (who have also declined in terms of absolute numbers). This may reflect the increase in the share of landless households, which is reported by the NSS, whereby fewer rural men report themselves as mainly working on their own household plots. By contrast, the proportion of male agricultural labourers has remained broadly stable at around 23 per cent. "Other workers" have increased commensurately. This suggests that those

who have stopped cultivating have not become agricultural labourers; rather they have become self-employed people or engaged in other forms of rural paid labour.

*The proportion of agricultural workers has come down sharply.*

For women workers in West Bengal, the share of both cultivators and agricultural labourers has declined. In this case, the importance of “household industry” has gone up quite sharply. This is a strong process in rural areas of the state - West Bengal currently shows one of the highest rates of employment diversification out of agriculture, in the whole of rural India. This is discussed in more detail below.■

	Males		Females	
	1991	2001	1991	2001
	1991	2001	1991	2001
Cultivators	30.2	20.8	16.2	13.4
Agricultural Labourers	22.7	22.6	37.9	32.4
Household industry	2.8	4	11.3	18
Other workers	44.3	52.7	34.7	36.2

**Table 5.2 Occupation of main workers according to the Census (as per cent of total main workers)**

*Source: Census of India, 2001*

## Rural employment

The patterns described above relate to the number of workers in terms of pattern of work over the year. But in highly seasonal economies, such as those in rural West Bengal in particular, this may not be adequate to capture the actual availability of work. For this, we also consider the available NSS data on employment. The NSS has at least three ways of capturing employment. The first is that of “usual status” activity, which relates to what the person usually did in the course of the past year. The second is the concept of “weekly status”, which counts a person as employed if she or he was engaged in any economic activity for at least one hour on any day of the week preceding the survey. Finally, “daily status” defines a person as employed if she or he has worked for 4 hours or more during the day preceding the survey. These are not the same as the Census differences between “main” and “marginal” work, which are only differentiated in terms of the number of days worked over the year. Rather, the “usual status” is related to the stock of available workers and the “current weekly” or “daily” status indicate the flow of jobs available in the economy.

Charts 5.5 and 5.6 indicate the growth of rural employment according to the NSS, by both “usual status” and “daily status” indicators separately. These suggest slightly different trends from those observed using only the Census data. In terms of usual activity, while male employment shows a sharp decline in growth, that for women has actually turned negative over the latest period,

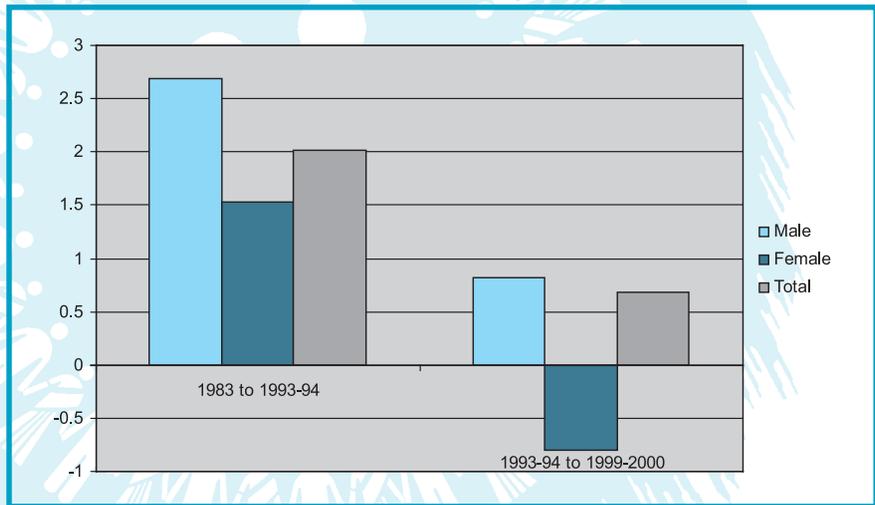


that is the second part of the decade of the 1990s. In terms of daily status, which possibly captures the real state of the labour market from the point of view of workers more accurately, both men and women experienced a decline in employment after reasonable growth in the earlier period. The decline in women’s employment is especially disturbing, given the already low work participation rates of women in West Bengal.

The following conclusion can be drawn. In the period of the 1980s and early 1990s, the positive changes in the countryside brought about by land reforms and increased agricultural output had their impact on generating more rural employment. However, the more recent period since the mid 1990s – which is when the broader macroeconomic processes such as economic liberalisation and reduced per capita government expenditure had their effects across the whole of rural India – was marked by severe negative effects on employment generation in rural West Bengal.

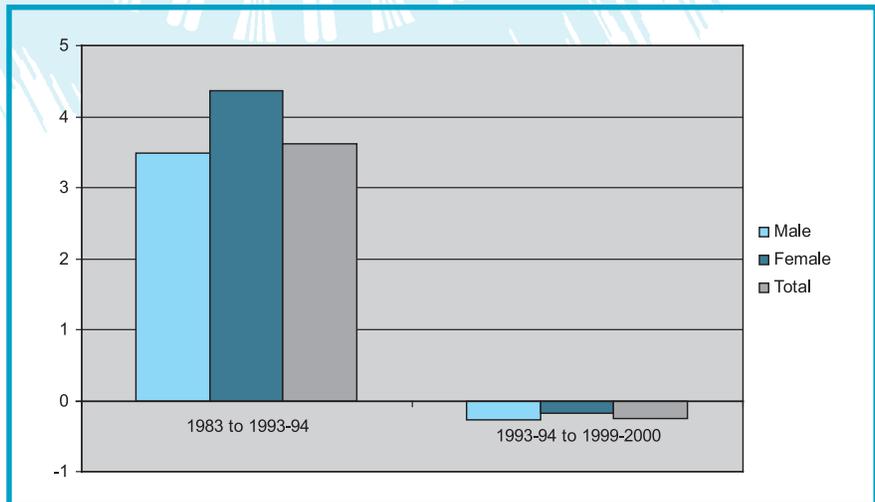
**Figure 5.5 Growth rates of rural employment by usual status**

Source:



**Figure 5.6 Growth rates of rural employment by daily status**

Source:



In terms of the conditions of employment, for rural men the most significant changes according to the NSS, are the decline in regular employment and the increase in casual work. Self-employed men (in both agriculture and non-agriculture) currently account for about half of the rural male workforce, while those with casual jobs are more than two-fifths (43.3 per cent), and those with regular employment are only 7.5 per cent. For rural women workers, self-employment is the dominant form, accounting for nearly two-thirds of such work, while casual employment is marginal and even appears to have declined in terms of share, from 7.3 per cent to 5.1 per cent.

*Rural wage rates have gone up, but more work is casual in nature.*

Rural wages appear to have increased over the entire period, however. A recent study (Chavan and Bedamatta 2003) found that real daily wages of agricultural labourers in West Bengal increased by annual rates of more than 16 per cent for men and by nearly 14 per cent for women over 1983 to 1987-88. In the 1990s, the rate of increase tapered off to some extent. But real daily earnings still increased by more than 2 per cent per year for both male and female agricultural labourers in the state.

Work participation rates and unemployment rates tend to vary quite substantially across social categories. Table 5.3 provides data from the NSS on usual status work participation and unemployment rates in the rural areas, for men and women separately. It is evident that work participation is highest among Scheduled Caste males, and lowest among “other” females in the rural areas, that is those who do not belong to SC, ST or OBC groups. Gender disparity in terms of recognised employment seems to be lowest among Scheduled Tribes, for whom the work participation rates for women are reasonably high by all-India standards. Such disparity, and the relative gap for women, is highest among “others”, a category which includes other Hindus, Muslims and other socio-religious groups.

The differences in unemployment rates are also striking. Current daily rates of unemployment are relatively high, and are also higher than the all-India averages. Male unemployment appears to be more acute than that for women in rural West Bengal. Male unemployment appears to be highest among Other Backward Castes in terms of the usual status, while there seems to be less differentiation by social category for daily status unemployment, with Scheduled Tribes indicating the highest rate of rural male unemployment by this criterion.



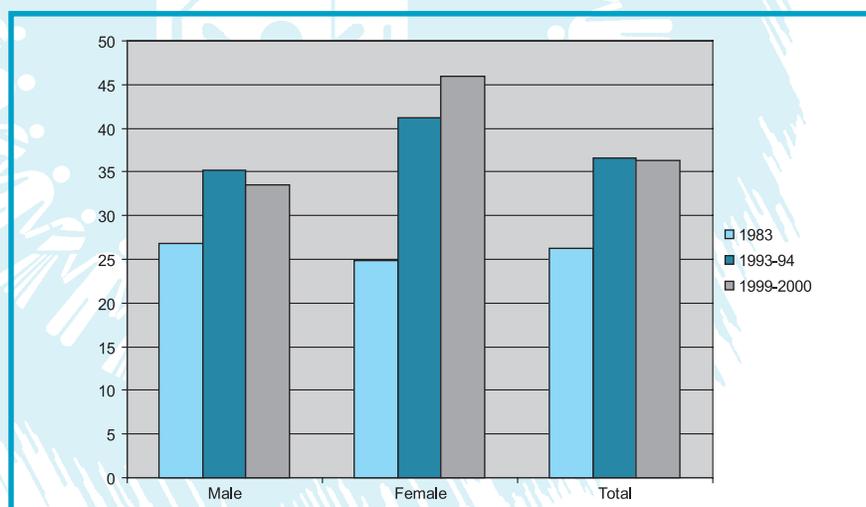
**Table 5.3 Work participation and unemployment rates (in per cent) by social category in rural West Bengal, 1999-2000**

Source: NSS Employment-Unemployment Survey, 55<sup>th</sup> Round

	Work participation rate by usual status		Unemployment rate by usual status		Unemployment rate by daily status	
	Male	Female	Male	Female	Male	Female
Scheduled Tribes	52.0	34.8	1.0	0.4	8.9	4.6
Scheduled Castes	55.2	16.7	2.3	0.6	6.3	1.2
Other Backward Castes	54.7	13.0	3.5	0.1	6.3	0.4
Others	52.7	11.9	1.8	0.4	8.4	3.7

Within the overall stagnation of aggregate employment in the West Bengal countryside in the recent past, one very significant shift has been the diversification into non-agricultural activities. According to the NSS, by 1999-2000, nearly half of the women engaged in some usual status activity in rural West Bengal were not working in agriculture. For men, the increase in non-agriculture's share in total rural employment was quite sharp up to 1993-94, but subsequently seems to have reduced slightly. In the aggregate, well above one-third of all employment in rural West Bengal was in non-agricultural activities by the end of the 1990s. In fact, the Census data show an even higher rate of occupational diversification in rural parts of the state. (See Box for some examples of non-agricultural work in rural areas.)

**Figure 5.7 Rural non-agricultural employment as share of total rural employment**



In many other states of India, the shift away from agricultural employment has come about because cultivation itself has been with more and more labour-saving techniques, and growing mechanisation has reduced the labour requirement per unit of crop output. Some of this type of change can also be observed in West Bengal, but it has been counteracted by other changes such as the spread of labour-intensive *boro* rice cultivation as well as the continued preponderance of small holders who typically use more labour per hectare. This is why overall agricultural employment has not declined in West Bengal, unlike in rural India as a whole and

most other states. In this context, the expansion of non-agricultural activities (which are increasing most rapidly in terms of “marginal work”, it must be remembered) is certainly remarkable.

Table 5.4 provides a closer look at the district-wise changes in rural employment according to the Census. The most striking feature is the very high proportion of non-agricultural workers in the rural areas of a number of districts. In five districts (Haora, Darjeeling, Jalpaiguri, North and South 24 Parganas) more than half the rural workforce is engaged in non-agricultural activity. The average for the state in 2001 was more than 40 per cent of total rural workers being engaged in non-agriculture, which is well beyond the national average and is one of the highest such ratios in India. Furthermore, this increase in non-agricultural work has been very rapid in the past decade, increasing by more than 12 percentage points for all of rural West Bengal.

*The increase in non-agricultural activities is very marked for women in rural parts of the state.*

### Some examples of rural non-agricultural employment

Dhantarini Oraon, a middle-aged mother of seven daughters, is the main earner in her family. Her husband, a bargadar in Mal panchayat of Jalpaiguri district, cultivates seven bighas of land, but frequent devastation of fields by wild elephants from the nearby forest makes the harvest from this land volatile and uncertain. Dhantarini is illiterate, but earns money for running the household by making and selling earthen pots, for which she earns around Rs. 20 a day. Dhantarini controls how the money in her family is spent, and has made it a point to educate her daughters at least until Class V. Her elder daughters, who are teenagers, have studied up to Class VIII, attend Gram Sansad meetings, and participate actively in community life.

The “Beniputul” craftspersons of East Medinipur are part of a long and rich puppetry tradition, which involved making and decorating the puppets, performing with them and composing and singing songs with the performance. However, their live performances have faced competition from the growing allure of modern forms of entertainment, such as television and videos, which have spread even in the rural areas. Their problem is that puppetry no longer provides a stable source of income, and even patronage from local panchayats provides only sporadic remuneration. Many of these traditional performers have turned to working for the nearby ONGC factory as day labourers, or pull rickshaws for a living. Their

*Traditional and new forms of non-agricultural employment co-exist.*



art is still being maintained on a part-time basis, but its future is uncertain.

Bishwanath Mondal comes from a family of traditional weavers who had become agricultural labourers in Nabadwip panchayat of Nadia district. Two of Bishwanath's brothers have sold off their looms and now work only as agricultural labourers. Bishwanath has retained two looms, and he and his son work at them regularly. His wife also helps out with weaving after finishing her household chores, and his daughter used to work with him until her recent marriage. However, the combined income from weaving is still not enough to support the family, and so Bishwanath also works as a construction worker whenever he gets the chance, at a daily wage of Rs. 75. However, there is no certainty about this employment – in some years he works up to 3-4 months in this way, but last year he got only 5 days of work.

Shaoni, a young woman residing in a village about half an hour by road from Bardhaman town, has studied up to Class IV. Her father is a bargadar. She lives with her parents and two brothers, both of whom are self-employed, running a small shop for repairing cycles and selling parts. They say they have no desire to become cultivators. Shaoni is to be married off soon, but at the moment she is also employed. She works in one of the new “beauty parlours” that have mushroomed across villages of West Bengal, especially in rural areas that are close to towns. Shaoni enjoys her work, for which she underwent a “training” of one month, and gives most of her salary of Rs. 600 per month to her parents. She wants to continue working like this after her marriage, but is worried that the village of her husband-to-be may not yet have a beauty parlour.

Jagannath Dey lives in a village in Hugli district, but earns his livelihood as a hawker on the Haora-Bardhaman train line. He specialises in selling cosmetics, costume jewellery and other items of interest to women, and so focuses his attention on the Ladies' Compartments on the trains. Most of the goods he sells are made locally in Haora. Although he has been doing this for 25 years now, he does not have a hawker's licence, which he says is very difficult for a villager to acquire. So he cannot travel on the train until Bardhaman, but has to operate in between the main stops. He earns between Rs. 20-40 per day. Jagannath works every day of the year, from 6 in the morning to after midnight, to ensure the survival of his wife and teenage son, since his family has no other means of income.

District	Cultivators		Agricultural Labourers		Non-agricultural workers	
	1991	2001	1991	2001	1991	2001
Darjeeling	33.5	20.6	16	14.4	50.5	65
Jalpaiguri	33.3	23.6	19.5	20.4	47.2	56
Koch Behar	51.8	40.4	28.2	31.8	20	27.8
Uttar Dinajpur	42.9	38	38.6	43.7	18.5	18.3
Dakshin Dinajpur	46.4	34.3	33.4	40	20.2	25.7
Malda	35.6	21.9	36.7	32.5	27.7	45.6
Murshidabad	33.9	21.3	34.6	32.3	31.5	46.4
Birbhum	36.5	24.9	40.7	39.7	22.8	35.4
Bardhaman	30.1	20.4	36.9	41.9	33	37.7
Nadia	36.3	24.7	33.1	29.1	30.6	46.2
North 24 Parganas	34.2	21	32.4	28.5	33.4	50.5
Hugli	29.2	20.9	36.5	34.1	34.3	45
Bankura	43.2	32.6	36.5	37.1	20.3	30.3
Purulia	52.2	33.3	30.7	38.4	17.1	28.3
Medinipur	47.4	30.4	26.1	33.9	26.5	35.7
Haora	21.6	9.9	27.7	19.6	50.7	70.5
South 24 Parganas	33.1	18.8	33	30.4	33.9	50.8
<b>West Bengal</b>	<b>38.4</b>	<b>25.4</b>	<b>32.3</b>	<b>33</b>	<b>29.3</b>	<b>41.6</b>

**Table 5.4 Occupational diversification by district in rural West Bengal**  
Per cent of total (main + marginal) workers in rural areas

Source: Census of India, 2001

There is substantial variation across districts with regard the extent of non-agricultural employment. The districts with very high non-agricultural employment shares are also those that have experienced substantial urbanisation and expansion of the metropolis into the rural hinterland. Thus, large parts of “rural” Haora and Darjeeling are increasingly suburban extensions of Kolkata and Siliguri respectively, and so the high prevalence of non-agricultural activity in these areas is explicable. What is interesting is the very limited number of districts which have not had very rapid diversification away from agriculture. Only four districts showed rates of non-agricultural employment of 30 per cent or less. They are among the districts generally considered “backward”: Uttar Dinajpur (18 per cent) and Dakshin Dinajpur (28 per cent), Purulia (28 per cent) and Bankura (30 per cent).

The other point to note from Table 5.3 is the significant decline in the proportion of cultivators. By 2001, they constituted only one-fourth of the rural workforce in rural West Bengal. In most districts, this was part of a general shift away from agriculture, although it is not clear whether push or pull factors have influenced this shift. However, in Uttar and Dakshin Dinajpur as well as in South 24 Parganas, the decline in the proportion of cultivators has been accompanied by an increase in the share of agricultural workers. These are also the districts for which a relatively higher proportion of land alienation by pattadars was noted in Chapter 2, so the decline in the share of cultivators may reflect the impact of loss of land holding by small and increasingly unviable cultivators



*Most non-agricultural work is through self-employment with very little capital.*

confronted by attempts to increase landholding for other uses such as plantations and fisheries.

The very significant extent of rural employment diversification in West Bengal is obviously welcome, especially since economic diversification remains both the main mechanism and the end result of the overall process of rural development. But it should be remembered that this has occurred in the recent context of overall employment stagnation, and even actual declines in rural female employment. Also, much of the increase has occurred in the form of what the Census describes as “marginal work”, offering less than 183 days of employment in a year. Therefore, while jobs in non-agriculture have been growing, they clearly need to increase at a much faster rate in order to absorb the available rural labour force productively.

The increase in rural non-agricultural employment that has occurred can be linked with the expansion of output in small-scale manufacturing and services that was noted in the previous chapter. It should be borne in mind that the greater proportion of new activities takes the form of self-employment rather than paid labour. It is likely that the land reforms and other institutional changes in the countryside operated to increase the mass market for locally produced goods and services in rural West Bengal, which has then translated into increased activity and employment in non-agriculture. A lot of petty food processing activities, small-scale trading, and basic production of consumer goods for local markets would have contributed to this. In addition, of course, there has been consciously designed and policy-assisted diversification into a range of activities such as fisheries, poultry and livestock raising and sericulture.

The problem is that many activities that had emerged as important avenues for rural employment in some regions, have been facing difficulties or crisis which have thrown employment in such activities into disarray. The crisis in the tea industry is a case in point (see Box), where falling international prices have led to closure of estates, joblessness and extremely precarious living conditions for many thousands of workers.



## The tea crisis and the conditions of plantation workers

Pipli Mahali, aged 34 years, was a permanent worker in Mujnai Tea Estate, who lived on the estate with her husband and her two and a half year-old son. After the crisis in the tea estate began, it became increasingly difficult to manage her household. Her husband, who suffered from tuberculosis, died in early 2002 because the estate hospital had no stock of medicine. Once the employers abandoned the estate in November 2002, there was no food provided to the workers at all. Pipli was then forced to feed her son whatever fruits and vegetables were available in the nearby jungles. The child was unable to digest these wild fruits and died of blood dysentery within a month. By late 2003, Pipli was living alone and had sold off all her belongings in order to survive. She too was suffering from untreated tuberculosis.

The tea industry of North Bengal has been facing a major economic crisis in recent years because of the continued fall in international tea prices, and therefore a number of tea plantations have been closed down or abandoned by the private managements. In the Duars region of Jalpaiguri district alone, there were 20 such abandoned plantations in late 2003, which affected more than 30,000 workers and their families. There has been an alarming increase in deaths among workers' households after July 2002, when most of these plantations closed. Most of these deaths have been of young children and women in childbirth. Since some food forms part of the wage basket in most tea plantations, the abandonment by management typically means there is no food provision for the workers. Also, the closure means the electricity supply to the plantation is withdrawn, denying workers access to the common water tanks and forcing them to fetch drinking water from nearby streams which are polluted by waste from upstream cement factories in Bhutan. As a result, many workers in this area face not only starvation but significant increases in water-borne diseases.

In other plantations in the area which have not yet closed, there are reports of retrenching of workers, delayed payment of wages and mounting provident fund and gratuity dues. Women workers, who form the bulk of permanent workers in these tea estates because of their role as pluckers, are the worst affected. They increasingly face not only poverty and possible starvation, but also other forms of exploitation. The recent incidents of violence in the tea estates reflect the growing desperation of all workers in the area.

*Source: Tea Plantations of West Bengal in Crisis, New Delhi: Centre for Education and Communication, 2003.*

*Conditions of workers in the tea growing areas is a major source of concern.*





Much of the employment diversification away from agriculture in rural West Bengal represents positive and dynamic processes and tendencies. However, there are doubts about the sustainability and continued viability of several of these activities, either from an ecological or an economic perspective. Thus, it is not known whether small-scale local manufacturing industry will be able to compete effectively over time with the products of large-scale companies or branded multinational products benefiting from superior marketing and distribution techniques. Also, the expansion of alternative activities such as prawn farming and fisheries has ecological implications which cannot be dismissed and which raise question about the future effects. However, the future for a wide range of small-scale services appears to be relatively bright, especially as improvements in rural infrastructure and communication are also bringing a range of previously urban services into the rural areas.

Some new institutional forms of organising workers may be pushing along the process of employment diversification. In the rural areas, there is micro evidence that more women are entering into various types of economic activities that are related to the expansion of local networks such as panchayat-based groups and Self-Help Groups. Most of this work is in non-agricultural activities, although it may be in related activities such as dairy, livestock rearing and food processing. These groups have also helped in increasing women's work involvement in a range of services, some of which are relatively new. Such women's groups are also active in urban areas, where they have assisted women in finding income-generating activities that add to household income. ■

*Self Help Groups have been associated with the diversification of women's employment.*

### **New forms of women's employment**

In Katoya town of Bardhaman district, a women's Self Help Group has been instrumental in suggesting new forms of income generating activity to its members as well as providing some amount of resources with which to embark on such enterprise. With the help of this group, Koli Bibi was able to access a bank loan to set up a small business selling vegetables, which is now doing very well, and makes the family less dependant upon the meagre wage income earned by her ailing husband. Meerarani Pal has been able to revive the traditional family craft of making clay statues and models, which her husband had given up for want of resources. Another group of women has set up a successful food processing business making pickles and condiments for local sale.

Sumona Das, a mother of three daughters, lives in a village near Bolpur town of Birbhum district. Her husband was a carpenter, but is now unable to work because of illness. To provide for the family, Sumona began making Manipuri-style side bags which she sold to a contractor who also supplied the cloth and thread. She earned Rs. 3 per bag and was able to make around 24 bags in a week. However, when this contractor stopped coming, Sumona had to find another source of income to feed her family. So she began selling old clothes. Every few days, Sumona and some of her friends, in a group of 10-15 women, take the evening train to Kolkata and arrive at Haora station around 11 p.m. They wait at the station for a few hours, and then around 1 a.m. they start walking to Liberty Cinema, in front of which a large wholesale market for old clothes functions from 3 a.m. onwards. Sumona buys a bunch of clothes, and then walks or occasionally shares a taxi back to Haora station, from where she catches a morning train. Because she and her friends cannot afford to buy train tickets, they usually sit near the door and sometimes have to pay the ticket inspector a few rupees. On the return journey they start sewing up and repairing the torn clothes they have purchased. Sometimes she is able to sell these clothes on the train; sometimes people come to her home to buy them; otherwise she has to travel around the nearby villages hawking these clothes. She usually tries to sell around Rs. 500 worth of clothes per trip, which can take from 2 to 7 days. When she is able to sell Rs. 500 worth of clothes, she makes Rs. 200, out of which she has to cover all her costs as well.

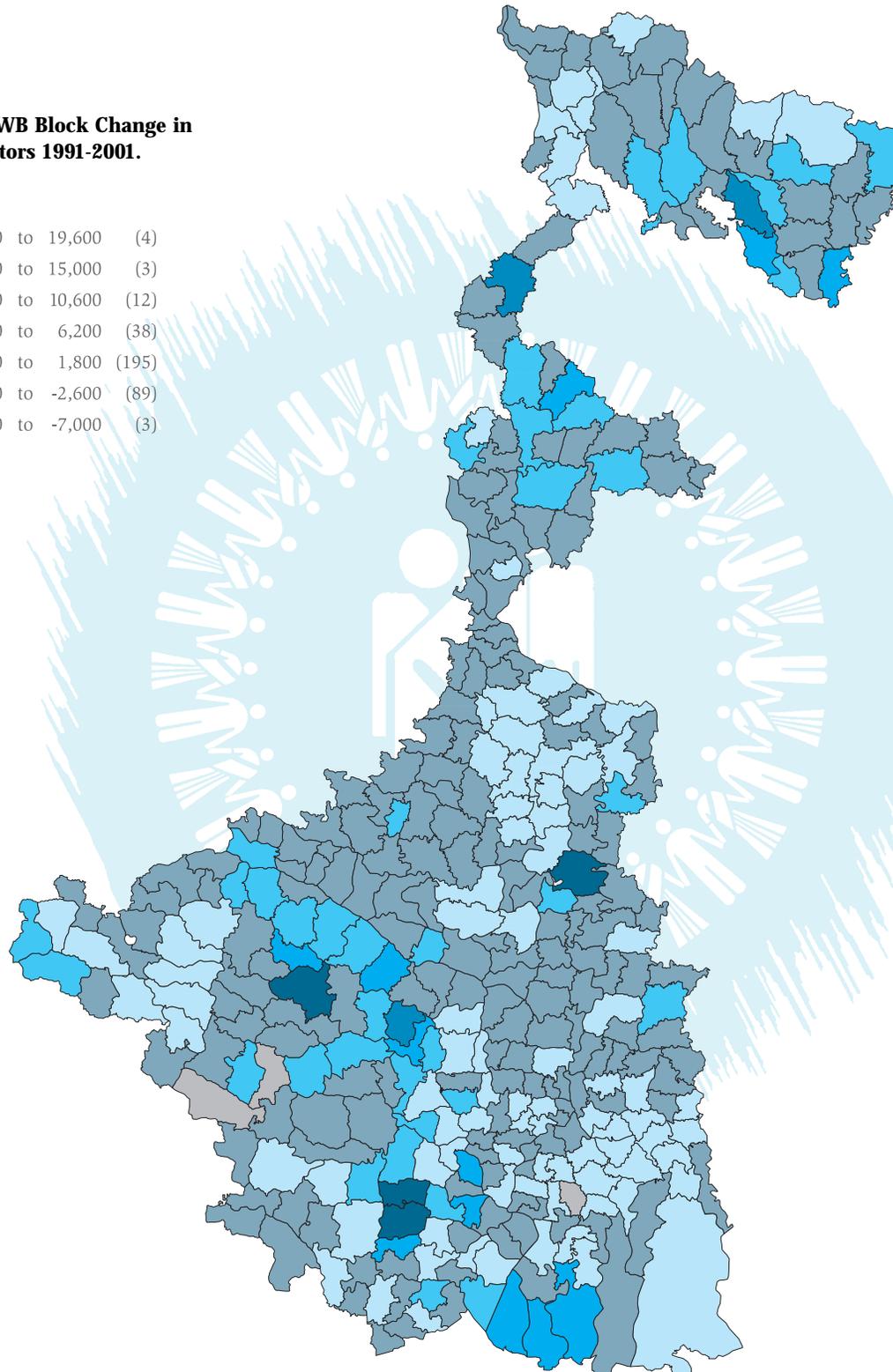
Rohila Bibi, a resident of a village in North 24 Parganas, was the second wife of her husband, who died ten years ago. Rohila had to work on the household plot of around 2 acres, and also as a factory worker, but she still made it a point to educate her four sons. When her sons grew up, she stopped tilling the land and instead mortgaged it to raise money for her own enterprise. She and two of her sons now run a small business making and selling men's undergarments (banians). Her eldest son is a carpenter, another works as an L.I.C. agent in addition to working in the cottage industry, while her youngest son, who has completed his Higher Secondary schooling, does tuitions to add to the family income. Her family is now much better off than before and the business is doing reasonably well. ■

*The fall in employment for urban women is a serious matter.*

**Map 5.1 WB Block Change in Cultivators 1991-2001.**

*Legends*

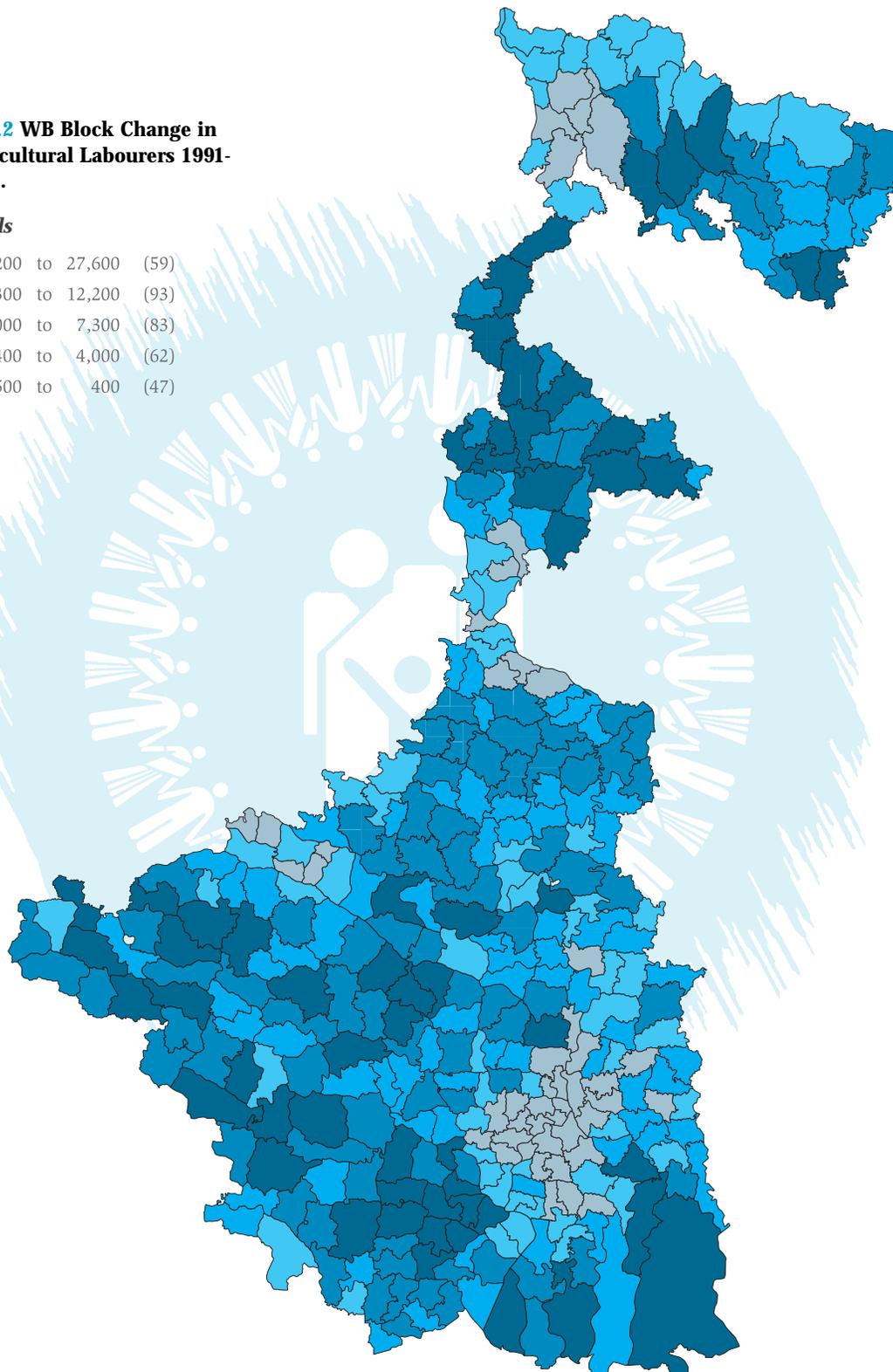
15,000 to 19,600	(4)
10,600 to 15,000	(3)
6,200 to 10,600	(12)
1,800 to 6,200	(38)
-2,600 to 1,800	(195)
-7,000 to -2,600	(89)
-11,400 to -7,000	(3)



**Map 5.2 WB Block Change in  
Agricultural Labourers 1991-  
2001.**

**Legends**

12,200 to 27,600	(59)
7,300 to 12,200	(93)
4,000 to 7,300	(83)
400 to 4,000	(62)
-7,500 to 400	(47)

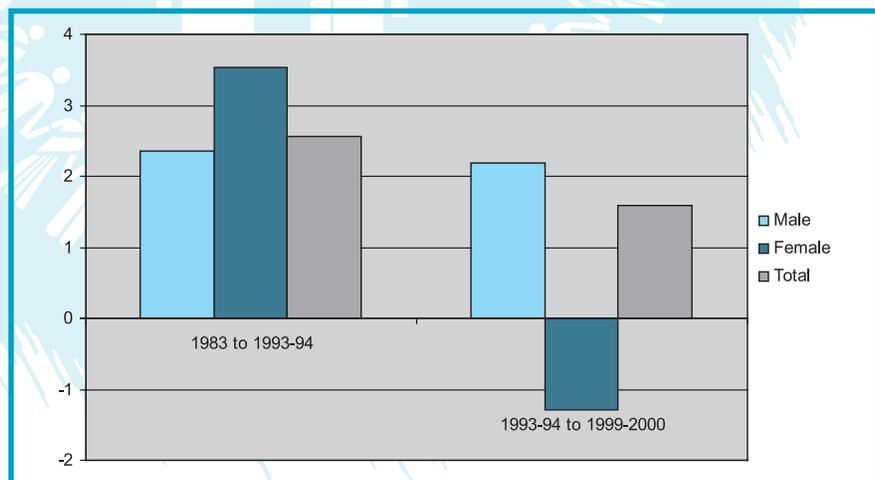


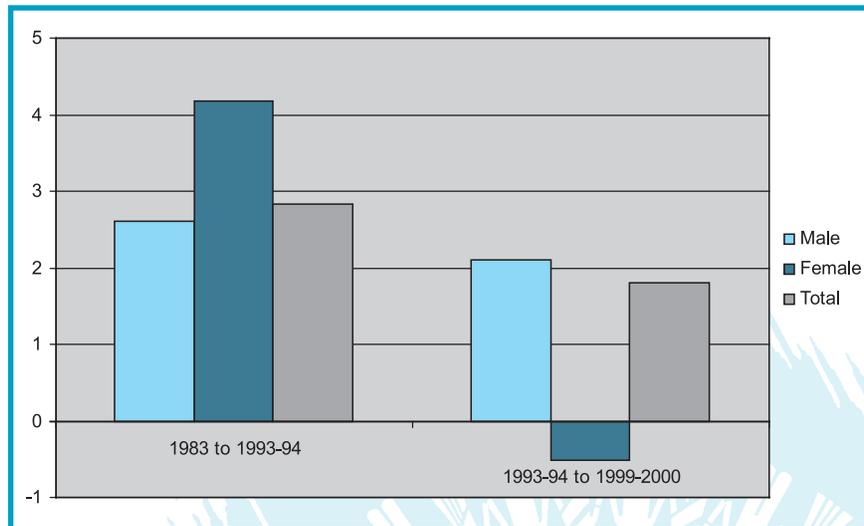
## Urban employment

The proportion of working age population is higher in urban areas than in the rural areas of West Bengal. Also, urban labour force participation tends to be higher than its rural counterpart, according to recent data. Furthermore, male work participation rates have been increasing in urban West Bengal for the past two decades. However, as in the rural areas, female work participation is low and it has also been increasing more slowly than that for men. As would be expected, the education level of the workforce is higher than in rural areas, and also work participation increases with the level of education, within similar age-groups above 15 years.

However, rates of urban employment generation have slowed down in the most recent period, as the NSS data indicate. While rates of employment growth for men do not appear to have declined very much, the decline has been especially sharp for women. As Charts 5.8 and 5.9 indicate, for urban women the total employment appears to have fallen absolutely, by both usual status and daily status criteria. The reversal of employment generation for urban women in the latter part of the 1990s is a very serious issue which requires specific policy focus in order to redress. This is especially the case given that labour force participation rates for women in West Bengal were already very low.

**Figure 5.8** Growth rates of urban employment by Usual Status





**Figure 5.9** Growth rates of urban employment by current daily status

An examination of patterns of employment change and diversification in urban West Bengal would necessarily highlight the central role of Kolkata. More than two-thirds of the entire state's urbanisation is in Kolkata alone, which is very unlike other states such as Tamil Nadu where urban growth is more diverse. As can be seen from Table 5.5, Kolkata also has the highest work participation rate for men in terms of main work. Districts in the vicinity of Kolkata, such as Haora, Hugli and North 24 Parganas, which benefit from the spread of the metropolis, also have relatively high male work participation rates. It is worth noting that in Kolkata, unlike the state as a whole, the proportion of male main workers to male population has increased over the 1990s.

It is generally the case that male work participation tends to be higher in the larger cities compared to the smaller towns, but the opposite seems to be the case for female work participation. Once again, in the urban areas as in the rural parts of the state, the number of marginal workers has increased more rapidly than that of main workers.

In terms of district-wise variation, the greatest differences are apparent for work participation of women, which extends from a low of 5.8 per cent in South 24 Parganas to a high of 20.9 per cent in Murshidabad. While the importance of women workers for the *beedi* industry of Jangipur in Murshidabad may be responsible for this, the social composition of the local population in that area may also have played a role, since STs and SCs tend to show higher work participation rates for women in general. Only in Bardhaman, Purulia and Medinipur towns have male work participation rates (in terms of main work) actually declined over the decade 1991-2001, but the range of changes over the decade has been very large



across districts, with the most rapid increase being experienced in Koch Behar and Nadia.

**Table 5.5** Urban work participation rates and changes over the decade according to the Census

Source: Census of India, 1991 and 2001.

District	Urban Males				Urban Females			
	Main WPR		Marginal WPR		Main WPR		Marginal WPR	
		Change from 1991		Change from 1991		Change from 1991		Change from 1991
	2001	1991	2001	1991	2001	1991	2001	1991
Darjeeling	47.9	0.3	2.5	2.2	10.3	1.6	1.4	1.2
Jalpaiguri	50.1	0.5	2.7	2.5	8.4	1.3	2.1	1.8
Koch Behar	50.6	3.7	2.4	2.1	9.6	1.5	1.7	1.1
Uttar Dinajpur	47.7	2.8	2.7	2.5	8.4	2.4	2.4	2.0
Dakshin Dinajpur	46.8	2.7	2.2	2.0	10.3	4.3	3.0	2.5
Malda	48.8	2.4	2.2	2.0	8.8	2.7	2.3	2.1
Murshidabad	47.3	0.1	3.1	2.7	20.9	6.5	6.6	4.6
Birbhum	48.5	1.8	3.5	3.2	9.1	3.3	2.7	2.1
Bardhaman	43.2	-2.0	5.6	5.2	6.0	1.8	2.6	2.1
Nadia	52.1	3.5	2.7	2.5	13.4	6.4	3.6	2.6
North 24 Parganas	51.2	2.9	3.0	2.8	8.3	2.1	2.1	1.9
Hugli	51.0	1.8	3.4	3.2	7.8	2.9	2.2	1.9
Bankura	49.9	2.4	3.4	3.1	9.3	2.0	3.9	3.2
Purulia	42.5	-2.4	4.4	4.1	5.9	0.9	2.6	0.9
Medinipur	44.9	-1.6	5.1	4.1	7.2	1.1	2.6	0.8
Haora	52.7	1.0	3.8	3.6	5.8	2.4	2.0	1.8
Kolkata	56.4	2.8	2.3	2.1	10.8	1.0	1.4	1.3
South 24 Parganas	47.6	0.7	5.7	5.0	5.8	2.3	2.6	2.3
<b>West Bengal</b>	<b>50.6</b>	<b>1.3</b>	<b>3.5</b>	<b>3.2</b>	<b>8.8</b>	<b>3.0</b>	<b>2.3</b>	<b>1.9</b>

The NSS data generally indicate much higher work participation rates than the Census. Table 5.6 shows that usual status work participation for urban men is much higher on average, at well above half, and is also higher for urban women at 10 per cent or more. As in the rural areas, Scheduled Tribe women show the highest rates of work participation, and the gender gap is also the lowest among this social group. Backward castes show the highest work participation rate among men, while male unemployment rates tend to be highest among the Scheduled Tribes and Castes in urban areas.

**Table 5.6** Work participation and unemployment rates (in per cent) by social category in urban West Bengal, 1999-2000

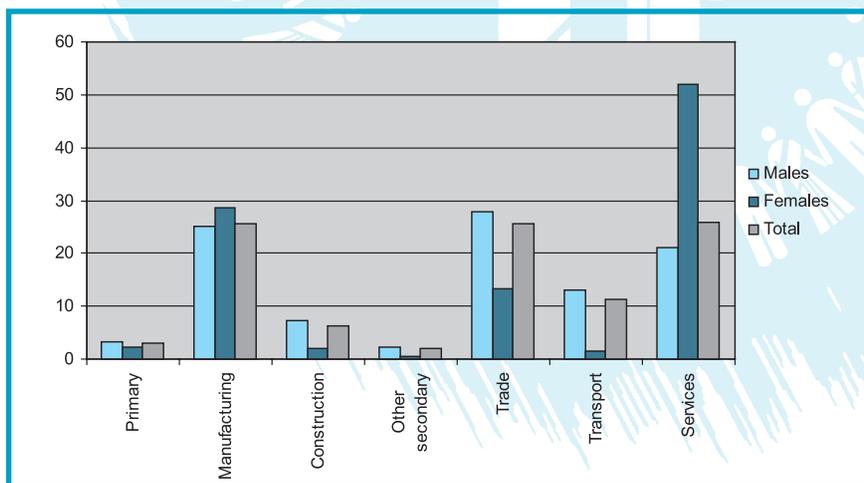
Source: NSS Employment-Unemployment Survey, 55<sup>th</sup> Round

	Work participation rate by usual status		Unemployment rate by usual status		Unemployment rate by daily status	
	Male	Female	Male	Female	Male	Female
Scheduled Tribes	53.1	21.1	3.6	2.6	6.9	3.6
Scheduled Castes	56.7	16.5	5.2	0.4	7.6	0.6
Other Backward Castes	60.4	13.3	4.1	1.2	5.5	2.6
Others	56.2	9.8	4.8	1.5	5.9	1.8

In general among the urban workforce, the share of the secondary sector has gone down and that of the tertiary sector has increased. This is in line with trends all over urban India, and indeed all over the world. Within services, which accounted for more than 63 per cent of urban employment in 1999-2000, the biggest increase in share has been in the sub-sector “trade, hotels and restaurants”. This sub-sector increased its share of total urban employment from 17 per cent in 1981 to 26 per cent in 2001. Chart 5.8 indicates that in 1999-2000, manufacturing accounted for only around one-fourth of urban employment, slightly less than services and just above trade.

*Employment in the organised sector has collapsed.*

The big decline in the urban areas has been in organised sector employment. This has occurred in industry and services, as the restrictions on public employment expansion have limited increases in organised sector service employment, and the generally poor performance of organised industry (noted in Chapter 4) has prevented employment expansion from that source. In consequence, the ratio of organised sector workers to total workers is estimated to have decreased from 12 per cent in 1990 to 8.7 per cent in 2000.<sup>2</sup> The biggest declines in organised sector employment occurred in Kolkata, for obvious reasons, but there were also substantial falls in North 24 Parganas, Haora and Bardhaman. Partly because of this trend, the problem of educated unemployment is more severe in this state than in many other parts of the country.



**Figure 5.10** Distribution of all urban workers by sector, 1999-2000

Source: NSS 55th round, 1999-2000.

Factory employment has also been broadly stagnant since the early 1980s, with the average number of workers employed daily in factories at around 9 lakh. For all these reasons, unorganised or informal sector employment has become much more significant in urban West Bengal over the past decade. While estimates of the size of the informal sector and the share in total employment vary, it is likely that in urban west Bengal the informal sector accounts

<sup>2</sup> Pabitra Giri (2003).

*The gender gap for urban wages is large.*

for between 56 and 62 per cent of the urban workforce.<sup>3</sup> Wages in this sector are typically lower than in the organised sector, but also tend to be lower than the all-India average. Thus, in 1999-2000, the reported wages paid by all informal enterprises together (own account and establishments) was Rs. 1373, which was not only lower than the all-India figure, but was even lower than the minimum wages (Basic plus DA) specified under the Minimum Wages Act.

There is a substantial gender gap in wages, which stems primarily from the fact that most female employment in the urban areas is in low income occupations. In a study of the Calcutta Metropolitan Area in 1996-97, nearly half (49.4 per cent) of the women workers earned less than Rs. 1000 per month, while the corresponding proportion for male workers was only 11.4 per cent.<sup>4</sup> In the Haldia planning area in 1999-2000, 56 per cent of the women workers earned less than Rs. 1000 per month, compared to only 20 per cent of the men.<sup>5</sup> Even in self-employed activities, women workers tended to be crowded into the sectors which are less remunerative and involve greater drudgery.■

### An urban working woman

Parbati Pal was born in Lakhikantapur in South 24 Parganas district. Her father was a day labourer. The family had a very small plot of land, which was not adequate to provide income for the family, and by 1970 they lost even this small amount of land. At that point the family moved to Santoshpur in Kolkata, where her father worked in a decorator's shop and her mother did cleaning work in other people's houses. According to Parbati, the family's living conditions improved after moving to Kolkata, especially their food intake, which was at bare subsistence levels in the village.

However, even in Kolkata life proved to be very uncertain. In 1981, 13-year old Parbati was married to a rickshaw puller. After five years, her husband used his own savings and money from Parbati's father to buy a used taxi. However, within a few months he was involved in an accident, in which the car was destroyed and his leg had to be amputated. Parbati's husband was effectively crippled and could not go out to work.

This was when Parbati began to work in other people's houses, washing dishes and cooking. She used the savings from such work to buy a small space for a fruit shop in the evening market in Jadavpur, where her husband sat. But even this

<sup>3</sup> Pabitra Giri (2003).

<sup>4</sup> CMDA 1999, page 104.

<sup>5</sup> HDA 2001, pp 80-81.

source of income disappeared after the construction of the new Sukanta Setu led to the shop being destroyed.

In 1990, with the help of a family in whose house Parbati worked, she was able to register as an ayah with the South Calcutta Nurses Bureau, from where she got her first job in a nursing home. She got Rs. 20 a day for this, out of which she had to give Rs. 3 to the Bureau. Thereafter Parbati worked in a series of nursing homes in South Kolkata, and even in Ruby General Hospital. By then she was the sole earner in her family, which consisted of her crippled husband and two daughters. At Ruby Hospital, patients paid Rs. 70 per day for the services of an ayah, out of which the hospital retained Rs. 25. In addition, Parbati had to continue to give Rs. 5 to the Nursing Bureau, so she received only Rs. 40 for each day of work.

In 2002 Parbati's husband died after a prolonged illness. By then, Parbati's family responsibilities had increased greatly. Her elder daughter, who was married in 1995, had three children and a jobless husband. Parbati's elderly parents, who lived in Sonarpur, still required her support. Her younger daughter contracted tuberculosis and had to be admitted into a TB hospital. Her brother and his young family also relied upon her, especially when it came to illness in the family. All the costs of these illnesses, ranging from her husband's illness, to her daughter's TB treatment, to her father's cataract operation, to her nephew's gastro-enteritis, have been borne by Parbati. While she was able to secure free beds for in-patient treatment, paying for all the medicines and saline drips was extremely difficult to manage.

These health-related expenditures have pushed Parbati into debt, and now interest and debt repayment take up a significant part of her monthly income. Nevertheless she continues to work as she is the main breadwinner for her family, and despite her difficulties, still feels that on the whole "life has been good to her".

Migrant labour is a substantial proportion of the urban workforce in the state. There are three broad streams of migration into urban areas of West Bengal: from the rural areas of the state; from other states within the country (typically Bihar, Orissa and Uttar Pradesh); and from neighbouring countries (typically Bangladesh and Nepal). Data for 2000 indicate that only 53 per cent of the factory workers and 83 per cent of the non-factory and commercial establishment

*Most urban working women face unstable and precarious conditions.*



*Despite small producer led growth, employment generation has been inadequate.*

workers originated within the state. The rest came from Bihar, Orissa, Uttar Pradesh and around 3 per cent from elsewhere. Of course there are many migrant workers in the informal sector, for whom there is less evidence. While most migration is male, there are also cases of families moving, and also some evidence of female migrants moving to urban areas for short-duration jobs.

Work participation rates of migrants tend to be higher than the average for obvious reasons. The relative decline in factory employment would obviously have affected such workers, and is also likely to have led to changes in patterns of migration. Recent patterns of migration indicate lower in-migration into Kolkata as well as into other cities and towns, and increased out-migration from urban areas of West Bengal to places possible even outside the state. While these could reflect improved conditions in the countryside, they also may result from relatively stagnant opportunities in the cities and towns. ■

### **Growth, employment and diversification: strategies for the future**

It is notable that in West Bengal, the period 1993-94 to 1999-2000, which experienced such a stagnation and even decline in aggregate employment generation, actually showed a higher rate of growth of economic activity. State Domestic Product in constant price terms increased at an annual rate of 6.7 per cent, compared to 5.8 per cent in the period 1983-1993-94. However, aggregate employment growth in the later period in West Bengal according to the NSS was only 0.76 per cent, compared to 2.44 per cent in the earlier period. This gives rise to a paradox: while output growth in West Bengal since 1993 has been quite creditable, and the state has shown higher rates of growth of income than most other states in India or the all-India average, the rate of employment generation has lagged behind and is indeed worse than the all-India average.

It can indeed be the case that even when economic growth *per se* is buoyant, the pattern of growth may become progressively less employment intensive, as in the jobless growth now familiar in the developed world. But in West Bengal in the recent past, such an outcome is especially surprising since it is clear from Chapter 4 that the expansion of economic activity in the state has been dominantly small producer-led, in both agriculture and non-agricultural sectors. While small cultivators drove the increase in crop output since the early 1980s, in industry and services the expansion of activity has not been in the large or formal sectors, which have generally stagnated, but in unorganised industry and informal services. The contrast between output and employment growth was especially



marked in manufacturing and services (other than transport and trade), in both of which employment actually declined, even though in both sectors, output grew at double the rates achieved earlier.

*Increasing employment will require sustainable economic diversification.*

The pattern of services employment is surprising, given that the services sector, particularly through self-employment, is typically a residual sector which can become a refuge for those unable to find productive employment elsewhere. However, in West Bengal the freeze on new state government employment after 1991 may have played a role in this. This is also reflected in the decline in regular employment in urban areas.

While agriculture has been an important source of employment generation in the past, the rate of job growth in this sector has been declining in the recent period. Of course, the situation in West Bengal is better than in the rest of India, where agricultural employment has actually fallen in the period 1993-94 to 1999-2000. This is probably because of the effects of more intensive cropping in many parts of the state, which has meant that labour demand in cultivation has not fallen.

Among the sectors that do show some dynamism in terms of employment generation are wholesale and retail trade, transport and storage, and construction. These are the only sectors for which employment elasticity has increased in the most recent period. However, dynamism in these sectors is more marked for urban areas – in rural areas the impact on employment appears to be less.

Obviously, the lack of adequate employment generation is one of the most pressing economic and social problems in West Bengal at the moment, much as in the rest of India. But the problem seems to be even more acute in this state than elsewhere, given the sharper declines in employment expansion that have been noted. Clearly, this has got to be a critical focus of future policy.

This can be achieved dominantly through diversification away from those sectors which are exhibiting low employment elasticity, or changing the pattern of growth in these sectors. Within agriculture, some diversification of cropping pattern – especially towards vegetables and horticulture, in which the state is already a major producer - as well as the development of improved storage and distribution facilities which would enhance cultivators' ability to grow newer crops, could possibly lead to more employment generation. In addition, the collapse in formal finance access for farmers, as evidenced for example in the sharp decline in rural credit-deposit ratios of banks, must be reversed. It is also important to improve the provision of extension services for the rural





population, and to expand their scope to cover not only cultivation practices but also livestock rearing, dairy and poultry related activities, fishing, and so on.

Ideally, employment diversification has to be based on activities using locally available resources. This can involve activities such as agro-processing as well as fishery development and so on. There should also be an attempt to exploit the opportunities created for the increase in rural services, either because of the indirect effects of government spending or because people take up activities such as petty trade for want of alternatives. The importance and relevance of group-based activities, including Self-Help Groups, to tap the large pool of self-employed in the rural areas, should be recognised. Of course, rural employment diversification must take into account both ecological sustainability and the need for reducing income inequality. This means that strategies that may appear attractive in the short run must be considered carefully to ensure that they do not desecrate resources and create greater inequalities.

In the urban areas, simply encouraging the diversification of activities away from employment towards manufacturing and services may not be sufficient to cause employment expansion in the urban areas, given the current pattern of growth in these sectors. What may be needed is a change in the nature of such growth, which would make these activities not only more dynamic, but also more labour-using than they are at present.

*Future growth has to involve more labour-intensive activities.*

Within urban manufacturing, the basic problem seems to be that much of the growth in the past came from larger units which are less employment-intensive, even as many more labour-using small units have closed down. While many new small and tiny units are coming up, it is not clear to what extent they will be able to withstand the more adverse economic conditions emanating from macroeconomic processes. The pressure of import competition and worsening credit access are, at one level, national problems which are common across the states, and cannot really be dealt with through state government policy. But it is still possible to think of methods of encouraging and safeguarding the interests of smaller and more employment intensive producers through various state-level incentives. In this context, the evident expansion of non-registered rural manufacturing is a very positive sign which needs to be encouraged and fostered for the future as well. The expansion of household industry and small-scale services has been associated with the rapid diversification of rural employment away from agriculture. But some public intervention may be required to ensure that these activities are sustainable in the medium-term, as the

pressure from import competition is likely to become more rather than less acute in the near future.

In services, much of the employment decline has come about because of the ban on fresh hiring by the state government, which has affected public employment very drastically. The point is that such declines have not been compensated for by increases in private service employment. While “services” is such a heterogeneous, catch-all category that it cannot be treated as one sector for policy purposes, it is true that there is scope for expansion of a range of new service activities.

The pattern of urbanisation in West Bengal may have acted as a constraint upon economic diversification in far-flung areas urban areas. There is need to encourage more dispersal of populations across towns and more “effective” urbanisation. The concentration on Kolkata has meant that both growth and human development indicators move in decreasing concentric circles with Kolkata as the centre. This points to the need for an urbanisation policy which would focus on developing towns and services far from Kolkata, through public investment in infrastructure and services.

The expansion of a range of activities for urban educated workers, such as IT-enabled services and also other professional services, has entailed a drop in the proportion of educated unemployed in urban India in general. While this would cover only a small part of the urban workforce, it would address the problem of educated unemployment or disguised unemployment which is still severe in urban West Bengal. There is still plenty of scope to develop such activities (which range from call centres and back office work to accountancy and other activities) in urban areas of West Bengal. For this, of course, much better infrastructure facilities (especially power, communication and connectivity) are required than currently exist at present, as well as more systematic and directed training of educated youth.

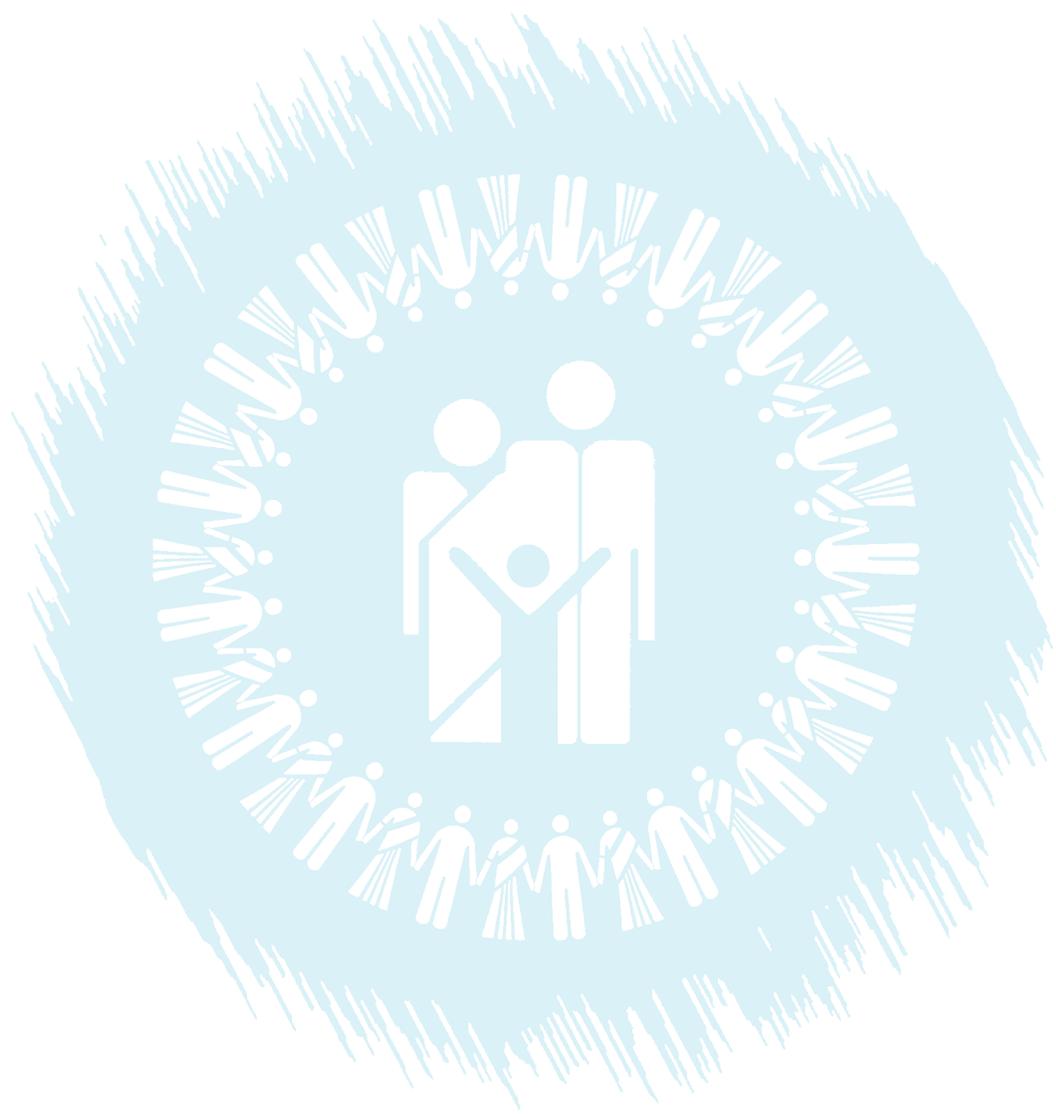
On the whole, it appears that there is scope for redirecting economic processes within the state of West Bengal to encourage more employment generation, notwithstanding the overall macroeconomic processes which are currently operating to inhibit job growth.



## CHAPTER 6

# Health and Nutrition





## Health and Nutrition

Health and nutritional status are two crucial and interlinked aspects of human development, which in turn interact with demographic variables in important ways. While health and nutrition conditions can be related with aggregate economic growth, there is no necessary or linear causation, and policy interventions can play an important role in determining both access to health services and nutrition, as well as outcome indicators in this area. In West Bengal, several outcome indicators suggest that while average conditions are still inadequate and could have improved more rapidly, there is substantially more equality of access across the population to basic health and nutrition, than in many other states. ■

*Despite modest average health performance, there is more equal access to basic health and nutrition than in many other states.*

### Demographic features relevant for health

Certain features like population density, population growth rate, sex ratio and rate of migration to urban areas are directly related to the health and nutrition situations of the community. Some of these features are described for West Bengal and India as a whole in Table 6.1. In the context of the high population density in the state, the extent of reduction of the decennial growth rate of population in West Bengal has been quite impressive at nearly 7 per cent as compared to the Indian average of 2.5 per cent. This has occurred in a scenario of both birth rates and death rates declining quite rapidly, as was illustrated in Chapter 1. The improvement in the sex ratio in West Bengal has been considerable, at the rate of 1.86 per cent as compared to the average Indian improvement of 0.6 per cent, so that the sex ratio is now better in West Bengal than the all-India average. The rate of increase of the urban population in West Bengal was less than 1 per cent, which was much less than the Indian average of 2 per cent, indicating that rural to urban migration has been substantially less in the state than elsewhere in the country.

		West Bengal	India
Area (Sq. km.)		88,752	32,87,263
Census Population (2001)		8,02,21,171	1,02,70,15,247
Decennial growth rate of population	1981-1991	24.73	23.85
	1991-2001	17.84	21.34
	Per cent Reduction	<b>6.9</b>	<b>2.51</b>
Population Density	1991	767	274
	2001	904	324
Sex-ratios	1991	917	927
	2001	934	933
	Per cent improvement	<b>1.86</b>	<b>0.65</b>
% of urban population to total Population	1991	27.48	25.73
	2001	28.03	27.78
	Per cent increase	<b>0.55</b>	<b>2.05</b>

**Table 6.1 Basic demographic indicators for West Bengal and India**

*Source: Chakravarty (2003) based on Health on the March, West Bengal: 2001-2002 and Census of India, 2001*



As already noted, although the mean decennial growth rate of population has increased, there are significant differences across districts. Sex ratios also show district wise differences, with Medinipur being the best and Kolkata being the worst. Of course, high rates of male in-migration into Kolkata may explain this difference to some extent; however, the sex ratio for 0-6 years is also the lowest in Kolkata.

In Chapter 1 it has already been observed that in terms of the crude birth rate, the improvement in West Bengal has been more rapid than for the national average. In terms of relative ranking, West Bengal now has the seventh rank among major states for the crude birth rate as well as the total fertility rate, as indicated in Table 6.2. The crude death rate in West Bengal is much less as compared to the Indian average, indicating that the health system is more supportive in preventing death. It has also improved more rapidly in the recent past than the all-India indicator. Further, West Bengal ranks third in India with respect to infant mortality rates. Nevertheless, obviously further policy interventions are needed to control fertility and birth, since there is still considerable scope for improvement even in these indicators. In addition, the average age at marriage still remains low in West Bengal, although it appears to have increased in recent years. Since teenage marriage and pregnancy tends to be associated with low birth weight and higher infant mortality, and also higher maternal mortality, this is an issue that needs to be addressed especially through consciousness-raising measures.

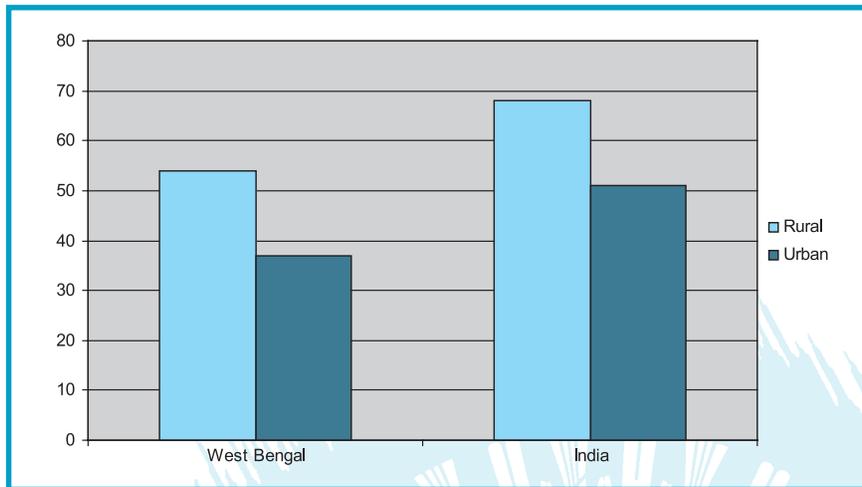
**Table 6.2 West Bengal's rank among all states for selected vital statistics**

Source: Chakravarty (2003) Based on NFHS 2, India : 1998-99

Major States : UP, MP, Bihar, Orissa, West Bengal, AP, Karnataka, Kerala, Tamil Nadu, Punjab, Maharashtra, Assam, Rajasthan, Gujarat, Haryana

Indicator	West Bengal (India)	Highest among major States	Lowest among major States	Rank among major States	Rank among all States
Crude Birth Rate	22.7 (26.2)	33.0 (UP)	17.9 (Kerala)	7	9
Crude Death Rate	8.3 (9.7)	12.9 (Orissa)	6.0 (Kerala)	2	8
Total Fertility Rate	2.49 (3.07)	4.31 (UP)	2.07 (Kerala)	7	9
Neonatal Mortality Rate	31.9 (43.4)	54.9 (MP)	13.86 (Kerala)	3	7
Infant Mortality Rate	48.7 (67.6)	86.7 (UP)	16.3 (Kerala)	3	11

Since one of the basic parameters of assessing the health situation of any given population is the Infant Mortality Rate (IMR) it is worth considering this variable in more detail. The IMR of West Bengal, at 51 per thousand, is quite good by aggregate Indian standards. As expected, the IMR in urban areas is much lower than that in the rural areas, indicating better health support and also possibly better infant caring practices in urban areas.



**Figure 6.1 Rural and Urban IMR for West Bengal and India in 2000**

Even in terms of reduction over time, between the 1982-1992 period and the 1992-2002 period West Bengal appears to have done much better than India as a whole, which clearly suggests a gradual improvement in health facilities over the years in the state. As evident from Chart 6.2, both in terms of absolute magnitude and also in terms of rate of reduction West Bengal's performance has been better than that of all-India. This is also the case when IMRs for boys and girls are considered separately; indeed, the gap between West Bengal and India is especially high for female IMR, indicating that West Bengal has a better record of ensuring the lives of girl infants than India as a whole.

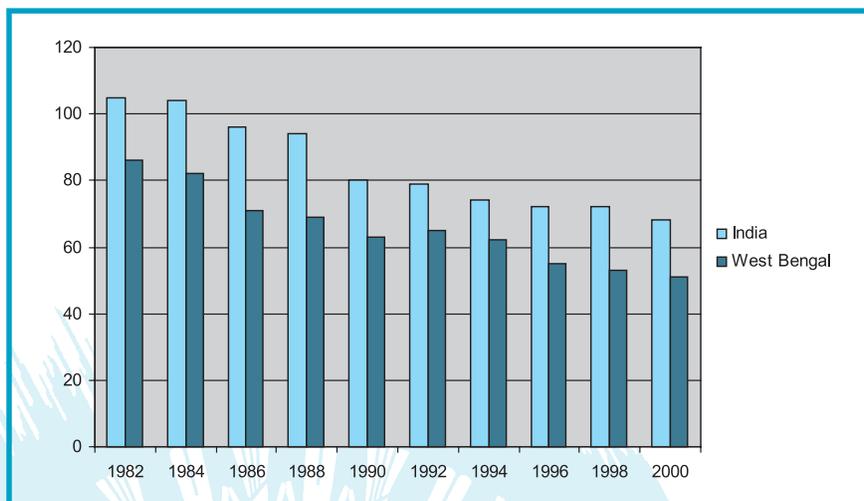
The total IMR for rural areas also shows a reasonably good trend of decrease over the years. However, although the total IMR for urban areas is much less than that of the rural areas, the rate of reduction in the urban IMR has not been steady. It has not decreased significantly in the last few years, indicating a possible stagnation in the reduction of IMR in urban areas though it is still better than the overall Indian average. This suggests that the existing health service facilities in the urban areas are possibly getting stretched and that a much greater effort will be needed to bring down IMR further. It is also a well-known fact that as the situation improves, further progress becomes more difficult.

*Infant mortality rates are lower than the national average and declining faster.*



**Figure 6.2 Reduction in IMR, India and West Bengal**

Source: Chakravarty (2003) based on Health on the March, West Bengal 2001-02



The better performance of West Bengal in recent years with respect to the health of infants becomes evident when the aggregate reduction of the IMR is compared across West Bengal and India on the whole. As Table 6.3 shows, in the period 1994-96, the rate of reduction of the IMR in West Bengal was more than four times that of the national average. In the subsequent three-year period 1996-98, the IMR for all of India was stagnant, showing no improvement at all (indicating a worrying reversal from the previous trend) whereas in West Bengal the IMR declined by 3.6 per cent over this period.

**Table 6.3 Per cent reduction in IMR, India and West Bengal**

Source: Chakravarty (2003) using SRS Bulletin.

	1994-1996	1996-1998
India	2.70%	0
West Bengal	11.29%	3.63%

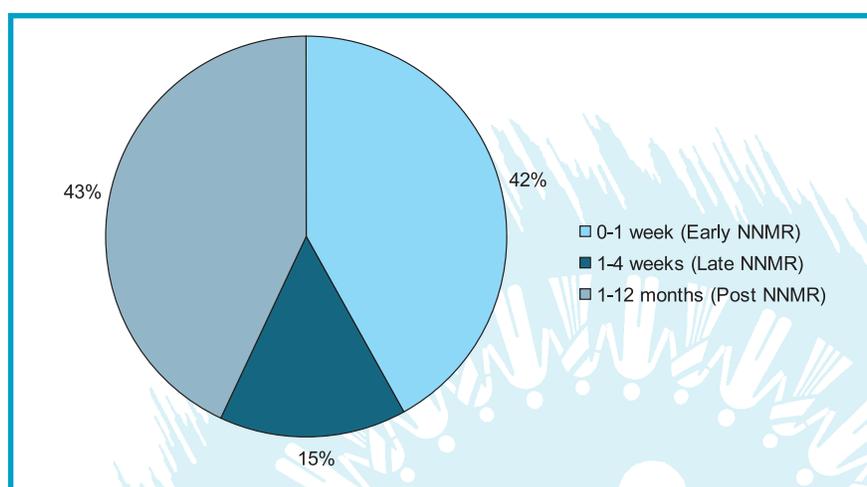
**Table 6.4 Per cent reduction of IMR in Urban and Rural West Bengal**

Source: Chakravarty (2003) using SRS Bulletin.

	1994-1996	1996-1998
Urban	15.38%	2.27%
Rural	9.37%	3.44%

Within aggregate infant mortality, nearly 42 per cent of the deaths occur within the first week. Deaths in the next three weeks account for 15 per cent, while deaths in the remaining 11 months amount to 43 per cent of the total infant mortality. This indicates that the control of early neonatal mortality will lead to a much improved IMR as this appears to be the most critical period. However, it should be noted that this variable is also the hardest to control: even in Kerala, where the IMR is remarkably low (at 16 in 1998) more than half of the infants die in the early neonatal stage. Though the total neonatal mortality rate of West Bengal is better than the Indian average, the number of deaths is very high compared to some states such as Kerala, and some districts tend to have much higher rates than others. This calls for important critical interventions. The recent opening (in August 2003) of a neonatal

specialty hospital in Purulia is a positive step, since the establishment of such facilities in far-flung districts with relatively poor transport connections to Kolkata, is likely to make a big difference towards reducing neonatal mortality.



**Figure 6.3 Neonatal mortality rates as a percentage of IMR in West Bengal**

Source:

The district-wise pattern of IMR in the rural areas, for the period 1996-2000, according to the Sample Registration Surveys conducted by the Census of India, is presented in Table 6.5. There are very substantial variations in rural IMRs, ranging from the low of 24 in Hugli to the highest rate of 74 in Dakshin Dinajpur and Purulia, both of which are relatively badly served in terms of health infrastructure and transport networks. Indeed, the SRS data point to substantial variations in IMRs even within districts, often depending upon the availability of basic health infrastructure in the villages.

District	IMR
Darjeeling	41
Jalpaiguri	54
Koch Behar	52
Uttar Dinajpur	65
Dakshin Dinajpur	74
Malda	61
Murshidabad	58
Birbhum	49
Bardhaman	57
Nadia	54
North 24 Parganas	51
Hugli	24
Bankura	61
Purulia	74
Medinipur	49
Haora	34
South 24 Parganas	51
<b>West Bengal</b>	<b>53</b>

**Figure 6.5 Rural IMRs by district, 1996-2000 (number of infant deaths per 1000 live births)**

Source: Office of Director of Census Operations, West Bengal

Given the high correlation of the under-5 mortality rate with the IMR, there is increasing recognition that policy interventions directed towards improving the overall health care of children are closely bound up with those addressing the issue of infant mortality. Both of these in turn are usually closely related to nutrition patterns among mothers and children. However, as will be seen from Table 6.6, there does not seem to be any obvious correlation between the IMR and the proportion of severely undernourished children.

**Table 6.6 Health and other socio-economic indicators**

Source: Chakravarty (2003) based on <sup>1</sup> SRS Bulletin, October - 2002

<sup>2</sup> NFHS -2. <sup>3</sup> NNMB, 2002

	Health Indicators						Per Capita <sup>3</sup>		Adult Female Literacy Rates <sup>3</sup>	% of Family lived in Kuchha House <sup>3</sup>	% of Family with Sanitary Latrine facility <sup>3</sup>	Family Size <sup>3</sup>
	IMR <sup>1</sup> (2000)				Under 5 MR <sup>2</sup>	1-5 yrs severely malnourished - 3SD	Monthly income					
	Total	Urban	Rural	Rank								
W.B.	51	34	54	3	67.6	22.6	43.9	43.1	40.4	29.2	18.1	4.6
Kerala	14	14	14	1	18.8	7.7	25.3	33.1	85.4	9.8	90.6	4.4
M.P.	87	54	93	14	137.6	35.8	59.0	27.8	30.5	53.3	6.4	5.6
Orissa	95	66	99	14	104.4	25.1	83.9	10.2	37.7	66.9	2.9	5.4
A.P.	65	36	74	7	85.5	15.5	42.4	43.3	31.7	34.6	12.2	4.8
Gujarat	62	45	69	6	85.1	23.0	9.4	43.5	57.7	17.8	60.1	4.8
India	68	44	74	94.9	data not available	43.3	34.0	46.9	29.3	26.2	5.0	

Table 6.6 presents some other variables along with IMR and under-5 child mortality, to see if there is any obvious relationship between variables such as income, female literacy and nature of house and sanitary arrangements. There is clearly little relationship between per capita income and IMR. West Bengal, with third rank in terms of lower IMR, is clearly among the lower income states, especially compared with Gujarat which has a lower rank for IMR. Nor is there any clear relationship with the incidence of severe child malnutrition, since Gujarat and Orissa with similar ratios for this variable, have much higher IMRs than West Bengal. The incidence of child malnutrition will be discussed below – it is notable that more than one-fifth of children in West Bengal are severely malnourished. Adult female literacy does not have a clear relationship with infant and child mortality rates, unless Gujarat is regarded as an outlier. In fact, disregarding Gujarat, the other variables such as adult female literacy, type of housing and sanitation do seem to be important in affecting infant and child mortality. ■



## Nutritional status

*Women and children face particular nutritional deprivation in West Bengal.*

The data on nutrition overall indicate that the average level of nutrition in the state, and especially among women, is relatively low by several criteria. However, malnutrition among children is lower than the national average, and severe malnutrition is also low, suggesting that distribution is better than in most other states.

The nutritional status of children in the age group of under-3 years is better in West Bengal, as compared to the all-India average for Weight for age (undernutrition) as well as Height for age (stunting). By these criteria, West Bengal also has a lower percentage of severely malnourished (< - 3SD) children (16.3%) as compared to the Indian average of 18%. West Bengal ranks sixth among the major states in India.

Nutritional Grades :	West Bengal	India
<b>Weight for age :</b>		
Percentage below - 2SD	48.7 (19)	47.0
Percentage below - 3SD	16.3 (15)	18.0
<b>Height for age :</b>		
Percentage below - 2SD	41.5 (13)	45.5
Percentage below - 3SD	19.2 (17)	23.0
<b>Weight for Height :</b>		
Percentage below - 2SD	13.6 (15)	15.5
Percentage below - 3SD	1.6 (4)	2.8

**Table 6.7 Nutritional Status of Children under 3 years of age West Bengal and India**

Source: Chakravarty (2003) based on NFHS 2, India: 1998-99 and NFHS 2, West Bengal: 1998-99

Note: Figures in brackets indicate rank among 25 states of India.

The overall anaemia status of children in West Bengal is very poor as the state ranks as low as nineteenth among 25 states. The proportion of children with anaemia (78 per cent) is higher compared to the Indian average of 74 per cent. However, the proportion of children with severe anaemia is marginally lower, at 5.2 per cent compared to the national average of 5.4 per cent. Not surprisingly, the situation is worse in the rural areas, where as many as 82 per cent of children are estimated to have anaemia by the NFHS 1998-99, compared to a rate of 64 per cent in urban West Bengal and 60 per cent in Kolkata. Severe anaemia is also higher in rural West Bengal, at 5.3 per cent compared to 4.6 per cent in the urban areas and 0.7 per cent in Kolkata.<sup>1</sup> Such nutritional deficiencies among children have important negative effects in terms of the health and capability patterns of these future adults, so it is important to make this a focus of public intervention.

The nutritional status of women in West Bengal is a source of some concern, since it seems to be significantly worse than the national average. In a survey conducted by the National Nutrition Monitoring Bureau, West Bengal ranked eighth among 9 states in important variables such as chronic energy deficiency among women. In terms

<sup>1</sup> NFHS 2, West Bengal: 1998-1999.

*Anaemia and iron deficiency among women and girls are major problems.*

of the Body Mass Index (BMI) the state ranks as low as twenty fourth among 25 states of NFHS-2 survey. This indicates a very poor nutritional status of women in West Bengal. Clearly, there is scope here for immediate target oriented intervention strategies to be planned.

**Table 6.8 Nutritional status of ever-married women West Bengal and India**

Source: Chakravarty (2003)

Note: NFHS2 – Rank among 25 States; NNMB – Rank among 9 States.

Indication	West Bengal	India	Position of West Bengal	Best Performing States	Poorest Performing States
Mean Height (NFHS-2)	150 cm	151.2 cm	23	Punjab	Bihar, Assam
% below 145 cm (NFHS-2)	19.2	13.2	23	Punjab	Bihar, Orissa
Mean BMI (NFHS-2)	19.7	20.3	22	Delhi	Bihar, Orissa
% with BMI less than 18.5 (NFHS-2)	43.7	35.8	24	Delhi, Arunachal Pradesh, Sikkim	Orissa
% with Chronic Energy Deficiency II plus III NNMB-2002	19.9	18.5	8	Kerala	Maharashtra
% with Moderate and severe anaemia (NFHS-2)	62.7	51.8	20	Kerala, Mizoram	Assam, Bihar, Rajasthan
Protein plus caloric adequacy status (NNMB, 2002 NPNL Women)	87.1	87.8	4	Gujarat	Tamil Nadu
% with > = 70% RDA of iron intake (NNMB-2002)	10.7	14.7	5 <sup>th</sup>	Gujarat	Andhra Pradesh

In case of anaemia as well, (moderate and severe) West Bengal ranks as low as nineteenth in the NFHS-2 survey. Compared with the national average of 52 per cent, 63 per cent of ever-married women in West Bengal were characterised as having iron-deficiency anaemia in 1998-99.<sup>2</sup> The state therefore ranks nineteenth among 25 states of India in terms of this variable. However, the proportion of such women with severe anaemia, at 1.5 per cent, is marginally lower than the national average of 1.9 per cent. It is also substantially lower than in other richer states such as Tamil Nadu (3.9 per cent) and Maharashtra (2.9 per cent) whose overall proportion of women with anaemia is lower. This suggests lower but more equitable distribution of nutritional intake among women in West Bengal, than in many other states.

Once again, rural women tend to be worse off in terms of anaemia, with 64 per cent of ever-married women in rural parts of the state with some anaemia, compared to 58 per cent in urban areas and 60 per cent in Kolkata. However, the incidence of severe anaemia

<sup>2</sup> NFHS 2 1998-99.

shows the opposite pattern, being the lowest in the rural areas at 1.4 per cent, compared to 1.8 per cent in all urban areas and 2 per cent in Kolkata. This higher incidence of severe anaemia in Kolkata is worth noting, suggesting that there are proportionately more cases of extreme nutritional deficiency in the metropolis, which should be addressed through systematic policy intervention.

Rates of anaemia tend to be quite high all through life for girls and women in West Bengal.<sup>3</sup> Interestingly, anaemia among men in West Bengal is also significantly high; in fact severe anaemia was higher (at 7.2 per cent) among men above 60 years than among females of that age group (4.3 per cent). The highest rates of anaemia tend to be found among women in the age groups 12-19 years and 19-45 years, which are also the age groups for which the gender gap is greatest. While anaemia among children is not different across gender, girls tend to become more anaemic after puberty. Obviously, anaemia is a critical problem for the state and suitable steps need to be taken at all levels to combat it.

However, in terms of other nutritional supplements, West Bengal is not so badly off. Thus, the iodised salt programme in the state shows a better coverage compared to the all-India level.■

### Health-related food security issues

**Food security** is obviously one of the prime factors for nutritional well being, and therefore an important determinant of the overall health condition. Food security in turn is affected by aggregate production within the state, the ability to access outside production, and the distributional features within the state that determine the access to food of households in different geographical areas as well as households of different income and occupation groups. In this context, the recent deterioration of the public food distribution system, and its declining ability to reach households across the state and provide the desired range of foodstuff, is a source of concern.

In terms of aggregate production within the state, the relationship between per capita production and consumption of various food items has been quite good, as indicated in Table 6.9. Food items such as cereals, tubers, vegetables, eggs and fish, which are produced in larger quantities than the national average, are also consumed more in the state. The per capita consumption of cereals appears to be significantly higher than the all-India average, as well as of other foods such as vegetables, eggs and fish. In the case of cereals, tubers and fish, per capita consumption in West Bengal is also well above the recommended daily allowance of the ICMR. However, per capita consumption of pulses, milk, fruit and sugar is below the national average.<sup>4</sup> It should be noted that the data for

<sup>3</sup> **National Pilot Programme on Control of Micronutrient Malnutrition** of the All India Institute of Hygiene & Public Health, Kolkata undertook a study which attempted to monitor the nutritional status of both male as well as females right from infancy up to the geriatric age of post 60 years (girl child to elderly women viz. the entire life cycle) in Bankura district.

<sup>4</sup> It should be borne in mind that milk products and sugar items that are consumed through shop purchases, are included in NSS data under "other food items", and so there may underestimation of the consumption of these items if they are purchased rather than processed at home.

production relate to 1995-96, and come from official agricultural production data, whereas the data on consumption relate to 1999-2000 and are based on sample survey data. Therefore the two are not strictly comparable; however, they do provide an indication of approximate relative magnitudes. By 1999-2000, the state was surplus in cereal production because of the increase in rice production in particular.

A look at the consumption pattern across age groups (Table 6.10) makes it clear that the most deprived group consists of children between 1-3 years of age. Such relative nutritional deprivation is likely to have either an immediate impact as well as negative effects in their later life. The nutrient intake patterns also indicate a similar picture. As Table 6.11 indicates, the intake was lower than the Recommended Daily Allowance in all cases, with the 1-3 year old category being the most deprived.

**Table 6.9 Per capita production and consumption of selected food items**

Source: Chakravarty (2003) using Ministry of Agriculture, Area and Production of Principal Crops in India : 1995-96, Ministry of Agriculture, Bulletin of Food Statistics : 1999-2000. NSS 50<sup>th</sup> Round 1993-94, Level and Pattern of Consumer Expenditure, Report No. 402, NSS 50<sup>th</sup> Round 1993-94, Quality of Consumption of all food items.

Notes: Data sources for production and consumption vary and relate to different years. RDA refers to Recommended Daily Allowance.

Food items (grams)	RDA (ICMR)	Production (grams per day)		Consumption (grams per day)	
		West Bengal	India	West Bengal	India
Cereals	420	413.24	430.33	<b>498.67</b>	434.79
Tubers	75	<b>210.85</b>	65.73	132	—
Sugar	30	0.33	41.00	12.00	24.92
Pulses	40	4.73	31.94	14.00	23.29
Fruits	50	21.17	58.33	19.20	22.60
Vegetables	125	<b>438.77</b>	179.22	<b>63.67</b>	59.63
Milk & milk products	150	116.39	184.33	46.20	146.23
Eggs	45	<b>11.28</b>	9.38	<b>7.04</b>	2.76
Fish	25	<b>31.06</b>	14.01	<b>18.0</b>	7.04

**Table 6.10 Age-wise food intake pattern in West Bengal (Proportion of population in each group consuming less than half the RDA)**

Source: Chakravarty (2003) using NNMB: 2002

Foods		1-3 yrs Children	4-6 yrs Children	10-12 yrs Boys	10-12 yrs Girls	> = 18 yrs Male sedentary workers	> = 18 yrs Female sedentary workers
1	Cereals	24.0	7.8	12.4	6.9	2.2	2.2
2	Pulses & Legumes	95.2	93.2	94.1	90.0	77.8	82.6
3	Leafy Vegetables	79.3	72.8	65.1	63.8	66.7	64.8
4	Other Vegetables	57.2	56.8	50.3	51.5	43.7	44.3
5	Roots & Tubers	15.1	5.4	5.9	5.4	5.9	5.7
6	Milk & Milk Products	85.6	90.1	91.1	90.8	86.7	89.7
7	Fats & Oils	88.2	93.2	96.4	93.8	85.9	47.8
8	Sugar & Jaggery	96.3	98.6	95.3	93.8	81.5	79.0

Age / type		Protein		Fat		Energy	
		RDA	Intake	RDA	Intake	RDA	Intake
1-3 years		22	18.3	25	9.2	1240	693
4-6 years		30	25.7	25	10.9	1690	1009
7-9 years		41	29.6	25	12.8	1950	1220
Over 18 years (sedentary worker)	M	60	50.1	20	21.4	2425	2067
	F	50	43.0	20	17.4	1875	1839
Over 18 years (moderate worker)	M	60	54.1	20	17.6	2875	2409
	F	50	45.6	20	15.2	2225	1988
Pregnant		65	45.3	30	16.6	2175	1664
Lactating		75	44.2	45	17.3	2425	2007

**Table 6.11 Age-wise nutrient intake pattern**

Source: Chakravarty (2003) using NNMB, 2002

One very interesting observation is that per capita production of vegetables in West Bengal is 438.77 gms (which is the highest in India) against the ICMR recommended daily allowance (RDA) of 125 gms. But the present per capita consumption is only about 63 gms per day, and West Bengal ranks only sixth at the all-India level. It is necessary to investigate the fate of the large amount of excess vegetables. Are they sent to other neighbouring states or are they wasted for lack of food preservation facilities? This needs to be looked into because if the excess vegetables are distributed and/or preserved properly then this can be a major intervention method to prevent micronutrient deficiencies in rural as well as urban areas.

The data generated by the National Pilot programme on Micronutrient Malnutrition, All India Institute of Hygiene & Public Health, Kolkata in five states (Assam, Bihar /Jharkhand, Orissa, West Bengal and Tripura), indicate that if the distribution of energy and protein is divided into groups of population having 100-75 per cent of RDA; 75-50 per cent of RDA and the worst off having less than 50 per cent of RDA, then West Bengal has the lowest percentage of the last group (2.6 per cent) as compared to the average of the other four states which is about 10 per cent (the range being 6-22 per cent). This indicates that the state of West Bengal has relatively better equity, as compared to the other states of this region, and confirms the similar inferences that can be made from other nutrition-related data.

The nutritional status of adult females in terms of the Body Mass Index (BMI) (which is very low in West Bengal as compared to India) tends to have a high correlation with energy intake, protein intake, food intake and also income status. Anaemia among adult females is highly correlated with the Body Mass Index for women, pulse intake, sanitary facilities available, literacy rate and antenatal care. Under nutrition in children shows high correlation with calorie intake and anaemia in women, but does not appear to have much correlation with the water supply status. The prevalence of

*Production of many food items within the state is much higher than total internal consumption.*



malnutrition is possibly a major cause for certain health problems in the state. The evidence therefore points to certain areas of public intervention that can be usefully pursued, such as the provision of sanitary facilities and campaigns to improve food consumption practices to ensure adequate nutrition. The data also indicate that service delivery needs overall improvement at all levels. ■

### Morbidity and possible preventive action

There is usually a problem with morbidity data, which relates to the perceptions about and recording of morbidity, which can vary dramatically with income level, extent of access to medical facilities, and so on. Except in the case of communicable diseases, the data on morbidity may not always reflect the actual situation on the ground. However, the spread and control of communicable diseases do provide useful indicators for the state of community health.

Table 6.12 presents information on the morbidity profile of children in West Bengal. It is seen that the incidence of acute respiratory infection (ARI) is very high in the state, as compared to the all India figure. The rate of diarrhoeal diseases, by contrast, is very low.

**Table 6.12** Incidence of selected diseases among children in West Bengal (Percentage of children suffering from)

Source: Chakravarty (2003) using NFHS-2 India, 1998-99.

Note: Rank in ascending order in terms of incidence among 25 states.

	ARI	Fever	Any Diarrhoea	Diarrhoea with blood	% ARI taken to health facilities (out of those who suffered)
West Bengal	24.8	29.9	8.3	1.0	52.4
India	19.3	29.5	19.2	2.6	64.0
Rank of West Bengal	20 <sup>th</sup>	8 <sup>th</sup>	2 <sup>nd</sup>	4 <sup>th</sup>	8 <sup>th</sup>

The data on morbidity among the general population (Table 6.13) indicate very high incidence of asthma and jaundice. These are diseases which are affected by the extent of atmospheric pollution and the availability of safe water and sanitation, so these are clear areas for public health intervention. Although the prevalence of malaria is substantially lower than the all-India average, it is still high enough to require attention.

**Table 6.13** Incidence of selected diseases among adult in West Bengal (number of cases among 100,000 population in the previous 12 months)

Source: Chakravarty (2003) using NFHS-2 India, 1998-99.

Note: Rank in ascending order in terms of incidence among 25 states.

	Asthma		Tuberculosis		Medically Treated tuberculosis		Jaundice		Malaria	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
India	2,649	19,66	600	390	476	370	1410	1,225	4,254	2,168
West Bengal	2,654	2,410	537	357	330	170	3,544	1,892	1,669	918
Rank of West Bengal	15	18	11	11	8	2	21	21	10	8

There are some diseases for which West Bengal appears to have much higher incidence than any other state. For example, 40 per cent of the reported cases of measles in India in 2001 were from West Bengal, even though the rate of measles immunisation in West Bengal is higher than the all-India average, as indicated in Table 6.14. The state also has a higher than expected incidence of some diseases that can be prevented by timely vaccination, such as neonatal tetanus (21 per cent of all reported cases in India) and diphtheria (17 per cent of all reported cases).<sup>5</sup> This suggests that the preventive health delivery systems need to be strengthened, to ensure complete vaccination among the population. However, rates of leprosy, Kala azar and Japanese Encephalitis are less in West Bengal than the Indian average.



There is an increasing trend in the incidence of HIV-AIDS cases, from 204 reported cases in 1996 to 1331 cases in 2002, although West Bengal is not one of the more seriously affected states in this regard. Males in the age group 15-44 appear to be the most at risk, which is broadly similar to the pattern elsewhere in India. Obviously the control of this disease requires the extension of specially targeted programmes.

Table 6.14 indicates the district-wise burden of diseases in order to highlight the vulnerable areas of the state with respect to particular diseases. These data should of course be treated with caution, since it is clearly the case that those districts with better health infrastructure tend to record higher morbidity, and often people from other districts travel to these areas for treatment.

<sup>5</sup> Annual Report 2002-2003, Ministry of Health & Family Welfare, Govt. of India.

**Table 6.14 District-wise burden of communicable diseases**

Source: Chakravarty (2003) based on *Communicable Diseases: Jan-Dec 2002*, SBHI, West Bengal.

Diseases	2001	2002
<b>Acute Diarrhoeal Diseases</b>	Koch Behar, South 24 Pgs, Murshidabad	Murshidabad, South 24 Pgs, Koch Behar
<b>Viral Hepatitis</b>	Kolkata, Hugli, North 24 Pgs, Bardhaman, Jalpaiguri, Koch Bihar	Bardhaman, Kolkata, Jalpaiguri, Haora, Nadia
<b>Malaria</b>	Purulia, Jalpaiguri, Koch Behar	Jalpaiguri, Purulia, Koch Behar
<b>Acute Respiratory Infection + Pneumonia</b>	Koch Behar, Murshidabad, North 24 Pgs, Dakshin Dinajpur, Purulia	Koch Behar, Murshidabad, Bardhaman, North 24 Pgs, Dakshin Dinajpur, Purulia
<b>Enteric Fever</b>	Purulia, North 24 Pgs, Murshidabad, Darjeeling	Purulia, Medinipur, Hoara, Malda, Darjeeling
<b>Acute Poliomyelitis</b>		Murshidabad, Birbhum, Kolkata, South 24 Pgs, Haora, Malda, North 24 Pgs
<b>Diphtheria</b>	Kolkata, Bardhaman, Murshidabad, Darjeeling	Kolkata, Darjeeling, Bardhaman
<b>Tetanus Neonatal</b>	Murshidabad, Birbhum, Malda, Purba Medinipur	Murshidabad, Bardhaman, Birbhum, Malda, Purba Medinipur
<b>Japanese Encephalitis</b>	Bardhaman	Bardhaman, Kolkata, Haora
<b>Meningococcal Meningitis</b>	Kolkata, Bardhaman, North 24 Pgs	Kolkata, Bardhaman, Jalpaiguri
<b>Tuberculosis</b>	Darjeeling, Koch Behar, Jalpaiguri	Koch Behar, Darjeeling, Jalpaiguri, North 24 Pgs
<b>Kala Azar</b>	Murshidabad, North 24 Pgs, Dakshin Dinajpur, South 24 Pgs	Murshidabad, Malda, Dakshin Dinajpur, North 24 Parganas, South 24 Parganas.

An important area of concern which requires more public attention relates to disability. The NSS data suggest that in the late 1990s, around 2 per cent of the population of the state was disabled. There is a need to organise health camps at regular intervals and ensure satisfactory public facilities for the disabled, which are at the moment sadly inadequate. ■

### ••• Arsenic poisoning



The first of arsenicosis (or arsenic poisoning) was discovered in West Bengal in 1982. Since then, it has been found that the problem of excess arsenic in drinking water exists in at least 75 blocks spread over 8 districts, accounting for an estimated population of over 13.5 million people. These districts are Malda, Murshidabad, Nadia, North 24 Parganas, South 24 Parganas, Bardhaman, Haora and Hugli.

Arsenic contamination of groundwater in West Bengal is of geological origin, deriving from the geological strata underlying the Gangetic plain. The increasing use of tubewell water to provide drinking water as well as for sanitation and irrigation, means that this is an urgent problem requiring immediate public intervention. Simple removal of arsenic from water, or shifting to other sources of human drinking water supply, may not be adequate to eliminate the problem, as there is evidence that the food chain is now also being affected. The effect on the cattle population is also potentially very serious and requires focused intervention.

*The adverse socio-economic effects of arsenic poisoning are already apparent.*

Excess arsenic in drinking water gives rise to a number of health problems, including gastro-intestinal disturbances, hyperpigmentation and neuropathy, and even skin cancer in severe cases. The most common effects appear in the form of skin lesions, which typically manifest after a minimum exposure of about five years. Already, nearly 17 lakh people in the state have been diagnosed with arsenic-related skin manifestations.<sup>6</sup> However, knowledge about the full health effects of arsenic is still incomplete.

The social implications of this health problem, and the impact on people's livelihoods, are yet to be adequately studied. However, some adverse social effects can already be observed.<sup>7</sup> There are reports of young women not being able to marry because of arsenicosis, and more general reluctance to declare the problem because of fear of social ridicule. Clearly, there is a need to change social attitudes towards the health effects of arsenic exposure, as well as to provide people in affected areas with scientifically correct information along with feasible safe drinking water options.

This means that along with the technical and infrastructural measures that are required, such as identification and treatment of those affected and the provision of alternative sources of drinking water, an effective communication strategy is required. This has to correct the prevailing myths about arsenic poisoning, clarify the awareness about contaminated and safe water, and increase people's motivation to switch to arsenic-free drinking water for themselves and their livestock. In all of this, there is an important role for the panchayats.■

## Community health and delivery systems

As in other parts of India, the public health system in West Bengal has been undermined by recent global and macroeconomic processes which have effectively reduced the ability of the state government to ensure access of the people to safe, timely and effective health care. Both preventive and curative dimensions of

<sup>6</sup> Health on the March, West Bengal: 2001-02, PHED, Govt. of West Bengal.

<sup>7</sup> Public Health and Engineering Department, GoWB (2002) Revised Joint Plan of Action for Arsenic Mitigation in West Bengal.

*The role of panchayats in affecting public health can be crucial.*

health care have been affected by the fiscal constraint upon the state government, which has reduced its ability to make much-needed health expenditure. It is not just the inability to make important capital investment which has mattered. Public health systems have been badly hit by a massive shortage in funds required for current expenditure, in the provision of medicines and material required for surgical operations and basic medical interventions, and even in the inadequate number of staff available to fulfil the necessary duties involved in health service delivery. The growing reliance on private curative health care, even by poorer people, indicates the inability of the state system to cope with the requirements, and points to the disturbing possibility that in future even more people will be denied health care because of their inability to pay.

Ultimately, the community's health is in the hands of the community, and therefore it is important to ensure that an adequate institutional framework is created to allow people to take control of their own health conditions. The role of the community (and therefore of panchayats) is crucial. There are three levels of health intervention that are relevant. The first level is that of disease prevention, which depends upon food and nutrition, sanitation, water, and conditions of shelter. The second level relates to control of communicable diseases, in which there are three different programmes: control, elimination and eradication. There can be no complacency about eradication, as the recent resurgence of polio in the state has shown, since this disease was believed to be eradicated. The third level relates to curative treatment. This is obviously critical in itself, but also is necessary even to bring legitimacy to health workers working at the other two levels, because the health system has to show to the people that it is useful and can deliver.

The public health system in West Bengal bears an exceptionally large burden, because in addition to the high demographic pressure in the state, which has already been noted, the bulk of curative services are in public hands. The very large responsibility and coverage of the public health system in the state are evident from the fact that 76 per cent of the health institutes in West Bengal are run by the government, compared to less than 40 per cent elsewhere in India and as little as 25 per cent in states like Kerala and Tamil Nadu.



In terms of preventive and community health, it is clear that the panchayat system has a lot of potential in terms of mobilization and ensuring effective vaccination and personal and community cleanliness which contributes to the control of disease. However, to a significant extent this potential has not really been utilised in

West Bengal so far. The recent focus on community health issues as a priority among panchayat activities is therefore very welcome.

In terms of community health practices, knowledge of best practices among women of the household, especially mothers, is often found to be the most significant variable. In West Bengal, while specific knowledge of ORS (oral re-hydration) is not so good among women (with only 17 per cent knowing the exact quantity of such drink to be given), the level of general information on diarrhoeal diseases is better. In fact, the rate of diarrhoeal diseases is lower in the state than for India as a whole, as was seen earlier.

What is much more disturbing is the evidence on routine immunisation coverage, which is indicated in Table 6.15. The state has a very low rank in terms of coverage of vaccines such as DPT, OPV and measles. Furthermore, there is evidently a very high dropout rate with respect to successive immunisation for DPT and OPV, which has obvious effects on the efficacy of the vaccination.

	BCG	DPT1	DPT2	DPT3	OPV1	OPV2	OPV3	Measles	Vit. A drops	Fully immunised	Immunised before 12 months
West Bengal	87.8 (15)	85.8 (8)	77.7 (22)	69.6 (24)	85.1 (17)	79.7 (20)	68.6 (27)	60.8 (21)	56.1 (19)	56.4 (24)	50.3 (18)
All India	72.8	71.1	67.4	63.6	78.2	74.7	70.4	55.6	43.3	49.8	43.6

*The spread and quality of health service delivery are still problems.*

**Table 6.15 Routine immunisation coverage**

Source: Chakravarty (2003) based on Coverage evaluation on Routine Immunization (2000-01). National Report: Dept. of Family Welfare; Ministry of health and Family Welfare, Govt. of India, organised by UNICEF.

Notes: 1. Figures in brackets refer to rank in 35 states.

2. BCG: Bacilli Calmette Guerin; DPT: Diphtheria Pertussis Tetanus; OPV : Oral Polio Vaccine.

Furthermore, a quick comparison of the four rounds of Intensified Pulse Polio Immunisation Programme indicates that the coverage has reduced in the more recent rounds in the early months of 2003. This type of reduction is critical and needs urgent attention. Similarly, the drop out rate in immunisation is quite high. Hence, special motivation programmes need to be identified to prevent drop outs. Panchayats and other groups need to be much more actively involved in the mobilisation of people necessary to ensure complete coverage.

The problem of maintaining continuity in services is evident even in antenatal care. The data indicate a good beginning in terms of coverage, but subsequently a gradual fallout among women who receive ANC. The reason could be lack of motivation or gaps in service delivery itself. ■

**Table 6.16 Antenatal care among ever-married women**

Source: Chakravarty (2003) using NFHS 2, West Bengal : 1998-99 and NFHS 2, India : 1998-99

State / Country	% of ever married women who received all types of antenatal check ups	Of those receiving antenatal check ups			
		% with at least one ANC-check up	% with three or more ANC-checkups	% with two or more TT injections	% receiving IFA tablet or syrup for full quota
West Bengal	19.7	90.0	57.0	82.4	56.4
India	20.0	63.4	43.8	16.8	47.5
Position of West Bengal	15	6	13	6	13
Best performer states	Kerala, Goa	Goa, Kerala, Tamil Nadu	Kerala, Goa	Tamil Nadu	Kerala, Tamil Nadu
Worst performer States	Rajasthan, Nagaland	UP, Rajasthan	UP, Rajasthan	Meghalaya	Bihar, UP

## Health infrastructure

Obviously, the total physical infrastructure available for health care in the state is still inadequate relative to requirement, and it has already been noted that there are also problems with the quality of the health service delivery in several key areas. Clearly, there is need to improve the physical infrastructure conditions with respect to preventive and curative health. In addition, it is worth noting the importance of the presence of good secondary care facilities in the vicinity, in order to ensure proper primary care facilities.

However, an excessive focus only on western medicine may be counterproductive in this regard. For example, the present system of medical education in the state has a strong western bias, which is not always cost-effective, and may even be incompatible with the health culture of the majority of the people. It may be useful to rationalise and upgrade the non-allopathic system of medicine and support them in more effective ways, especially since these are what are used more often by the majority of the people in the state, for a range of health problems. In addition, as discussed below, panchayats may be involved in the participatory management of health services and to create more general awareness about hygiene and health conditions.

*Health infrastructure is very inadequate compared to the need for it.*



No. of Beds	Numbers	
	West Bengal	India
Primary Level	22329	
Secondary Level	19671	
Tertiary Level	10703	
Total Beds in Government	57022	398284
Total Beds in other bodies	13592	283359
Population served per bed	1136	

**Table 6.17 Number of hospital beds, 1999**

Source: Dept. of Health and Family Welfare, Govt. of India; Health Information of India: 1999.

Health Care Providers	Numbers	
	West Bengal	India
Doctors	12213	410800 (1997)
Nurses	23702	449351 (1997)
Non-Allopathic Doctors	40415	
Pharmacists	21729	
Population served per Doctor (Urban)	830	182
Population served per Doctor (Rural)	4727	

**Table 6.18 Number of Health Care Providers**

Source: Dept. of Health and Family Welfare, Govt. of India; Park's Text Book of PSM 15<sup>th</sup> Edn: 1992

It is worth noting that non-allopathic and traditional systems of medicine (such as ayurvedic, homeopathic and kabiraji systems) are widely used in the state; indeed, the number of non-allopathic doctors is nearly four times that of the allopathic doctors in the state, and more than half the people regularly access such practitioners for medical treatment. *Even these data refer only to non-allopathic doctors under the public health system; therefore the actual spread of such medicine is likely to be much larger.* There are also many pharmacists, who (especially in the rural areas) effectively provide basic health services to a substantial number of people. ■

### Assessment of indicators

The broad health indicators, such as the birth rate, death rate, life expectancy at birth, neonatal mortality rate, infant mortality rate, child mortality rate are better in West Bengal as compared to India. The state also has a better morbidity profile of diseases like diarrhoea and malaria. However, the service indicators, which actually signify the delivery of services right till the household level, show clearly that there is no reason for complacency and considerable scope for improvement. West Bengal is one of the better states in respect of the broad health indicators when comparisons are made at the all-India level. This is certainly true in respect of some outcome indicators such as infant and child mortality rates, maternal mortality rates and life expectancy in general. However, nutritional indicators are relatively poor, especially for women and children. Service indicators suggest that there are important gaps and areas of concern in health service

*Non-allopathic treatment is regularly used by more than half of the people in the state.*

*Community involvement is necessary to improve overall health conditions.*

delivery mechanisms and also in the involvement of the community in the entire process of the health delivery system.

There are evidently several problem areas. The high presence of anaemia among women is a serious concern. There is need for better spacing of births. The age of childbirth needs to be increased as well, because IMRs tend to be higher when mothers are younger than 20 years old. For this reason, the low average age for women at marriage need to be raised more rapidly than has already occurred. There is widespread anaemia among the children at the crucial age of 0-3 years, when the brain is growing. There need to be more strenuous efforts (such as the one in Purulia) to reduce neonatal mortality. West Bengal has also not been up to the mark in terms of quality and quantity of supplementary feeding. The use of ORS has been coming down, although this may reflect the use of local substitutes. There have also been many measles deaths. There is evidence of widespread Vitamin A deficiency. The dropout rate in immunisation is a very important indicator, and it suggests either a lack of consciousness among the people or inadequate public service provision. In general it must be borne in mind that the empowerment of women is a crucial instrument towards better health for the society in general.

This means that there is tremendous potential to improve the health care and delivery service by involving local communities. In the developed countries of the West, most disease control occurred *before* medical interventions like vaccination were widespread, mainly through improved water supply, sanitation and better hygiene practices. This is what is currently required in West Bengal. The ongoing efforts of the state government to involve the panchayats in the health delivery mechanism may bring about an improvement in these indicators, although this still needs to be watched.

There is a growing problem of inadequate access to drugs in the public health centres and hospitals, and requiring patients to provide or pay for the drugs that are used. This is an area in which different administrative systems may lead to improved efficiency. For example, a more rational use of drugs by the public health system, as well as careful and organised central purchase of widely used drugs in state hospitals could ensure improved provision of such drugs.



The current aim of the state government is to involve panchayats in creating community health consciousness, and also to take over some of the more basic activities of the Primary Health Centres which currently are still run in a centralised way from Kolkata. The

State government plans to introduce Community Health Workers, chosen from among the membership of the Gram Sansads, who would be paid a nominal amount by the state government in addition to receiving contributions from the community. The purpose would be to encourage the spread of basic health information (which can often be quite simple information) among the community. If hospitalisation is required, the panchayat can send this volunteer worker to assist as an intermediary. Gram panchayat headquarters can have a health sub-centre. Meanwhile, some of the Primary Health Centres are proposed to be downgraded to sub-centres to focus more resources on the spread of secondary level services even in villages. The plan is that two-thirds of the doctors in PHCs will be removed and transferred in order to upgrade the remaining one-third of PHCs, which will become referral units. The others will concentrate only on outdoor services, and will be run by Community Health Officers, and will also have Ayurveda and homeopathy medical officers and a pharmacist, as well as a laboratory assistant for the microscopy centre.

*The public health system requires increased funding and more local accountability.*

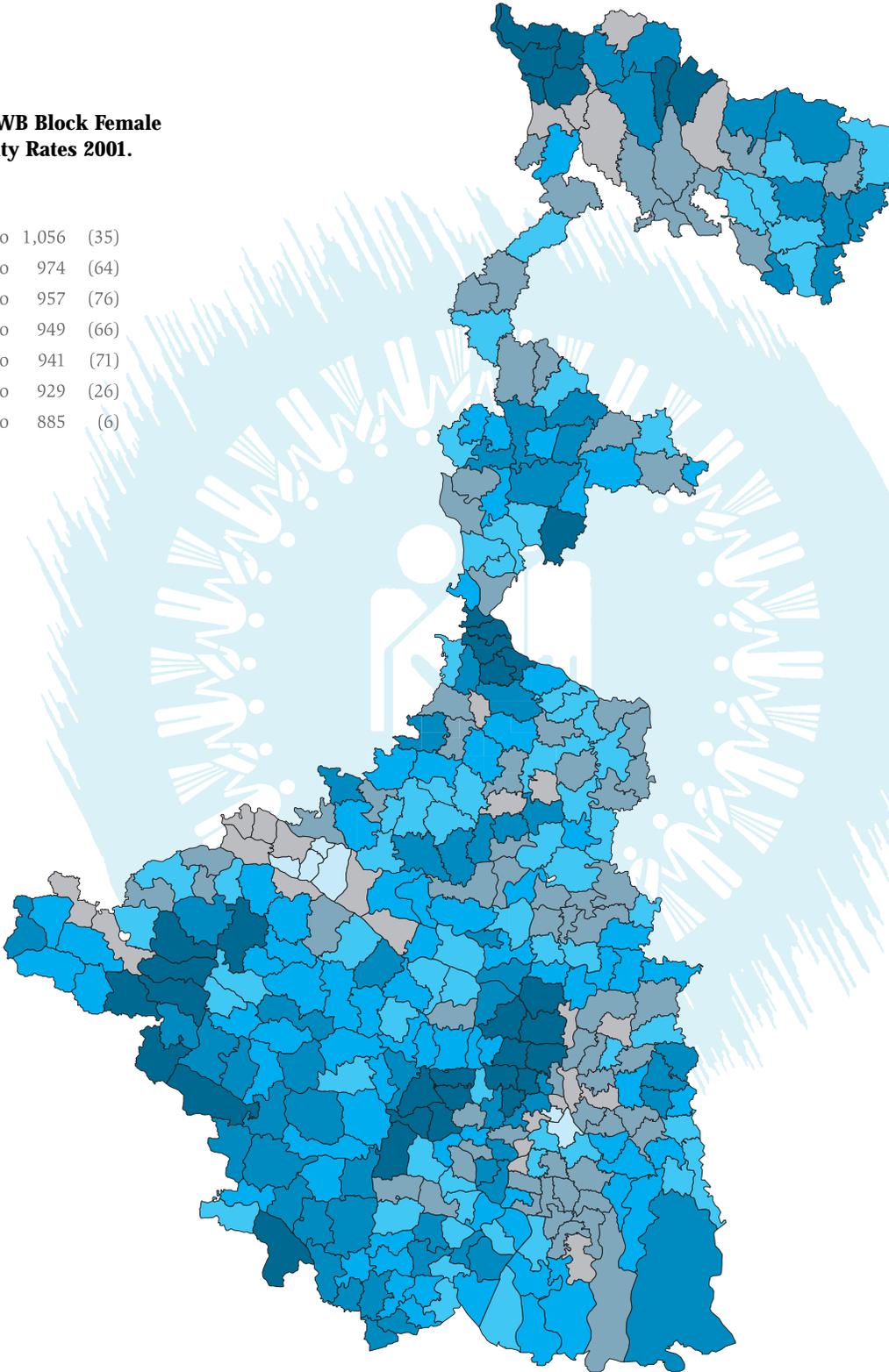
These measures are designed to increase the involvement of local government and local communities in the public health services, which will therefore become more directly accountable to the people. However, care must be taken in such measures, to ensure that they do not result in a lower track parallel system of health care provision under the supervision of the panchayats, operating with community involvement but with fewer resources. In other words, instead of pushing for a less funded system under local control, it may be better to pursue more effective ways of ensuring local accountability of the public health system in general. At the same time, it is also necessary to regulate the activities of private medical practitioners and institutions. All these measures are part of a broader programme based on the philosophy that the people's health is in the people's hands. ■



**Map 6.1 WB Block Female Mortality Rates 2001.**

*Legends*

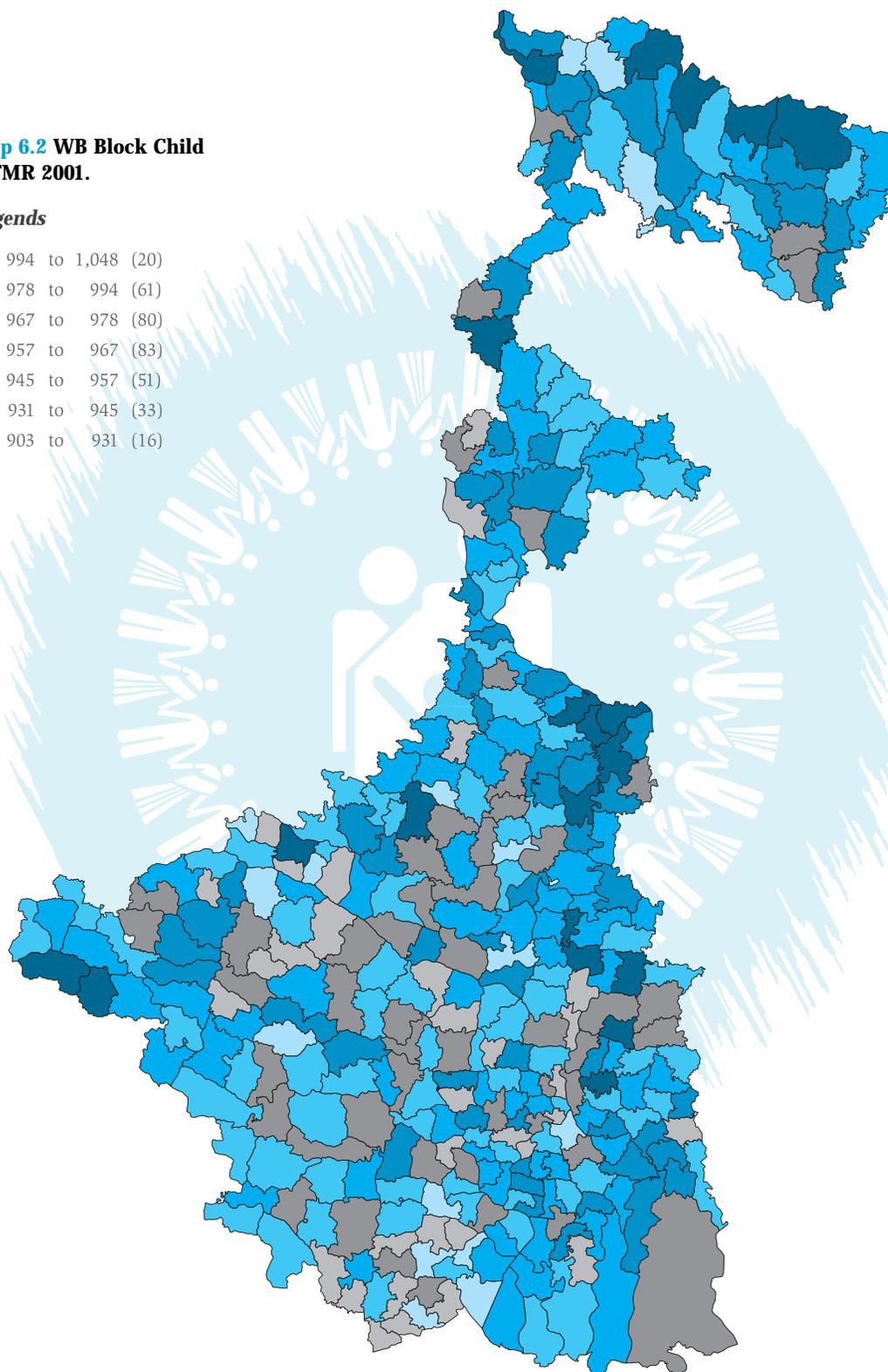
974 to 1,056	(35)
957 to 974	(64)
949 to 957	(76)
941 to 949	(66)
929 to 941	(71)
885 to 929	(26)
828 to 885	(6)



**Map 6.2 WB Block Child  
FMR 2001.**

**Legends**

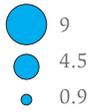
■	994 to 1,048	(20)
■	978 to 994	(61)
■	967 to 978	(80)
■	957 to 967	(83)
■	945 to 957	(51)
■	931 to 945	(33)
■	903 to 931	(16)



**Map 6.3 Health Infrastructure**

**Legends**

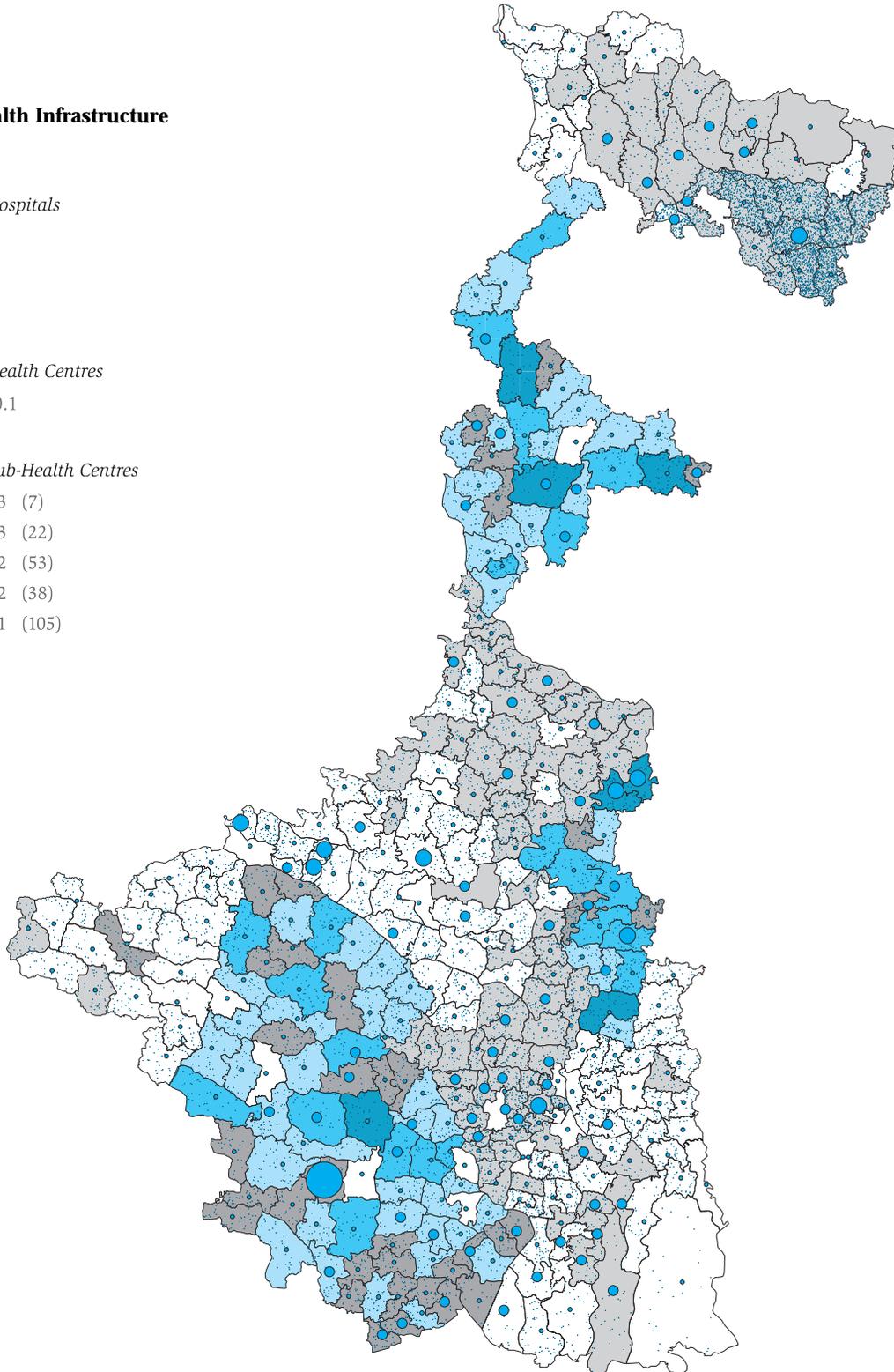
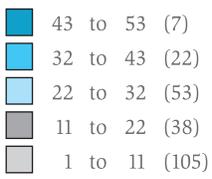
*Government Hospitals*



*Government Health Centres*



*Government Sub-Health Centres*



## CHAPTER 7

# Literacy and Education



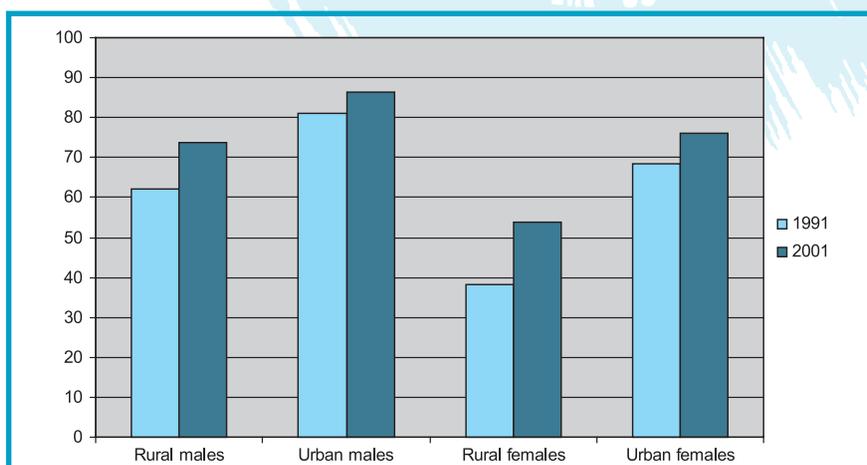


## Literacy and Education

This chapter will examine the important features of the state with respect to literacy and primary education. While higher education, including scientific education and technical training, is obviously of great significance, this will not be covered in this report, although subsequent reports may take this up in more detail. The literacy rate is generally considered as one of the important indicators of the development of a population, and the educational level of a population is seen as an important determinant of its quality of life. In addition, of course, education interacts with other human development variables in crucial ways. For example, universal education and special attention to the education of women are critical in improving the health practices of a community. Universal education is also likely to be necessary for meaningful and effective decentralisation, especially in the coming phase when panchayats are being given greater responsibility for a very wide range of activities.

*The improvement in literacy has been relatively slow except in the last decade.*

The literacy rate in West Bengal has always been higher than the all-India average, and West Bengal ranks sixth among the major states in this regard. But until the last decade, the improvement in literacy has been relatively slow in the state, especially for women. However, in the past decade, the state government has been making concentrated efforts through various special schemes such as 'total literacy campaigns', 'non-formal education', etc. apart from formal schooling for children to achieve the goal of 'education for all' as soon as possible. As a result, according to the Census, the literacy rate in West Bengal has increased from 48.6 per cent in 1981 to 57.7 per cent in 1991 and to 69.2 per cent in 2001. While rural literacy is predictably lower than in urban areas, it has improved more rapidly in the recent past. Furthermore, as can be seen from Figure 7.1, while literacy among rural females is still low compared to other groups, it has increased most rapidly in the recent past, going up by nearly 16 percentage points in the last decade.



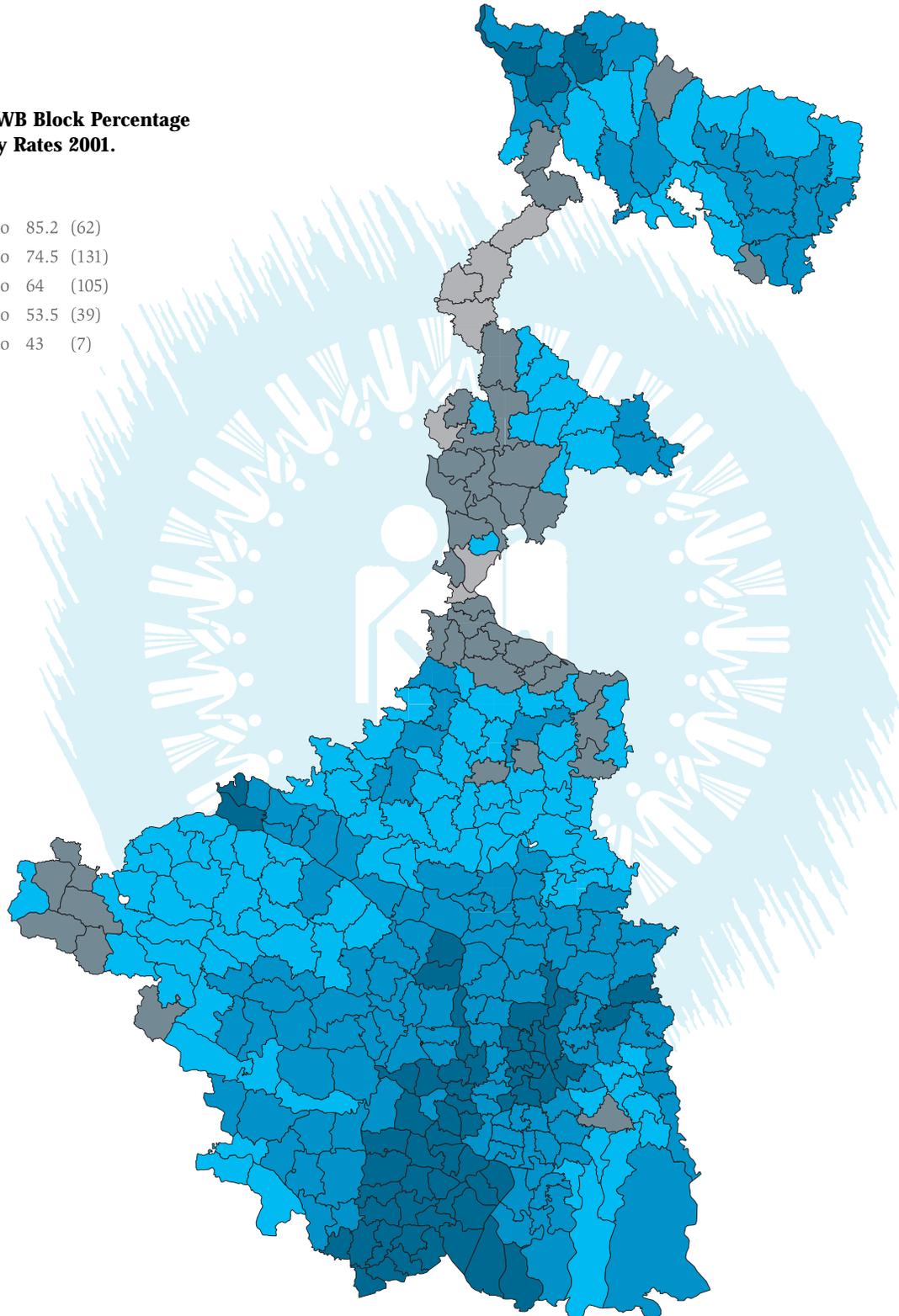
**Figure 7.1 Change in literacy in West Bengal**

Source: Census of India, 2001

**Map 7.1 WB Block Percentage Literacy Rates 2001.**

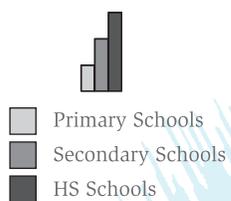
*Legends*

- 74.5 to 85.2 (62)
- 64 to 74.5 (131)
- 53.5 to 64 (105)
- 43 to 53.5 (39)
- 32.5 to 43 (7)



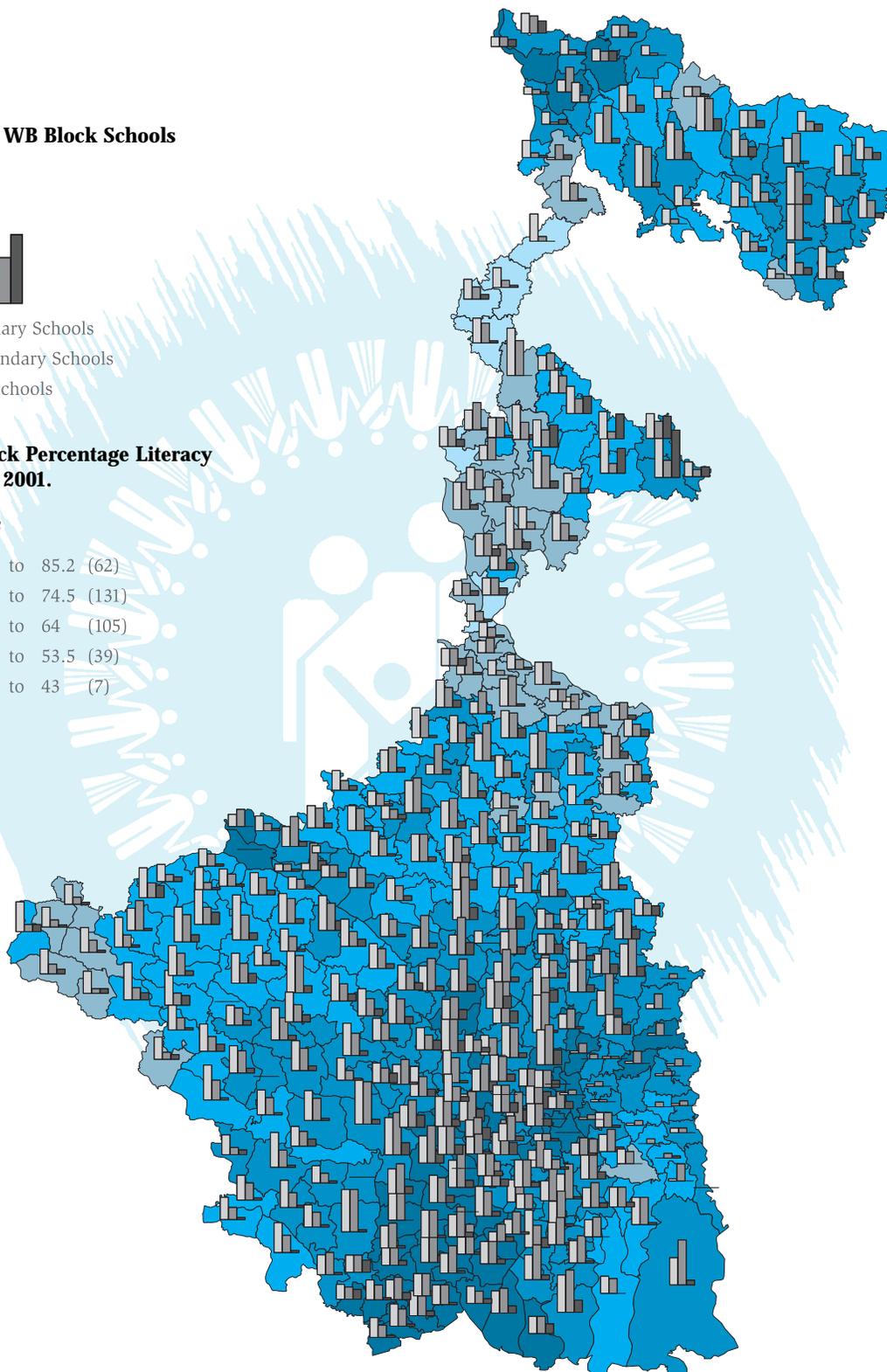
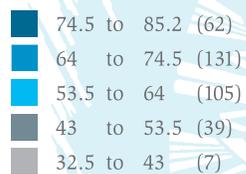
**Map 7.2 WB Block Schools  
1997.**

**Legends**



**WB Block Percentage Literacy  
Rates 2001.**

**Legends**



*Some pockets of illiteracy require special attention.*

It is encouraging that the largest improvements in literacy in the past decade have been in some of what were the most “backward” districts, and especially among females. Table 7.1 provides evidence of the changing profile of literacy rates across districts, according to the Census. Increases in the female literacy rate have been in excess of 20 percentage points in Dakshin Dinajpur and Koch Behar, and more than 15 percentage points in Jalpaiguri, Murshidabad, Malda, Darjeeling, Nadia and Birbhum, in the period between 1991 and 2001. So there is substantial improvement in literacy – and especially female literacy – in the recent period.

**Table 7.1 Literacy rates across districts**

Source: BAES and Census of India, 2001

	Aggregate literacy rate				Female literacy rate		
	Rank in per capita income	2001	Rank	% point change over decade	2001	Rank	% point change over decade
Darjeeling	2	72.9	6	14.9	63.9	6	16.1
Jalpaiguri	4	63.6	13	18.5	52.9	12	19.7
Koch Behar	13	67.2	9	21.4	56	10	23.7
Uttar Dinajpur	18	48.6	18	9.3	37.2	17	9.3
Dakshin Dinajpur	12	64.5	11	25.2	55.1	11	27.2
Malda	10	50.7	17	15.1	41.7	16	16.8
Murshidabad	15	55	16	16.8	48.3	15	18.7
Birbhum	17	62.2	14	13.6	52.2	13	15.1
Bardhaman	3	71	7	9.1	61.9	7	10.4
Kolkata	1	81.3	1	3.7	77.9	1	5.8
Nadia	6	66.6	10	14.1	60.1	8	15.7
North 24 Parganas	11	78.5	2	11.7	72.1	2	14.1
Hugli	5	75.6	4	8.8	67.7	4	10.8
Bankura	7	63.8	12	11.8	49.8	14	13.2
Purulia	16	56.1	15	12.8	37.2	18	13.9
Medinipur	9	75.2	5	5.9	64.6	5	8
Haora	8	77.6	3	10	70.9	3	13.1
South 24 Parganas	14	70.2	8	15.1	59.7	9	19.1
<b>West Bengal</b>		<b>68.2</b>		<b>11.5</b>	<b>60.2</b>		<b>13.6</b>

Nevertheless, despite these improvements, there still remains a lot to be done in terms of improvement, and certain pockets of illiteracy in particular need to be addressed. According to the NSS, in 1999-2000, 27 per cent of households in rural areas and 12 per cent of all households in urban areas did not have any literate adult (15 years and above). The proportion of households without any female adult literate was substantially higher, at 51 per cent and 31 per cent in the rural and urban areas of West Bengal respectively. (The corresponding figures for the best state, Kerala, were 9 and 10 per cent respectively.) Further, the literacy status of Scheduled Castes, Scheduled Tribes and minority community households is significantly worse than for other households, especially in rural West Bengal.



Even among the literate population, a sizeable proportion (around 17 per cent in 1998-99 according to the NFHS 2) is only literate at “below primary” level. However, there is clear evidence of progress even in terms of level of education of the population. By 1998-99, 48 per cent of rural males and 27 per cent of rural females in the age group 15 years and above were estimated to have completed at least primary education, and around one-third of these had completed secondary education or above. In the urban areas, 79 per cent of adult males and 62 per cent of adult females were found by the NFHS-2 to be literate at least up to primary level or above. ■

*In literacy, agricultural labourers constitute the most deprived occupational group.*

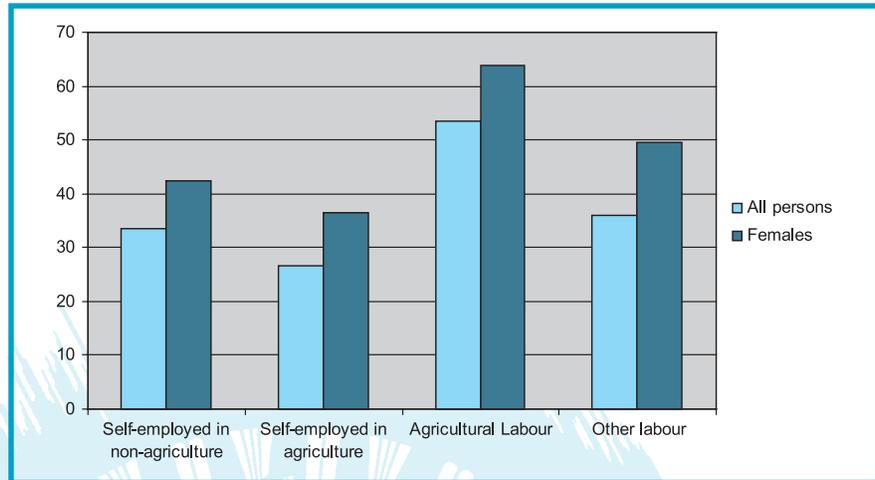
### Literacy by socio-economic categories

While there has been overall improvement in literacy in the state, there are clearly significant differences across socio-economic groups, which persist and suggest that access to literacy and education is still differentiated and may need to be addressed with targeted interventions. Figure 7.2 describes the variations in literacy rates across occupational groups in rural West Bengal for all the population above 7 years, and separately for females above 7 years. The relatively most deprived occupation group appears to be that of agricultural labour households, of whom more than half of all such population, and nearly two-thirds of the females, are non-literate. Households consisting of the self-employed in agriculture show the highest rates of literacy, for men and women in rural parts of the state. Gender gaps remain substantial, and women of rural labour households (both in agriculture and non-agriculture) are the worst off among the rural population in terms of illiteracy.

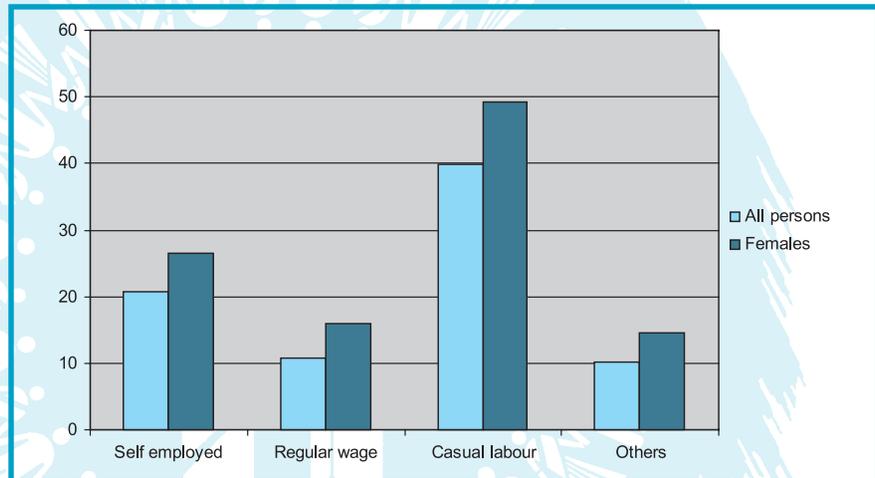
Interestingly, gender gaps in literacy appear to be slightly less marked in urban parts of the state. Here, as Figure 7.3 indicates, casual labour households are the worst off, and nearly half the women in such households are illiterate. In urban areas, those households where the main source of income is from regular wages, as well as “other” households, show the lowest rates of illiteracy.



**Figure 7.2 Non-literacy by occupation in rural West Bengal**



**Figure 7.3 Non-literacy by occupation in urban West Bengal**



As could be expected from this, income categories are also relevant in determining access to education. People from the bottom 20 per cent of households according to income are more than twice as likely to be illiterate as those from households in the top 20 per cent income category. At the other end of the spectrum, those from the top quintile income group are more than 12 times as likely to have completed education up to higher secondary and above, than those in the bottom quintile. About 66 per cent of rural females of age 7 years and above are non-literate in the lowest quintile as compared to 30 per cent in the richest quintile. Further the percent of non-literate rural females decreases with increase in the quintile group. However, it should be noted that while these differences appear to be sharp, they are less so than in other parts of the country as a whole, and the apparent occupational discrimination in education is less in West Bengal (especially in rural parts of the state) than in India as a whole and in most other states. Furthermore, the income gaps in access to education have narrowed in the past two decades.

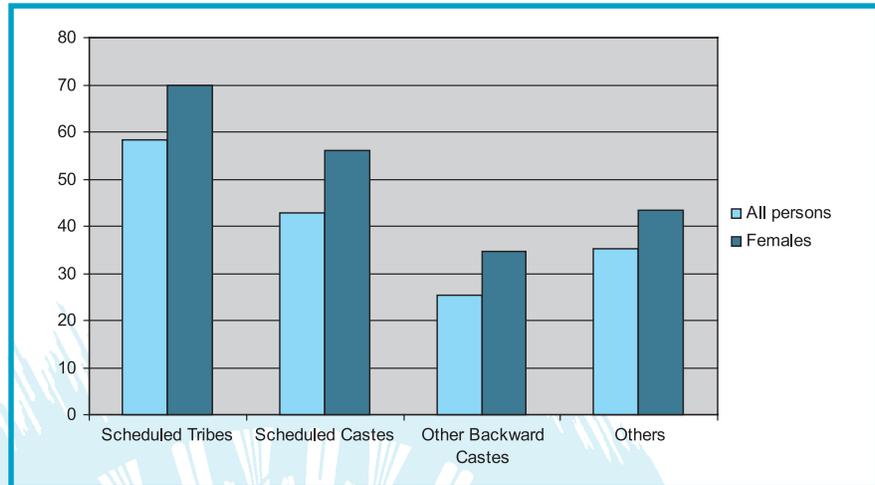
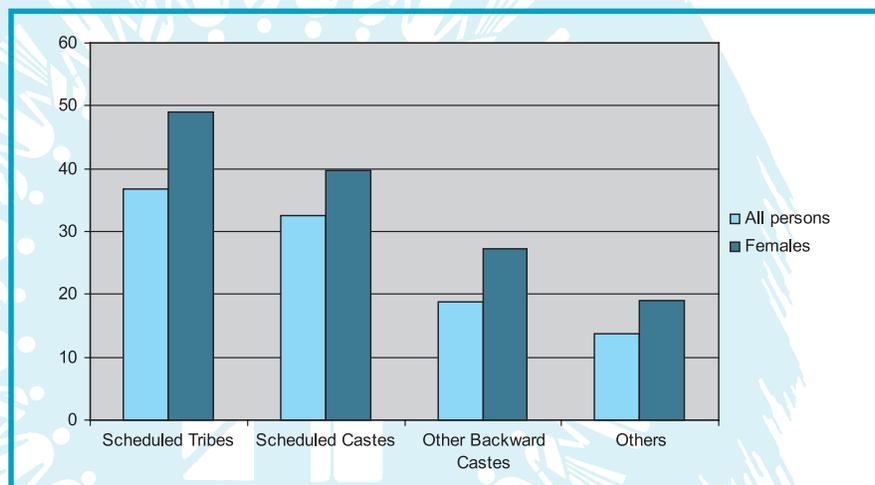
In terms of social and caste categories, the level of literacy among persons of age 7 years and above in the ST households is uniformly lower as compared to all other social categories. The problem of illiteracy is particularly acute among rural women from ST households, with 70 per cent of them being non-literate. Quite obviously, females in the ST households in the rural areas of West Bengal need special attention to improve the education levels in the rural West Bengal. Next come SC households, where more than half of the women are illiterate. The gender gap seems to be approximately equal across caste category, indicating that gender discrimination is not more marked among any particular caste group, but is shared across all castes. In the rural areas, interestingly, Other Backward Castes have the highest rates of literacy, better than “Others”, which includes not just Hindus of other castes but also other religious communities.

*Women in SR households show the highest rates of illiteracy.*

The low levels of literacy among ST households indicate that the problem also has a spatial or regional dimension, since ST households tend to be concentrated in certain regions/districts/blocks, and poor physical infrastructure in such areas makes communication and the provision of basic public services including education much more difficult. These have also been the groups less directly affected by Total Literacy and other such campaigns. Districts with higher proportion of ST population, and especially those with more remote and inaccessible blocks, also tend to have lower rates of literacy in general because of this problem. The problem of intervention therefore has to address the need to rectify this regional imbalance, which then expresses itself also as an imbalance of social category.

However, it should be recognised that there has already been some progress towards rectifying this regional imbalance. It used to be observed that literacy rates in West Bengal were highest in Kolkata and deteriorated in concentric circles around that metropolis, with the more distant districts showing lower rates of literacy. The only exception was Darjeeling because of the impact of Siliguri. That was certainly true up to even as late as 1991. But in the last decade, as Table 7.1 indicates, while the top and bottom ranks have remained broadly the same (in terms of literacy rates) there has been much greater movement in the middle ranks of districts. While they can still broadly be classified in terms of distance from Kolkata, the literacy gap has reduced across different districts, especially for women.



**Figure 7.4 Non-literacy by caste in rural West Bengal****Figure 7.5 Non-literacy by caste in urban West Bengal**

From Figure 7.5 it is clear that even in urban areas, the literacy situation of STs and SCs is the worst. However, the absolute levels are not as bad as they are for rural West Bengal. Once again, for a given social category, there are disparities in the education levels among males and females. The most deprived category – female members of ST households – would require special attention to improve literacy levels. In this case, since remoteness, absence of physical infrastructure and communication facilities are less evident, the required targeted intervention may be simpler to achieve.

There also appears to be some inequality in access to literacy and education across religious groups, although once again, this is not as marked as it is elsewhere in India. The important religious communities in the rural areas of West Bengal are Hindus (66 per cent of the population) and Muslims (32 per cent). The level of illiteracy among persons of age 7 years and above in the Muslim households (at 46 per cent) is uniformly higher as compared to the

Hindu households (35 per cent). However, Muslims as a group are not more educationally deprived than either STs or SCs, both of which show higher rates of illiteracy in rural West Bengal. Nor is the gender gap among Muslims higher than it is among Hindus, indicating that the general perception that Muslim women are less likely to be educated than their Hindu counterparts, is not borne out by the data. In urban parts of the state, however, the differentials according to religious community are more marked than they are in rural areas, so Muslims in urban areas tend to be relatively more excluded from literacy/education than Muslims in rural areas. This may reflect the fact that land reform (in terms of tenancy registration and redistribution) disproportionately benefited rural Muslims from landless households, many of whom in consequence have experienced a general improvement in social conditions including in the access to education.■

*Gender gaps in literacy tend to be similar across social and economic categories.*

### Primary school enrolment

Progress in literacy and education is dependent upon the propensity of children to go to school and also to complete at least the primary level of education. But this often means that lack of progress can become self-reinforcing, in terms of reducing the incentive among children to carry on with schooling when the parents are also not educated. It is well known that enrolment ratios of children in primary school tend to be strongly related to the educational levels among adults in the same households. This is also true of West Bengal, where studies indicate high correlation of both enrolment and attendance with parental literacy and with parents' education levels of primary and above as well as secondary and above, in both rural and urban areas. (Nagi Reddy 2003),

However, enrolment data are notoriously prone to inaccuracy for a variety of reasons. Official data based on school records tend to inflate enrolment, because of the pressure upon school authorities to indicate high levels of enrolment, because enrolment figures, especially for Class I, are typically taken as the relevant indicator for assessing the performance of the school authority as well as the resource requirement for that school.<sup>1</sup> Regular attendance of students also tends to be overestimated for similar reasons. However, data based on sample surveys are often underestimates, for different reasons. A large number of children join school at pre-primary age, even in rural areas, because of the absence of local pre-primary schooling or crèche facilities, and they all tend to be conflated into "Class I" in the data. So the "Class I" group tends to contain children in the age group 4 to 8 years, even if they are not actually "studying" in that class. This is one of the reasons why there appears to be a high dropout rate between Class I and Class

<sup>1</sup> This is one reason why the official enrolment data have not been used in this study. It should be noted that the official enrolment data provided by the School Education Department suggest much higher rates of primary enrolment than are described here, at an average of more than 92 per cent of children in the 5-8 age group being enrolled in primary schools in 2003.

*Children who have never been to school tend to be concentrated in lower income and SC/ST groups.*

II, because of the large number of underage children classified into Class I.

One proxy indicator of enrolment is literacy ratios among girls and boys of school-going age, since non-literates in this age group would suggest that such children are not and have not been enrolled in schools. It is evident from Figure 7.6 that a significant proportion of children in the age group 6-14 years were not effectively enrolled in schools in the rural West Bengal even in 1998-99. Data from the NSSO regarding school enrolment in 1995 are presented in Table 7.2. This shows that attendance rates for boys were generally slightly lower than the all-India average and substantially lower than the best performing state, which is Kerala, in both urban and rural areas. However, attendance rates for girls aged 6-10 years in rural West Bengal were generally better than the all-India average, although in urban areas the rate in West Bengal was slightly lower. For girls aged 11-13, attendance rates were higher or the same as the all-India average. Table 7.2 also indicates a surprising feature – higher attendance among the age group 11-13 years, for both boys and girls. This may be because the median age for school entry is above 7 years, and therefore taking the age-group 6-10 years inflates the denominator.

**Table 7.2 Age-specific school attendance ratios (per cent) in 1995**

Source: Nagi Reddy, based on NSSO 52nd Round Report, No. 439 (52/25.2/1).

Note: Age specific attendance ratio is defined as the percentage of children attending school in the age group 6-10 years.

	6-10 years			11-13 years		
	Boys	Girls	Children	Boys	Girls	Children
			<b>West Bengal</b>			
Rural	69	61	65	74	67	71
Urban	79	75	77	83	83	83
<b>Total</b>			<b>67</b>			<b>74</b>
			<b>All India</b>			
Rural	71	58	65	75	57	67
Urban	84	82	83	87	83	85
<b>Total</b>			<b>69</b>			<b>72</b>
			<b>Kerala</b>			
Rural	96	97	97	97	98	97
Urban	98	97	97	97	98	97
<b>Total</b>			<b>97</b>			<b>97</b>

## Girls' schooling

Malini is twelve years old, the younger daughter of a retired soldier who now lives in a village in Naxalbari in North Bengal. Malini is now in Class 7, but cannot attend the Army School which is 15 kilometres away, so she walks 2 kilometres to a higher secondary school in a neighbouring village. However, because this school cannot accommodate all the students

together, it functions three days a week for girls and three days a week for boys. There are no separate facilities for girls, including a common room, and Malini feels that the quality of instruction does not compare with the teaching at the Army primary school that she studied in previously. She would like to study further, but is not sure that she will gain admission to higher levels.

Shipra Singha's parents are illiterate, but she has passed her Madhyamik school examination. Because her father, a small cultivator with 2 bighas of land, is a panchayat samiti member in the area of Darjeeling where they live, she has been appointed a sahayika in the village Sishu Shikha Kendra, even though officially only women above 35 years are eligible. Shipra believes that now there is no constraint on girls studying, but that their job prospects are more limited even after education. Her brother, who unlike her failed the Madhyamik examination, has a job as a peon earning Rs. 3,000 per month.

In the village school in one of the poorer and more backward islands of the Sunderbans region of South 24 Parganas, girls now outnumber boys in the middle and senior classes by a ratio of 2:1. The teachers believe this is because they are more serious and consistent as students, but others suggest that girls are keener to learn simply because they realise that they have access to something that was denied to their mothers. The examination results in this area tend to confirm that girls are performing better; in both Madhyamik and Higher Secondary examinations, girls' pass percentages and overall marks have been higher than those for boys in recent years.

It has been found by a number of studies relating to different parts of the state, that the never enrolled children tend to be more concentrated among the lower income groups and the Scheduled Tribe and minority populations.<sup>2</sup> This reinforces the point that was already observed, that regional differences tend to dominate in questions of literacy and education, with less developed and more inaccessible regions indicating less delivery of public education systems. At one level, this also makes it easier to identify the focus areas for policy intervention – mainly those regions with high ST/SC/Muslim population.

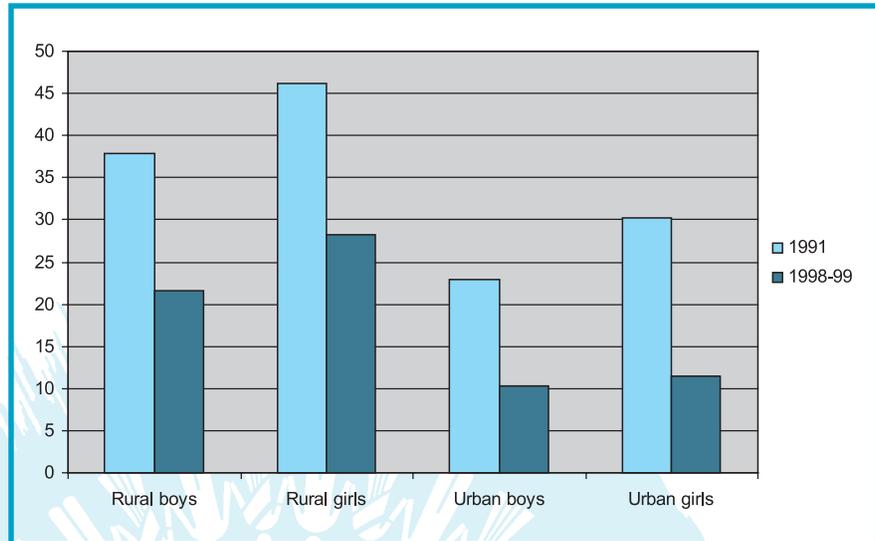
*Girls are outperforming boys in schools in many areas.*

<sup>2</sup> Chattopadhyay et al, 1998; IIM Kolkata 2001; Pratichi Trust 2002.

**Figure 7.6 Per cent of non-literates in the age group 7-14 years**

Source: Nagi Reddy (2003) using NSS and NFHS-2.

Note: Figures for 1998-99 refer to children in the age group 6-14 and so are not strictly comparable with those for 1991.



There are a number of reasons for the relatively low ratio of attendance at schools in West Bengal, compared to say, Kerala. The most important reason relates to the sheer physical lack of schools in the vicinity. Lack of basic infrastructural facilities continues to be a serious concern for the proper growth of primary education in West Bengal. Not only are there not enough schools, even those that exist often do not have buildings to speak of, not to mention other facilities and equipment. Despite the rapid increase in the number of schools and school teachers over the 1990s, there are very severe gaps in physical availability of schools. The number of schools with no room is depressingly high, and amounts to nearly one-fifth of all schools, as can be seen from Table 7.3. When a school does not have a building, it does not only affect the quality of the learning experience; it can even affect the quantity of instruction, since such schools cannot function, for example, on rainy days.

*Poor physical infrastructure is a major problem in the public school system.*



Schools with only one room amounted to nearly another one-fifth. This suggests that all the primary classes are therefore taught together in one room, which also cannot be considered desirable, since multi-grade classrooms are clearly less conducive to learning and can become major sources of distraction. While the average number of teachers per school is 3, this is still below the number of classes, which must cover at least Class I-IV and sometimes also Class V. This means that at least two classes would be taught together on average. It was estimated in 1997 that more than half the schools had only one or two teachers, so that multi-grade simultaneous classes were the norm in these schools. This makes the teacher-student ratio, which otherwise seems to be reasonable at under 50 students per teacher, appear much more problematic.

In addition, there are major inadequacies with respect to the

physical condition of schools and the absence of necessary fitting and fixtures, toilets and basic equipment and teaching materials such as blackboards. Many rural school buildings are characterised by poor natural light and often no electricity, with inadequate toilet facilities (especially for girl students) and mostly very insufficient furniture, which make them unattractive places to be in for young children. Separate urinals for girls are very rare, while latrine facilities do not exist in most rural schools.

Year	1986	1993	1997
Percentage of schools with:			
No room	4.9	5.0	18.0
One room	26.9	23.5	18.0
Two rooms	23.0	32.4	23.1
Three or more rooms	45.2	39.1	40.9
Teachers per school	3.2	3.0	3.0
Students per teacher	36	46	47
Percentage of trained teachers	64	63	66

**Table 7.3 School facilities**

Source: Nagi Reddy (2003)

Very clearly, the infrastructure has not kept pace with the increase in the student enrolment which might have resulted either from the various reforms introduced at the primary education level or from the effects of the total literacy campaigns in changing parental attitudes towards education. This is despite the significant increase in the number of schools and school teachers in recent years, after a period in which all such expansion was stayed by a decision of the Calcutta High Court. There has been some improvement in basic infrastructure in terms of school buildings, as Table 7.4 below indicates. However, the number of students per teacher appear to have increased, even according to the official data.

The recent increase in the number of schools has still not been enough to meet the evident requirement and desire for education among the population. Sheer lack of physical infrastructure and facilities is therefore now a major bottleneck on the expansion of primary education facilities in the state. This suggests that the issue of finding more resources for education – especially for increasing the availability and quality of the physical infrastructure - is likely to become a crucial one.

Another important issue relates to dropout from school, especially in the early stages of primary education.<sup>3</sup> It has already been suggested that the dropout rates that are typically presented may be overestimates, mainly because enrolment itself is over estimated at the primary stage and therefore subsequent data for later classes do not capture similar numbers. This is confirmed by field studies conducted by IIM Kolkata, which have found that the dropout of rural children from primary school is insignificant, at less than 3 per

<sup>3</sup> In India in general primary education refers to education in classes 1 to 5, but in West Bengal, most of the primary schools (except approximately 3500) have only classes 1 to 4. Class 5 is attached to junior/secondary/higher secondary schools. The elementary education referred to in this discussion comprises of classes 1 to 4 only.

*The quality of primary education continues to be a serious concern.*

cent, compared to around 27 per cent of children who were never enrolled in this age group.<sup>4</sup> Therefore the problem of high dropout at primary level may not be as severe as generally imagined. It should also be noted that all surveys point to high and growing positive interest in schooling among the population, including among less advantaged groups in society, which tend to ensure at least some continuation of schooling regardless of inherent difficulties. The typical reasons for dropout that surveys have revealed include lack of interest in education, inability to meet the expenses, distance of the school from the home, and the need to attend to domestic and other household duties, including collection of fodder and water. In urban West Bengal, the most important reason that surveys have highlighted is the inability to meet the expenses associated with schooling.<sup>5</sup> Dropout rates tend to be higher in the 10-14 years age group, at around 18 per cent. This is not surprising, because of the shift from primary to middle school, and because of the lesser likelihood of middle schools in the vicinity.

There are serious and continuing concerns about the quality of primary education, in both urban and rural areas. The 1992 Report of the State Education Commission made a number of comments about delivery of public education, which were repeated by a more recent report of 2002 by the Pratichi Trust.<sup>6</sup> Some of the areas of concern identified in both reports include: poor infrastructure and inadequate equipment in schools; sporadic and irregular attendance of some teachers; lack of accountability of teachers; and inadequate school inspection. The District Inspectorate has such a huge task that it is impossible for it to meet its responsibilities adequately. There is an average of 90 schools per sub-inspector, in addition to which these sub-inspectors are responsible for a large number of other administrative tasks, such as enforcing service and leave rules of teachers. This suggests that there may be a need to restructure the organisation and administration of schools, to make them amenable to greater local community control. ■

### Public expenditure on education

The state government in West Bengal is directly responsible for much more of the overall educational system than in many other more “advanced” states, and therefore the public sector in West Bengal bears a disproportionate burden of the primary education system in particular. Education expenditure grew faster than the state domestic product during the 1980s until the early 1990s, and slowed down thereafter. As a result, education expenditure as a proportion of SDP increased from about 3 per cent in the early 1980s to 4.8 per cent in the early 1990s, and was around 3.5 per cent in the late 1990s.

<sup>4</sup> 2 IIM Kolkata “The role of panchayats in primary education in West Bengal”, August 2001.

<sup>5</sup> Ibid.

<sup>6</sup> Government of West Bengal: Report of the Education Commission, 1992; and the Pratichi Education Report, 2002, Kolkata.

The growth of education expenditure has been faster than the population growth. Per capita real expenditure on general education more than doubled during 1980-81 to 1997-98. Total expenditure on general education as a proportion of the total expenditure of the West Bengal government has similarly increased, from less than 6 per cent in the early 1980s to more than 7 per cent in the late 1990s. More than 90 per cent of the total public expenditure on education is spent through the Education Department. The remaining part is spent through Social Welfare, Tribal Welfare, Rural Development departments, etc.<sup>7</sup> A very small proportion of the education department's expenditure (less than 1 per cent) is incurred on capital formation. The plan expenditure of the education department as a percentage of the total plan expenditure of the West Bengal government has remained constant around 7 to 8 per cent during 1980-81 to 1993-94 and declined substantially in recent years.

*It is essential to find more resources for universal schooling.*

Per student expenditure at 1997-98 prices was about Rs. 590/- in 1980-81 and increased to about Rs. 1302/- by 1997-98. Since this does not include the spending by private unaided schools and Central schools, it may be an underestimate. However, it is worth noting that the relative importance of elementary education as a proportion of total general education expenditure fluctuated around 36 per cent during 1980-81 to 1987-88 and fell to around 33 per cent by the late 1990s. However, it increased subsequently, largely due to greater outlay on salaries after the Pay Commission award.

Salaries have been the largest single element of the expenditure on elementary education, accounting for about 90 per cent of the total during the triennium ending 1999-2000.<sup>8</sup> The next most important items are textbook printing and school construction and repairs, each of which accounted for about 2.1 per cent of the expenditure. For midday meals, the expenditure incurred was 1.5 per cent, for teachers training 0.4 per cent and for inspection 1.6 per cent.

There are currently more than 2000 schools providing mid-day meals, and this number is likely to reach 5000 by the end of 2004. The provision of mid-day meals is an important step towards ensuring better nutrition among the young as well as providing incentives for children to attend school regularly, and clearly can be crucial in improving human development conditions generally. However, the problem of finding finances to support a mid-day meal programme for all the children in public schools at elementary level, still remains a difficult one. Besides the financial cost (currently an additional estimated Rs. 600 crore per year) there is the associated infrastructure requirement in terms of utensils, people to cook, centralised kitchens, etc.

<sup>7</sup> Budgetary Resources for Education, 1951-52 to 1993-94, Department of Education, MHRD, Government of India, 1995

<sup>8</sup> The salary bill has been very significantly increased from 1997-98 onwards by the implementation of the Pay Commission award, which also affected school teachers. The increase in number of teachers has also played a role.

*A National Fund is necessary to ensure mid-day meals for children in government schools in all states.*

However, the preparation of mid-day meals need not be within the school, and the state government is actively considering using other institutions for the purpose, such as involving ICDS and anganwadi workers in the activity, as well as getting the participation of parents' groups as in some other states. It is possible to argue that since the provision of mid-day meals in schools is both desirable and feasible at a country-wide level, but not so easy for state governments with hard budget constraints, a National Fund should be set up specifically for this purpose. This remains an area where the state government should take active steps to ensure universal provision.

The universalisation of primary education has become an important subject both for the state and central governments, and the state government is making efforts to achieve the goal of free and compulsory primary education for all in spite of its resource constraints. Currently, there are around 54,000 primary schools in West Bengal, with more than 1.5 lakh teachers.<sup>9</sup> However, universalising primary education would require substantial expansion of even these large numbers. This would require about Rs. 2,328 crores of additional expenditure including about Rs. 1000 crores as recurring costs. The state government also estimates that more than 7,000 new primary schools would need to be constructed.<sup>10</sup> While there has been considerable progress in terms of recruiting new teachers, constructing new schools, constructing additional rooms in the existing schools, etc, in recent years, this still remains a gigantic task, for which the issue of resource mobilisation is now the most immediate concern. ■

### Recent developments in primary education

The West Bengal DPEP<sup>11</sup> was formally launched in 1997-98. The main objectives of the DPEP project are to support the public education system through interventions designed to enhance student enrolment, reduce dropout rate, provide enhanced access and better facilities for primary education, etc. It therefore involves recruiting additional trained teachers to cope with the expected enhanced student enrolment, as well as providing increased access to children for primary education by constructing new schools and appointing additional qualified teachers in those schools etc.

The project was launched initially in five districts of West Bengal (Bankura, Birbhum, Koch Behar, Murshidabad, South 24 Parganas) with a project cost of Rs. 200 crores over a period of 7 years. The project cost for each district is Rs. 40 crores, out of which a maximum of 24 per cent can be spent on civil construction

<sup>9</sup> IIM Kolkata 2001.

<sup>10</sup> Annual Report 1996-97, Department of School Education, Government of West Bengal

<sup>11</sup> Funded by the Department for International Development, U.K.

(basically building support for primary schools) and 6 per cent on administrative costs. The remaining 70 per cent of funds is to be spent mainly on access, retention, equity and quality improvement interventions as planned by each district, essentially training of teachers and members of the Village Education Committees. The DPEP project has recently been expanded into another five districts (Dakshin Dinajpur, Jalpaiguri, Malda, Purulia, Uttar Dinajpur). It has been found that the enrolment, retention and awareness of parents to send their children to schools have increased to some extent in the DPEP districts. The DPEP also has contributed in devising programs to provide primary education to deprived urban children and to disabled children.

However, the changes brought about by the DPEP programme may not have been as dramatic as originally hoped for. Table 7.4 shows the recent pattern of facilities as between primary schools in DPEP and non-DPEP districts. While official enrolment ratios are marginally better, it is evident that for several other indicators such as teachers and rooms per school, the non-DPEP districts are slightly better off even without the large additional resource outlay that has occurred in the DPEP districts.

	DPEP districts	Non-DPEP districts	Total
Number of schools	23852	25976	49828
Number of teachers	71328	81744	153072
Net enrolment rate (5-8 years)	94.95	89.85	92.1
Teacher per school	3.11	3.19	3.15
Per cent 1-teacher schools	11.8	4.1	7.8
Per cent 2-teacher schools	34.6	26.7	30.5
Pupil-teacher ratio	56.62	57.07	56.84
Per cent without building	1.6	1.4	1.5
Per cent with 1 room	31.6	15.2	23

**Table 7.4 Primary school data as on 1 April 2003**

Source: West Bengal Sarva Shiksha Abhiyan

In 1997 a new system of alternative schooling was launched by the state government, the Sishu Siksha Karmasuchi. The purpose was to provide access to basic education to the large number of children in the age group 5-9 years who are unable to get enrolled in the formal primary school because of lack of easy access, unsuitable school timings, lack of accommodation or similar problems. Under this programme, more than 11,000 Sishu Shiksha Kendras, or Child Education Centres, catering to 7.5 lakh students, were set up between 1997 and 2001, and many more are envisaged. The programme is under the supervision and control of the Department of Panchayats and Rural Development, which in turn means that the local panchayats have authority over the SSKs in their own villages and monitoring is done by the Village Education Committees.

*New schemes of alternative schooling are being developed...*

The SSK programme allows for an SSK to be set up in any village where there are twenty or more children in the age group 5-9 years who do not have access to the formal school system, with the proposal coming from the gram sansad and being vetted by the panchayat system. Each SSK has a Managing Committee constituted by the gram sansad, with 7 representatives of guardians, 1 person interested in education and 1 member of the gram panchayat – and at least 3 out of the 9 members must be women. The SSKs have to run for at least three hours a day for 200 days in a year, but all timings are flexible and depend upon local suitability. There are at least two teachers (called Sahayikas) in each SSK, who must be women above 35 years of age. They are appointed by the Managing Committee on an annual contractual basis at a monthly honorarium of only Rs. 1,000, compared to the normal monthly salary of a primary school teacher in the formal system, of at least Rs. 5,000 to 6,000. On average about 80 children are enrolled in each SSK.

The SSKs do not receive any infrastructural facilities from the state government. All such facilities, even buildings, etc., are to be provided by the panchayats from own resources. The state government provides the salaries of the Sahayikas and the free text books (which are the same as those used in the formal system) but there are no arrangements for other incentives such as mid-day meals or school uniforms.

The SSKs have apparently been deemed to be successful, which is why they continue to grow in number and similar schools are being opened in wards of urban municipalities. The programme is now being extended to cover middle school children as well. The Madhya Siksha Karmasuchi was launched in 2001, to provide community managed secondary education to children in the age group 9 years and above, who for various reasons are unable to attend formal secondary schools. The system is broadly similar to the SSK. However, the teachers can be male or female without age bar; the head teacher receives Rs. 3,000 per month and the other teachers Rs. 2,000 or Rs. 2,500 depending upon their degrees.

There are many positive features of the alternative system, such as greater flexibility, greater responsiveness and approachability of the teachers, and more possibilities for supervision by and accountability to the local community through the Managing Committee and the panchayat. This may explain the enthusiasm on the part of the state government and many other observers for this programme.<sup>12</sup> However, there are problems with making this the basic way forward in expanding the scope of primary education in the state. Apart from proper infrastructural facilities, quality education is another important factor to be considered immediately

<sup>12</sup> The Pratichi Report, for example, finds instruction in SSKs to be more effective than formal schooling especially for children from backward and underprivileged groups.

for these otherwise out-of-school children. In many more backward areas where such education is really required, it is difficult to find a woman above 35 years who is able to teach primary children. More importantly, the basic assumptions, that anyone can teach children and that pedagogy is unimportant at elementary school level, must be faulted. The lower salaries paid to teachers, the lack of infrastructure and the absence of proper facilities all point to the creation of an inferior level of education compared to the formal school system, rather than ensuring equal opportunities for all children. Therefore it is necessary to avoid the possibility of this parallel system becoming another means of class differentiation in school education.

*...but these should not divert attention and resources from universalising and strengthening the public education system.*

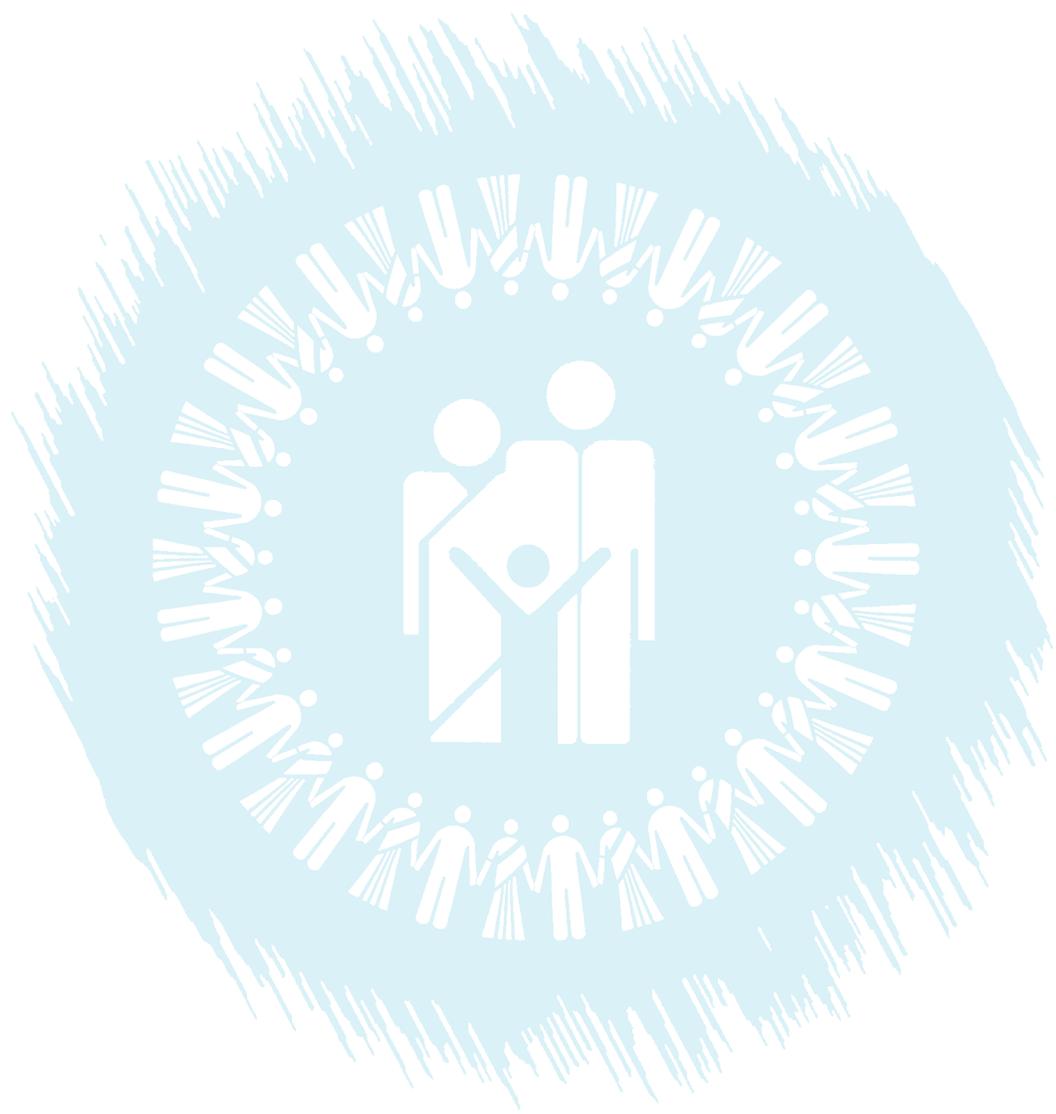
In turn, it is necessary to devise ways of making the formal system more responsive to local needs and to the specific requirements of children from disadvantaged groups, perhaps by increasing community participation in the supervision of such education. There is therefore a strong case for increasing the control of panchayats over the formal school system in the state. This is possible given the already evident strengths of panchayats and their greater degree of democratic representation in West Bengal. The model provided by the Kerala experience, whereby the primary education system was brought under the supervision and control of panchayats, may be useful in this context. ■



## CHAPTER 8

# Human Security





## Human Security

Human security is a broader concept than that of human development. If human development is defined as a process of widening the range of people's choices, human security means that people can exercise these choices safely and freely, and with some confidence that today's opportunities will not be totally lost tomorrow. Effectively, this requires safeguarding the vital core of all human lives from critical pervasive threats, in a way that is consistent with long-term human fulfilment. This is also different from notions of national security (especially in the military sense) since the focus is on individual lives, while recognising the role played by social arrangements and processes. Also, here the concern is with the "downside risks" of human lives, and preventing or mitigating their effects, rather than with the more positive expansion of freedom.

*Human security requires safeguarding the vital core of human lives from critical and pervasive threats.*

Many forces can erode or provide threats to human security, including economic, food, health, environment, personal, community and political forces. Several of these aspects are considered in other chapters. Here some features such as personal and community security are considered, in terms of the level of crime and violence, as well as the extent of protection against impact of natural disasters and against economic volatility. ■

### Personal security: violence and crime

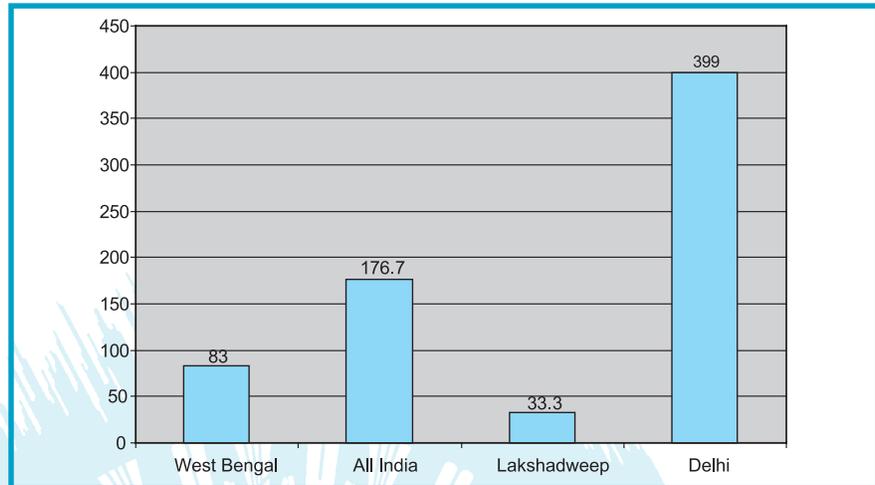
The crime situation in West Bengal has always been better in comparison to most other states in India, and it also seems to have been improving over time. Figure 8.1 indicates the relative position of West Bengal in 2000. Not only was the rate of cognisable crime (relative to population) in West Bengal less than half the national average, it was almost one-fourth of the crime rate in the worst region, Delhi, and not very much higher than the best performing region, Lakshadweep. In terms of rank, West Bengal had the fourth lowest crime rate among all 32 of the states and Union territories in the country. Furthermore, the number of cognisable crimes in West Bengal actually decreased over the period 1997-2001, which is in marked contrast to most of the major states. Further, in terms of "violent crimes" (Murder, Attempt to Commit Murder, Culpable Homicide, Rape, Kidnapping and Abduction, Dacoity, Robbery, Arson, Riots and Dowry Deaths), West Bengal seems to be one of the safest places in India, with third rank. The rate of violent crimes in West Bengal was 13.4 per lakh population in 2000, compared to the national average of 23.8 and the rate of 48.7 in the worst state, Rajasthan.



**Table 8.1 Crime rate in West Bengal compared to the rest of India in 2000**

Crime rate is defined as the ratio of cognisable crimes under the Indian Penal Code per lakh of total population

Source: *Crime in India, 2000*



*West Bengal is generally a more secure place for women than many other parts of the country.*

Among the metropolitan cities, Kolkata is among the safest, just after Chennai. Among all major cities in India, Kolkata contributed only 3.4 per cent of total crimes under IPC in 2000, which is well below its share of population of these cities. In terms of recorded crimes against women, West Bengal had a crime rate of 7.1 compared to the national average of 14.1 in 2000 and 22.3 in the worst performing state, Madhya Pradesh. The crime rate against women in Kolkata was 4.3 in 2000, compared to 17 for the 23 major cities of India. Apart from the aggregate statistics, there is no question that among metros Kolkata is generally perceived to be safer for women in public places, and that in general in the state women are not under constant threat of violence or with a strong sense of physical insecurity. In this respect West Bengal is certainly a more secure place for women than many other parts of the country. However, domestic violence (“cruelty by husband and relatives”) was the most significant form of violence against women in West Bengal, and this is widely known to be under-reported across India. In general information on the actual extent of domestic violence is difficult to obtain, and there is the possibility of violence against women in less public spaces, which does not get recorded.

It is also worth noting that the conviction rate (percentage of cases that resulted in conviction to the number of cases in which trials were completed, during a year) of IPC crimes during 2000 in West Bengal was only 22.6 per cent, which was among the lowest in India. The All-India average ‘conviction rate’ during 2000 was 41.8 per cent. In particular, the conviction rates for kidnapping/abduction of women and sexual harassment were considerably lower in West Bengal compared to the national averages.

West Bengal was the first state to institute a Human Rights Commission of its own, which suggests that there has been some



concern at the state government level to ensure that in addition to crime control and prevention, the violation of human rights should be monitored and controlled. Government records indicate that the threat to personal security from the state is minimal in West Bengal. On the basis of police strength (civil and armed), the rate of complaints against per 100 policemen was 0.1 in West Bengal in 2000, which was lower than the national average of 5.3 and also significantly lower than most other states. According to the West Bengal Human Rights Commission, the annual average number of custodial deaths in the state in the period 1997-98 to 1999-2000 was 66, with around two-thirds occurring in jail custody and one-third in police custody.

*The state also has a very good record on security for people of different communities and Scheduled Caste groups.*

One area in which the state performs very well is with respect to violence against Scheduled Castes and Tribes. The emphasis on these groups in the land reforms and in the subsequent programmes for social and economic advancement of the weaker sections in general, has found some resonance in the much lower incidence of crimes against these groups, and the generally greater sense of security among such people. The national violent crime rate against SCs/STs in 2000 was 2.5 per lakh of total population in 1999 and 2000. However, West Bengal, which accounts for around 12 per cent of the Scheduled Caste population in the country, did not have any reported crime against this group for several years up to 2000. Similarly, there were no reported crimes at all against Scheduled Tribes in West Bengal during 2000. In this respect, West Bengal seems to be among the safest places in India. This is a major achievement given the previous high levels of violence recorded in the state especially in the 1970s.

In terms of community security defined by religion, the state also has a good record. This is especially significant given the early history of the state, the violent effects of the partition of the state in the early 20<sup>th</sup> century, the post-Independence partition riots, as well as the fact that the leadership of many of the important community-based organisations such as the Hindu Mahasabha originated in Bengal. During the past two decades, and especially since 1990, the West Bengal government has effectively safeguarded the minority communities of the state, even in the times of country-wide communal tension (for example, after the Babri Masjid demolition in 1992 and the post-Godhra incident riots in Gujarat in 2002). In this respect, there is no doubt that social conditions in West Bengal remained almost entirely unaffected, at times when states like Gujarat and Maharashtra were in the grip of major communal tension and violence. Because of this greater prevailing security as well as the effects of local participation in government through the panchayats and their activities, the communalisation



*Some parts of the state are especially prone to floods and cyclones.*



of public and social life is much less developed in West Bengal than in many other regions of the country. In recent times, this almost complete avoidance in West Bengal, of what has become a major “downside risk” of human security in some otherwise developed and economically advanced states, must be seen as a major achievement. ■

### Protection against the effects of natural disasters

West Bengal is prone to various kinds of natural disasters. The most significant of these has been floods, which have been the major cause of agony due to natural disaster. In addition, cyclones have also wreaked substantial damage periodically. In the 1980s and early 1990s, it was estimated that more than 45 per cent of the villages in the state were susceptible to floods, and more than 40 per cent of the land area of the state has been identified as flood-prone.<sup>1</sup> However, there was less incidence of flooding subsequently, with the major exception of the devastating flood of September 2000 in the state. This turned out to be both more widespread and damaging in terms of life and property than previous floods. In addition, there have been other natural calamities, such as drought and earthquakes.<sup>2</sup>

Natural disasters have a number of adverse effects on human security. The most obvious immediate negative effect relates to destruction of life and property. There are also implications for livelihood and employment of people in the affected areas, and for the immediate viability of cultivation and other economic activities in the affected areas. Further, floods and cyclones in particular give rise to major health hazards, with the threat of epidemic disease resulting from such calamities being ever-present. It is worth noting, however, that none of the calamities mentioned above resulted in famines or epidemics. Following the severe flood of 2000, some water-borne diseases did emerge and spread, but this did not assume epidemic proportions. Thus, natural calamities have been managed such as to ensure that epidemic situations did not develop, even though the extent of other damage has occasionally been severe.

Prevention, where possible, and control are obviously even more crucial than the management of natural disasters. In order to reduce the problem of flooding, the construction of embankments is an important task, and the state government has allocated substantial funds for such construction, to be locally managed by panchayats. Most of the new construction is planned for the sub-Himalayan region, which has tended to be worst affected in recent times,

<sup>1</sup> Sengupta (2003), quoting Planning Commission, Government of India, Tenth Five-Year Plan.

<sup>2</sup> Guha Roy and Kasturi Sen (2001).

followed by the improvement and strengthening of existing embankments along the Gangetic plain. Some construction is also planned for the tidal basin area.

*Drought management is an important issue for the western districts.*

West Bengal lies along the Bay of Bengal which is exposed to cyclone-related hazards. About 5 to 6 cyclones form in the Bay of Bengal and the Arabian Sea every year, of which the majority are in the Bay of Bengal. Among all natural calamities, the devastation caused by cyclones tends to be the most sudden and severe; however, the effects can be mitigated by timely and precise weather forecasts. In recent years, improved forecasting, better disaster preparedness in highly exposed regions and more systematic response by local authorities have tended to reduce the human and animal deaths caused by cyclones, even if they have not managed to reduce the damage to property and real assets. However, there is still scope for much improvement in this matter.

The western districts of the state, especially Birbhum, Bankura and Purulia, are drought-prone and tend to receive inadequate rainfall. Drought management requires a combination of sustained and improved water harvesting techniques which reduce dependence upon any one rainy season, and much improved transport and communications links between the drought-affected areas and the rest of the state and neighbouring regions, such that greater supply of food and other commodities is provided during and just after the drought. There are currently various experiments under way designed to improve water management in the drought-prone districts (such as the water harvesting project in Purulia), although these are still in the nature of micro-initiatives rather than more widely based and systematic state government strategies. The improvement of transport links is critical in this regard. In this context it should be noted that although in September 2003 all the blocks of Purulia, seven blocks of Bankura and four blocks of Medinipur were declared drought-hit, this did not substantially affect local food availability or food prices because of measures to ensure increased supply into these areas.■

## Social security

As in most other parts of India, social security schemes are relatively underdeveloped in West Bengal. It has already been noted that employment patterns have entailed a shift towards more casual and less protected work at the margin, and there is very little in the form of unemployment benefit. However, there are some social security services organised by the state government that cater to some beneficiaries. These include pensions for disability, widowhood or old age, which are currently being provided to more



than 52,000 beneficiaries at the rate of Rs. 500 per month. There are also several publicly run homes and hostels to cater to the needs of women rescued from trafficking or victims of violence as well as working women's hostels. An office has been set up for a Commissioner to monitor the rights and conditions of person with disability. In general, such schemes and programmes remain small relative to the requirement in society.



## CHAPTER 9

# Environmental Issues





## Environmental Issues

This chapter considers the environmental issues and concerns that affect human development and quality of life. Two natural resources, which are fundamental to human life – land and water – are discussed, as well as the effects of atmospheric pollution on living conditions.

*Patterns of land and water use affect degradation and sustainability.*

Land is a vital input in many economic activities – agriculture and forestry; residential, commercial and industrial uses; and mineral exploration. It also supports an enormous variety of ecosystems. Changes in land use, for example from forests to agriculture and to human settlement, are also associated with loss of biodiversity and many habitats, such as wetlands. This raises important questions regarding the relationship between land use patterns and its possible degradation and sustainability in West Bengal.

Water is so essential a natural resource that without it, all life on earth would perish. Apart from the quantity, the quality of water is an increasingly important dimension of water system. Water pollution has increased from population, industry, and agriculture to the point where human health is endangered. Thus, for example, in West Bengal the scarcity of groundwater has been increasing due to the twin presence of a gradual fall in the underground water level and a decline in the quality of that water due to salination and arsenic and fluoride contamination.

Land and water are not disjoint resources. Many water resource systems are related to land use patterns. Some of our drought problems occur because crops are being grown in areas that probably should be left for alternative vegetation. The exhaustion of groundwater in several regions is occurring because of overdevelopment of agriculture and population relative to long-term carrying capacity. Water 'shortage' is frequently thought to exist even when this reflects grossly inefficient irrigation practices. Chemical fertilisers and pesticides used in agricultural activities tend to pollute surface water. There are also important issues related to property rights in this context. ■

### Land use patterns

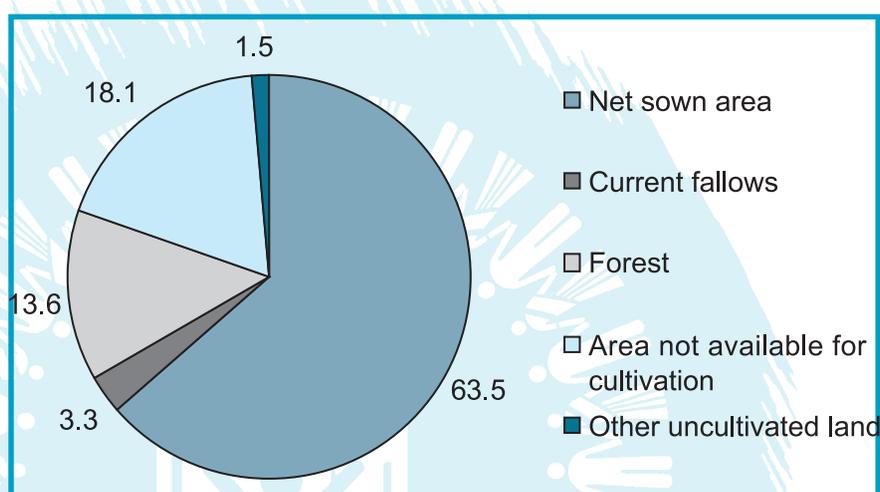
West Bengal has a total land area of 8,875 thousand hectares, of which around 63 per cent is under agriculture and around 14 per cent is under other types of land use. Over the last two decades, the net sown area and its share in total area have remained more or less the same. Between 1980-81 and 2000-01, the forest area has increased by 10.4 per cent. There has been an appreciable decline in barren and uncultivable land by 41 per cent, which can be explained mainly by the increase of 20 per cent in the area under



non-agricultural uses, essentially a transfer of land in favour of urbanisation, industrialisation, mining, infrastructural growth. However, this shift has been decelerating recently, mostly because of the decline in mining activities which was already noted in Chapter 4. There has also been a 52 per cent decline in land under miscellaneous tree groves not included in net area sown, and an increase of 334.3 per cent in the area under current fallow. This could be due to either the induction of degraded lands under cultivation or changes in cropping pattern and cropping intensity.

**Table 9.1 Land use in West Bengal in 2001-02**

Source: Bhattacharya (2003) using Department of Agriculture, GoWB.



The relatively small expansion of forest area, accompanied by declining area of land under miscellaneous tree groves and permanent pastures and other grazing land (which declined by 46.8 per cent even over the period 1996-97 to 2000-01) may lead to serious environmental consequences, such as loss of topsoil, biodiversity, livestock carrying capacity etc., unless compensated by growth of forest biomass. However, agriculture competes in land use with forestry because of population pressure. As the agricultural land is not available for expansion of forest cover, it is only the cultivable wastelands and part of the fallow land other than current fallows, which are the available potential areas on which forest cover can be expanded.

Depending upon the soils and climatic variations, the state can be broadly divided into six agro-climatic regions :

- the Hill Region in the north
- the Terai and Teesta Alluvial Region of North Bengal
- the Lateretic, Red and Gravelly Undulating region in the west
- the Coastal Alluvial Region in the south
- the Gangetic Alluvial Region in the east
- the Vindhya Alluvial Region in the centre.



The Hill Region, which is warm humid to hot humid, covers the districts of Darjeeling (excluding Siliguri sub-division) and the northern fringe of Jalpaiguri district. This is heterogeneous but mainly forest area intercepted by terraced land under cultivation with field and plantation crops. The soils on the steep hill slopes are shallow in depth with poor water retention capacity and excessively drained with high potential for erosion. The soils of the foothill slopes and valleys are moderately deep and well drained with moderate erosion hazards. About 30 per cent of the land in this region is available for cultivation, with very limited scope of land extension. In spite of moderately good fertility status of the soil, crop yields are rather poor due to soil acidity, high runoff rate and limiting soil depth.

*Land conditions vary greatly across agro-ecological zones.*

The Terai and Teesta Alluvial Region, which is hot humid, consists of the alluvial plain of Jalpaiguri and Koch Behar, Siliguri sub-division of Darjeeling and Islampur sub-division of Uttar Dinajpur. The soils of this region are moderately deep to deep. They are mostly imperfect and/or poorly drained. About 20 per cent of the land is prone to inundation and water logging. Coarse sands are deposited on cultivated and cultivable lands making them almost barren for the next few years. The soil reaction is moderate to strongly acidic. While doublecropping is common in this region, the productivity of this soil is generally low.

The Lateritic Region partly coincides with hot moist sub-humidity and hot dry sub-humidity. This region comprises part of the Gangetic Plain covering the districts of Malda (small pockets), Dakshin Dinajpur, and western parts of Bardhaman, Birbhum, Bankura, Purulia and Medinipur. In some areas of this region, upland soils are prone to acidity and poor in organic matter. The lands in lower situations are rich in fertility whereas those in higher situations are deficient in available plant nutrients and susceptible to erosion hazards. Due to poor rainwater retention capacity, there is severe runoff and soil loss in upland situations. The rice crop accounts for 90 per cent of the crop area in this region.

The Coastal Alluvial Region is of the moist sub-humid type. The southern portions of the North and South 24 Parganas (including islands of the Sundarbans), Haora and Medinipur districts constitute this region. Soils in this region are imperfectly drained with moderate to very high salinity hazards. The soils are alluvial and generally saline. Due to the predominance of magnesium, the soils become hard and dry and become non-porous when wet, impeding drainage facility. Both deep tubewells and shallow tubewells are not economically viable for such tracts. This area is, as a result, primarily a monocropped area, rice being the only field crop.



*In some districts, more than half of the land is degraded.*

The Gangetic Alluvial Region, which is hot moist sub-humid, is a non-saline alluvial region mostly on the north and eastern part of river Ganga. It comprises Nadia and parts of Malda, Dakshin Dinajpur, Murshidabad, Bardhaman, Hugli and 24 Parganas districts. Soils of this area are mostly neutral in reaction. Upland soils are lighter in texture and contain higher proportions of fine sand and silt, which helps water recharge. Here the groundwater potential is very high and the aquifer character is mostly unconfined. The region is suitable for cultivation of all kinds of field and horticultural crops. With the development of ground water irrigation, a large area has been brought under multiple cropping and high yielding varieties of cereals are being grown in all the seasons. Cropping intensity in this region is therefore quite high compared to other regions. However, a significant reduction in the area under plantation crops (like mango, litchi etc.) has occurred here. It seems that plantation crops have given way to field crops because of changes in the relative rates of return.

The Vindhya Alluvial Region is of the hot moist sub-humid type. This centrally located region consists of the western parts of Murshidabad and Hugli, the eastern parts of Birbhum and Bankura, the central parts of Bardhaman and Medinipur and the northern parts of Haora. Here the soil reaction is acidic to neutral. The soils here are highly responsive to the application of fertilisers. About 10 per cent of the area is susceptible to flooding caused by impeded drainage and river overflows during rainy season. Rice is the major crop; in addition, some of the best potato growing land in all of India is located in this region. Besides, water from three major river valley projects flows through this area. There is also extensive use of groundwater for irrigation purposes here. ■

### Land degradation

Table 9.1 describes the extent of land degradation by district. The districts of 24 Parganas (North and South) have the highest percentage (69.2 per cent) of degraded non-forest lands followed by Medinipur East (65.9 per cent), Haora (63.2 per cent) and Darjeeling (35.3 per cent). All of these are well above the state aggregate of 28.8 per cent.



District	Per cent of degraded land to total non-forest land	Rank
Darjeeling	35.26	13
Jalpaiguri	18.93	7
Koch Bihar	18.79	6
Dinajpur (N & S)	4.36	1
Malda	7.53	2
Murshidabad	16.00	5
Nadia	13.85	3
24 Parganas (N&S)	69.2	16
Haora	63.16	14
Hugli	15.97	4
Burdwan	19.74	8
Birbhum	23.67	11
Bankura	19.86	9
Purulia	27.16	12
Medinipur (West)	20.45	10
Medinipur (East)	65.86	15
<b>West Bengal</b>	<b>28.77</b>	

**Table 9.1 Land degradation in West Bengal**

Source: Bhattacharya (2003) based on Soil Conservation Department, GoWB

There are various sources of problems related to soils, such as soil erosion, soil depth, drainage, waterlogging and salinity. They have important implications for land use planning. Effective soil depth governs root development and is a source of moisture and nutrient. Four classes of drainage have been found to adversely affect soil and crop management, as indicated in Table 9.2.

Class	Distribution	Area (000 ha)
Very Poorly Drained	Parts of Medinipur, Hugli, 24 Pgs (S)	173.4
Poorly Drained	Parts of 24 Pgs, Nadia, Murshidabad, Jalpaiguri, Koch Behar, Medinipur, Howrah, Hooghly	2453.3
Imperfectly Drained	Parts of Burdwan, Birbhum, Howrah, Maldah, West Dinajpur, Medinipur & Purulia	1747.6
Excessively Drained	Part of Darjeeling, Jalpaiguri, Bankura & Purulia	64.7
<b>Total</b>		<b>4439.0</b>

**Table 9.2 Districts affected by soil drainage problems**

Source: Bhattacharya (2003) citing Status of Environment in West Bengal, p 54.

Soil erosion is another important problem, of which erosion by water is a major component, and can lead to declines in the fertility of the soil. In a recent study (Das, 1997) conducted in Birbhum district of West Bengal, some causes of soil erosion have been identified. These include low forest cover, ill-conceived canal irrigation without alignment of field channels, unrestricted grazing, improper bunding, excessive use of irrigation water and cultural practices associated with lack of education. Table 9.3 indicates which districts are more affected by this problem.

**Table 9.3** Districts affected by soil erosion problems

Source: Bhattacharya (2003) citing *Status of Environment in West Bengal*.

Class	Distribution	Area (000 ha)
Severe	Parts of Darjeeling, Purulia, Birbhum, Bankura and Medinipur	57.4
Moderate	The whole of West Bengal excepting 24 Parganas (South and North), Nadia, Haora and Hugli	1303.1
<b>Total</b>		<b>1360.5</b>

Soil salinity as a source of soil degradation affects mainly the inundated areas of the deltaic zone of West Bengal. Two categories of soil degradation in West Bengal can be identified: (i) soil degradation due to displacement of soil material mainly through water erosion; and (ii) physical and chemical deterioration of soil due to water logging, flooding and salination. According to one estimate as much as 31 per cent of the total geographical area of West Bengal has degraded soil cover. Of this, 20 per cent of the area belongs mainly to Purulia, Bankura and Darjeeling where the degradation is mainly due to loss of top soil by water erosion. 3 per cent of degraded soil region due to salination is found in South 24 Parganas and Medinipur. 7 per cent of degraded area affected by water logging can be found in 24 Parganas (N & S), Medinipur, Hugli, Nadia and Malda. ■

### Forest land

Forests provide multiple benefits to humans. Forests are the source of timber which serves a variety of human needs, including fuel needs and wood pulp. They also generate a lot of other useful produce such as fruits and oils, medicines, fibres and flosses, lac and resins. Forests protect us from floods and soil erosion, cleanse the air, ameliorate the climate and act as the natural habitat of wildlife. They play a crucial role in the ecology of water sheds which supply much useful water.

Although forests share many attributes with other renewable resources, they also exhibit some unique features. Trees are commercially valuable when they are cut and sold. However if not cut, like a capital asset, standing forest also provide a stream of non-timber environmental services. Unlike many other renewable resources, the time period between initial investment (planting) and recovery of that investment (harvesting) may be quite long. Intervals of 25 years or more are common in forestry. Furthermore, most of the environmental benefits provided by the forests are positive externalities which normally can not be captured by the resource managers. This leads to inefficient management (Bhattacharya, 2001).



In West Bengal, the total recorded forest area is 1.19 million hectares, which constitutes 14 per cent of the geographical area. Of the total forested area, Reserved Forests constitute 60 per cent and Protected Forests 32 per cent, while the remaining forest area is unclassified. The Forest Survey of India recorded a net increase of 13 sq km of forest in 1999 compared to 1997, in the districts of Bankura, Jalpaiguri, Malda, Medinipur and Murshidabad. However, the Forest Survey of India, on the basis of Satellite Imagery and ground level verification at micro level, finds even higher total forest cover in the state, at 15.3 per cent of the geographical area (State of Forest Report, 2001, GoWB). Even so, the state is still deficient in forest cover compared to the national average of 23 per cent. The gradual increase in the extent of forest cover in the state could be related to the large scale afforestation efforts in both forest and non-forest areas as well as the protection offered by the Forest Protection Committees (FPCs) under the scheme of Joint Forest Management (JFM).

*Joint forest management experiments began early in West Bengal.*

West Bengal is a pioneering state in India in initiating JFM by way of seeking people's participation in the conservation and development of forests. This movement had its genesis at Arabari in Medinipur district, where 618 families of 11 villages were motivated in the early 1970s to rejuvenate 1186 hectares of degraded Sal forest and to participate in a set of activities of employment generation and sharing of non-timber forest produce (NTFP) from such forests. The formation of FPCs was formalised in 1987, with the agreement to share the usufruct in the ratio 1:3 between members of FPCs and the Forest Department respectively. The involvement of women in the JFM programme has become a major thrust area. In all FPCs, wives are joint members along with their husbands, while in some FPCs women are primary members. Some all-women FPCs have been found to function better.<sup>1</sup>

The need for JFM became imperative in the context of the substantial increase in the number of illicit felling cases in West Bengal between 1993 and 1996-97, from 5883 to 10829. In the absence of proper monitoring and in the presence of a strong time preference in favour of the present among subsistence-constrained poor villagers in many areas, there can be violation of norms and as a consequence overexploitation of forest resources without the development of such participatory institutions.

Fuel wood is a major component of energy in domestic sector of West Bengal accounting for more than 40 per cent of overall energy source in the state. While data on availability, production and consumption of fuel wood in West Bengal are scanty, one study (GOWB, 1987) shows that on an average a significant proportion –

<sup>1</sup> State of Forest Report 2001, GoWB.

<sup>2</sup> Malhotra et al, 1991.

*The quality of water has become an important dimension in both irrigation and drinking water systems.*

around one-third of richer households – purchased fuel wood in the open market. Forests are depleted for fuel wood not only to cater to the needs of the rural poor but also to satisfy the needs of the well-to-do households in the villages and urban areas.

In the absence of any alternative source of rural energy, assuming that the per capita consumption of fuel wood remains roughly constant, there is likely to be increasing demand for fuel wood in future. It has been estimated that fuel wood constituted about 42 per cent of the total NTFP biomass gathered from the forest and contributed about 39 per cent of the mean household income from NTFP items in Medinipur district in the early 1990s.<sup>2</sup> The extreme importance of fuel wood both in terms of biomass and monetary value is particularly significant in forest fringe villages. As a consequence of all this, accelerated deforestation to meet the fuel wood requirements of the expanding population has been going on at the cost of other multiple uses of the forests. Therefore alternative energy sources should be promoted on an urgent basis. ■

### Water



Water is an increasingly scarce resource, in West Bengal as in most other parts of India. All aspects of water resources systems are closely related to patterns of land use. Since patterns of regional development are constrained by water availability, water allocation requires a balancing between the regions and also between different sectors in any given region. The land use pattern in rural and urban West Bengal suggests that the aggregate demand of water may, in future, far exceed the endowment in a given location.

The quality of water has become an important dimension of water systems. Pollution has increased from population pressure, industrial and agricultural activities, to the point where even human health is endangered. Water quality has many dimensions, among which are dissolved oxygen (DO) that is critical to marine life, suspended solids that cause turbidity, dissolved solids (Salts) that cause hardness and damage crops and piping systems, and many natural and artificial chemical agents, some of which (like PCBs, mercury, and DDT) are concentrated in the water based food chain and cause toxic effects in fish and humans. Human health is directly linked to the availability of water in sufficient quantity and quality. People in less developed countries suffer from many water-borne diseases, while large part of each day must be spent by women and children in carrying water from distant sources.

The demand for water is generated from a number of sources. There are economic functions in the agriculture sector, the urban sector,

<sup>3</sup> Bhattacharya, 2003.

the industrial sector, the power sector, and for transport and navigation. In addition, there are the survival needs of the domestic household sector, the forest sector and a range of ecological systems. Estimates of current and future demand as well as existing water resources suggest that the mismatch between requirement and availability is quite pronounced. It should be borne in mind that all the water that is stored in the underground aquifers or escaping through run-off along the streams cannot be utilised for various physical and socio economic reasons. Hence, the ratio between availability and utilisable water from surface resources has been relatively small.

*Inefficient use and waste of water are common problems.*

Surface water is widely utilised by directly pumping water from rivers at suitable locations to meet urban industrial and rural irrigation demands. Surface water is also impounded and tapped by way of construction of dams or barrages on rivers at different locations for the generation of power, irrigation, industrial and municipal water supply. Over time, the number of wells of different types has increased considerably. However, during the last fifteen years or so there has not been any sizeable increase in the utilisation of surface water, except for catering to the demands for urban centres and for river lift schemes to meet the needs of irrigation in the rural areas.<sup>3</sup> Thus the pressure of increasing demand for water is felt on the ground water stock. This has led to drying up of many shallow tube wells. Saline penetration into the aquifers of the tidal zones has also been reported.

Inefficient use and waste of water are major and common problems encountered in all irrigation command areas. Due to faulty delivery channels, large losses of water occur through seepage. The lack of development of field-channels also contributes to wastage of water. Many of the irrigation command areas have no facility for draining out excess water, and so waterlogging is a common experience. So there are definitely opportunities for conservation of water in the agriculture sector. This is also need to reduce degradation of soil in the agricultural fields.

The main source of water in West Bengal is rainfall, and because of relatively high rainfall, the state is well endowed with ground water resources. However, the distribution is not uniform over the regions. Ground water in West Bengal is tapped by means of heavy and medium duty deep tube wells. Shallow tube wells also cater to water requirement for small scale irrigation and domestic use. The expansion of groundwater tapping especially from the 1980s has been a major activity of rural panchayats in the state.■

*Both panchayats and co-operatives can play a role in ensuring water supply for small cultivators.*

### **Panchayats and co-operatives in rural water management**

Some examples from Bankura district show how local rural institutions can help to deal with the problem of ensuring water supply for cultivators. In Kotulpur block, the local gram panchayat intervened to set water rates in two villages where private water suppliers had monopolised the supply of water for irrigating the *boro* rice crop. In one case, the inter-seasonal tying of water sales was stopped. In another case, the price of water was fixed by the panchayat after a meeting with water-sellers and water-buyers. Despite some initial objections, the water sellers eventually agreed and furthermore have kept to the terms of the deal thereafter.

In this area, there is also evidence of co-operative ownership of tubewells, especially among smaller cultivators. In one particular village, ten per cent of the tubewells are co-operatively owned. One such co-operative was formed by a group of 14 Santhal bargadar households, who collectively invested in a tubewell in 1994. The tubewell, with a total depth of 80 feet, was installed at a cost of Rs. 56,000, with each of the households contributing Rs. 4,000 in cash. The money was raised independently by each household. 8 of the 14 households mortgaged parts of their landholdings to raise the money, 5 to other marginal farmers and the other 3 to traders or larger cultivators. One household took a loan on interest, and 2 families sold cattle to arrange the money. Two families earned the money from selling potatoes cultivated on a part of their land that was irrigable from a diesel pumpset owned by a big farmer. Two families used their savings to raise the money. Within 2 years of the installation of the tubewell, of the 9 households that borrowed money to pay their share, 4 had repaid their loan.

The rights to water were distributed equally among members. An equal amount of land, (2 *bighas*), of each household was irrigated by the tubewell. Irrigation took place according to a cycle that gave four hours of water to each household. Water was neither provided for the excess land held by the members of the group nor sold to non-members.

The tubewell had an enormous impact on the economic conditions of these households. Fields that were cropped only once until the cooperative began are now cropped twice or thrice, with *boro* paddy and potatoes along with *aman* rice.

The impact on employment has also been substantial. Even 10 years ago, when only one crop a year was grown in this village, migration to the district Hugli was routine. With the development of irrigation, work has been available almost throughout the year in the village. After 1994, when the tubewell was installed, members of this co-operative have not had to go out to labour on other people's fields because there is enough to keep them busy on their own fields.

*Source: Vikas Rawal (2002)*

Another important use of water supply is for rural households of West Bengal. The district-wise status and coverage in 2001 is shown in Table 9.4. This indicates that while most districts have near universal or at least adequate coverage of habitations and population in terms of water supply, there is distinct inadequacy in some districts, where at least 15 per cent of the population is not covered. The worst affected districts in this regard are South 24 Parganas, Haora and Nadia, while Medinipur, Koch Behar and North 24 Parganas also require attention.

	Per cent of partly covered habitations	Per cent of fully covered habitations	Per cent of covered population
Darjeeling	0.7	99.3	97.1
Jalpaiguri	6.2	93.8	61.4
Koch Behar 15.1	84.1	86.1	
Uttar Dinajpur 1.9	98.1	99.4	
Dakshin Dinajpur	2.5	97.5	99.8
Malda	7.8	92.2	90.8
Mushidabad 0.2	99.8	96.6	
Birbhum	2.5	97.5	98.5
Bardhaman 22.4	77.6	96.4	
Nadia	39	61	83.1
North 24 Parganas	31.6	68.4	88.8
Hugli	5.2	94.8	99.5
Bankura	0.5	99.5	94.7
Purulia	4.7	95.3	91.9
Medinipur	27.3	72.7	86.4
Haora	42.6	57.4	80.6
South 24 Parganas	51.1	48.9	78.6
<b>West Bengal</b>	<b>16.8</b>	<b>83.2</b>	<b>90.3</b>

**Table 9.4 Coverage of water supply to rural households**

*Source: Based on Bhattacharya (2003) using data from Public Health Engineering Department, GOWB*

Note: Norms for full coverage of habitation require the following: (a) One spot source for 250 persons; (b) In case of piped water supply, 40 litres per capita per day or one public stand for 250 persons; (c) The drinking water source exists within 1.6 km of the habitation in plains or 100 metres elevation in hilly areas.

## Water pollution

The quantity dimension of the water resource problem is reflected through the gradual scarcity of water; the quality dimension is manifested in water pollution of different kinds. Environmental

*Surface and ground water resources are increasingly becoming polluted in both rural and urban areas.*

degradation leads to degradation of both air and water and acts as an impediment to healthy life. While air pollution is basically an urban phenomenon, floating dust particles and chemical materials in air may pollute surface and underground water in rural areas. Environmental pollution in the rural areas is mainly caused by agricultural activities. The residues of chemical fertilisers and pesticides used in agricultural production flowing with rain and irrigation water affect the surface water of rivers, canals, ponds and other water bodies. They also adversely affect the quality of underground water system. Economic activities undertaken by factories and mines often produce undesirable by-products in the form of different kinds of wastes. These untreated wastes pollute different water bodies where they are dumped. Another source of water and environmental pollution is the livestock population. The residues generated by livestock affect the quality of underground water.

Broadly speaking in the entire state of West Bengal, except the coastal and deltaic part, the quality of water is in general suitable for drinking, irrigation, and industrial purposes.<sup>4</sup> In general, the amount of utilisable water does not reflect the purity of water. Both surface and ground water resources of West Bengal have been increasingly getting polluted in the rural and urban areas. Rural waste water is mostly absorbed in the soil and an insignificant quantity may flow to the water bodies. However, during the monsoon the scenario changes, and most of the waste water flows to the rivers and ponds with the surface run-off, contributing a considerable amount of pollution.

In urban areas most of the domestic waste water is discharged into rivers and other water bodies and very little is absorbed in the soils. Average characteristics of municipal waste water in terms of BOD vary between 100 to 300 mgs per litre. Apart from waste of human origin, domestic sources of pollution also include water wastes from cattle. In West Bengal, not all industries are highly polluting in nature. The most polluting industries include: chemical industries, breweries and distilleries, vegetable oil refineries, paper and pulp makers, tanneries and pesticide plants.

One problem with regard to water pollution which has recently assumed critical proportions relates to arsenic poisoning through tubewell water, which has affected 8 districts in particular. This has been discussed in Chapter 6.

<sup>4</sup> Thus, specific conductance values are well within permissible limits, that is, below 500 micromhs per cm at 25 degrees Centigrade. Status of Environment in West Bengal, 1999.

## Atmospheric pollution

Air pollution is dominantly an urban problem. The risks are typically of immediate health effects (e.g., acute respiratory ailments) delayed effects (e.g., chronic bronchitis) and mortality risks. High levels of lead pose long-term health risks and poor indoor air quality is a potential health hazard especially for the urban poor who live in slums and squatter settlements. Table 9.5 provides some of the health hazards related to particular air pollutants.

Pollutant	Impact on Human Health	
	Short-term effects	Long-term effects
SPM	Sneezing, deposition on trachea, etc.	Susceptibility to respiratory problems, death from respiratory causes and carcinogenic effects.
RPM	Exacerbation of airways disease.	Heart attack, stroke and malfunctioning of liver.
NO <sub>2</sub>	Lung edema, eye and nasal irritation.	Respiratory infection, damage to lung tissues.
SO <sub>2</sub>	Increased asthma attacks, irritation of respiratory tracts.	Reduced lung function.
CO	Reduced supply of oxygen to body tissues.	Impairment of time discrimination abilities, adverse effect on central nervous system.
Pb	Adverse effect on blood hemoglobin and central nervous system.	Affects renal and reproductive system. adversely.

**Table 9.5 Health effects of air pollutants**

Source: Banerjee (2003) using WHO-UNEP Reports and Hester and Harrison (1998).

In the twin cities of Kolkata and Haora quite a large number of industrial units are located within the residential areas. In general, Haora is more polluted than Kolkata. In 1990 the Air Pollution Index (API) for Kolkata was 82 for residential and 51 for industrial areas. The corresponding figures for Haora were 171 and 61, respectively. By 1995, for Kolkata these figures became 105 for residential and 76 for industrial areas and the corresponding figures for Haora were 244 and 129.<sup>5</sup> These levels of air pollution level are quite alarming for residential areas. Haora is always more polluted than Kolkata and residential standards are flouted more severely than the industrial norms. Moreover, between 1990 and 1995 in both cities the air quality degraded. However, since 1997-98, there has been a tendency towards reversal, and the quality of Kolkata's air started improving marginally since then.

There is a higher concentration of pollutants in the ambient air during the wintertime, i.e., during the months of December, January, February and March. It has been found that in these months the level of SPM is critically above the tolerable standard in and around Kolkata and Haora and in the industrial centres of

<sup>5</sup> The Air Pollution Index (API) combines these pollution parameters:  $API = [(SPM_A/SPM_S) + (NO_{2,A}/NO_{2,S}) + (SO_{2,A}/SO_{2,S})]*100$ , where A stands for actual and S for standard. If this API value lies between 51 and 75 then it is moderate air pollution. For API between 76 and 100 it is heavy air pollution and if the value exceeds 100 it is severe air pollution.

*The location of industries contributes greatly to urban pollution.*

Asansol and Bardhaman. In Malda and Krishnanagar also, the overall SPM levels are well above the recommended standard for the residential areas. The picture with respect to RPM is even more discouraging. In all the major urban centres the West Bengal the residential limit for this is grossly exceeded and the industrial limit is mostly exceeded. The concentration of RPM is the highest in Kolkata. In Haora, Haldia, Krishnanagar, Barrackpore and Malda the level of NO<sub>2</sub> concentration in the ambient air is alarming. Kolkata and Siliguri are borderline cases. In Kolkata, Burdwan, Krishnanagar, Barrackpore and Malda the overall air quality has degraded between 1999-00 and 2000-01 in terms of API. The deterioration of air quality is the highest in Malda. For the remaining centres some marginal improvements are recorded. (Banerjee 2003).

One of the main reasons for the high levels of urban pollution is the location of industries. In West Bengal industries have been and continue to be located on the basis of availability of raw materials, proximity to human resources, access to market, transport facilities and other techno-economic considerations, rather than environmental considerations. The Government of India has specifically targeted 17 types of critically polluting industries. These include thermal power plants, cement manufacturing units, petrochemicals, oil refineries, integrated iron and steel units, etc. West Bengal has 72 industrial units belonging to these 17 categories out of which 15 are closed presently. Pesticides units show the least compliance (33 per cent) followed by petrochemicals, integrated steel plants and thermal power plants (between 50 and 55 per cent). The compliance levels of fertiliser, distillery and cement industries vary between 75 and 88 per cent. Among the defaulting units a few important ones are the integrated steel plants like IISCO, Burnpur and DSP, Durgapur, thermal power plants like Santaldih TPS, Durgapur TPS and DPL and pesticides producer Shaw-Wallace of Haldia. For bulk drug, chloro-alkali, sugar-mill, paper and pulp and dyeing and bleaching industries, a few non-compliant units are currently closed down and the remaining ones are showing 100 per cent compliance. In addition, though the environmental problems of large and medium industries have been contained to some extent by strict enforcement of emission norms, the problems of small industries are yet to be adequately addressed.

One official survey in Kolkata found that in 1998-99 more than 90 per cent of the industrial units had neither obtained air consent from the West Bengal Pollution Control Board, nor had proper stacks within the premises, thereby creating an environmentally problematic situation for the entire locality. A vast majority of industries were found to be operating only under 'trade license'.<sup>6</sup>

<sup>6</sup> KMDA-WBPCB Report on Industry-Mapping, 2003.

During the last four years the number of units brought under the consent administration of the Board has almost been doubled and roughly 24,000 units are currently covered by the regulatory-net. Some of the regulatory instruments designed by Board are location policy for new industries, stricter emission norms for the existing industries, incentive-schemes to encourage the adoption of greener technology and the exploration of the possibility of relocation of industries.

*Half of the air pollution in Kolkata comes from automobile exhausts.*

About half of the total air pollution load of Kolkata is contributed by automobile exhausts, especially from diesel driven vehicles. The RPM, responsible for respiratory damage in the exposed population, has been found to be alarmingly high in Kolkata.<sup>7</sup> The effective road area available in the city is around 6 per cent of the total area. In Haora the pattern is even worse. Very high and increasing automobile density, disproportionately low percentage of road network, congestion and slow traffic movement, aging of vehicles, registration of discarded vehicles from elsewhere, poor quality of fuel and unscientific traffic management are a few major reasons for highly polluting automobile exhausts.

Breathing the air present in buildings where we eat, sleep, work and relax constitutes one major source of exposure to potentially toxic materials. Studies on time-activity pattern suggest urban residents spend about 22 hours a day in an indoor environment and approximately 73 per cent of indoor time, roughly 15 to 16 hours, at home.<sup>8</sup> The indoor air quality substantially differs from that of outdoors, because the smaller dilution volume of indoor air, along with inadequate ventilation, results in higher concentration of pollutants when the pollution source is inside the home. Domestic activities like cooking and heating are the major sources of indoor air pollution. Combustion in household includes burning of fossil fuels (LPG, kerosene, coal) or fuel from vegetative sources (wood, paper, tobacco). The cooking medium also causes emission of certain volatile organic compounds whose sustained exposure is known to have intensely adverse health-effects.

When the effects of indoor air pollution on women over 15 years and children under 5 years in India are considered, it is found that 24 per cent of the national burden of disease for children under 5 years comes from ARI (acute respiratory infection). COPD (chronic obstructive pulmonary disease) accounts for around 2 per cent of the diseases for women and sustained exposure to indoor air pollution places them at higher risk with respect to lung cancer. The causal link between exposure to indoor pollution and incidence of ARI, COPD and lung cancer is well documented. A study of the Kolkata Metropolitan Area districts taken as a whole found that

<sup>7</sup> WBPCB: A Quinquennial Report, 2003

<sup>8</sup> Lahiri et al, 2001.

<sup>9</sup> Lahiri (2002) Kolkata's Indoor Air-pollution, 2000-01.

*Three fourths of the population of Kolkata have respiratory problems related to air pollution.*

LPG, kerosene and coal were almost equally used for cooking.<sup>9</sup> About 40 per cent of households in Kolkata are forced to cook inside their living room. With very little arrangement for ventilation of fumes, the Kolkata population is more exposed to health risks due to indoor air pollution. Nearly 60 per cent of study population was affected by respiratory symptoms in Kolkata. Moreover, in terms of all season averages, women and girls revealed slightly higher incidence and prevalence of respiratory problems compared to their male counterparts. The intensity of pollution related health hazards is the highest during winter months and lowest in the monsoon.

A study on the biomarkers of the health impact of Kolkata's air pollution<sup>10</sup> took rural people as the control group. Almost three-fourths of the people in the city were found to have some form of respiratory problem, and about half of them had damaged lungs. In comparison, less than half the rural residents had respiratory problems. Also, in both rural and urban areas, smokers exhibited greater respiratory problems compared to their non-smoking counterparts. Urban residents were twice as affected as rural residents. Air pollutants affect urban health more seriously because of their excessive concentration in the ambient air. Street hawkers, garage workers, traffic policemen and others working on congested streets are more exposed compared to office workers and students, therefore their ailments and impairments are much higher.

It is a common belief that the air pollution is mostly the offshoot of industrial and vehicular emissions related to modernity and urbanisation and, therefore, the rural areas are free from this problem. If indoor air pollution is recognized as a serious atmospheric problem, this myth disappears. A study of six states<sup>11</sup> found that in the households of rural West Bengal 87 per cent of total energy consumption is due to cooking, 5 per cent due to domestic lighting and the remaining 8 per cent is the share of water heating. The cooking is done mostly on traditional chullhas (83 per cent), with some cooking on improved chullhas (1 per cent), 2 per cent on bio-gas stove, 14 per cent on kerosene stoves and less than 1 per cent on LPG stoves. The traditional chullha, which is most prevalent, has no chimney and smoke from the stove goes directly into the adjacent room. While primarily designed for fuel wood, the chullha has been adapted to burn charcoal and dung. The average pattern of energy use in six states of India, including West Bengal, revealed that the share of bio-fuel (wood, dung, straw, crop residues) was 93 per cent, that of fossil fuel (charcoal and coal) was 1 per cent and the shares of kerosene, electricity and LPG were 3, 2 and 1 percent, respectively. Given the relation of indoor air pollution with respiratory illness, even when the quality of outdoor

<sup>10</sup> Conducted jointly by CNCI and Calcutta University under the sponsorship of the Department of Environment, Govt. of West Bengal and the WBPCB. Six years' panel data were collected from 1510 subjects from Kolkata and rural areas.

<sup>11</sup> UNDP-ESMAP, 2001 "Energy Strategies for Rural India: Evidence from Six States"

air in rural West Bengal is of safe standard, the indoor air may be cause for serious concern.

Researchers have identified and quantified at least six specific effects of noise on humans, such as interference with communications, hearing loss (temporary and permanent), disturbance of sleep, stress, annoyance and effects on performance. It was observed from an annoyance study that people living in residential buildings along the major roads of the city are highly annoyed by vehicular horns, which disturb their regular work to the maximum possible extent. Another study has been conducted by WBPCB to assess the impact of noise pollution on school children for whom the school buildings are situated on major roadsides and noise areas in Kolkata. The schools in the study were all situated on major roadsides in close proximity of the busiest traffic intersections of Kolkata where the peak hour noise level is recorded as 82-89 dBL. The external noise due to the continuous honking of horns in the adjacent roads and internal noise during lunchtime, results in high levels of noise inside the school premises. The survey found noise-induced hearing damage to be prevalent among 25 per cent of students and 55 per cent of teachers who are exposed to high level of noise in the school premises for quite a long time. 80 per cent of students and 90 per cent of teachers responded that vehicular horn induced noise is the most disturbing source of noise in the school premises, and most also felt that high noise levels interfere with communication and cause loss of concentration, therefore affecting both the learning experience and the performance of students. Public intervention in this area began in 1996. So far, a distinct positive result is observed during the festival days. At the traffic intersections the intensity of noise has gone down marginally due to the banning of the air horns.■

*The effects of public intervention on noise pollution have been positive.*



## CHAPTER 10

# Problems of Specific Regions





## Problems of Specific Regions

It has been seen at several places in this report, that both material and human development in West Bengal have strong regional dimensions. Indeed, it can be observed that the distribution of human development indicators tends to follow the old regional divisions of Bengal, which united the ancient Indian regions of Banga, Pundravardhana and the Rarh. The various regions have varied in importance over history. Banga, or eastern Bengal, was the most important during the reigns of Sasanka and the Palas. The central region stretching across Kotivarsha, Gaur and Murshidabad was dominant from the time of the Palas until the Bengal Subah during the Mughal period. The Kolkata region grew to its current importance with the advent of British rule. The present political form of the state dates from Partition and Independence in 1947.

*Both material and human development in West Bengal have strong regional dimensions.*

The central importance of Kolkata in determining both growth and employment patterns and human development conditions has been noted at several places in this report. Indeed, it can be observed that levels of human development tend to be highest in the greater Kolkata region, and deteriorate in concentric circles according to distance from this region. This is certainly true of literacy rates; it is also true of other important indicators such as infant and maternal mortality rates, as was observed in Chapters 6 and 7.

Given this basic characteristic, there are various ways of making regional distinctions in West Bengal. The NSS data divide the state into four regions: the Himalayan Region (Koch Behar, Darjeeling and Jalpaiguri); the Eastern Plains Region (Uttar Dinajpur, Malda, Murshidabad, Nadia and Birbhum); the Central Plains Region (North 24 Parganas, Kolkata, Haora, Hugli, Bardhaman and South 24 Parganas; and the Western Plains Region (Medinipur, Bankura and Purulia). Per capita consumption in 1999-2000 was highest for the central plains districts, and lowest for the eastern plains region. Predictably, therefore, rural poverty was highest in the eastern plains, and lowest in the central plains. This corresponds to the distinctions made above with respect to the superior material conditions prevailing in the greater Kolkata and surrounding region, and the deterioration according to distance from Kolkata. The exception is the high income to be found in the northern or Himalayan region, which results from the rapid growth of the urban conglomeration of Siliguri in Darjeeling district, as well as the presence of tea plantations in Darjeeling and Jalpaiguri, which add substantially to aggregate income even if they are also associated with poverty among the workers.

However, there are more specific regional imbalances that are not captured by this relatively aggregate picture, and some regions which require particular attention not only with respect to the



*Agro-ecology and history have combined to create existing regional imbalances.*

constraints to economic growth, but especially from the perspective of human development.

Agro-ecology is an important factor in the distribution of livelihood patterns. These combine with historical tendencies to create the existing regional imbalances. There are three particular sub-regions in West Bengal which face particular problems of development and constraints on improving the conditions of well-being, due to historical reasons, or distance and location considerations, or social composition. Therefore, they tend to be more backward in terms of infrastructure development and also some human development indicators. These regions have also been recognised by the state government as having special characteristics and therefore requiring special attention, with designated Development Boards (Unnayan Parishads) for each of these regions.

The four administratively recognised subregions are: the Darjeeling Gorkha Hill Council or DGHC, comprising 8 hill blocks in Darjeeling district; the Uttarbanga Unnayan Parishad, comprising 61 blocks in Darjeeling, Jalpaiguri, Koch Behar, Uttar Dinajpur, Dakshin Dinajpur and Malda districts; the Paschimanchal Unnayan Parishad consisting of 74 blocks in Purulia, Birbhum, Bardhaman, Bankura and Paschim Medinipur districts; and the Sunderbans Development Board, consisting of 22 blocks in North 24 Parganas and South 24 Parganas districts. It is worth noting that the areas of West Bengal that are not included in these regions principally lie in the Gangetic region. These regions are late entrants to development because of topographical complexity and infrastructural deficiencies. The Sunderbans and DGHC regions can be identified by distinct geographical characteristics, while Paschimanchal and Uttarbanga possess a combination of special geographical and cultural attributes.

In North Bengal, the Uttar Banga and DGHC blocks span the two major watersheds of the Tista and the Mahananda. The hilly blocks of the DGHC region, the terai and the Duars share some characteristics, although Koch Behar is more similar to the two Dinajpur districts. In this region, the presence of Siliguri in Darjeeling district creates a more developed centre, but the economic and developmental linkages to surrounding areas are still weak. The Sunderbans area in the southernmost part of the state, mostly in South 24 Parganas and some blocks of North 24 Parganas, is a special region with an exceptionally fragile environment of mangrove forests and estuaries. Finally, the Paschimanchal region in the west of the state spans the all the blocks of Birbhum and Purulia, and some blocks of Bankura, Medinipur and Bardhaman. These blocks share in common the red laterite soil that is

challenging for cultivation, are relatively isolated with poor transport infrastructure, and therefore tend to be backward.

Both Uttarbanga and Paschimanchal have high concentrations of SCs and STs. Both of these regions also experienced substantial investment of colonial capital in the pre-independence period, in Uttarbanga in the tea plantations and in Paschimanchal in coal extraction. Because of this history, a large migrant ST population settled in these areas. The rest of the region is dominated by agriculture, but the ST population is typically landless. In both of these regions, a major nodal role is played by the development of the fast-growing urban centres of Siliguri and Bardhaman, because of which the rate of rural-urban migration in these areas has been higher than for the state as a whole.

In the past, ethnic tensions in both northern and western regions of the state have tended to evolve into separatist demands, and perceptions of backwardness have sometimes taken political form. The formation of these Development Boards, designed to concentrate upon filling infrastructure and human development gaps, may therefore be seen also as a step towards fulfilling some of these regional aspirations and counteracting ethnic unrest. ■

### North Bengal

Within North Bengal, and encompassing the administrative regions of DGHC and Uttarbanga, three sub-regions can be identified with different characteristics: (i) Malda and Dinajpur (ii) Darjeeling, Cooch Behar and Jalpaiguri and (iii) the “chicken neck” of North Dinajpur. These three agro-ecological zones also have cultural associations. The south is akin to Murshidabad, part of Nadia and Dinajpur in Bangladesh; the central chicken neck region is culturally akin to Assam; and the north is akin to Nepal and the Northeast of India. These areas are not only geo-ecologically distinct, but also were until recently separated with little interaction in terms of transport or trade, especially after the Partition of India broke pre-existing links. The northern districts earlier had reasonably good communication links with the rest of the state through East Bengal. But after 1947, these links were broken by Partition, which disrupted both road and rail lines. This reduced accessibility and ability to trade in the northern region. In fact, the North Bengal road system was only interlinked to southern Bengal after construction of the Farakka barrage, so development history can be divided into pre- and post-Farakka periods.

Currently, the Siliguri-Jalpaiguri road provides links to Koch Behar. There is a similar road linkage between Malda, Uttar Dinajpur and

*Communications links have determined patterns of development in North Bengal.*



*Decentralisation is especially significant given the variety and complexity of the North Bengal region.*

Dakshin Dinajpur. In terms of rail connectivity, the most important railway lines through North Bengal strategically link the Northeast of the country with the rest of India. The southern route through Malda has great importance for passenger traffic, but little freight passes along this line. Large parts of Malda and the whole of Dakshin Dinajpur still have no rail linkage.

The region as a whole has a much higher rate of in-migration than other parts of West Bengal. The advantages are that migrants bring in new skills and also tend to be better educated, so they utilise local educational and other resources better. But this also raises questions, for example the problem of the local deprived groups, such as the SCs/STs in the area. There are issues relating to imbalances within the region. For example, Darjeeling is the second richest district of West Bengal (largely due to peri-urban expansion around Siliguri), but Uttar Dinajpur, which is contiguous, is the poorest. Similarly, Jalpaiguri (which has a high prevalence of tea estates) has the third highest per capita income in the state, but less than the state average of per capita consumption expenditure, and also one of the highest head-count poverty ratios, at more than 45 per cent of the population.

Given the diversity within the region, which contains not only many economic variations but also many different languages and cultures, one single development policy for the whole region cannot serve the purpose. Therefore decentralisation may serve an especially useful function in this region, in terms of recognising local differences in material conditions and culture, and incorporating these into planning. However, there may be a case against “excessive” decentralisation and bifurcation of activities also, which can lead to lack of co-ordination both at the district level and between districts. Thus, both Jalpaiguri and Koch Behar spend money in different ways on flood control, even though the same river goes through both districts and much would be gained by co-ordination among the relevant authorities. The North Bengal Unnayan Parishad is currently more concerned with implementing specific schemes and projects, but there is scope for it to be a planning and co-ordination body based on inputs from Zilla Parishads and Panchayat Samitis.



A major aspect of lack of development is inadequate infrastructure development. There is a common perception among residents of the North Bengal region that distance from Kolkata is associated with some degree of neglect by the state government, although that may be changing. The importance of infrastructure is not confined to provision of transport, communications, energy, buildings for health and education facilities and the like. In this region, a critical

felt need is that of developing institutions, which requires the intervention of the state government. The following areas can be identified:

- Economic institutions to assist agriculture, for example in activities such as credit provision, food processing and marketing, especially of local produce.
- Education/training institutions for better utilisation of existing human resources.
- Extension services to develop a wider range of local products, for example mango seeds, using small manufactories.
- Special assistance for silk production, which has been badly affected by the lack of technological progress, lack of inputs (cocoon) and import penetration.
- Alternatives to private middlemen, whose role has become more refined for example in jute and silk production, and whose dominance has been associated with local imbalances in spinning and weaving. This issue has become especially important as co-operatives have not been so successful in this area.

*The need to develop certain institutions in North Bengal requires the intervention of the state government.*

In this region a particular role is played by the substantial presence of tea gardens, especially in Darjeeling and Jalpaiguri districts. While the expansion of such tea estates, including into Uttar Dinajpur district, has been associated with the decline of small-holder subsistence cultivation, there is also a recent tendency for closure of some of these plantations, because of worsening international market conditions. There is a lot of wasted land on plantations, which produce only 41 per cent of the tea used in the local tea factories. These factories deal with tea blends that include both local and imported tea leaves. Conditions of labour on the tea estates are cause for some concern. There have been increases in labour productivity, but a simultaneous increase in the casualisation of labour, especially of women workers. Female work participation is much higher in the tea areas, but this is mostly in the form of casual labour.

Conditions of workers in the tea estates leave much to be desired, and women workers especially face very difficult circumstances. This may be one reason why the Female Mortality Rate is higher in this region than in other parts of the state, and has also declined more slowly. Recently, the crisis in the tea industry has meant that workers, especially women workers, have been the worst affected as many estates have closed down or simply retrenched workers. (See Box on page of Chapter 5.) This has also had major effects on human development, especially for women and girls in the area.

*The Sunderbans is a fragile and unusual ecosystem.*

There are other issues of concern for women in the region. The shift from paddy to cash crop cultivation and teak forestry has implications for food security, which tends to affect women and girls more adversely than other household members. In addition, there is an increase in the labour hours spent by women in the collection of fuel wood and water. There is evidence of significant increase in the trafficking of women in the Darjeeling/Nepal region. West Bengal, Uttar Pradesh, Uttaranchal and Bihar are the main transit states in India through which trafficked women and children pass. West Bengal shares borders with Bangladesh and Nepal, through which many such forced migrants enter. There is evidence that a substantial amount of trafficking of both women and children occurs not only for commercial sex work, but also for use as cheap labour in factories and other economic activities such as domestic or informal service sector work.

The experience of North Bengal therefore highlights three policy areas relevant for improving human development: the role of infrastructure in redressing development imbalances; the importance of institutions, in a range of areas such as banking, marketing, research, education, health, industrial development; and the simultaneous significance of both decentralisation and co-ordination in the planning process. ■

### Sunderbans

The Sunderbans forest area, located in the estuarine section of the Ganga-Brahmaputra river system at the mouth of the Bay of Bengal, is a fragile and unusual ecosystem. It is not only the single largest mangrove forest in the world, covering parts of both Bangladesh and West Bengal, but is also the only mangrove forest in the world with a tiger population, home to a very large floral and faunal diversity. These include many endangered species, such as the Royal Bengal tiger, the Gangetic dolphin, the river terrapin, the estuarine crocodile, and others. The mangrove forests also act as a natural fish nursery, supporting coastal fisheries along the Bay of Bengal and the Indian Ocean. Around 4264 square km of the approximate total of 10,000 square km of this forest lies in West Bengal; the rest is in Bangladesh.



This region is one of high tidal amplitude and fluctuations, with cyclones, storms and tidal waves being common occurrences. The Sunderbans delta is a dynamic ecosystem, continuously being created by the process of accretion of new land through tidal-based sedimentation, as well as the erosion of banks leading to the formation of new islands. Currently it comprises about 106 islands, which are subject to changing salinity, soil texture and tidal action,

as well as biotic pressure in the western and northern fringes of the forest. The human settlements of the Sunderbans rely crucially upon the system of protective embankments, which are around 3500 in number. However, these are frequently known to fail, as tidal action undercuts the earthen banks and causes them to collapse.

*Environmental problems in the Sunderbans are partly natural and partly created by human activity.*

The history of human settlement in this region dates from the treaty of 1757 signed by Mir Jafar, through which the lands of 24 Parganas were ceded to the East India Company, and subsequently became the jagir of Lord Clive. At that time the harvesting of timber from the forests began. Thereafter, there is a continuous history of reclamation of forest land for agriculture. In the last century, more than 750 square km of slightly more than 4,000 square km of the forest has been released for agricultural purposes. Currently, around 40 per cent of the forest area has been brought under the protected area network, in an effort to protect the forest cover.

Infrastructure is poorly developed in this area. There are only 42 km of railway line and around 300 km of metalled roads, around half of which become inaccessible in the rainy season. The basic means of communication between islands is water transport which is not well-organised and mainly in private hands. There is an acute shortage of pukka jetties. Because of inaccessibility, most of the inhabited areas still do not have conventional electricity supply. Access to potable water is a major problem for residents.

In addition, there are some major environmental problems in the region, some of which are natural while others are created by human activity. One of the important changes relates to the reduced flow of sweet water, because of the shift of the fresh water flow from the Hooghly river into the Padma. This has meant that the major fresh water rivers of the area, such as the Matla and the Bidyadhari, have got cut off from fresh water sources and are now mostly tidal rivers. The resulting increase in salinity has changed the vegetation pattern, affected irrigation for cultivation and caused the formation of saline banks inside the islands.

Human activity, especially in the form of construction of barrages and embankments, also has negative environmental effects. The construction of barrages in the upper catchment area has stopped silt flow into the estuary. Embankments affect the drainage system, cut off the sweet water flow into adjoining areas, and raise the silt deposition along the inner river banks so that the level of river beds is often higher than that of the human settlements, creating more danger from flooding. Prawn culture has had negative effects upon the salinity of the soil, affecting agriculture, and also threatens the ecosystem more generally.

*Structural unemployment is a critical issue in the Sunderbans.*

The population of this area is very heterogeneous, with a rich history of in-migration especially in the post-Independence period, with new migrants (often displaced people from the east) pushing into a relatively harsh natural environment, clearing forests for habitation and cultivation. This process of uncontrolled population growth has reduced the per capita cultivable land, and created overcrowding and high rates of disguised unemployment in agriculture, as well as overexpansion of pisciculture and brackish water shrimp farming which have created a range of ecological and socio-economic problems in the region. The consequent difficulties in ensuring livelihood have also led to high rates of out-migration, especially among young male workers.

The Sunderbans region has high representation of minorities and other disadvantaged social groups. Scheduled Castes comprise nearly 40 per cent of the population, and are concentrated in Basanti, Gosaba and Kultali blocks. Scheduled tribes, which make up 7 per cent of the population, are found especially in Sandeshkhali and (to a lesser extent) Minakhan blocks. The population is younger than the rest of the state, with nearly 30 per cent being under 10 years of age.

The economy of the region suffers from very substantial structural underemployment. A large part of the population is basically dependent upon rain-fed monocropping (recently dominated by *boro* rice) and whatever subsidiary activities are available. About half of the households are those of landless labourers. The limited possibilities of extending cultivation and the features of the area, have led to an increase in dependence upon fishing and the collection of *bagda* prawn seeds.

The over-extraction of this local resource (*bagda* prawn) is one of the most significant problems in the region today. It results from the serious underemployment and low wages, which make this activity (performed mainly by women and children) essential for household survival. However, brackish water fisheries and such collection have created overexploitation and thus scarcity of this prawn species as well as other fish species, making it a highly unsustainable activity.

Since the work entails standing in waist-deep or deeper water for many hours, it involves numerous health hazards, including skin diseases and bites from various water species. In addition, there are real risks of being eaten by crocodiles or sharks. For this reason, male household heads rarely do this work, since they are seen as the primary earners. Instead, children are kept out of school to engage in this activity along with their mothers. There have also

been some reports of child trafficking within the Sunderbans, involving cross-border trade.

The crucial problem for future development in the area is of creating a balance between the delicate and threatened ecosystem, the needs of the local population, and the demands of resource exploitation and material development. Several of the possibilities for future development are fraught with risks in this respect. The opening up of the proposed international waterways through the core area of the Sunderbans Tiger Reserve would obviously cause both sound and water pollution, which in turn would seriously affect not just the habitat of tigers and other wild species, but also fish production. The coastal Bay of Bengal area is a likely site for massive underwater oil reserves, but offshore drilling for oil would create major disturbances to the whole ecosystem and would not benefit the local population much. Even the proposed plans to promote high-end eco-tourism are problematic, because they would involve further drain on the limited resources of the region, create disturbance and not generate much productive employment in return. Attempts to link the islands through a system of bridges would be excessively capital-intensive and prone to collapse, but relying exclusively on water transport also has its problems.

*A balance has to be created between the delicate ecosystem, the needs of the local population and the demands of material development.*

The human development problems in the area go beyond those determined by the lack of productive employment and the poor physical infrastructure. There are complicated issues of social cohesion, given the diversity of the population and the contradictions between fringe villagers and relatively new migrants. Also, because of inaccessibility, the panchayat system is less developed and integrated into society than in other parts of the state, and therefore the use of local government institutions to further human development goals, while still possible, is more constrained. Clearly, the need is for the Sunderbans Development Board to envisage and execute more focused interventions for the very specific context, than have occurred in the past. ■

## Paschimanchal

The western parts of the state include some of the most backward areas from the point of view of infrastructure and material development, with the lowest levels of per capita income and also relatively poor HDI rankings. The relative inadequacy of transport and communication networks, and the inadequate physical provision of basic public goods and services, has already become apparent in the previous chapters. However, the lack of development in this region is evident not only in terms of the level of basic infrastructure in the region, but also with respect to

*The specific problems of the Paschimanchal region stem directly from lack of infrastructure development.*

agricultural development. This is compounded by the fact that this region is relatively speaking the driest in the state; it receives the least amount of annual rainfall and is more prone to drought than other parts of West Bengal. The cropping intensity is substantially lower in these districts than in other parts of the state. There are large tracts of land which remain fallow because of inadequate irrigation and lack of development of water storage facilities and rainwater harvesting techniques. Partly because of the low level of agricultural development, non-agricultural activities also are less extensive than in other districts. As was evident from Chapter 5, the districts in this region have among the lowest rates of diversification into non-agricultural employment in the rural areas.

The region is also distinct from central and eastern parts of the state in terms of social composition. It has a relatively high proportion of Scheduled Tribes in total population, with their own cultures, languages and forms of life. This has made the attempt to provide universal primary education particularly difficult and complex in this region, as already discussed in Chapter 7. However, in terms of aggregate human development indices such as literacy and levels of education as well as infant mortality rates, this region has made greater strides and shown more improvement, than other parts of the state. This is strongly related to the very active role played by panchayats in this region, and the enthusiastic efforts of some local leaders, many of whom have emerged in the area in recent times.

Gender differentials, which were marked, have shown greater improvement, and there is also greater evidence of women's active participation in public life through the panchayats and related activities. The age of marriage for girls in this region was well below the state average, and was typically only around 10-12 years even two decades ago; it is now around 16-17 years, which is still low but closer to the state average, and indicating considerable improvement. In Purulia, one of the most backward districts in this region, indicators like polio immunisation rates have improved from only 40 per cent of children even a decade ago, to more than 67 per cent in 2003. There has been a significant decline in maternal mortality rates as well.

The problems of the Paschimanchal region therefore appear at one level to be more tractable than those in the other regions, because they stem more directly from poor infrastructure and lack of material development. Many of the social requirements for improved human development and empowerment of disadvantaged groups are more developed in this region than in some other parts of the state. ■

## CHAPTER 11

# The Way Forward





## The way forward

This chapter seeks to provide both a general assessment of past patterns and a broad direction for future policies to promote human development in West Bengal. This report has presented a mixed picture of the current state of human development in West Bengal. On the positive side, there are definite and important achievements which are possibly unmatched in any other state of India. These include the substantial progress in land reforms as well as the early and sustained efforts at increasing people's participation in government through decentralisation and emphasising the role of panchayats. These have provided important forces making for increased productive capabilities in agriculture and small-scale production generally, greater empowerment of the poor, more equity in basic consumption patterns and greater voice for ordinary people, including workers in urban and rural areas, women and SC/ST groups. These initiatives and the social forces they have generated have also helped the people of the state to avoid the spread of communal and caste-based disharmony that has unfortunately become more prevalent in other parts of India.

However, it has also been noted in the various chapters that progress in terms of some important human development indicators has been less than could be expected given these other achievements. The lack of adequate productive employment opportunities is probably the most pressing socio-economic problem in the state. The paid employment of women, which was already low by national standards, has diminished further in relative terms in the recent past. The spread of literacy and education has been slow, and the failure to achieve universal primary education thus far is a major disappointment. Inequalities of access to education according to gender and social category, and by region, are still considerable, despite recent attempts to reduce these imbalances. Similarly, while health and nutrition outcome indicators indicate a greater degree of equity across income groups than other states, gender differences remain important and there are lacunae in public delivery systems for both preventive and curative health. Environmental forces that affect human development conditions are of growing concern. Regional imbalances within the state continue to be significant.

At the start of this report, certain questions were raised with respect to the effects of land reform and decentralisation upon conditions of human development in West Bengal. One critical question was why these initiatives and the related socio-economic processes they have unleashed have not had more pronounced positive implications for human development. A related question referred to the factors currently constraining human development in the state, and the possible ways in which these can be overcome. This chapter will briefly attempt to address these questions, and look at the possible strategies that could contribute to advancing human development conditions in West Bengal in the future.

*Progress in important human development indicators in West Bengal has been less than could be expected given other achievements.*



*It is difficult for a state within a country to have an autonomous development trajectory.*

The experience of West Bengal highlights three significant relationships that have crucial implications for human development anywhere. The first is the inherent difficulty of an autonomous development trajectory within a constituent province of a country, even with a federal system of government, and the role of broader macroeconomic processes in determining outcomes even within the state. The second is the importance of mobilising resources for public intervention, and the possible limitations upon the advance of human development imposed by fiscal constraints. The third is the crucial two-way relationship between institutional change and economic processes, as well as the importance of continued mobilisation and involvement of ordinary people in the infrastructure and delivery mechanisms necessary for improving conditions of human development. The evolution of these relationships in the case of West Bengal may provide some insight into the issues mentioned above, and therefore deserve to be considered in some more detail.

It was noted in the first chapter of this report that according to the Constitution, state governments in India have substantial responsibilities in terms of the provision of physical infrastructure as well as health and education services. Indeed, they are solely or jointly responsible for all the areas typically associated with the concept of human development.<sup>1</sup> However, they have relatively limited powers in terms of resource mobilisation and policies that affect macroeconomic processes. The ability of state governments to raise resources through taxation is restricted to only certain relatively less lucrative areas, and they are dependent for the bulk of their revenues upon revenue sharing with the central government according to formulae determined by successive Finance Commissions. The reduced flow of resources to state governments from the Centre since the early 1990s has adversely affected most state governments in India, especially those for which the ability to increase state-level taxes is constrained by the pattern of economic growth. The issue of resources is taken up below, but what may be even more significant is that state governments have very little ability to affect the major macroeconomic processes that have crucial human development implications, such as employment generation patterns and relative prices of goods, services and labour.

This has certainly been apparent in West Bengal. In addition to this more general tendency, three specific features of West Bengal that have particular import in this connection must be noted. First, the way electoral politics have played out, the state of West Bengal has been ruled by a Left Front government since 1977 which has continuously had to deal with a central government led by an oppositional political formation. This has obviously affected its ability to attract or extract any concessions from the Centre. Second, West Bengal happens to be situated in a relatively poor and economically stagnant region of India, as well as near relatively

<sup>1</sup> Thus the 7th Schedule of the Constitution (Article 246) describes, *inter alia*, the following in the "State list" for legislative and executive powers: public order and police; local government; public health and sanitation; relief of the disabled and unemployable; communications; agriculture; water; land; relief of agricultural indebtedness; and many others. Education, economic and social planning, social security, the welfare of labour, relief and rehabilitation are all included in the "Concurrent list" for which both central and state government are responsible.

backward countries, such that there have been very few economic growth stimuli coming from the surrounding region. Indeed, the economy of West Bengal has been the only dynamic one in the region, which makes its growth performance in the 1990s the more creditable. Third, the absence (due to historical factors) of a local bourgeoisie, with an inherent interest in investing within the state, has meant that formal sector private investment has played relatively little role in the recent economic expansion of the state.

*Macro processes have had direct and indirect effects upon conditions of life in West Bengal.*

It is in this context that the effects of wider macro processes on West Bengal should be considered. The stagnation of employment opportunities that has been marked across India since the early 1990s has also been evident in the state. The effects of trade liberalisation at the national level have had implications for small producers in the state. There has been a pincer movement of prices for farmers since the mid-1990s, with falling or stagnant crop prices even in bad harvest years and rising input prices because of the reduction of government subsidies. The collapse of rural institutional credit across India has been particularly severe in West Bengal, affecting both agriculture and small producers in non-agriculture. The increase in retail food prices over most of the 1990s and the effective disintegration of the Public Distribution System have both had implications for all net food purchasers, including rural labour and the urban poor. All these have had both direct and indirect effects upon the conditions of life and human development in the state.

It could be argued that the state government could have done more to prevent these adverse processes from affecting the people of the state. To some extent, in fact, there has been a positive role played by certain policies and institutional changes brought about by the state government, as described above. However, it is true that the weakening of the Public Distribution System for food and the system of rural credit, were not adequately countered by the state government. Further, the reduction of organised sector employment has been met only with increases in more fragile and insecure forms of work, rather than any significant success in promoting more formal employment. From the perspective of human development, the state government has also proved unable to buck the national trends of inadequately expanding or even deteriorating public provision in the spheres of education and health in the 1990s.

Once again, the issue of inadequate resources devoted to this area (because of the growing fiscal constraint) is crucial, and will be considered below. But there is also the important question of why the existing services, upon which there has been substantial expenditure, have not been deployed to more effect in terms of greater spread and better quality. It has been noted in Chapter 6 that there are important issues with respect to the delivery system for public health. Similarly, in Chapter 7 it was observed that the



*The paucity of resources devoted to these areas is one of the most important constraining factors.*

public education system, especially at the primary level, suffers not only from large infrastructure gaps, but also from genuine problems of quality and unequal access.

At one level, this appears to be surprising, since the decentralisation process should have meant that local control over the delivery systems in these areas would ensure better quality. However, in fact these basic delivery systems largely remained under the control of the departments at the state government level, and the administrative responsibility was not transferred to the panchayats (unlike Kerala for example). Apart from the real problem of shortage of funds in these areas, this may be one important reason why there are continuing concerns about the efficacy and responsiveness of public delivery systems in the areas of health and education.

It is evident, however, that the paucity of resources for public intervention in these crucial areas remains one of the most significant constraining factors upon human development in this state. This is why the second relationship mentioned above is so important. West Bengal, like most other states in the country, is today in the grip of a fiscal crisis and a hard budget constraint that severely affects its capacity to increase public spending in vital areas. Much of this is because of national policies that have affected the state. The adoption of neo-liberal policies by the central government has entailed a reduction in tax-GDP ratios. For example, with the end of investment licensing, state governments have resorted increasingly to competitive concessions and rebates to attract new investment, thus reducing their collective revenue. Although West Bengal has attempted to resist this, it too has suffered as result. But, more importantly, although the combined state governments' tax effort has not deteriorated much since the early 1990s, the amount of shared resources coming from central taxes has declined significantly in recent years because the Centre's tax-GDP ratio has fallen.

The combination of reduced resources flowing from the central government and the need to implement Pay Commission recommendations with regard to salaries of public employees has drastically reduced the funds available for both capital and current expenditure in other areas. In addition, the restrictions imposed by the Reserve Bank of India upon domestic borrowing by the state governments, have created a much tighter budget constraint. It is extremely anomalous that a state such as West Bengal, which leads the country in terms of small savings collections and whose debt is therefore overwhelmingly to the Central government and its institutions, is now obliged to pay much higher than market rates of interest without full freedom to restructure this high cost debt.

This tendency has forced many state governments to turn to external sources of funds, such as bilateral and multilateral donors,

even for the most basic infrastructure and development schemes. Even for these, state governments are also required by the Centre to pay much higher rates of interest on multilateral and bilateral external borrowing than are actually being charged by the lending agency, with the difference being retained by the Centre. Further, to the extent that expenditure upon development, including human development, then becomes donor-driven, this is obviously a matter of grave concern. It is therefore necessary to ensure that all such external resources are taken only when they are in accordance with the state government's own spending priorities and when there are no conditions attached to such resources which conflict with the government's own objectives.

*The generation of new imaginative methods of resource mobilisation is therefore crucial.*

Obviously, national policies restricting the state's government's ability to spend are important and must be taken up at the national level. But it is also urgent for a state government such as that in West Bengal to consider seriously all available options for additional resource generation within the state, and to consider how to redirect available resources in such a manner as to make them most effective in furthering the human development of the people in the state. In this context, it is disturbing to note that the state government's own tax-raising capacity has declined in recent years. The generation of new imaginative methods of public resource mobilisation is possible the single most important economic issue in the state today, which also has critical implications for public interventions towards better human development conditions.

One way of dealing with the resource constraint has been to try and reduce the actual cost of new expenditure in these areas, through new interventions that effectively circumvent the salary and other expenditure requirements, as well as some of the bureaucratic controls, of existing systems of delivery. These are evident in both health and education, through for example the alternative schooling created by the Shishu Shiksha Kendras as well as the proposed schemes for panchayat-controlled health units rather than department-controlled primary health centres. The advantages and disadvantages of such schemes have been discussed in Chapters 6 and 7; here it need only be noted that these schemes typically involve much lower remuneration and non-permanent contracts to service deliverers such as teachers and health workers, which is why they can be undertaken at much lower cost. It can be argued that in a context in which universal access is a necessary and urgent goal, there is something to be said for this, but the perpetuation of an unequal system of pay for public workers and facilities for some citizens cannot be desirable and must be transitional at best. Also it is still not established that such interventions do not involve inferior quality relative to the established education and health infrastructure. Therefore, it would be best if the flexibility and local control that the new interventions provide could be incorporated into existing education and health systems, with more resources being made



*The preferred strategy would be to integrate the public delivery systems for health and education, and make them accountable to democratic local government institutions.*

available to such service delivery. Obviously, the best alternative would be to integrate all such delivery systems and make them accountable to representative local government institutions, and this must be treated as the basic goal of the new interventions as well.

This brings up the third crucial relationship mentioned above, that is the complex interaction between social and institutional change on the one hand and economic processes on the other. The way in which land reforms and the building of people's participation through panchayats were closely linked to one another has already been described in this report. Not only did panchayats play an important role in implementing and monitoring the land reforms, but these reforms themselves created a social dynamic which ensured that the panchayats have been more democratic and socially representative than in most other states. Both of these processes then contributed to the increase first of all in agricultural production, and then in other small-scale production, as has been noted. Economic growth in this state has been small producer-led, which is unlike the other major states in India and has positive social implications as well. The effect of land reform and decentralisation on the empowerment of and greater dignity accorded to peasants and workers, as well as previously marginalised groups such as SC, ST and minority categories and in some regions women, has also been mentioned. The significant implications for human security, of the absence of communal and caste-based tensions, cannot be overstated. There is no doubt that there has been a positive change in the balance of class forces, especially in the West Bengal countryside, as a result of these processes.

These are important, even outstanding, achievements, which are all the more remarkable because they are so different from what has been happening in the recent past in many other parts of India. However, these are not static features, but dynamic processes which change continually depending upon how material forces in turn affect social patterns. In rural areas, the old domination of landlords and traditional moneylenders may have diminished, but new class relations are emerging which need to be assessed and confronted. In urban areas, the shift to more fragile forms of employment has been associated with a decline in the bargaining strength of workers in general, which also affects their conditions of both work and life. The reduced availability of public goods and services, the greater play of market forces in general and the broader cultural tendencies emphasising competition and individualism, as well the greater uncertainties of material life, all tend to create social forces that threaten the communal harmony and social cohesion that has been achieved in the state.

In this context, public intervention for social and economic change needs to be designed recognising the altered environment. Employment opportunities are of course crucial in this context, but they are not all that matters. The strengthening of public health

conditions and increasing the access to education of the poor and other disadvantaged groups are both important means of ensuring that the balance of class forces remains tilted in a positive direction. But it may be unrealistic to expect previous institutional change to continue to deliver positive results in the new environment: it will be necessary to undertake further innovations in institutional mechanisms and delivery systems, in order to ensure universal access and improved quality of services. Increasing the direct administrative control of locally elected bodies over these local delivery systems is likely to play a positive role in this regard. Strengthening the mechanisms by which the local bodies themselves are more responsive to local people's requirements may also be necessary.

*The full potential of decentralisation has not yet been harnessed to improve human development indicators.*

This brings into focus the need for the active involvement of ordinary citizens in generating the conditions for human development. The experience with decentralisation in West Bengal in this regard has been both extremely positive in some ways and somewhat disappointing in others. The many positive effects have already been noted. But it is also true that the full potential of this process and this form of institutional change has probably not been adequately exploited thus far. The regional variation in this regard highlights the need for a continuing process of social mobilisation in order to generate the best possible results of decentralisation.

Such mobilisation is obviously not the task of a state government alone, but it can assist the process in civil society by providing more effective powers to the panchayats and through other means which encourage and enable their ability to affect the conditions of human development. Thus, it was seen that the process of decentralised planning which was initiated in the mid 1980s, had subsequently petered out and has only recently been revived. Such a process obviously needs to be strengthened, including through greater actual fiscal devolution if possible. Panchayats and urban municipal bodies already have major responsibilities in a range of areas, but these have to be backed by greater powers of administrative control if they are to be effective. This also means reducing the power of the administrative departments at the state government level, and increasing the authority of local bodies in the functioning of public programmes and delivery systems. Finally, if they do receive these greater powers, then ideally panchayats in turn would need to be more directly answerable and responsive to the needs of local people than is implied by the periodic elections to five-year terms alone, and institutional mechanisms to ensure such responsiveness would have to be devised or strengthened. Obviously, all such mechanisms must reinforce the Constitutionally-defined significance of the panchayats as elected bodies, and not undermine their status vis-à-vis unelected social forces. So there is need for careful balancing in the design and implementation of such strategies.

The two crucial planks of a forward looking strategy therefore are:

increasing the efforts for resource mobilisation to enable more state government spending in necessary areas; and innovating and strengthening institutions and mechanisms to ensure the better delivery of public services. Such a strategy would help to generate a virtuous cycle of human development and economic growth positively reinforcing each other. ■

### Specific areas for policy intervention

In addition to this broad strategy, there are particular areas that require specific intervention, which have been identified in the previous chapters. Some of these are described very briefly here:

- In the area of land relations, the recent increase in landlessness needs to be analysed in terms of its causes and the viability of peasant cultivation needs to be strengthened. This may require strengthening certain rural institutions, and especially ensuring improved access to institutional credit, public marketing services of input and output, and the provision of adequate and timely extension services.
- In land distribution, the recognition and granting of land rights to women needs to be further extended.
- The legal-administrative framework should be altered in order to preserve and strengthen the basic goals of decentralisation, in terms of ensuring the capacities of the panchayats, and their accountability to local people rather than to the bureaucracy. All formal changes should not in any way affect the constitutional powers of panchayats as elected representative bodies
- There is a very strong case for giving panchayats and municipal bodies greater administrative and functional control over many of the local social sector delivery institutions, such as in health and education.
- Greater local-level resource mobilisation by panchayats, through taxation or other means, should also be allowed and encouraged, in the absence of more state level funds being forthcoming.
- Urban-rural income disparities need to be addressed; in particular, the growing gap between the metropolitan area of Kolkata and the rest of the state is a cause for concern. In addition to reducing rural-urban gaps, there is need to develop other urban centres in the state for make for more balanced urbanisation.
- In terms of poverty alleviation, the single most affected group is that of rural wage labour households, whose needs need to be specially considered.
- More than half of the villages in West Bengal lacked connection by roadways in the mid-1990s. This obviously has important implications for the provision of a range of basic services and utilities, as well as health and education infrastructure.
- The state government could consider new and imaginative ways of encouraging co-operatives in production and marketing in

both agriculture and non-agricultural activities especially in rural areas.

- Employment generation has to be a critical focus of future policy. The change in the pattern of job creation towards more casual, marginal, part-time and insecure contracts or self-employment is a major source of concern. Improvements in this area will require diversification away from those sectors which are exhibiting low employment elasticity, or changing the pattern of growth in these sectors.
- The reversal of employment generation for urban women, and the large male-female wage-gap in urban work, both point to the need for focussed intervention.
- The low nutritional status of women and young children requires urgent attention. Areas of public intervention that can be usefully pursued in this regard include the provision of sanitary facilities and campaigns to improve food consumption practices to ensure adequate nutrition. Targeted interventions in terms of provision, access and raising public consciousness about desirable food intake patterns are especially necessary, given the large production of vegetables, which do not appear to be consumed within the state.
- The recent deterioration of the public food distribution system, and its declining ability to reach households across the state and provide the desired range of foodstuff, is a source of concern.
- Health service delivery needs overall improvement at all levels. In particular, preventive health delivery systems need to be strengthened. Under-achievement in terms of vaccination coverage and high dropout rates in vaccination, antenatal and post-natal care and quality and quantity of supplementary feeding, should all be rectified. Panchayats and other groups could be much more actively involved in the mobilisation of people that is necessary to ensure complete coverage.
- Arsenic poisoning is an urgent problem requiring immediate public intervention. Along with the technical and infrastructural measures that are necessary, such as identification and treatment of those affected and the provision of alternative sources of drinking water, an effective communication strategy is required. There is a need to change social attitudes towards the health effects of arsenic exposure, as well as to provide people in affected areas with scientifically correct information along with feasible safe drinking water options. In all of this, there is an important role for the panchayats.
- Measures that are designed to increase the involvement of local government and local communities in the public health services are clearly desirable. However, care must be taken that such measures do not result in a lower track parallel system of health care provision under the supervision of the panchayats, operating with community involvement but with fewer resources.
- In education, certain spatial and social pockets of illiteracy need to be addressed. In occupational terms, agricultural labour

households (and especially females in such households) require special policy attention. Scheduled Tribe households (especially females) also require a focussed drive to increase literacy.

- There is still regional imbalance in education provision, in that districts and blocks that are more remote and inaccessible, and with a higher proportion of ST/SC/Muslim population, tend to have lower rates of literacy and schooling in general. This makes it easier to identify those blocks requiring special attention for providing education infrastructure.
- Overall, the lack of basic infrastructural facilities continues to be a serious concern for the proper growth of primary education in West Bengal. The issue of finding more resources for education – especially for increasing the availability and quality of the physical infrastructure - is therefore crucial.
- Financing and implementing mid-day meals in schools is difficult, but nevertheless this is a programme that the state government should attempt to universalise as quickly as possible because of its positive effects in terms of better nutrition among the young and increasing incentives for regular attendance.
- The continuing concerns about the quality of delivery services for school education suggest that there may be a need to restructure the organisation and administration of schools, to make them amenable to greater local community control. There is therefore a strong case for increasing the control of panchayats over the formal school system in the state.
- Where new initiatives such as the Sishu Siksha Karmasuchi are underway, it is necessary to avoid the possibility of such parallel systems becoming another means of class differentiation in school education, and to integrate them into the wider public education system as soon as possible.
- There is distinct inadequacy of drinking water supply in some districts, where at least 15 per cent of the population is not covered. The worst affected districts in this regard are South 24 Parganas, Haora and Nadia; while Medinipur, Koch Behar and North 24 Parganas also require attention.
- Kolkata and Haora show very high levels of urban atmospheric pollution, due to the location of industries and vehicular pollution, creating health problems for the residents.
- The specific problems of certain regions (North Bengal, Sunderbans and Paschimanchal) highlight several policy areas relevant for improving human development: the role of infrastructure in redressing development imbalances; the importance of institutions, in a range of areas such as banking, marketing, research, education, health, industrial development; the simultaneous significance of both decentralisation and co-ordination in the planning process. The problem of ensuring sustainable development with social cohesion is especially marked in these regions. ■

# ANNEXURE

## Statistical Tables





## 1. Human Development Index

Sl. No.	Districts	Infant mortality rate/life expectancy rate	Literacy rate * (%) (2001)	School enrolment rate	Per capita DDP (Rs.) at Current Prices.	Health index	Education index	Income index	HDI value	HDI rank
1	Darjiling	68.9	72.87	70.1	18529.18	0.73	0.72	0.49	0.65	4
2	Jalpaiguri	62.0	63.62	51.9	16749.07	0.61	0.60	0.38	0.53	10
3	Koch Bihar	54.9	67.21	58.8	13855.35	0.50	0.65	0.41	0.52	11
4	Uttar Dinajpur	62.0	48.63	49.6	11182.86	0.62	0.53	0.39	0.51	13
5	Dakshin Dinajpur		64.46		14579.19					
6	Maldah	54.5	50.71	41.5	14777.20	0.49	0.48	0.36	0.44	17
7	Murshidabad	59.0	55.05	49.8	13392.39	0.57	0.52	0.29	0.46	15
8	Birbhum	57.0	62.16	57.5	12791.72	0.53	0.61	0.27	0.47	14
9	Barddhaman	69.4	71.00	60.8	17537.98	0.74	0.71	0.47	0.64	5
10	Nadia	64.0	66.55	64.1	16211.46	0.65	0.66	0.42	0.58	9
11	North Twenty Four Parganas	68.4	78.49	69.6	14768.32	0.72	0.76	0.49	0.66	3
12	Hugli	70.9	75.59	66.4	16279.65	0.77	0.67	0.46	0.63	6
13	Bankura	64.9	63.84	60.6	15741.64	0.67	0.62	0.26	0.52	11
14	Puruliya	61.5	56.14	54.1	13044.67	0.61	0.55	0.18	0.45	16
15	Medinipur	66.0	75.17	70.7	15526.01	0.68	0.74	0.45	0.62	7
16	Haora	71.4	77.64	68.5	15591.44	0.77	0.75	0.53	0.68	2
17	Kolkata	74.5	81.31	72.3	33299.50	0.82	0.8	0.73	0.78	1
18	South Twenty Four Parganas	67.4	70.16	63.0	13630.22	0.71	0.68	0.40	0.6	8

\* Literate Population excludes children of age group 0-6 years  
(Source: Census of India, 2001)

## 2. Gender Development Index

Sl. No.	Districts	Life expectancy rate		Literacy rate (%) 2001 (P) *		School enrolment rate		No. of Workers to population (%) *		GDI Index	Rank
		Male	Female	Male	Female	Male	Female	Male	Female		
1	Darjiling	67	71	81.28	63.92	71.5	68.8	25.10	10.18	0.57	2
2	Jalpaiguri	61	63	73.64	52.90	60.6	43.2	27.06	11.30	0.45	12
3	Koch Bihar	53	57	76.83	57.04	65.7	51.9	28.26	10.73	0.45	12
4	Uttar Dinajpur	61	63	59.27	37.16	57.2	42.0	26.87	11.47	0.46	10
5	Dakshin Dinajpur			73.30	55.12			28.61	12.14		
6	Maldah	54	55	59.24	41.67	45.9	37.2	27.05	13.70	0.39	17
7	Murshidabad	58	60	61.40	48.33	53.9	45.8	26.29	7.84	0.41	15
8	Birbhum	56	58	71.57	52.21	62.5	52.5	27.94	9.47	0.42	14
9	Bardhaman	68	71	79.30	61.93	64.9	56.8	27.99	7.50	0.54	7
10	Nadia	63	65	72.67	60.06	68.0	60.3	28.37	6.76	0.49	9
11	North Twenty Four Parganas	66	71	84.35	72.13	72.6	66.5	28.15	5.29	0.55	5
12	Hugli	69	73	83.05	67.72	71.2	61.7	29.13	7.71	0.56	3
13	Bankura	62	68	77.21	49.80	69.4	51.9	29.13	15.59	0.46	10
14	Puruliya	60	63	74.18	37.15	66.2	42.0	26.84	17.62	0.40	16
15	Medinipur	65	67	85.25	64.63	74.4	67.0	27.92	11.14	0.55	5
16	Haora	70	73	83.68	70.93	73.8	63.3	29.48	4.23	0.56	3
17	Kolkata	74	75	84.07	77.92	77.8	66.8	32.12	5.54	0.59	1
18	South Twenty Four Parganas	65	70	79.89	59.73	69.6	56.4	26.88	5.59	0.51	8

\* Source: Census of India, 2001

### 3. Demographic Trends

Sl. No.	Districts	Total Population 2001 (P)	Decadal growth Rate 1991-2001 (Percent)	Density (Population Per Square K.m.) 2001	Urban Population (as a 2001 percentage of total population)	Sex ratio (females per 1000 males) overall	Sex ratio (females per 1000 males) 0-6 years	Infant Mortality Rate	
								Male	Female
1	Darjiling	1605900	23.54	510	32.44	943	971	39	43
2	Jalpaiguri	3403204	21.52	547	17.74	941	972	62	58
3	Koch Bihar	2478280	14.15	732	9.10	949	968	76	76
4	Uttar Dinajpur	2441824	28.72	778	12.06	937	973	68	59
5	Dakshin Dinajpur	1502647	22.11	677	13.09	950	968		
6	Maldah	3290160	24.77	881	7.32	948	967	75	89
7	Murshidabad	5863717	23.70	1101	12.49	952	975	61	59
8	Birbhum	3012546	17.88	663	8.58	949	969	60	65
9	Barddhaman	6919698	14.36	985	37.18	921	960	38	40
10	Nadia	4603756	19.51	1172	21.27	947	975	56	57
11	North Twenty Four Parganas	8930295	22.64	2181	54.30	927	961	46	54
12	Hugli	5040047	15.72	1601	33.48	947	951	25	25
13	Bankura	3191822	13.79	464	7.37	953	955	41	45
14	Puruliya	2535233	13.93	405	10.07	953	967	46	46
15	Medinipur	9638473	15.68	685	10.49	955	951	47	51
16	Haora	4274010	14.60	2913	50.39	906	959	22	33
17	Kolkata	4580544	4.11	24760	100.00	828	923	15	18
18	South Twenty Four Parganas	6909015	20.89	694	15.77	938	969	54	66

- Note:** 1) Source: Census of India, 2001 Series-20, West Bengal.  
2) Source: Census of India, 2001 Series-20, Paper-1 of 2001.  
3) Source: Census of India, 2001 Provisional Population total  
4) Source: Census of India, 2001 Series-20, West Bengal.  
5) Source: Census of India, 2001 Provisional Population total, Paper-1 of 2001.

## 4 Health: access and services

2000-2001

Sl. No.	Districts	Population using adequate sanitation facilities****	Population using improved water re-sources***	Children one year old received complete immunisation	No of * hospitals 2000 per 10000/PP	No. of PHCs * 2000 per 10000/PP	No. of rural ** Family Welfare planning Centres	No. of hospital * beds per 10,000 population 2000
1	Darjiling	28.4	75.6	60.8	0.74	1.93	73	151
2	Jalpaiguri	17.7	98.1	62	0.29	1.34	527	39
3	Koch Bihar	8.6	98.6	49.8	0.44	15.99	25	60
4	Uttar Dinajpur	9.3	99.5	28.5	0.17	1.12	293	30
5	Dakshin Dinajpur	11.0	99.6	40.5	0.27	1.68	237	54
6	Maldah	10.6	99.4	38.9	0.27	1.36	16	35
7	Murshidabad	13.5	99.4	39.4	0.27	1.54	30	48
8	Birbhum	13.9	99.3	34.9	0.30	2.57	428	75
9	Barddhaman	32.4	99.3	51.8	0.56	1.94	768	100
10	Nadia	25.4	99.2	68.9	0.56	1.28	28	113
11	North Twenty Four Parganas	39.4	99.0	65.6	0.23	0.82	779	29
12	Hugli	32.7	99.3	67.8	0.59	1.38	45	73
13	Bankura	10.0	98.2	67.3	0.28	2.73	514	87
14	Puruliya	8.1	93.8	38	0.47	2.83	471	89
15	Medinipur	9.1	99.0	46	0.35	1.80	70	48
16	Haora	29.4	99.1	56	0.54	1.33	97	80
17	Kolkata	75.2	99.5	82.9	1.75	-	92	434
18	South Twenty Four Parganas	11.3	99.2	59.4	0.22	1.22	34	22

\* Source: Chief Medical officer of Health, District.

\*\* Note: This refers to total Family Welfare Planning centres.

\*\*\* Note: This refers to percentage of population with availability of drinking water facility through tap, handpump/tubewell, and well.

\*\*\*\* Note: This refers to percentage of population/households with availability of bathroom within the house.

Source: Census of India 2001, West Bengal.

## 5. Education

Sl. No.	Districts	Place of residence Rural/ Urban (1)	Literacy rate (2) (%) 2001 (P)		Literacy rate Scheduled Tribes (%)		Literacy rate for Schedules Castes (%)		Total enrolment of all stages / from class I to XII Combined enrolment As on 30.01.2001	Teacher pupil ratio 2001		
			Male	Female	Male	Female	Male	Female		Primary	Upper primary / Middle	Secondary / High
1	Darjiling	68.2	81.28	63.92	47.54	30.77	58.14	33.25	180552	0.020	0.028	0.020
2	Jalpaiguri	82.1	73.64	52.90	31.69	12.52	54.82	26.57	694957	0.013	0.015	0.013
3	Koch Bihar	91.2	76.83	57.04	44.89	19.31	54.31	26.87	609088	0.016	0.030	0.029
4	Uttar Dinajpur	88.4	59.27	37.16	28.42	9.10	45.72	19.06	444389	0.014	0.021	0.019
5	Dakshin Dinajpur	88.4	73.30	55.12	28.42	9.10	45.72	19.06	325193	0.018	0.030	0.019
6	Maldah	92.8	59.24	41.67	25.07	6.42	46.63	20.18	614833	0.016	0.014	0.018
7	Murshidabad	87.8	61.40	48.33	25.95	10.60	40.54	24.42	1174568	0.013	0.016	0.016
8	Birbhum	91.5	71.57	52.21	23.63	5.63	38.47	16.13	566863	0.021	0.033	0.024
9	Bardhaman	62.5	79.30	61.93	36.70	14.83	47.95	24.69	1251921	0.022	0.023	0.019
10	Nadia	79.0	72.67	60.06	33.53	12.63	55.03	34.78	999291	0.013	0.015	0.017
11	North Twenty Four Parganas	45.8	84.35	72.13	36.73	13.08	64.72	41.21	1216324	0.018	0.033	0.022
12	Hugli	67.0	83.05	67.72	42.11	13.83	52.78	27.80	925166	0.024	0.013	0.025
13	Bankura	92.7	77.21	49.80	50.41	13.88	40.27	13.08	632661	0.025	0.022	0.022
14	Puruliya	90.2	74.18	37.15	43.91	10.55	48.93	13.47	447881	0.020	0.021	0.020
15	Medinipur	90.1	85.25	64.63	55.57	24.56	68.66	39.75	1687755	0.021	0.020	0.021
16	Haora	49.6	83.68	70.93	51.01	31.95	55.98	32.87	714464	0.021	0.027	0.018
17	Kolkata	0.0	84.07	77.95	64.30	42.00	63.51	47.25	944662	-	-	-
18	South Twenty Four Parganas	84.4	79.89	59.73	36.43	12.14	64.99	33.44	1247842	0.014	0.028	0.025

**Note:** 1) : Rural population as a percentage of total population. Source: Census of India 2001, West Bengal.

2) Source: Census of India, 2001.

3), 4) : Percentage of literates has been calculated on the basis of population aged 7 and above.  
Source : Census of India, 1991.

5) : Source: Annual Report, 2001-02 Department of school Education, Government of West Bengal.

## 6. Income and Employment

2000-2001 (Q)

Sl. No.	Districts	Per capita real income (Rs.) (1) At 1993-94 Prices	Percentage of main workers (2) 2001 (P)		Percentage of workers (2) 2001 (P)		Percentage of non-workers (2) 2001 (P)	
			Males	Females	Males	Females	Males	Females
1	Darjiling	10415.88	22.43	7.30	25.10	10.18	26.35	38.36
2	Jalpaiguri	8830.71	24.17	6.02	27.06	11.30	24.45	37.18
3	Koch Bihar	7779.86	25.93	4.49	28.26	10.73	23.05	37.95
4	Uttar Dinajpur	6778.81	24.10	5.27	26.87	11.47	24.76	36.90
5	Dakshin Dinajpur	8866.40	25.80	5.55	28.61	12.14	22.67	36.58
6	Maldah	8339.28	23.04	6.38	27.05	13.70	24.29	34.95
7	Murshidabad	8009.30	23.58	4.89	26.29	7.84	24.94	40.92
8	Birbhum	7738.07	23.76	3.84	27.94	9.47	23.37	39.21
9	Barddhaman	11445.13	23.79	3.82	27.99	7.50	24.07	40.43
10	Nadia	9606.47	26.51	4.07	28.37	6.76	23.00	41.87
11	North Twenty Four Parganas	9440.25	25.98	3.44	28.15	5.29	23.76	42.80
12	Hugli	10344.55	26.13	4.20	29.13	7.71	22.22	40.93
13	Bankura	9361.52	23.87	5.75	29.13	15.59	22.08	33.19
14	Puruliya	7905.00	19.69	5.74	26.84	17.62	24.36	31.18
15	Medinipur	9263.49	22.37	3.95	27.92	11.14	23.21	37.72
16	Haora	10365.59	26.17	2.58	29.48	4.23	22.98	43.30
17	Kolkata	19895.96	30.85	4.90	32.12	5.54	22.58	39.75
18	South Twenty Four Parganas	8394.74	22.02	2.29	26.88	5.59	24.71	42.82

**Note:** 1) Source : Bureau of Applied Economics & statistics, Government of West Bengal.

2) Source : Census of India, 2001.

## 7. Local Government

Sl. No.	Districts	Number of CD blocks 2000	Number of Gaon Panchayats 2000
1	Darjiling	12	134
2	Jalpaiguri	13	148
3	Koch Bihar	12	126
4	Uttar Dinajpur	9	99
5	Dakshin Dinajpur	8	65
6	Maldah	15	147
7	Murshidabad	26	255
8	Birbhum	19	169
9	Bardhaman	31	278
10	Nadia	17	187
11	North Twenty Four Parganas	22	211
12	Hugli	18	210
13	Bankura	22	190
14	Puruliya	20	170
15	Medinipur	54	514
16	Haora	14	157
17	Kolkata	-	-
18	South Twenty Four Parganas	29	312

**Note:** 1) Source : Bureau of Applied Economics & Statistics.

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