A Vision Document for The State of Meghalaya 2030

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PREFACE

The study on 'A Vision Document for the State of Meghalaya 2030' is a result of a detailed study undertaken by the National Institute of Public Finance and Policy. The study was commissioned by the Government of Meghalaya (vide Letter No. PLA.86/2008/23 dated 7 May 2009). The draft was submitted to the Government of Meghalaya on 2 July 2011. Based on the comments received from the Government of Meghalaya and subsequent developments in the Indian economy as well as the economy of the State, the draft report has been revised.

The report has been prepared by a team of researchers led by Dr M Govinda Rao and comprises Dr Anuradha Bhasin, Dr Alokesh Barua, Dr Mukesh Anand, Dr Rita Pandey, and Dr R Srinivasan. Research assistance for the report is provided by Mr Kausik Bhadra.

The opinions expressed in this report are those of the authors. Members of the Governing Body of the National Institute of Public Finance and Policy are in no way responsible for the opinions expressed in the report.

Dr M Govinda Rao
Director

New Delhi
18 December 2012

ACKNOWLEDGEMENTS

The developmental challenges of Meghalaya are manifold and meeting these challenges requires a systematic approach and strategy. To empower the people and to secure peace, prosperity, and stability, it is important to have a long-term vision of development. Such a vision will help the State adopt a systematic approach towards identifying the challenges, setting targets, and working out a detailed developmental strategy. With this in view, the Government of Meghalaya entrusted the task of preparing the *Vision 2030* document to the National Institute of Public Finance and Policy.

We are grateful to the Government of Meghalaya for entrusting us with the task of preparing the *Vision 2030* document for the State. While preparing this document, we have received enormous help from the Chief Secretary, Mr Pankaj Jain, Principal Secretary and Resident Commissioner of Meghalaya in Delhi, Mr Ram Mohan Mishra, Principal Secretary, Planning, and many other officials in the Department of Planning on a variety of matters dealt with in the document. We are also grateful to all those who responded to the questionnaire that was placed in the newspapers with their views on various aspects of development of Meghalaya. A summary of the views of the respondents is placed in the *Annexure.*

The draft report was presented to the Chief Minister and senior officials of the Government of Meghalaya, and a presentation on the report was made to the general public, which was presided over by the Chief Minister. We are extremely grateful to the Chief Minister for his personal interest and passion for the development of the State and for his significant views and suggestions on the draft report. Comments and suggestions received from senior officials of the government were also very helpful. We must also acknowledge the detailed written comments on the draft report from Mr Pankaj Jain, which were extremely useful in avoiding errors, updating the information on various developments in the State, and ensuring realism. However, there may still be errors of both omission and commission which we cannot share with any of them. We are solely responsible for all the shortcomings in the report.

M Govinda Rao

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Abbreviations

ADCs	Autonomous District Councils
BPL	Below the Poverty Line
BRGF	Backward Region Grant Fund
CHCs	Community Health Centres
DES	Directorate of Economics and Statistics
DONER	Union Ministry of Development of the North Eastern Region
DPCs	District Planning Committees
DPDC	District Planning and Development Council
DRDAs	District Rural Development Agencies
FDAs	Forest Development Agencies
FRU	First Referral Unit
GDI	Gender-related Development Index
GDP	Gross Domestic Product
GEI	Gender Equality Index
GEM	Gender Empowerment Measure
GSDP	Gross State Domestic Product
HD	Human Development
HDI	Human Development Index
HDRs	Human Development Reports
ICT	Information and Communication Technology
IFAD	International Fund for Agricultural Development
IMR	Infant Mortality Rate
JFM	Joint Forest Management
LCS	Land Customs Station
MLAs	Members of the Legislative Assembly
NaRMG	Natural Resource Management Group
NEC	North Eastern Council
NEDFi	North Eastern Development Financial Corporation Ltd
NEHU	North-eastern Hill University
NEIGRIHMS	North East Indira Gandhi Regional Institute of Health and Medical Sciences
NERCORMP	North Eastern Region Community Resource Management Project
NESPYM	North East Society for the Promotion of Youth and Masses
NFHS	National Family Health Surveys
NGOs	Non-Government Organisations
NIPFP	National Institute of Public Finance and Policy
NLCPR	Non-Lapsable Central Pool of Resources
NREGA	National Rural Employment Guarantee Act
NREGS	National Rural Employment Guarantee Scheme
NRHM	National Rural Health Mission
NSAP	National Social Assistance Programme
NSDP	Net State Domestic Product
NSSO	National Sample Survey Organisation

PDS	Public Distribution System
PHCs	Primary Health Centres
PMRY	Prime Minister's *Rozgar Yojana*
PPP	Public–Private Partnership
PWD	Public Works Department
RCH	Reproductive and Child Health
RFs	Reserved Forests
RIDF	Rural Infrastructure Development Fund
RNTCP	Revised National TB Control Programme
RPDCs	Regional Planning and Development Councils
SGSY	*Swarna Jayanti Gram Swarozgar Yojana*
SHGs	Self-Help Groups
SRS	Sample Registration System Surveys
UNDP	United Nations Development Programme
VHAM	Voluntary Health Association of Meghalaya
VPDP	Village Participatory Development Planning

Overview

Towards Building Capabilities, Enhancing Freedom, and Accelerating Development: Meghalaya Vision 2030

A Summary and a Starting Point

Introduction

Meghalaya is a beautiful state located to the north of Bangladesh and surrounded by the state of Assam along its other borders. Literally, 'Meghalaya' means 'the abode of clouds' and the name itself lends a mystic aura to the state. It is a small state carved out of the composite state of Assam in 1972, has a geographical area of 22,429 sq km, and is inhabited by 2.96 million people as of 2011. The state, like the rest of the north-eastern region, has a predominantly tribal population which constitutes about 86 per cent of the total population. Rich in mineral deposits such as coal, limestone, and uranium, and with large potential for generating hydropower, the prospects of the state becoming an industrial engine for growth in the region are well within the realm of feasibility, if the severe constraints it faces are considerably eased. The state has a predominantly hilly terrain, and its area includes the three main hill regions of Garo Hills, Jaintia Hills, and Khasi Hills. With a forest cover of over 70 per cent of its land area and endowed with bountiful rainfall, the state has an abundance of flora and fauna.

Like other states in the north-eastern region, Meghalaya faces severe constraints in accelerating growth and improving living conditions for its people at a rapid rate, for a variety of reasons. The acidic nature of the soil, unbalanced in its nutrients, has resulted in low agricultural productivity, and shifting cultivation in the hills has endangered the sustainable ecological system. The centralised system of governance and planning has not helped in creating an enabling environment for development and spreading the fruits of development to the common people. Like other states in the region, its landlocked nature and remoteness from the rest of the country have limited the mobility of people, constrained the development of markets for goods produced in the state, increased transportation costs to render economic activities non-competitive, and restricted trade with the outside world. Poor connectivity and transport infrastructure, combined with the perception that the state is afflicted by insurgency, have resulted in

low levels of private investment in economic activities, which in turn has led to an overwhelming dependence of the people on the state government for employment and income-earning opportunities. Indeed, Meghalaya is a state which, like Sikkim, is not affected by insurgency much and yet, the perception of insurgency has inhibited private investments in the state. Above all, the low level of institutional capacity and lack of focus on building the technical capacity needed for exploiting the developmental potential of the state have posed additional constraints in ensuring the productive employability of its vast pool of human resources.

These constraints have posed serious problems in harnessing the resources of the state for the benefit of the people. Thus, despite bountiful resources and vast developmental potential, the standard of living of people, remains low.

At the time of Independence, the per capita income of the north-eastern region as a whole was significantly higher than the national average[1]. However, after Independence, with the entire region becoming completely landlocked and connectivity to the rest of the country restricted to the narrow 27 km Siliguri corridor—the state and the entire region — was isolated from its traditional markets. Consequently, the per capita income of the region grew at a much lower rate than the average growth rate for the country. This is true of Meghalaya as well. Although the growth performance of Meghalaya was slightly better than the average performance of the north-eastern region, it was much below the country's average.

The composite state of Assam, which included Meghalaya at the time of Independence, had a per capita income much higher than the national average — higher by about 15 per cent. Since then, however, the growth rate in the region has been slower than the rest of the country, and per capita income in the state of Meghalaya, carved out of the composite state of Assam in 1972, has also lagged behind the country average. Although the state's performance was better than that of the region as a whole, and its per capita NSDP at 2004–05 prices (Rs 21,243) caught up with the per capita NDP of the country with the state growing at a lower rate in the decade beginning 2000–01, per capita NSDP in 2010–11 in Meghalaya was lower than the per capita NDP in the country by about 5 per cent, and in 2011–12, it was lower by 9.3 per cent. Although this is better than other north-eastern states, except Sikkim and Tripura, Meghalaya has considerable catching up to do with the rest of the country.

The poor development of the state has further fuelled dissatisfaction among the people. The issue of poor development of the region as a whole has also been a matter

[1] This issue is discussed in detail in the Vision 2020 document of the north-eastern region. *See* India (2008).

of considerable concern to policy makers. There have been several committees and study groups appointed by the Union as well as individual state governments to analyse various aspects of development, identify the causal factors impeding development, and recommend strategies to overcome the constraints. Various committees as well as individual researchers have made recommendations to open up the markets, improve connectivity and infrastructure in the region, create economic opportunities with the neighbouring countries, improve governance, and build capacity of the people and institutions in the region to create a congenial investment climate, and achieve political and economic empowerment of the people. Mention must be made of the Shukla Committee (India, 1998) which has quantified the investment requirements for attracting investment into the region, essential for accelerating economic growth and banishing poverty. The state development reports for each state in the region, prepared by various scholars and institutions at the initiative of the Planning Commission in collaboration with individual state governments, have identified the opportunities and constraints, quantified investment requirements, and recommended policy measures to steer them on to the road to prosperity. The most comprehensive analysis of the economic opportunities and constraints of the region as well as individual states have been mentioned in the *Vision 2020* document for the north-eastern region, prepared by the National Institute of Public Finance and Policy, and adopted for implementation by the North Eastern Council on 13 May 2008. Thus, it is not for lack of knowledge and understanding of the problem that the region continues to stagnate. What is now needed is the implementation of the recommendations made by various committees, study groups, development reports, and scholars. These recommendations are applicable to accelerating development in Meghalaya as well.

The most important challenge is to establish the institutional environment of governance. Empowerment of the people is possible only when participatory governance and development is introduced. As mentioned earlier, inclusive governance is a pre-requisite for inclusive development. This is necessary for ensuring incentives for savings and investment, which is a precondition for the growth of the economy. Governance institutions ensure incentives, and when these do not exist or do not function in a manner congenial to the growth of markets, economies cannot grow, and even if they do, growth will not be encompassing.[2]

[2] Olson (1993), in his insightful analysis, argues that there are no incentives for savings, investment, and the economy to grow when there are roving bandits. When a powerful roving bandit replaces anarchy with dictatorship, there is an incentive for savings and investment, but the resulting growth is not "encompassing". It is under real democracy, where people are empowered to partake in decision making, that conditions for encompassing growth exist.

While it is true that the issue of insurgency in the region, and particularly in the state of Meghalaya, is exaggerated and large parts of the state are peaceful, the fact remains that sections of the population have been alienated and need to be brought into the mainstream. It is important to undertake measures to change the perception that the state is affected by insurgency in order to ensure the flow of private investment. Achieving peace and prosperity and ensuring inclusive development requires empowerment of the people and building capacity in them. In a situation where the market is nascent, it is also necessary to create and build capacity in market-based institutions, and create conditions for people to participate in the market without being exploited.

Vision 2030: Sustainable Development for Peace and Prosperity

The people of Meghalaya have a vision — a vision of achieving happiness through peace and prosperity in a sustainable manner, without harming the land and nature. They would like to see their state emerge as strong, secure, peaceful, prosperous, and confident. They would like to see their state embrace markets gainfully and to prepare themselves to significantly increase trade within the region, with mainland India, and with neighbouring countries and beyond. They would like to banish poverty, ill health, and ignorance, and enjoy a high standard of living. They would like to move away from dependency in every sense of the term and acquire the confidence to move forward on the path of determining a development strategy on their own, to harness the resources of the state for their own benefit. In the process, they would like to create abundant productive employment opportunities for the youth. At the same time, they would like to have opportunities to empower themselves, acquire the education and skills to be gainfully employed in emerging productive economic activities, and to contribute to their own wellbeing, and to building the nation. They would like to be empowered to enjoy their freedoms — freedom from poverty and hunger, from ignorance and ill health — to meaningfully participate in the governance of the state, to enjoy a peaceful, good quality of life, and to enhance their capabilities and avocations. As persuasively argued by Amartya Sen (1999), capabilities earn freedoms.

Ensuring economic and political empowerment of the people is critical to achieving the freedom listed above. In the past, the development experience of the region in general, and the state in particular, has been disappointing, and needs a course correction to include strategies that will put the state on the path to lasting

peace and sustained progress. The response to the questionnaire circulated to elicit the views of the people to ascertain their vision of development for the state overwhelmingly stresses the lack of economic opportunities for the people and youth, mainly due to the lack of empowerment and inadequate productive economic activities, and consequent alienation, leading to a spread in insurgency. Inclusive development requires inclusive and participatory governance. Planning is not only a means to achieve sustained and inclusive development but also an end in itself; it is an important tool of empowerment as it provides a voice in deciding the development strategy. The responses also emphasise the need to create a climate for investment by putting in place efficient means of transport and connectivity, and competitive infrastructure facilities (*see Annexure-I, Part-II*). They underline the need to improve economic relations, including trade relations with Bangladesh in the south, not only to provide an impetus for economic activities within the state, but also to improve connectivity and access to markets through land, sea, and inland water routes. Access to ports in Bangladesh will improve market opportunities for the state, and a land route through the southern neighbour will substantially reduce the state's physical distance from the rest of India.

Challenges and Strategy

The challenges of participatory development — where policies need significant reform, and institutions need to be created and developed, while existing ones need to be overhauled — are formidable. The region in general and the state in particular, suffers from deficits of various kinds, and overcoming these deficits is key to placing the state on the path to progress and prosperity. First, there is a governance deficit, and unless this is overcome, it is not possible to create enabling conditions for inclusive development. Inclusive development requires participatory governance. Second, there is a trust deficit for the people. In part, the governance deficit comes from the trust deficit, and is an outcome of the functioning of successive governments in the state, and the Centre's approach in dealing with the problems of the region. These have been recorded in detail in the Vision 2020 document for the north-east and there is no need to repeat them here. Third, there is an infrastructure deficit, and unless this is met, the prospects of transforming the economy into a prosperous state will remain a dream. The infrastructure deficit comes from poor transport facilities which are necessary for the swift movement of people and goods, lack of regular and good quality power, infrastructure needed for agricultural storage, marketing and processing, and border infrastructure needed for trading with neighbouring countries.

Overcoming these deficits is a formidable challenge which cannot be met by the state government alone. A significant role will have to be played by the Central government in providing major infrastructure facilities, ensuring a friendly diplomatic relationship with Bangladesh, and facilitating border trade and smoother connectivity to the rest of India. Of equal concern is the deficit in social infrastructure, overcoming which will require the provision of quality education and skills so that people are employable in a modern economy, and access to quality health services to ensure health security for all. Another major deficit in the region in general and the state in particular is the capacity deficit. In part, this arises from the deficit in the social infrastructure. A deficit in capacity pervades both human resources and institutions. The most glaring outcome of the institutional capacity deficit is in the government's capacity to implement various programmes, particularly those initiated by the Central government. A competent government is critical to ensure efficient functioning of markets. Overcoming these deficits holds the key to ensuring an adequate flow of investment into the state and transforming the investments into inclusive developmental outcomes. This requires strategic initiatives in several areas.

We have put forward a set of seven strategic initiatives to overcome these deficits and propel the state onto the path of economic progress. These strategic initiatives are needed to accelerate growth, banish poverty, enhance human development, and bring peace and prosperity to the people of the state in a sustained manner, without unsettling the traditional and cultural milieu in which they live. These seven initiatives are interdependent and reinforce one another. These are summarised as follows:

(i) Empowerment of the people through participatory planning and inclusive governance is the most important component of the strategy. An essential prerequisite of inclusive development, it involves strengthening the traditional institutions of local governance and grassroots planning calibrated from the village level upwards. Meghalaya is not covered by the 73 rd and 74 th Constitutional Amendments and does not have Panchayats at the village, block and district levels. The state is covered under Schedule VI of the Constitution which protects the rights and interests of the tribal people by mandating the prevailing local and district-level self-government institutions to undertake the task of local governments. Although Schedule VI was created to protect the interests of tribals and preserve the autonomy of local institutions, the Autonomous District Councils (ADCs) set up in 1952 within the larger undivided state of Assam have little relationship with traditional village-level institutions in Meghalaya today, namely, the Nokma, Syiem, and Dolloi. In fact, after the

creation of Meghalaya, there is very little rationale for the continuation of ADCs. The ADCs do not have an organic linkage with the traditional tribal institutions, and their track record in both grassroots planning and development has been abysmal. Only the Khasi Hills ADC has enacted some laws; the track record of the Garo Hills ADC is extremely poor. Reviving the traditional institutions to enable participatory planning at the grassroots level is a major challenge for inclusive growth.

(ii) The second component is the development of institutions and systems to promote markets in the state. Besides improving governance, this entails development of market-promoting institutions and infrastructure.

(iii) The development strategy should focus on sustainable development based on comparative advantage, so that the natural resources of the state are harnessed for the benefit of its population. This involves enhancing agricultural productivity through the spread of irrigation and agricultural extension, promoting the cultivation of commercial crops, shifting tribal populations away from the practice of "*jhuming*" by encouraging them to undertake organic farming and providing alternative livelihood opportunities, developing traditional crafts and small industries, as well as manufacturing activity based on the resources of the region. The state's pool of educated manpower provides a base for the development of information technology-enabled services (ITES) as well.

(iv) Infrastructure development to promote markets and attract investment into the region is a critical component of the development strategy. Improving the state's connectivity both within the region and with the rest of the country is key to its prosperity and growth. This requires significant investment in rail, roads, and inland waterways. Equally important is the need to make regular, quality power available by harnessing the state's potential to generate power from its own hydel sources. Creation of a network of roads within the state, including rural roads, opens up the markets for both labour and products, and helps the rural population access services such as education and healthcare. Investment in cold storage facilities helps minimise wastage of perishables and ensures more remunerative prices for farm products. Other important infrastructure required for market development includes telecommunication networks to strengthen connectivity. Thus agricultural and rural development requires, in addition to rural roads and connectivity, the creation of a network of cold storage facilities. It is also seen that manufacturing activity thrives when there are agglomeration economies, and urban agglomerations are the centres of economic dynamism. Sustainable urban development requires provision of amenities such as water supply, sanitation, and waste disposal.

(v) Expanding trade and investment opportunities is another important component for the development of the state in a globalising world. This requires expansion of trade within the region, with neighbouring countries, and beyond. A number of recommendations have been made by various committees and study groups which have been summarised in the Vision 2020 document for the north-eastern region. These are applicable to Meghalaya as well.

(vi) Developing the capacity of people and institutions is equally important for accelerating growth and ensuring employment security to the people. Institutional capacity must be augmented to improve governance in the state, and to design and implement development plans from the level of the village through to the state. Considerable capacity building is also needed to ensure responsive and market-friendly governance. People's empowerment comes from building their capacity. Education and skill development must be a cornerstone of development, as these enhance people's productivity and employability. Further a more rapid pace of industrialisation requires the state to have the necessary skilled manpower.

(vii) Inclusive development is possible only when vulnerable sections of the population have access to education, healthcare, and employment opportunities. The youth of the state will have to be provided with access to education and skill development to empower them to acquire productive employment in the new economy. The development strategy should foster greater gender balance by ensuring a more equitable role for women in representative and elected bodies at all levels of government. Inclusive development also entails ensuring balanced development of the areas within the state. There are significant variations in the levels of development — both physical and human — and the development strategy adopted should ensure balanced provision of basic physical and social infrastructure in the state.

Articulating a vision of development for the state requires a clear understanding of the developmental perspective. It is important to take stock of the prevailing developmental status and identify the opportunities and constraints. The road to progress is beset with formidable challenges, and it is by no means easy to achieve the objective of securing peace, prosperity, and happiness for the people of Meghalaya by 2030. There are several factors constraining development in the state, some common to the region and others specific to the state, and to overcome them requires a considerable change in attitudes and mind-sets at both the central and state levels — from a security perspective to an orientation towards development, financial resources, and governance reform. For these changes to take place, the architecture, engineering,

and management aspects of the development strategy will have to be worked out and implemented carefully. The next section analyses the current state of development in the state to understand the magnitude of the problem and the challenges faced. Section III presents a detailed projection of the vision of development for the state, both in terms of the acceleration in growth and other qualitative factors required to ensure peace, prosperity, and inclusiveness. The strategy to achieve the goals listed above is elaborated in *Section IV*. *Section V* presents the overall perspective on the vision of development for Meghalaya.

Meghalaya is a state where nature is bountiful. Known for its flora and fauna, it is an abode of biodiversity with thick forest cover constituting 42.3 per cent of its geographical area. The overall forest cover in the state extends to over 80 per cent of its geographical area. The state receives the highest rainfall in the country. It is an ecological paradise with varieties of flowering plant species, over 300 types of orchids, and medicinal plants. There are more than 450 species of birds and 110 species of mammals. At the same time, given its large deposits of minerals, there is a real threat of unregulated mining in the forest area. Furthermore, a threat to the forest cover also comes from the practice of shifting cultivation. Development of the state should take place while preserving its fragile ecosystem and maintaining its thick forest cover. Ensuring sustainability should be a priority in any strategy to develop the state.

II. Meghalaya: The State and its People

The state of Meghalaya was carved out from two districts in the composite state of Assam — the United Khasi and Jaintia Hills District, and the Garo Hills — initially as autonomous districts in April 1970, and later converted into a full-fledged state in January 1972. According to the 2011 Census, the state had a population of 2.96 million which is estimated to have increased from 2.58 million in 2009–10. The state, with a geographical area of 22,429 sq km, has seven districts: East Khasi Hills, West Khasi Hills, Jaintia Hills, Ri-Bhoi, West Garo Hills, East Garo Hills, and South Garo Hills. It is strategically located, bounded by Bangladesh on the south and surrounded on its other borders by Assam. Meghalaya mostly comprises hills and tablelands.

The population of the state is predominantly tribal, constituting as much as 86 per cent of the population. The main tribes are the Khasis, Jaintias, and Garos in the hills, but there are also tribes in the plains such as the Koch, Rabhas, and the Bodos. Almost 86 per cent of the people live in the rural areas and are predominantly dependent upon land and agriculture for their livelihood. The literacy rate in the state,

at 75.48 per cent in 2011, was marginally higher than the average for the country at 74.04 per cent, but more importantly, the quality of education and skill development in the state, which is needed to create human resources to service the modern economy, requires significant a upgrade.

The state is endowed with abundant natural resources. Endowed with bountiful rainfall, the state has abundant water resources which make it a haven of biodiversity. The potential for hydropower generation is vast and only a fraction of that has actually been harnessed. The rich mineral resources in the state include coal, limestone, clay, kaolin, uranium, and sillimanite. The deposits of coal and limestone in the state are estimated at 640 million tonnes and over 5,000 million tonnes, respectively.

Despite the plentiful rainfall, agricultural productivity in the state is low. A large proportion of the state is hilly and agricultural practices in the hill areas are primitive. Less than 25 per cent of the net sown area is irrigated. The practice of shifting cultivation in hill areas not only damages the forest cover, it also deters the enhancement of capital formation in agriculture and agricultural productivity. By and large, the soil is acidic and abundant in organic matter, but unbalanced in terms of nutrients, as it is rich in nitrogen but poor in phosphorus. The state receives heavy rainfall and in the Mawsynram-Cherrapunjee-Pynursla belt in the Khasi Hills along the southern border, rainfall varying between 1,000 mm to 15,000 mm is recorded annually. Thus, the soil in the border areas tends to be sandy.

Agriculture practiced in Meghalaya is predominantly subsistence in nature, though in recent years many farmers have taken up horticulture and, to a lesser extent, floriculture. Horticultural products from the state include turmeric, ginger, potatoes, and pineapple. However, the absence of cold storage and processing facilities is a major constraint in securing remunerative prices for the products, and is impeding the commercialisation of agriculture in the state. There has been considerable progress in floriculture, with the Horticulture Mission of the central government playing a key role, assisted by a private company from Bangalore, Zopar Exports, which supplies farmers with flower pods from the Netherlands, introduces farmers to scientific methods of cultivation using fabricated greenhouses and drip irrigation, and purchases the flowers from the farmers to export to the Netherlands and other European countries. Farmers in the state also produce three varieties of silk (eri, muga, and mulberry); almost 60–70 per cent of the cocoons produced are transferred to Assam for conversion.

The landlocked nature of the state, and its remoteness from the mainland have been major factors constraining the realisation of the state's potential. Meghalaya is surrounded by Assam on all sides, except in the south where it borders Bangladesh.

Thus, it is cut off from the rest of the country, and the only lifeline it has with mainland India is through Assam.

As mentioned earlier, at the time of Independence, the per capita income in the composite state of Assam, which included Meghalaya, was higher than the national average by about 15 per cent. Access to the outside world through the Chittagong port, and shorter land and inland water routes to the mainland through undivided Bengal ensured relatively higher growth for the region and the state than the rest of the country. The question of the vast development potential of the region was never in doubt, for even the colonial rulers had laid their second railway line between Dibrugarh and Chittagong, as far back as the late nineteenth century. Yet after the partition of the country and separation of East Bengal to form a part of Pakistan, and later Bangladesh, the entire region, and with it Meghalaya, was virtually cut off from the rest of the country, with road connectivity to the mainland confined to the 27 km Siliguri corridor.

Not surprisingly, growth of per capita NSDP in the state was slower than both the average for the north-eastern region as well as the country average. Thus, Meghalaya, which had a per capita income 1.4 per cent higher than the average for the region in 2001–02, fell behind the all-state average in 2003–04, and the difference increased steadily thereafter; in 2010–11 it was lower than the all India average by 4.5 per cent. Similarly, the growth rate in the state was lower than the average of the north-eastern region and by 2010–11, per capita NSDP in Meghalaya was lower than the average of the north-eastern region by 7.5 per cent (Table II.1; Figure II.1). The more recent data available shows that in 2011–12, the per capita NSDP in the state, at Rs 55,306 at 2011–12 prices, was lower than the per capita NDFP in the country (Rs 60,972) by 9.3 per cent. In an environment where market infrastructure and institutions were nascent, it was too optimistic to expect a flow of trade and investment to the state, and not surprisingly, the growth rate recorded in the state was lower than the country's average. The important issue is that the Indian economy has accelerated its growth significantly during the current decade to record almost 7.7 per cent growth per year on average. However, in the aftermath of turmoil in the world economy following the global financial crisis and sovereign debt crisis in the EU, the growth rate of the Indian economy has substantially decelerated, forcing the Planning Commission to revise its growth target for the 12th Plan to 8.2 per cent, though in the subsequent plans it would be realistic to assume that the economy will revert to the 9 per cent growth path. This implies that the difference between the state's per capita income and that of the country will continue to increase. In order to catch up with the expected growth in per capita income of the country, the state will have to undertake significant reforms in both policies and institutions to attract the large investment required, and change the

quality of growth to reach the vulnerable sections. Inability to catch up with the rest of the country despite abundant natural resources is a matter of concern, and developmental efforts should be focused on taking the Meghalaya economy to the frontier of development in the country. Unless this is realised, it will not be possible to realise the vision of development in the state.

The problem with the state's developmental profile is not the slow growth rate of incomes alone; even more important is the high concentration of poverty. According to the Planning Commission, the estimated poverty ratio in 2006–07 was 31.4 per cent. Unfortunately, these estimates relate to the state of Assam, for which the consumer expenditure data are collected, and not specifically to Meghalaya. The government of Meghalaya undertook a survey of households to estimate poverty based on the advice of the Ministry of Rural Development, Government of India in 2002. However, the sample was too small to ensure any degree of reliability of the estimates. Nevertheless, the estimate shows that almost 48.9 per cent of the population in the state is below the poverty line. Attempts at eradication of poverty of such a large scale shows that growth of the economy has been too slow to reduce poverty in any significant manner, and moreover, the quality of growth is such that by itself, it has not reduced poverty appreciably, and this calls for a second look at the development strategy followed thus far. Therefore, even as the growth rate of the economy is accelerated, it is important to make it inclusive, which requires participatory governance and planning.

Figure II.1: Per Capita Income of Meghalaya Relative to N-E Region and All States

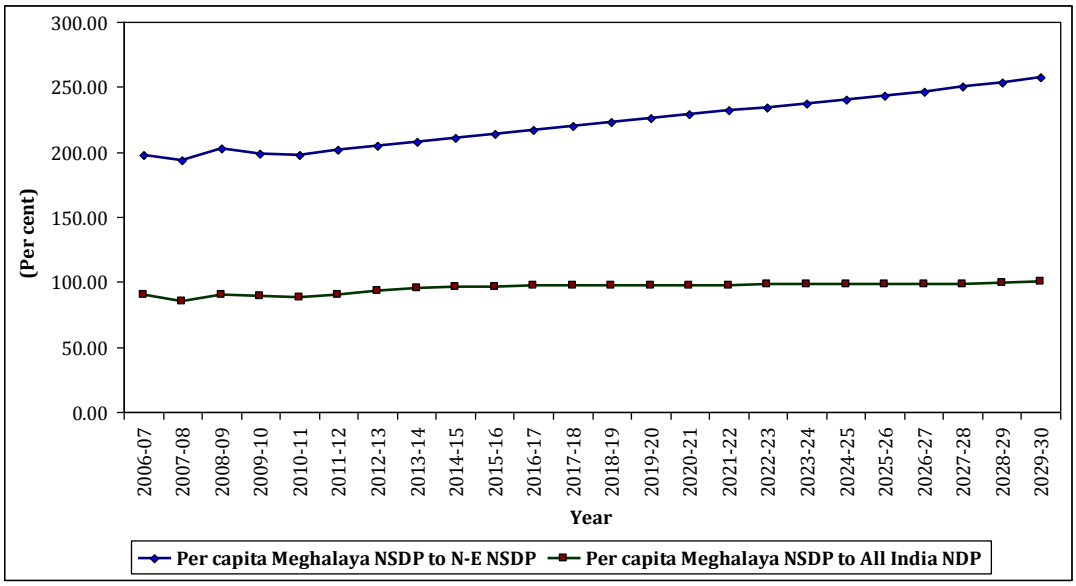


Table II.1: Per Capita Real Income in Meghalaya, North-Eastern (N-E) States, and All States

Year	(In Rupees)			(In Crore)						(Per cent)	
	Per capita NSDP of Meghalaya	Per capita NSDP of N-E States	Per capita NDP	Population of Meghalaya	Population of India	Population of N-E States	NSDP of Meghalaya	NSDP of N-E States	NDP	Per capita Meghalaya NSDP to N-E NSDP	Per capita Meghalaya NSDP to India NDP
2006–07	40443	20468	45029	0.2488	112.2	4.221	10062	86390	5052205	197.597	89.817
2007–08	41218	21289	48663	0.2518	113.8	4.275	10379	91009	5537797	193.617	84.703
2008–09	45968	22632	50943	0.2548	115.4	4.329	11713	97967	5878807	203.109	90.234
2009–10	48352	24290	54295	0.2578	117.0	4.383	12465	106449	6352503	199.065	89.054
2010–11	51115	25823	57743	0.2608	118.6	4.436	13331	114550	6848333	197.944	88.521
2011–12	55306	27421	60972	0.2640	120.2	4.490	14601	123114	7328878	201.690	90.707
2012–13	59617	29124	63842	0.2670	121.8	4.543	15918	132318	7775940	204.699	93.383
2013–14	64249	30940	67370	0.2701	123.5	4.596	17354	142210	8320255	207.660	95.366
2014–15	69249	32867	71830	0.2732	125.1	4.650	18919	152842	8985876	210.694	96.408
2015–16	74649	34919	77305	0.2763	126.7	4.704	20625	164269	9794605	213.777	96.563
2016–17	80479	37123	83147	0.2794	128.4	4.756	22486	176550	10676119	216.790	96.791
2017–18	86745	39477	89515	0.2826	130.0	4.807	24514	189749	11636970	219.736	96.905
2018–19	93543	41991	96312	0.2857	131.7	4.857	26725	203935	12684297	222.767	97.125
2019–20	100886	44688	103720	0.2888	133.3	4.905	29136	219181	13825884	225.756	97.267
2020–21	108818	47577	111631	0.2919	135.0	4.951	31764	235568	15070213	228.719	97.480
2021–22	117386	50672	120165	0.2950	136.7	4.996	34629	253179	16426532	231.658	97.688
2022–23	126644	53991	129464	0.2981	138.3	5.040	37752	272107	17904920	234.566	97.821
2023–24	136601	57549	139403	0.3013	140.0	5.082	41158	292450	19516363	237.366	97.990
2024–25	147405	61370	150126	0.3044	141.7	5.122	44870	314314	21272836	240.190	98.188
2025–26	159081	65484	161810	0.3075	143.3	5.159	48917	337813	23187391	242.931	98.314
2026–27	171699	69677	174305	0.3106	145.0	5.211	53330	363068	25274256	246.421	98.505
2027–28	185278	74123	187791	0.3138	146.7	5.264	58140	390211	27548939	249.961	98.662
2028–29	200014	78885	202347	0.3169	148.4	5.316	63384	419384	30028344	253.551	98.847
2029–30	218055	84783	218061	0.3169	150.1	5.316	69102	450738	32730895	257.194	99.998

Source: NIPFP Estimates

Data Sources: 1) Central Statistical Organisation, Ministry of Statistics and Programme Implementation, Government of India. www.mospi.nic.in

2) Registrar General of India, Census 2001, Population Projections for India and States 2001–2026 (Revised December 2006).

3) *NEDFi Databank.* http://db.nedfi.com/user

The state's performance in human development too has not been impressive. As mentioned earlier, the literacy rate in the state, according to the 2011 Census, at just about 75.5 per cent is only marginally higher than the country average of 74 per cent, though it is better than that of the average for the north-eastern region (64.7 per cent). However, the infant mortality rate in the state, at 59 per 1,000 births, is much worse than that of the country average (50 per 1,000 births), and much worse than that of the regional average (45 per cent 1,000 births in 2005–06). This is a matter of concern and calls for remedial action in terms of increasing access to healthcare.

Lack of inclusiveness in the growth scenario in Meghalaya becomes even clearer when we look at the inter-regional disparities in development. The inter-district distribution of per capita district development product (DDP) in 2007–08 shows variation from Rs 12,592 or 56.3 per cent of the state average in the West Khasi Hills to Rs 31,202 or 139 per cent of the state average in the East Khasi Hills. In other words, per capita income levels in the poorest district in the state, the West Khasi Hills was only 40 per cent of that of the richest, the East Khasi Hills. Wide regional disparities in living standards point to the lack of inclusiveness in the developmental process in the state. This is also evident from variations in the incidence of poverty across the districts: the analysis of the poverty ratio based on the BPL census conducted in different districts shows that the poverty ratio in 2002 varied from 39.5 per cent in the Jaintia Hills to 55.9 per cent in the East Garo Hills. This reinforces the need to rework the development strategy to make it participatory and inclusive.

III. Towards Economic Freedom and Prosperity

Ensuring inclusive development and prosperity for the people of Meghalaya would require multipronged action. As argued by Sen (1999), development is freedom from poverty and hunger, freedom to meaningfully participate in the governance of the state, freedom to enjoy a peaceful life, freedom from ignorance and ill health, freedom to enjoy a high quality of life, and freedom to enhance capabilities to choose avocations. This requires multiple interventions to enable greater participation of the people in governance and planning, accelerate growth and make it inclusive, and to improve human development to enhance the capabilities of people to earn their freedoms. As shown in the previous section, the per capita income of the state is lower than that of the country by about 10 per cent, and as the Indian economy is poised to grow, the state will have to grow at a much faster rate than in the past to catch up with the standard of living in the country.

The Vision *2020* document for the north-eastern region revealed that if GDP at factor cost at constant (2006–07) prices in the Indian economy grows at an average rate of 9 per cent per year, (and per capita GDP at 7.6 per cent), the Meghalaya state will have to grow at an annual rate of 10.96 per cent (9.72 per cent per capita) to catch up with the country's average per capita income. To accelerate growth to double-digits and sustain it for a period of 14 years is a formidable task. Furthermore, since the Vision document was adopted by the North Eastern Council in May 2008, not much seems to have been done to reform policies and institutions and change the development strategy as recommended by the document. In the event, the Vision document has been relegated to yet being another document of intentions rather than being a blueprint for an action plan to bring peace and prosperity to the region.

As far as Meghalaya is concerned, implementation of the Vision document for the region will generate significant benefit to the state as well. However, the state should not wait, but should proceed to evolve action plans to create an enabling environment for inclusive development without any further loss of time. At the same time, it is important to have realistic targets and an action plan to achieve them.

As mentioned earlier, with the national economy poised to grow at an annual average rate of about 9 per cent, accelerating economic growth in the state economy will be a daunting task. This would result in the growth of per capita income at 7.74 per cent annually, as over the period, population is expected to decelerate and per capita income growth is expected to accelerate from 6.63 per cent in the 11th Plan to 7.76 per cent in the 15th Plan period (*Table 2*). Under this assumption, the per capita income of the country in 2029–30 is estimated at Rs 215,266 at 2009–10 prices. To achieve this level of per capita income, the GSDP in Meghalaya will have to grow annually at close to 10 per cent during the period 2007–08 to 2029–30, accelerating from 7.85 per cent during the 11th Plan to 10.25 per cent during the 15th Plan. Similarly, the growth of per capita GSDP should accelerate from 6.59 per cent per year during the 11th Plan to 9.52 per cent per year during the 15th Plan period, requiring an average annual growth rate of 8.8 per cent during the period (*Table III; Graph III.1*).

Ensuring inclusive development and prosperity for the people of Meghalaya would require multipronged action to achieve inclusive development. As argued by Sen (1999), development is freedom from poverty and hunger, freedom to meaningfully participate in the governance of the state, freedom to enjoy a peaceful life, freedom from ignorance and ill health, freedom to enjoy high quality of life, and freedom to enhance capabilities to choose avocations. This requires multiple interventions to enable greater participation of people in governance and planning, accelerate growth and make it inclusive, improve human development, and enhance capabilities of the

people to earn their freedoms. As shown in the previous section, the per capita income of the state is lower than that of the country by 4.3 per cent and as the Indian economy is poised to grow at about 9 per cent per year, the State will have to grow at a much faster rate than in the past to catch up with the standard of living in the country. However, given the endowments in the state, it should lead not only the region but also the country from the front and record much higher growth rates.

However, the revised estimates of NSDP in the state show that the shortfall in per capita income in the state is lower, and therefore, the growth rate required to catch up with the per capita income in the country, if the latter grows at about 9 per cent annually from 2015–16 to 2029–30, will be 9.02 per cent.

It is only development that can ensure sustained stability, lasting peace, and prosperity.

If the NDP in the Indian economy grows at 6.1 per cent in 2012–13, 7 per cent in 2013–14, 8 per cent in 2014–15, and 9 per cent every year thereafter, the per capita NDP will on average grow at the rate of growth of per capita income, i.e., at 7.33 per cent annually. Over the period, population is expected to decelerate and per capita income growth is expected to accelerate from 6.25 per cent in the 11th Plan to 7.75 per cent in the 15th Plan period (*Table III.2*). Under this assumption, the per capita income of the country in 2029–30 is estimated at Rs 215,266 at 2011–12 prices. To achieve this level of per capita income, the NSDP in Meghalaya will have to grow annually at close to 9 per cent during the period 2012–13 to 2029–30, accelerating from an average of 7.78 per cent during the last two years of the 11th Plan to 9.02 per cent during the 15th Plan period. Similarly, the growth of per capita GSDP should accelerate from 6.59 per cent per year during the 11th Plan to 9.52 per cent per year during the 15th Plan period, requiring an average annual growth rate of 8.8 per cent during the period (*Table III.3; Graph III.1*).

Table III.1: Projected Trajectory of Growth of India (at 2011–12 prices)

		Assumed Average Annual Growth Rate (%)	Projected NDP (Crore)	Assumed Population Growth	Derived Per Capita (End Year)	Implied Per Capita NDP Growth (%)
11th Plan	2007–08 to 2011–12	7.62	36998522	1.39	60972	6.25
12th Plan	2012–13 to 2016–17	7.82	45552794	1.24	83147	6.41
13th Plan	2017–18 to 2021–22	9.00	69643896	1.11	120165	7.64
14th Plan	2022–23 to 2026–27	9.00	107155767	1.00	174305	7.72
15th Plan	2026–27 to 2029–30	9.00	90308178	0.90	218061	7.76
Average Annual Growth Rate (From 12th Plan)		8.56		1.27		

Source: NIPFP Estimates from the data sources listed under *Table III.3*

Table III.2: Projected Trajectory of Growth of Meghalaya (at 2009–10 prices)

Plan Period	Years	Required GSDP CAGR (%)	Projected GSDP (Crores)	Derived Per Capita GSDP (end Year)	Implied Per Capita GSDP Growth (%)
11th	2010–11 to 2011–12	7.78	62488	55306	6.96
12th	2012–13 to 2016–17	9.02	95301	80479	7.79
13th	2017–18 to 2021–22	9.02	146767	117386	7.84
14th	2022–23 to 2026–27	9.02	226028	171699	7.90
15th	2026–27 to 2029–30	9.02	190626	218055	8.15
Average Annual Growth Rate (%): 2012–2030		9.02			7.92

Source: NIPFP Computations

Data Source: Population Estimates: Registrar General of India

GDP and GSDP Estimates: Central Statistical Organisation, Ministry of Statistics and Programme Implementation, Government of India

Accelerating growth to this extent would require substantial augmentation of investment, and enhancing efficiency in resource use for higher productivity. We have estimated the investment requirements for achieving the required growth in GSDP in two alternative scenarios: one assuming that the incremental capital-output ratio (ICOR) is 4, and another assuming that the ICOR will show a gradual decline from 4 to 3.6 over the plan periods, from the 11th Plan to 15th Plan. There is no state-specific ICOR available and we have assumed that the prevailing ICOR of the country will also be applicable to the state. Furthermore, the lower ICOR scenario is based on the assumption that over different plan periods, increase in productivity will result in a marginal decline in ICOR.

The estimates presented in *Table III.3* show that it is necessary to substantially increase the investment required to equalise the per capita income in the state with that of the country in 2030. Under the first scenario, where the ICOR is assumed to remain constant at 4, the volume of investment required as a ratio of NSDP will have to increase from 29 per cent during the 11th Plan to 33 per cent during the 15th Plan. Even under the alternative scenario of ICOR declining from 4 in the 11th Plan to 3.6 in the 15th Plan, investment as a ratio of GSDP will have to increase to 30 per cent (*Table 4*). Thus, substantial increase in the investment and improvement in productivity are necessary to accelerate Meghalaya's economic growth to equalise its per capita income with that of the country's average by 2030.

The volume of investment required, estimated above, cannot come from central and state governments alone, and a large part of this will have to be made by the

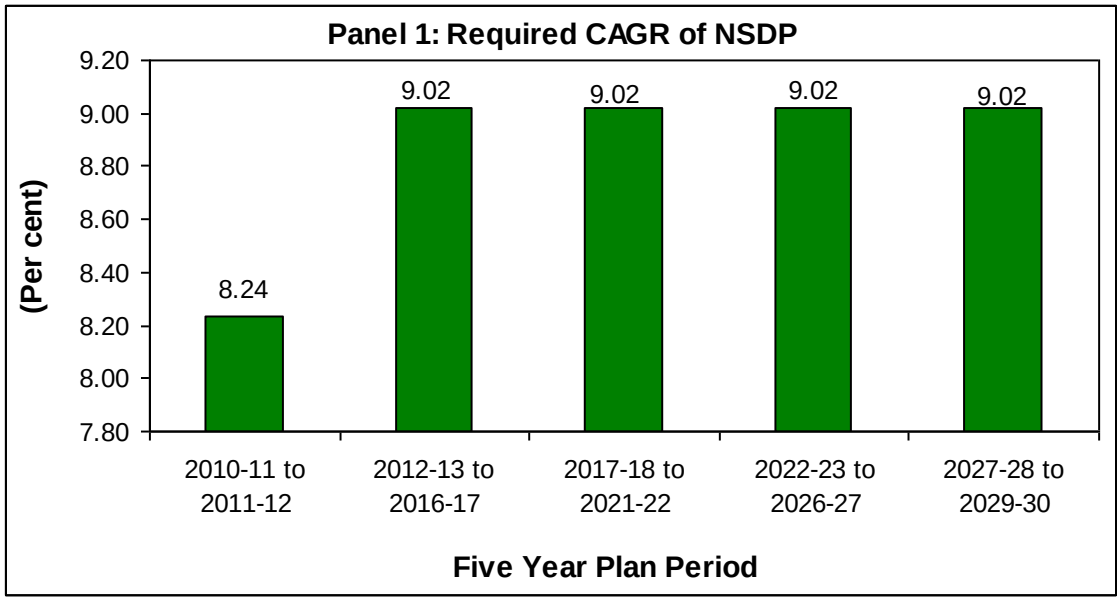
private sector. However, for the private sector to make large investments in the state, it is necessary to create an enabling environment. Among other factors, the quality of infrastructure in the state is an important determinant of investment by the private sector. Given the poor state of infrastructure in Meghalaya, it is important that both the centre and state governments significantly augment investment in this area. In particular, large scale upgradation is necessary in improving connectivity within the state, between the state and the region, between the state and the rest of the country, and between the state and the neighbouring countries and beyond. Thus, significant increases in public investment are necessary in roads, rails, inland waterways, as well as airways. It is important to develop the airport in Shillong to enable direct transfer to the rest of the country, without having to go through Guwahati. Substantial additional investments are needed to create the infrastructure required for agricultural storage and marketing, upgradation of land borders, telecommunication networks, and in ensuring regular, quality power supply.

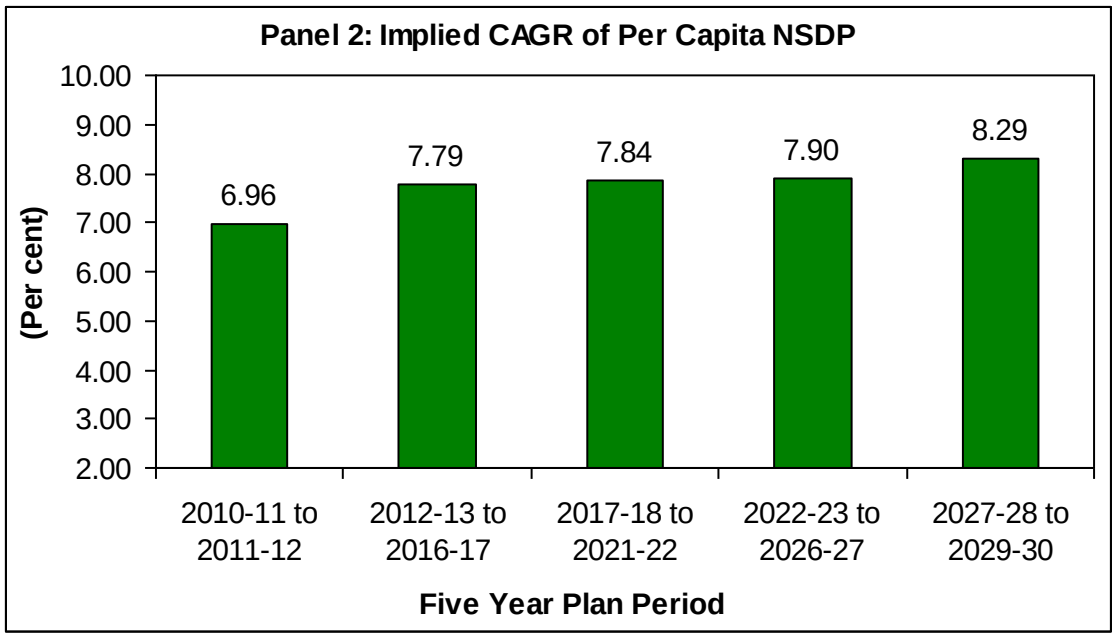
Table III.3: Projected Requirement of Investment (at 2009–10 prices)

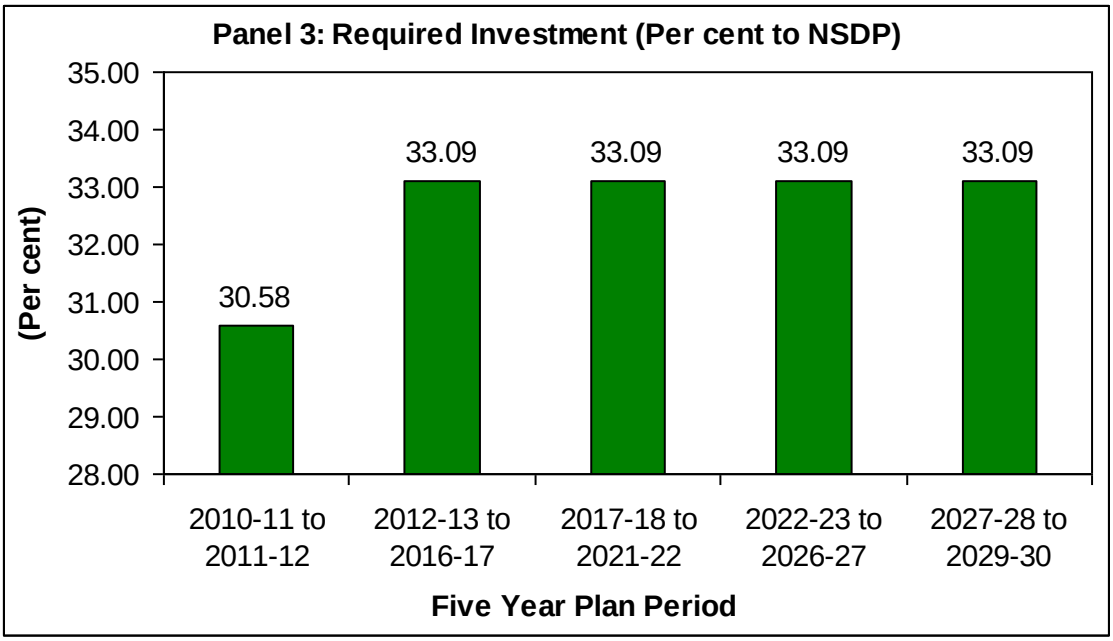
Plan Period	Years	Investment Required in Rs Crores		Investment Required as Per Cent of GSDP	
		Assumption I ICOR Constant at 4.0	Assumption II ICOR Declines from 4.0 to 3.6	ICOR I	ICOR II
11th	2010–11 to 2011—12	18154	18019	29.05	28.87
12th	2012–13 to 2016–17	31540	30846	33.09	32.37
13th	2017–18 to 2021–22	48572	46224	33.09	31.49
14th	2022–23 to 2026–27	74803	69231	33.09	30.62
15th	2026–27 to 2029–30	63088	57076	33.09	29.94

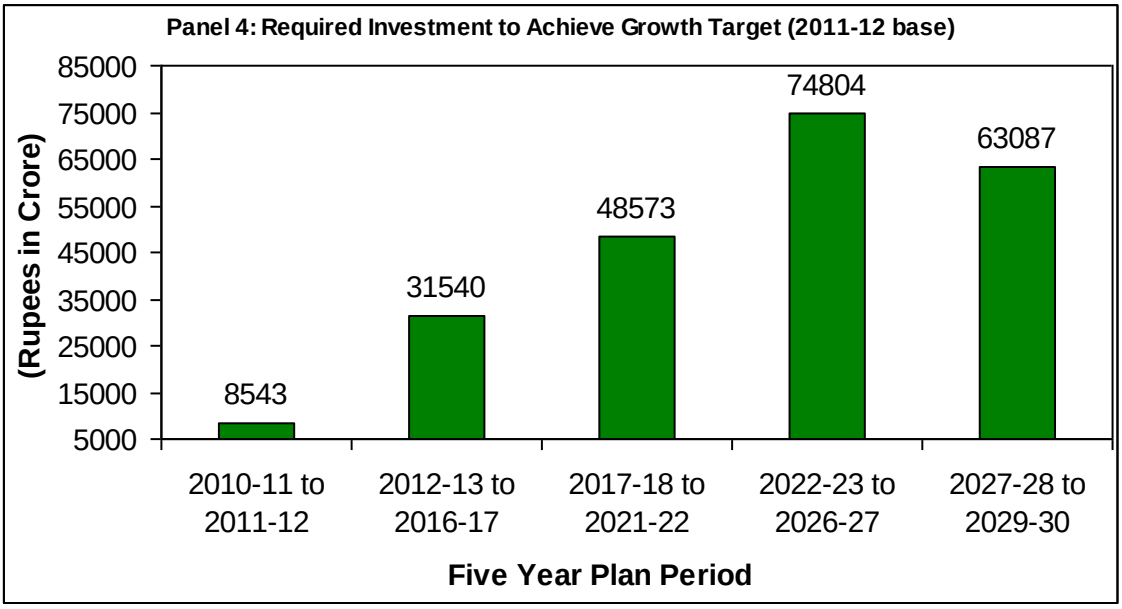
Source: NIPFP Estimates

Graph III.1 Projection of Investment Requirements to Achieve Economic Target by 2030









An important aspect of development in Meghalaya, as in other states in the north-east, is the lack of productive economic activity and extreme dependence on the government for employment and income generation. Development of the state cannot be sustainable if the government alone provides the major economic activity; instead it should be providing public services and creating opportunities for employment and income generation. Changing the structure of income generation to shift from a

predominant public administration share to non-governmental sectors, and particularly to manufacturing and services other than public administration, should be a priority.

Accelerating the growth rate of the economy is important, but just as important is the need to ensure that growth benefits the poor and disadvantaged groups more. Eradication of poverty requires that growth must be made inclusive. With almost 49 per cent of the population below the poverty line in 2002, empowering the poor by building their capabilities is as vital to realising the vision as accelerating economic growth.

An equally important part of the vision is empowering the people to govern themselves. Inclusive growth requires inclusive governance. Lack of participation in governance and planning has been a major shortcoming in the development strategy practiced thus far, and this has resulted in distortions in development on the one hand and a sense of alienation among the people on the other. Ensuring that the poor and disadvantaged benefit more from the growth process calls for building the governance system right from the village level upwards.

Empowerment of the people is a goal in itself, as it enables dignified living. This will require significant efforts at human development by the state. Human development indicators in Meghalaya are not very impressive; they are much below those not only in other states in the region but also that of the country. Human development automatically empowers people to live enlightened, dignified, and civilised lives. It empowers them to participate in governance in a meaningful way, a means to enhance their productivity and income-earning capacity. For those with no capital or land ownership, can possibly render help in participating in the market. In short, it expands their choices, and is therefore not only a means to achieve prosperity and happiness, but an end in itself.

IV. Realising the Vision: The Strategy for Development

We had, in the previous sections, underlined the problems and constraints impeding development in the north-eastern region as well as in the state of Meghalaya. We had pointed out the various kinds of deficit plaguing the region which are inimical to progress and prosperity. In fact, the High-Powered Committee appointed by the Prime Minister in 1997 had also drawn attention to the various kinds of deficit in the region, namely, the basic needs deficit, infrastructure deficit, resource deficit, and a two-way deficit of understanding. To this we have added the governance deficit, and the trust deficit. Realising the vision would require overcoming these deficits, which in turn requires an overhaul of the development strategy.

Components of the Development Strategy

Overcoming these deficits requires a paradigm shift in the strategy for development. This would entail significant reforms in both policies and institutions, and developing capacity in them to govern and implement inclusive development policies. In many cases, institutions required for the smooth functioning of markets may simply not exist, and it is necessary to identify the gaps and bring about conditions for their creation and development. Similarly, a large section of the population, the poor and vulnerable, cannot productively access the labour or product markets, and ensuring their participation is essential if they are to benefit from development. At the same time, their productive participation in the market requires that they be imparted with capabilities to enjoy freedoms.

In the earlier section, seven interdependent components of the development strategy were identified for implementation to realise the vision of development and to convert the dream into reality. They are discussed in some detail below:

(i) Empowerment of the People for Inclusive Growth

Local government institutions in the state are governed predominantly by Schedule VI of the Constitution, and these governance and planning systems are operating far below their potential. This scheme not only ensures that public services are provided according to the preferences of the people, but also ensures harmonious development, and can be an effective mechanism to end insurgency in the state. The entire scheme should be built on a system of communication, and should be harmonious with traditional systems and practices. At the same time, capacity building of local government institutions to undertake grassroots planning should be a major component of the strategy.

Responsive governance is also critical to creating an enabling environment for economic activity. Speedy clearances, and ensuring availability of land, water, and power for manufacturing activity are critical to achieve rapid industrialisation in the state. The governments of the day must make investors feel wanted in the system, and undertake measures to attract investments.

(ii) Promoting Market Friendly Policies and Institutions

Opening up the rural areas to the market through a network of rural roads, setting up a chain of cold storage facilities to minimise wastage of perishable farm products, and promoting marketing facilities to ensure that farmers receive remunerative prices are critical to agricultural transformation. The state has gained

considerable experience in promoting the development and export of floriculture, and it is important to expand the scale. In hill areas where shifting cultivation is practiced, it is important to wean cultivators away from the practice by providing extension services and building capacity to undertake organic farming. The development of markets for non-farm goods produced by the rural population helps to expand this avocation for supplementing incomes, and enhances the popularity of products from Meghalaya outside the state. An impetus will have to be given for setting up agro-processing facilities to bring about rural transformation.

Other important initiatives to create a market friendly environment include facilitating land acquisition for industrial purposes, including a clear relief and rehabilitation policy for the displaced, improving the governance system to ensure fast clearances, and infrastructure development.

(iii) Sustainable Development Based on Comparative Advantage

In undertaking developmental activities, it is important not to disturb the fragile ecology of the state. In particular, the forest cover needs to be maintained by weaning the tribal population away from shifting cultivation; while tribal people have a right to their natural habitat — the forests — they should be made to protect the forests. Extensive effort will be needed to build capacity among the tribal population to take up organic cultivation, and this should be supplemented by providing marketing facilities. This requires a holistic approach to the livelihood systems of tribal populations. It is important to ensure that the tribals have the right to use the forests for their livelihood and at the same time, they become part of the system to prevent exploitation of the forests.

Improving agricultural productivity is at the heart of enhancing income-earning opportunities for the large proportion of population that relies on farming for its livelihood. Ensuring balanced use of fertilisers, selection of the right crops for cultivation, and adoption of scientific cultivation methods require substantial efforts at providing easy access to soil testing, ensuring the availability of hybrid seeds and fertilisers, and, above all, agricultural extension to promote the practice of scientific methods of cultivation. Improvements in agricultural productivity also require significant expansion of irrigation, particularly in the plains.

(iv) Infrastructure Development for Manufacturing and Markets

Ensuring state-of-the-art infrastructure is one of the most important factors in creating enabling conditions for markets to develop and in attracting private investment. The Vision 2020 document has argued that in order to reach the level of per

capita income equivalent to the country's average in 2020, Meghalaya will have to accelerate its annual growth of real per capita income to 9.7 per cent during the period 2007–20. This is against the actual growth of 3.7 per cent during the period 1995–96 to 2004–05, and a mere 3 per cent during 2000–01 to 2004–05.[3] Admittedly, at the prevailing productivity level, the quantum of investment required is very large, which can only be achieved with large scale private investment.

Building up an efficient network of transportation for people as well as goods, and ensuring regular, quality power supply are the two most important components of infrastructure that should be put in place without much loss of time. Strengthening the transportation network is critical to improving connectivity and minimising transportation time and cost. This requires large investments in building roads, railways, inland waterways, and airways. This also requires diplomatic initiatives to open up land as well as inland water transportation routes through Bangladesh to Kolkata, which will considerably reduce the distance and time for transporting goods. Providing access to Chittagong port (through Tripura) could remove the state's handicap of being landlocked. In the area of power, the state has significant hydroelectricity generation potential which, if harnessed, could ensure adequate supply of power; it could even result in surpluses which could be sold to neighbouring Bangladesh, which also faces power shortages.

The development of road connectivity must receive special attention during the 12th Five Year Plan. The focus should not merely be on highways but also on state highways, district, block, and village roads. Substantial additional investments are expected under the Special Accelerated Road Development Programme (SARDP) – North-East. The North Eastern State Roads Investment Program financed by the Asian Development Bank is in progress, and there are also various other schemes for the development of road connectivity by the Ministry of Road Transport and Highways (MORTH). However, considering the low road density in the state, it is important to make substantial additional investments and fast track the various projects and ensure speedy implementation.

There have been some important initiatives taken by the Central and state governments to expand the road network and improve the existing roads. The Central government has embarked on four laning of the Guwahati–Shillong Highway, eastern and western bypasses for Shillong, Shillong–Nongstoin Tura road, Phulbari–Tura–Nongstoin road, Garobadha–Dalu road, and Shilliong–Silchar road. In addition,

[3] *See* India (2008), *Annexure Table 1.1*

substantial additional investments are made through special plan allocations, non-lapsable central pools of resources, and in the state plan for the road sector.

There are other important initiatives to spruce up transport infrastructure as well. Mention must be made of the attempt to upgrade Shillong airport to enable the landing of Airbus planes. In the expansion of railways, the Dudhnoi–Mendipathar link has progressed well and is likely to be commissioned by March 2013. This will be followed by the Sutnga–Silchar and Tetlia–Byrnihat lines, which are likely to be operational by 2014–15.

Despite these initiatives, much more needs to be done to improve transportation infrastructure in the state. Substantial additional investments will have to be made to improve roads, inland waterways, railways, and air connectivity. The focus of road connectivity in the less developed areas in the state will help in improving market penetration, mobility, and employment, as well as access to education and healthcare for the people.

Other important infrastructure that is required for competitive manufacturing activity is regular and good quality supply of power. The state has significant hydroelectric potential and harnessing this potential could ensure adequate supply of power. However, despite significant potential to generate electricity from hydel sources, the state is bedevilled by a severe shortage of power. The prevailing generation capacity in the state is a mere 185 MW as against the peak demand of 800 MW. As the entire region has a shortfall in power supply, and as the grid development in the region is still in the nascent stage, the state is not able to buy power from other states and thus, the deficit results in severe power cuts. The remoteness of the state and high transportation costs make it difficult to have captive power generation by the manufacturers to avoid power shortages. Lack of adequate power supply has been one of the major factors inhibiting the growth of manufacturing in the state.

As mentioned above, the state government's power generation capacity at present stands at 185 MW. Targeting double digit growth would require substantial augmentation of power supply to meet the growing demand for power, both from industrial and commercial sectors besides higher demand from households. Making up the prevailing shortfall in supply and meeting the additional demand for power from the growing industrial and commercial sectors would require significant augmentation of availability of stable power. As mentioned earlier, unlike the industrial units in the mainland, captive power generation is not a viable solution for the manufacturing sector and unless the state is able to ensure stable power supply, it will not attract investments in the manufacturing sector, which is important to achieve the envisaged growth target.

During the 12th Plan period, with the commissioning of Leshka, Kynshi, and Umngot hydroelectric projects, the power generation capacity is likely to increase by 126 MW. The state government also expects to get an additional 80 MW from Palatana, which is a gas based power project in Tripura. Additional power is expected to be available from the Bongaigaon thermal power project. The state has also initiated some measures to augment power supply from micro-hydropower and mini hydropower projects in the PPP mode. There is a proposal to initiate a thermal power project in the Garo Hills as well. In addition to all these, the new central generation projects in the north-eastern region are expected to augment the power supply to the state. In addition, the rural energy mission for decentralised energy solutions is supposed to augment the supply, albeit to a limited extent.

It would be unrealistic to expect the central and state governments to come up with the required investments for infrastructure. The way forward would be through public-private partnerships, where feasible. This would require developing a framework for such partnerships, and appropriate regulations. It would be unwise to expect that the framework for private investment in infrastructure that has been applied in the mainland can be applied to Meghalaya without any alteration. Given the unique features and inherent disadvantages of Meghalaya, the framework will have to be modified to ensure that investments in infrastructure with private participation do, in fact, take place at the required level.

The governments will have to find resources for investing in activities where there is no high return on investments, and private sector will be unwilling to make such investments. The typical case is investments in basic infrastructure. Even when opening up the investment opportunities for the private sector through public-private partnerships, the government will have to take the lead, not just in facilitation but even more so in making the basic investments needed, and in ensuring adequate viability gap funding.

(v) Expanding Trade with the Neighbours and Beyond, and Creating Enabling Conditions for Investment

The government will have to find resources for investing in activities where returns on investments are low and the private sector will be unwilling to invest, such as basic infrastructure. Even when opening up investment opportunities for the private sector through public-private partnerships, the government will have to take the lead in facilitation, and even more so in making the basic investments needed, and in ensuring adequate viability gap funding.

Expansion of trade will have to take place within the region and beyond. For the former, it is necessary to substantially improve transport infrastructure within the region. The expansion and improvement of roads, inland waterways, railways, and airways should be a priority. In fact, the Jaleswar–Dhubri and Dhubri–Fakirganj inland water routes are the shortest routes connecting Meghalaya with Assam, and upgrading these could provide the fastest method of moving goods. As regards rail construction, the Guwahati–Shillong line has only been built from Azra to Byrnihat (30 km) and construction of the Byrnihat–Shillong segment has yet to be taken up. This work needs to be expedited. Faster movement of goods within the region can provide an impetus to growth. In addition, the opening of land and inland waterway routes to West Bengal through Bangladesh could substantially reduce transportation costs and expand trade with the rest of India as well.

Facilitating international trade would require opening up the trade routes with neighbouring countries, facilitating access to ports in Bangladesh, and activating the land route to Myanmar through Manipur or Mizoram. Opening up for trade with Bangladesh should be a priority and will be beneficial to both countries, while a land route to Myanmar could open up opportunities to the South East Asian countries if the Asian Highway is constructed and made operational. These require diplomatic initiatives, and given that the fortunes of the north-eastern states, including Meghalaya, depend on the nature of India's relationship with its neighbours, they should have a say in conducting diplomacy with Bangladesh.

Opening up for inland trade with Bangladesh requires strengthening the border trade infrastructure. At present, most of the border check-posts allow trading in only a few commodities. It is important to enable these check-posts to trade in a wide range of commodities. In any case, given that the border between the two countries is porous, commodities not allowed to be traded officially go through informal channels, and therefore, facilitating their trade will reduce transaction costs. Borsorah, Dawki, and Chasuapara are the three important border check-posts between Meghalaya and Bangladesh which need to be upgraded to enable the movement of a wide range of goods across the border. Conducting inland trade with Bangladesh also requires substantial improvement in border infrastructure which involves upgrading the roads, weigh bridges, loading and unloading facilities, parking and resting places, restaurants, and refuelling stations.

An important initiative the Government of India should take is to assist the Government of Bangladesh to develop Chittagong port into a modern international port. Access to a port through land routes would provide Meghalaya access to the outside world, which can be a harbinger of expansion of trade. Development of land routes to

the port will also ease the constraints placed on Bhutan as a landlocked country, by providing access to central and eastern Bhutan. Similarly, it will also help Assam by ensuring access to international trade.

The government of India has taken some important initiatives to develop border trade infrastructure. It has already approved the establishment of Dalu and Gasuapara land customs stations in the Garo Hills as transit points for trade between Bhutan and Bangladesh. The inland route for this is supposed to pass through Srirampur (Assam)–Dhubri– hulbari–Garobadha–Dalu–Nakugaon (Bangladesh)–Mymensingh–Chittagong. Within this stretch, Srirampur–Garobadha has been declared a National Highway, and the Garobadha–Dalu stretch is being upgraded under the project financed by the Asian Development Bank.

Despite these developments, much remains to be done both in terms of diplomatic initiatives and in building border trade infrastructure. Clearly, opening up the trade route to the outside world through Bangladesh is critical to the development of the entire north-eastern region, and more particularly to Meghalaya.

(vi) Capacity Development of People and Institutions

Capacity development is the cornerstone of inclusive development, and the most important means of empowering the people. This is particularly true of the poor and vulnerable sections which do not own land or have access to capital. Endowing them with human capital will empower them to gainfully participate in market activity. For empowerment, they also need to acquire the basic capabilities, which is possible through human development. People have the potential for gainful employment only when they have access to quality education and good healthcare. Skill development and technical education are other important areas that will prepare manpower for industrial development or even for self-employment. Focus must be given to providing a good education in information technology (IT) and IT-enabled services (ITES).

With capacity deficits in several areas, Meghalaya will have to focus on various facets. Excessive dependence on the government for state employment has not helped either the people or the government. There is considerable need for improving formal education systems, both in terms of access and quality. This is particularly true of engineering, computer science, nursing and medicine, and management education; particular focus will have to be given to providing quality education in IT and ITES. It may not be possible for the state government to create all the educational institutions needed to educate the young population of the state. What is important is that the state should create the institutions in collaboration with other north-eastern states in addition to enhancing access to national universities and institutions through

negotiations with the Ministry of Human Resource Development of the Union Government.

Skill development in important areas is necessary to prepare the manpower for industrial development. New and innovative schemes of skill development in more remunerative and modern employment avenues, such as hospitality, nursing, flight attending and stewardship, tourism and travel, computer and mobile repairs, and office management services, in addition to the traditional skill areas is extremely important. In this task, it is important to involve the private sector participation through, inter alia, public-private partnerships in advancing skill development. Seeking guidance and coordinating the efforts with the National Skill Development Corporation in advancing these efforts in the state would be fruitful.

Capacity development has to be done for both individuals and institutions. Building the capabilities of institutions will have to start from the level of the village development council. Grassroots planning requires preparing plans from the village level upwards, building and coordinating these plans at the block, district, and finally at the state level for implementation. The Vision 2020 document has recommended that the North Eastern Council (NEC) undertake planning for the entire region, which will call for capacity building within the NEC, which needs to be taken up by the Central government. Capacity building of various institutions in the state is necessary also to effectively implement various programmes, including the many central schemes, to ensure that funds defrayed result in commensurate outputs and outcomes. Equally important is the need to build capacity in the bureaucracy in various aspects of governance, and to sensitise them to the needs of the market.

The most important area where capacity needs to be augmented is in drawing up and implementing plan schemes. There is considerable need to augment the capacity of various departments in identifying the projects, working out the social costs and benefits, and evaluating the projects after completion. Although there has been considerable improvement in implementing plan schemes, particularly as seen in terms of spending the allocated expenditures, much more remains to be done to transform expenditures into outputs and outcomes efficiently.

(vii) Ensuring Opportunities to Vulnerable Sections of Population

Meghalaya is a state with a predominantly tribal population — constituting over 80 per cent — and a significant proportion of them have a subsistence living. It is important to empower them to participate in the market in a productive manner to improve their standard of living. This involves a multipronged strategy. Enforcing their

rights to use the forest products in a sustainable manner and providing them knowledge and guidance in this regard, providing them the knowledge to improve their agricultural practices, enabling them to undertake organic farming in hill areas to replace shifting cultivation practices to ensure their sustainable development, and providing marketing opportunities for their products are some of the measures needed to empower them within their natural surroundings.

It must be noted that a number of youth belonging to various tribes in the state would like to become a part of the new economy. Their empowerment lies in ensuring access to modern education and skill development. This will enable them to be a apart of the labour market in the new economy, enhance their productivity, impart confidence in them to move in search of productive opportunities. At the same time, it is necessary to provide an enabling environment to the development of the new economy to create productive employment opportunities for the qualified youth of the state.

Annexure 1

India: Projection of Per Capita NDP at 2011–12 Prices

Base Year 2011–12 Population (Crore) 120

NDP Factor Cost (2011–12 Prices): Rs 73,28,878 crore

Per Capita NDP (2011–12 Prices): Rs 60,972

Year	Assumed NDP Growth Rate (%)	Projected NDP (Crores)	Plan Period NDP	Assumed Population Growth Rate	Derived Population	Per Capita NDP
2006–07		5052205			112.2	45029
2007–08		5537797			113.8	48663
2008–09		5878807			115.4	50943
2009–10		6352503			117	54295
2010–11		6848333		1.38	118.6	57743
2011–12	6.5	7328878	36998522	1.36	120.2	60972
2012–13	6.1	7775940		1.35	121.8	63842
2013–14	7	8320255		1.34	123.5	67370
2014–15	8	8985876		1.32	125.1	71830
2015–16	9	9794605		1.31	126.7	77305
2016–17	9	10676119	45552794	1.3	128.4	83147
2017–18	9	11636970		1.28	130	89515
2018–19	9	12684297		1.27	131.7	96312
2019–20	9	13825884		1.26	133.3	103720
2020–21	9	15070213		1.24	135	111631
2021–22	9	16426532	69643896	1.23	136.7	120165
2022–23	9	17904920		1.22	138.3	129464
2023–24	9	19516363		1.21	140	139403
2024–25	9	21272836		1.2	141.7	150126
2025–26	9	23187391		1.18	143.3	161810
2026–27	9	25274256	107155767	1.17	145	174305
2027–28	9	27548939		1.16	146.7	187791
2028–29	9	30028344		1.15	148.4	202347
2029–30	9	32730895	90308178	1.14	150.1	218061

Annexure 2

Meghalaya: Estimated Population

(Assuming 0.99 rate of decline in growth rate every year)

Year	Growth Rate (%)	
2009–10		0.2578
2010–11	1.21	0.2609
2011–12	1.19	0.2640
2012–13	1.18	0.2670
2013–14	1.17	0.2701
2014–15	1.16	0.2732
2015–16	1.15	0.2763
2016–17	1.14	0.2794
2017–18	1.12	0.2826
2018–19	1.11	0.2857
2019–20	1.10	0.2888
2020–21	1.09	0.2919
2021–22	1.08	0.2950
2022–23	1.07	0.2981
2023–24	1.06	0.3013
2024–25	1.05	0.3044
2025–26	1.04	0.3075
2026–27	1.03	0.3106
2027–28	1.02	0.3138
2028–29	1.01	0.3169
2029–30	1.00	0.3169

Annexure 3

Meghalaya: Projection of NSDP at Factor Cost at 2011–12 Prices

Year	(In Crore)		(Per cent)		Ratio of Decline in Population Growth Rate	Link Factor (2011–12 Prices)	(In Rupees)	(Per cent)
	NSDP	Population	Real Growth Rate	Population Growth Rate			Per capita NSDP	Growth of Per capita NSDP
2006–07	10062	0.2488					40443	
2007–08	10379	0.2518	3.15	1.206	0.99		41218	1.92
2008–09	11713	0.2548	12.85	1.191	0.99		45968	11.52
2009–10	12465	0.2578	6.43	1.177	0.99		48352	5.19
2010–11	13331	0.2608	6.94	1.164	0.99		51115	5.71
2011–12	14601	0.2640	9.53	1.227	0.99	1.4846	55306	8.20
2012–13	15918	0.2670	9.02	1.136	0.99		59617	7.80
2013–14	17354	0.2701	9.02	1.161	0.99		64249	7.77
2014–15	18919	0.2732	9.02	1.148	0.99		69249	7.78
2015–16	20625	0.2763	9.02	1.135	0.99		74649	7.80
2016–17	22486	0.2794	9.02	1.122	0.99		80479	7.81
2017–18	24514	0.2826	9.02	1.145	0.99		86745	7.79
2018–19	26725	0.2857	9.02	1.097	0.99		93543	7.84
2019–20	29136	0.2888	9.02	1.085	0.99		100886	7.85
2020–21	31764	0.2919	9.02	1.073	0.99		108818	7.86
2021–22	34629	0.2950	9.02	1.062	0.99		117386	7.87
2022–23	37752	0.2981	9.02	1.051	0.99		126644	7.89
2023–24	41158	0.3013	9.02	1.073	0.99		136601	7.86
2024–25	44870	0.3044	9.02	1.029	0.99		147405	7.91
2025–26	48917	0.3075	9.02	1.018	0.99		159081	7.92
2026–27	53330	0.3106	9.02	1.008	0.99		171699	7.93
2027–28	58140	0.3138	9.02	1.030	0.99		185278	7.91
2028–29	63384	0.3169	9.02	0.988	0.99		200014	7.95
2029–30	69102	0.3169	9.02	0.000	0.99		218055	9.02

Annexure 4

Meghalaya: Projection of Investment Requirement at 2009-10 Prices

	Base Year	Target
	2011–12	2029–30
NSDP (Crores)	14,601	69,108
Population (Crores)	0.2578	0.3169
Per Capita NSDP	51306	218061
Per Capita NSDP		
Growth Rate (%)	6.5*	7.92
NSDP		
Growth Rate (%)	7.56*	9.02

* 2006–07 to 2011–12

Year	Assumed GSDP Growth Rate	Projected NSDP (Crores)	Projected Per Capita NSDP (Crores)	Assumed ICOR Set I	Assumed ICOR Set II	Investment Required (Crores)	
						Set I	Set II
2006–07		10062.34	40443.47				
2007–08		10378.80	41218.43			1266	1266
2008–09		11712.56	45967.67			5335	5308
2009–10		12465.13	48351.94			3010	2988
2010–11		13330.73	51114.78	4	4.00	3462	3428
2011–12		14600.83	55306.19	4	3.98	5080	5030
2012–13		15917.83	59617.34	4	3.96	5268	5215
2013–14		17353.62	64248.86	4	3.94	5743	5657
2014–15		18918.91	69249.32	4	3.92	6261	6136
2015–16		20625.40	74648.57	4	3.89	6826	6638
2016–17		22485.81	80478.92	4	3.87	7442	7200
2017–18		24514.03	86744.63	4	3.85	8113	7809
2018–19		26725.20	93542.87	4	3.83	8845	8469
2019–20		29135.81	100885.77	4	3.81	9642	9184
2020–21		31763.86	108817.61	4	3.79	10512	9960
2021–22		34628.96	117386.30	4	3.77	11460	10801
2022–23		37752.49	126643.72	4	3.75	12494	11713
2023–24		41157.77	136600.62	4	3.73	13621	12702
2024–25		44870.20	147405.38	4	3.71	14850	13773
2025–26		48917.49	159081.26	4	3.68	16189	14894
2026–27		53329.85	171699.44	4	3.66	17649	16149
2027–28		58140.20	185277.88	4	3.64	19241	17510
2028–29		63384.44	200014.02	4	3.62	20977	18984
2029–30		69101.72	218055.29	4	3.60	22869	20582

Development Strategy to Realise the Vision 2030

Part – I
Main Report

Chapter 1

Meghalaya: A Socio-Economic Profile and Projections

Meghalaya, one of the most picturesque states in the north-east of the country, is home to two major tribal groups — the Khasis and the Garos — apart from several smaller tribes. The state's area, largely comprising tablelands and hill regions, is heavily forested and criss-crossed by several rivers. It is an abode of tremendous biodiversity, and the soil and climate are conducive to the cultivation of a large variety of agricultural crops, horticultural produce, and flowers.

As a state of the Indian Union, Meghalaya came into being on **21 January 1972**. It was created by carving out two districts of the former composite state of Assam, namely, the United Khasi and Jaintia Hills, and the Garo Hills. At present, Meghalaya comprises seven districts: East Garo Hills, East Khasi Hills, Jaintia Hills, Ri-Bhoi, South Garo Hills, West Garo Hills, and the West Khasi Hills. Its capital Shillong was also the capital of undivided Assam from 1874 till the creation of the new state of Meghalaya. On its south and southwest border Meghalaya is bounded by Bangladesh with which it shares a 443 km international border, to its north and northwest is the Brahmaputra valley of Assam, while Assam's Cachar region lies to its east.

Meghalaya is one of eight states in the north-eastern region (NER) of the country, the other seven being Arunachal Pradesh, Assam, Manipur, Mizoram, Nagaland, Sikkim, and Tripura. The entire state of Meghalaya (along with the state of Mizoram and parts of Assam and Tripura) falls under the Sixth Schedule of the Constitution, which prescribes a separate code for the governance of tribal areas in the country. Administration of the districts in the state is undertaken by three Autonomous District Councils (ADCs) which have extensive legal and executive powers over the use of land and resources, social custom, inheritance, and other areas.

The development of Meghalaya, along with other states in the NER, lags significantly behind the rest of India. The process of development has been shaped by the specific experiences of the state, and the region in general. The partition of the country had a tremendous adverse impact on the region, which was abruptly cut off from its traditional markets and linkages, and acquired a long and porous international border overnight.

Although Meghalaya has made substantial socio-economic progress since then, this has not been sufficient to propel the state to a higher sustainable growth path. The development model followed for the state in the years after Independence was largely determined by the Centre, and did little to lay a strong infrastructural base, promote linkages within the region, or generate employment opportunities. Today, constrained connectivity, abysmal infrastructure, and poor governance is combined with low productivity and limited access to the broader market, thus posing difficulties in sustaining high growth rates over medium and long periods of time. The lack of development has forced the state to be overwhelmingly dependent on the central government for resources. The Eleventh Plan envisages higher GDP growth and, more importantly, inclusive growth, requiring a rapid increase in employment, significant improvement in human development, particularly of disadvantaged groups and regions, and a sharp decline in poverty. According to a survey conducted by Meghalaya's State Rural Department in 2002, almost half the rural households (48.9 per cent) in the state fall into the BPL category. There is clearly an urgent need to bring the state in sync with the rest of the country so it can be an equal partner in India's growth story.

This report presents a vision of the development goals of the people of Meghalaya, and the strategy best suited to achieving these goals. Its perspective aims at promoting integrated development on a foundation of participative planning and implementation. The section that follows gives a brief description of the state, placing it in the context of development and growth in the rest of the country.

1.1 THE PEOPLE AND NATURAL RESOURCES

The people

Meghalaya's population has been growing at an increasing rate, at a rate that is higher than the national average. Thus, while in 1951 its decadal growth rate was 8.97 per cent, growth increased sharply in 1961 to 27.03 per cent, and to 32.86 per cent by 1991; growth declined to 29.94 per cent in the decade ending 2001, and further to 24.4 per cent in the most recent decade, ending 2011. In comparison the decadal population growth rates of the country as a whole were 21.56 per cent, and 18.74 per cent in the last two censuses, respectively.[1]

The state's population density was 130.5 per sq. km in 2011, based on its population of 2,964,007 and its land area of 22,720 sq. km, which is far lower than the population density for the country as a whole (*Annexure Table 1.A3*). As in any hilly

[1] *Table 1.2* from the State Development Report

region, population density varies tremendously across the state, from 241 persons per sq km in the East Khasi Hills to only 54 in the South Garo Hills (*Table 1.A3*). The capital Shillong is located in the East Khasi Hills, the most densely populated district, with over 28 per cent of the population and only 12.3 per cent of the state's land area.

An important aspect of Meghalaya's demography is its largely youthful population; in fact it has the largest share of very young people (below the age of 14 at the time of the last census in 2001) in its population among the north-east states, and indeed in the country: in 2001, 41.6 per cent of Meghalaya's population was below 14 years against a national average of 34.3 per cent (*Table 1.A1* in the Annexure). With 27.13 per cent of its population in the next age category of 15–29 years, the state has more than two-thirds its population (68.73 per cent) below the age of 30, which has important implications for its economic policy.

Its ethnically diverse population is 85.9 per cent tribal, mainly comprising people from the Khasi and Garo tribes. The Khasis are the dominant group, constituting more than half (56.4 per cent) the total tribal population of the state, followed by the Garos (34.6 per cent), so that the two groups together account for 91 per cent of the total tribal population of Meghalaya. The other main tribal groups are the Hajong (1.6 per cent), Raba (1.4 per cent), and Koch (1.1 per cent), followed by smaller tribal groups like the Man (Tai speaking), Dimasa, Chakma, Pawi, and Lakher.[2]

Like most other parts of the country, the state is predominantly rural, with over 80 per cent of its population living in the countryside. Here, the East Khasi Hills district is again an outlier, with only 58 per cent of its population in the rural areas compared to all the other districts which have over 88 per cent rural-based populations (*Annexure Table 1.A2*); more than 60 per cent of the urban population of the state resides in the East Khasi Hills, mainly because it is home to the state capital of Shillong.

The Resource Base

The state is richly endowed with natural resources and mineral deposits. Its long, abundant monsoon sustains intensive and varied flora, and over 70 per cent of its total geographic area is under forest cover.[3] Wide geological, ecological, and climatic variations mean that the state is home to five agro-climatic sub-zones, which have given rise to tremendous biodiversity, and are conducive to the cultivation of a wide variety of crops and produce.

[2] Census of India, 2001
[3] State of the Forest Report, 2005, from the *Meghalaya State Development Report*

The state also has vast reserves of coal and limestone and other commercially exploitable mineral deposits, along with rich deposits of uranium. Granite of excellent quality is at present being mined in the East and West Khasi Hills districts. Clay, which can be used in the ceramic, paper, rubber, and refractory industries, is found in some abundance, and minerals like gypsum, phosphorite, glass-sand, base metals, quartz, and feldspar exist in various parts of the state. Meghalaya is also credited with having one of the most valuable sillimanite deposits in the world.

The resource base of Meghalaya has unfortunately not been managed to the advantage of the state and the people. While most of the reserved forests are under the control of local communities, they have not been managed to the benefit of these communities. Of its rich mineral reserves, only coal and limestone have been mined commercially, but not in a systematic or organised fashion. Streams and rivers fed by heavy rainfall, cascading down the hill slopes, provide abundant hydropower potential, but of the assessed capacity of around 3,000 MW, only 185.2 MW has so far been tapped.

1.2 SOCIAL PROFILE

Along with its geological and climatic diversity, the state is characterised by large socio-economic variations across its seven districts, which are the combined outcome of geophysical conditions, the historic role of Shillong as the capital of undivided Assam, and the development strategy and priorities so far.

Meghalaya's literacy rate, at 75.48 per cent (2011 census), is marginally above the national literacy rate of 74.04 per cent. And while there is little gender related difference in literacy rates (with male literacy rates of 77.17 per cent and the female rate of 73.78 per cent), there is considerable variation in literacy rates across the districts, with rates ranging from a low of 63.26 per cent in Jaintia Hills and 68.38 per cent in West Garo Hills to 84.7 per cent in the East Khasi Hills (*Annexure Table 1.A3*). There is also a significant difference between literacy in the rural and urban areas: overall urban and rural literacy rates are 87.12 per cent and 57 per cent, respectively; in some districts such as the Jaintia Hills urban literacy rates are almost double the rural rates. More importantly, even as the average literacy rate in the region is marginally lower than the national average, there are concerns about the quality of education, which has not translated into higher employability or productivity. Further, the slow pace of industrialisation and limited capacity of the population to engage in productive economic activities has meant a high rate of unemployment and underemployment.

This district-wise variation is further reflected in other major indicators such as the infant mortality rate and in access to basic amenities like electricity (*Annexure Table 1.A3*). Thus while the aggregate data for the state appears to be on par with the average for the country, they mask vast disparities that exist within the different districts, and between urban and rural populations, reflecting the poverty of access to services such as health, electricity, and schools for many.

1.3 THE ECONOMY OF THE STATE

1.3.1 Income Levels

Per capita income over time is a good indicator of the economic status of people in the state. Data for Meghalaya (*Annexure Table 1.A4*) shows that the per capita income in the state is below the per capita income in the country as a whole average, and that the gap between the rates of growth in per capita income between the country and the state has increased, especially since 2005–06. Within the state, there are significant differences in the standards of living among the different districts (*Annexure Table 1.A3*), with per capita incomes in the East Khasi Hills being significantly higher than the per capita incomes in most other districts.

1.3.2 The State's Development Path: Sectoral Analysis

Growth of the state's economy has also been lagging behind the national economy. During the Tenth Plan (2002–07), the per capita NSDP growth in the state at constant (2004–05) prices averaged about 5.1 per cent, which was substantially lower than the country average of 6 per cent. Even in the first four years of the Eleventh Plan, annual growth of the per capita NSDP in Meghalaya at 6.1 per cent lagged behind that of the country (6.4 per cent), though by a smaller margin.

As in the rest of India, an overwhelming proportion of Meghalaya's population depends on agriculture for its livelihood, but a large majority of the people engaged in agriculture have subsistence living. While 79.9 per cent of the population resides in the rural areas of the state, income generated from the primary sector as a whole in 2010–11 was just about 17 per cent, with the secondary and tertiary sectors contributing 31.4 per cent and 51.6 per cent, respectively (*Annexure Table 1.A5*).

Further analysis of the sectoral data reveals that the structure of the economy has been showing a very slow change. While the share of the primary sector in the country has declined from 25 per cent to 14.5 per cent between 1999–2000 and 2010–11, the primary sector's share in Meghalaya over the same period has fallen only marginally, from 22.9 per cent (advanced estimates) to 17 per cent. The shares of the

secondary and tertiary sectors in the state's GSDP too have changed only marginally: while the contribution of the secondary (industry) sector has risen from 23.31 per cent to 31.4 per cent over the same period, services' share has remained almost stagnant, shifting from 53.8 per cent to 51.6 per cent during the period (*Annexure Table 1.A5*).

With the increase in population over time and the decrease in land for agricultural purposes, levels of poverty have risen substantially. Unfortunately, a reliable estimate of poverty for the state is not available. The usual practice by the Planning Commission has been to assume that Meghalaya's poverty ratio is the same as that of Assam, as the National Sample Survey Office's (NSSO) Consumer Expenditure Survey in the Northeast was conducted only for Assam. Thus, in 2006–07, Meghalaya's poverty ratio was taken as 31.4 per cent. To get a more reliable estimate relevant to Meghalaya, the state government undertook a survey of households to estimate poverty based on the advice of the Ministry of Rural Development, Government of India in 2002, and estimated the poverty in 2002 at 48.9 per cent. However, the sample was too small to ensure any degree of reliability of the estimates. Nevertheless, in the absence of any other state specific estimate, this has to be taken as the indicator.

An important reason for the persistence of high poverty is that in rural areas of the state, there are few employment and income-generating opportunities, poor linkages with markets, and low productivity arising from shifting cultivation and traditional methods of cultivation. And as we have shown above, they are further disadvantaged in comparison with urban areas in terms of access to amenities and other economic and social indicators of development.

Despite its rich resource endowments which could form the basis of a vibrant industrial sector, Meghalaya continues to be industrially backward. For a start, the manner of exploitation of its natural resources has been to market them mainly in primary form, with little or no value addition in the state, thus reducing employment and income-generating opportunities in the sector, as well as the revenue base. The various incentives offered to industrial investment in recent years have not been sufficient to offset the drawbacks, which include poor infrastructural facilities which have hampered communication and connectivity, shortages of power, a low technical and skills base, and the almost complete absence of non-community land that can be used for enterprise. This slow pace of industrialisation and limited capacity of the population to engage in productive economic activities has resulted in a high rate of unemployment and underemployment, especially among young people.

One of the biggest development challenges in the state is the lack of a strong infrastructural base, which is important to create an enabling investment climate. In the absence of air and rail networks to transport people and freight across the state,

Meghalaya is dependent on its national and state highways and access through the neighbouring states for connectivity. However, not only is the road network inadequate in the state, so much so that in 2008 it had the second highest proportion of unconnected villages (47.02 per cent) among the north-eastern states, but poor maintenance also means that the few existing roads are in dire need of attention and funding. Even in terms of road density, in 2006–07, Meghalaya's road density at 43.87 km/100 sq. km area was substantially lower than not only that of the country (97.57 km/100 sq. km) but also that of the north-eastern region (127.87 km/100 sq. km). In addition, less than one-third of its rural households have electricity (2001). In a recent ranking of states and union territories in the country by infrastructure, Meghalaya came twenty-first — and, in fact, was sixth in a ranking of seven north-eastern states (excluding Sikkim).

The pace of development in the region is the outcome of the development approach followed so far, which has been generated from the centre rather than determined through a 'bottom up' process of participatory decision making by the people of the state. Various centre-based schemes have only led to unaccountable spending with no monitoring systems in place. It is only when priorities, planning, and strategies involve the people they impinge on will development and progress truly lead to improved capacities and livelihoods.

Table 1.1: Some Indicators: Meghalaya and India

	Reference Year	Meghalaya	North-East Region	India
Area (sq. km)	2001	22,429	262,179	32,87,240
Population (in lakh)	2011	29.64	455.88	12,101.93
Population density (per sq. km)	2011	132	174	368
Sex ratio (per '000 males)	2011	986	956	940
Literacy rate (%)	2011	75.48	64.69	74.04
Forest cover (%)	2009–10	77.23	66.28	21.02
Villages electrified (%)	2009–10	59.3	74.83	83.7
Electricity consumption (per capita in kwh)	2009–10	655.42		733.5
Birth rate (per '000)	2006	24.4		22.5
Death rate (per '000)	2006	8.1		7.3
Infant mortality rate (per '000)	2006	59		50
Road density (PWD roads) (km per '00 sq. km)	2006–07	43.87	127.87	96.57

Source: Meghalaya State Development Report 2008, Government of Meghalaya

1.4 THE GROWTH SCENARIO

Bringing prosperity and peace to the people of Meghalaya would require sustained increases in the per capita income and a more equitable distribution among the population. At the very least, the people should have a standard of living at par with the rest of the country by 2030. The growth of the state's economy has been lagging behind growth in the national economy. During the Tenth Plan (2002–07), the per capita NSDP grew at 5.11 per cent annually, which was lower than the all-state average of 6 per cent. Although during the first four years of the Eleventh Plan, the state's annual growth rate accelerated to 6.1 per cent, it was still lower than that of the all-state average of 6.4 per cent. This implies that the state will have to improve its efforts to catch up with the national growth rate in the coming years.

The Vision 2020 document of the north-eastern region has estimated that if the NDP of the country at factor cost at constant (2011–12) prices grows at an average rate per cent during the Twelfth Plan at 9 per cent during the remaining period (7.6 per cent in per capita terms), Meghalaya will have to grow at a marginally higher rate of 9.2 per cent during the period (7.9 per cent per capita) to catch up with the country's average per capita income by 2030. Moving into a higher growth path to achieve 9.2 per cent per year on average for the next 18 years is going to a major challenge, and would require considerable efforts at creating the right investment climate in the state. After

the vision document for the North Eastern Region (NER) was adopted by the North Eastern Council in May 2008 in which all the states of the NER were signatories, not much appears to have been done to implement its recommendations on the ground, which would have created significant externalities to Meghalaya as well as the entire NER. Meghalaya, however, should proceed to evolve a strategy to create an enabling environment for inclusive development without any further delay to ensure its own progress.

With the national economy poised to grow at an average annual rate of about 9 per cent, this would result in per capita income growth of 7.74 per cent annually, as over the period, population is expected to decelerate and per capita income growth is expected to accelerate from 6.63 per cent during the Eleventh Plan to 7.76 per cent in the Fifteenth Plan period (*Annexure Table 1.A6*). Under this assumption, the per capita NDP (at factor cost) of the country in 2029–30 is estimated at Rs 2,17,855 at 2011–12 prices.

To achieve this level of per capita income, the NSDP in Meghalaya will have to grow annually at 9.2 per cent between 2013–14 and 2029–30, accelerating from 7.7 per cent during the Eleventh Plan to over 9 per cent during the Fifteenth Plan. The growth of per capita NSDP should accelerate from 6.5 per cent per year to 7.9 per cent per year during the respective Plan periods, requiring an average annual growth rate of 8.8 per cent during the period. This is clearly within the realm of feasibility. Nevertheless, growing consistently at over 9 per cent would require considerable efforts to ensure the flow of investment. This order of acceleration will be carried out in phases (as indicated in *Annexure table 1.A7*). Indeed, if favourable conditions for economic growth in the state are created, it is possible for the state to accelerate growth at a much faster rate to achieve per capita income levels higher than that of the country. Indeed, the target should be to achieve that and be a leader rather than a follower in terms of accelerating growth.

1.5 FUNDING THE GROWTH PROCESS

The required acceleration in growth of NSDP in Meghalaya would call for a substantial increase in investments in the state and an expansion in efficiency of resource use to promote higher productivity. We have estimated the investment requirements for achieving the required growth in GSDP in two alternative scenarios — one by assuming the incremental capital-output ratio (ICOR) at 4, and another assuming that the ICOR will show a gradual decline from 4 to 3.6 between the Eleventh Plan period and the Fifteenth Plan period. There is no state-specific ICOR available and we

have assumed that the prevailing ICOR of the country will also be applicable to the state. Furthermore, the lower ICOR scenario is based on the assumption that over different plan periods, an increase in productivity will result in a marginal decline in the ICOR.

The estimates (presented in *Annexure Table 1.A8*) show that it is necessary to increase the investment substantially to equalise the per capita income in Meghalaya with that of the country in 2030. Under the first scenario where the ICOR is assumed to remain constant at 4, the volume of investment required as a ratio of GSDP will have to increase from 29 per cent during the Eleventh Plan to 33.2 per cent during the Fifteenth Plan. Even under the alternative scenario of ICOR declining from 4 in the Eleventh Plan to 3.6 in the Fifteenth Plan, investment as a ratio of GSDP will have to increase to 30.6 per cent (*Annexure Table 1.A8*).

The large amounts of investment required for Meghalaya to catch up with the rest of the country by 2030 cannot come from public sources alone, and a large part will have to come from the private sector. However, for the private sector to make large investments in the state, it is necessary to create an enabling environment. Among other factors, the quality of infrastructure in the state is an important determinant of investment by the private sector. Given the poor condition of overall infrastructure in the state, it is important that both the Centre and the state governments significantly augment their investments. Large scale upgradation is necessary for improving connectivity within the state, between the state and the region, between the state and the rest of the country, and between the state and neighbouring countries and beyond. Thus, significant increases in public investment are necessary in setting up good road, rail, and air connectivity. Other enabling infrastructure that needs to be upgraded to attract private investment into the state includes telecommunication networks, power supply, agricultural storage and marketing links, and border trading facilities.

Since both the central and state governments will be required to make large investments to create the infrastructural environment for private investment, and for the larger benefit of the people of the state, it could be important to involve the private sector in the effort through public-private partnerships (PPPs). This will require the formulation of an appropriate PPP framework for infrastructural investment.

An important aspect of development in Meghalaya, as in other states in the NER, is the lack of productive economic activity and extreme dependence on the government for employment and income generation. Development is not sustainable if government is the only major economic activity in the state. Changing the structure of income generation to shift from a predominant public administration share to non-governmental sectors, and more importantly, to manufacturing and services other than

public administration should be a priority, and will call for the entry of private investment.

1.6 THE WAY FORWARD

The people's vision for Meghalaya is to achieve happiness through peace and prosperity in a sustainable manner. They would like to see their state emerge as strong, secure, peaceful, prosperous, and confident; to embrace markets gainfully; and prepare to significantly increase trade within the region, with the rest of the country, with neighbouring countries, and beyond. They would like to move away from dependency in every sense of the term, and towards determining their own development strategy, which will harness the resources of the state for their own benefit. In the process, they would like to create abundant productive employment opportunities for the youth. At the same time, they would like to have the chance to empower themselves by acquiring the education and skills needed to be gainfully employed in emerging productive economic activities, raise their own wellbeing, and to build the nation.

Responses to the questionnaire circulated to ascertain from the people of Meghalaya their vision for development of the state overwhelmingly stress the lack of economic opportunities, especially for the youth in the state, mainly due to the lack of empowerment. Inclusive development requires inclusive and participatory governance. Planning is not only a means to achieve sustained and inclusive development but also an end in itself, as it empowers people to have a voice in deciding their strategy. The responses also emphasise the need to create a climate for investment by putting in place transport connectivity and competitive infrastructure facilities (a summary of the responses is included in the Appendix to this report).

To meet the aspirations of the people, the development path of the state needs a course correction to include strategies that will place it on the road to progress in a sustainable manner. The strategies followed so far have failed to produce the momentum to propel the state forward in a sustained manner. Investments made in the state have not created strong backward and forward linkages, nor have they generated employment opportunities in the state. This Vision document for the state proposes a shift in strategy from a Centre- and state-centric approach to planning and implementation to a people-determined model, where people participate in the planning process and determine and monitor their own programmes and schemes.

The elements of the new strategy are as follows:

(i) Empowerment of the people through participatory planning and inclusive governance is the most important component of the strategy. An essential prerequisite of inclusive development, it involves strengthening the traditional institutions of local

governance and grassroots planning, calibrated right from the village level. As the state is covered under Schedule VI of the Constitution, neither the panchayat system nor the panchayat extension to scheduled areas (PESA) is applicable. The traditional village level institutions in the state include Nokma, Syiem, and Dolloi. At the same time, after 1952, Autonomous District Councils (ADCs) were set up in the state. Harmonising the traditional institutions with village councils is important to have effective participatory planning from the village level. Planning at the village level involves harnessing the various central projects to benefit the village economy in an effective manner to get the maximum benefits from them in addition to mobilising resources for spending on various public services desired by the people.

(ii) Creation of institutions and systems to promote the development of markets in the state. This will entail improving governance, as well as the development of market-promoting infrastructure.

(iii) A focus on sustainable development based on the state's comparative advantages so that natural resources are harnessed for the benefit of the population. This involves enhancing agricultural productivity through an expansion in irrigation and agricultural extension, promoting the cultivation of commercial crops, shifting tribal populations away from "jhuming" by encouraging them to take up organic farming, and by providing alternative rural livelihood opportunities by promoting the marketing of traditional crafts and small industries. It also involves promoting manufacturing activity and value addition based on the resources of the region. The state's pool of educated manpower provides a base for the development of information technology enabled services (ITES) as well. At the same time, given the fragile topography and ecosystem of the state, development has to be carried out in an environmentally sustainable manner.

(iv) Infrastructure development to promote markets and attract investment into the region. Improving the state's connectivity both within the region and with the rest of the country is key to its prosperity and growth. This requires significant investment in road, rail, and perhaps air connectivity. A good road network within the state which includes rural roads, opens up markets for labour and products, and enables the rural population to access basic services, including education and healthcare is essential. Equally important is the need to make regular, quality power available by harnessing the state's potential to generate power from its own hydel sources. A good telecommunications network can help overcome the problems of providing physical infrastructure in predominantly hilly terrain; it is vital to provide connectivity to bring the state at par with other well performing states, quite apart from being essential to the creation of a good IT trained workforce in the state. Agricultural and rural development requires, in addition to rural roads and connectivity, the creation of

warehousing facilities and a cold storage chain. Building people's capabilities and strengths will require the creation and maintenance of health and education related infrastructure — health centres, schools, playgrounds, and hospitals. Further, sustainable development in both urban and rural areas calls for the provision of environmental sanitation infrastructure — water supply, sanitation, and waste disposal — to ensure the wellbeing of people.

(v) Expanding trade and investment opportunities is important in a globalising world. This includes expansion of trade within the region, with neighbouring countries and beyond. A number of recommendations have been made by various committees and study groups which have been summarised in the Vision 2020 document for the north-eastern region. These are applicable to Meghalaya as well.

(vi) Building the capacity of people and institutions is important for accelerating growth, providing employment security, and empowering people. Institutional capacity must be augmented to improve governance in the state, and to design and implement development plans from the village level up to the state level. Considerable capacity building is also needed to ensure responsive and market-friendly governance.

(vii) Inclusive development is possible only when vulnerable sections of the population have access to education, healthcare, and employment opportunities. The development strategy should foster greater gender balance by ensuring a more equitable role for women in representative and elected bodies at all levels of government. Inclusive development also entails ensuring balanced development of the areas within the state. There are significant variations in the levels of development — both physical and human — across districts, and the development strategy should ensure a more equitable development path for all areas.

Chapter 2

Participatory Planning and Inclusive Governance

2.1 Structure of Governance in Meghalaya

2.1.1 Representation in Parliament

The state of Meghalaya is represented in the Parliament of India by two members, one each from the Shillong and Tura parliamentary constituencies. If voter turnout in elections is an indicator of the involvement of members of the community in the political process, then Meghalaya has done well, with a significant increase in voter turnout in the last decade from 56.16 per cent in 1999 to 64.38 per cent in 2009. Further, women's turnout rate in the last two general elections far exceeded the turnout rate for men. In fact, the last general election sent in not only the state's first woman parliamentarian, but also perhaps the youngest ever woman parliamentarian in the history of Indian parliamentary democracy.

2.1.2 The Legislative Assembly

There are 60 members in the Meghalaya legislative assembly. The state has had 23 state governments since its inception in 1972 with a median life span of less than 18 months. The state government lasted its full term only after almost 20 years since the first constituent assembly in 1972. Only three governments have survived more than three years. In particular, the life span of governments in the last three assemblies has fallen drastically, with only a few surviving beyond six months. Given that a stable government and political institutions play an important role in the economic and social development process, this pattern in the state polity *may have adversely affected the cohesion and synergy in programme formulation and implementation that are critical for development.* It must however be noted that despite such volatility, turnout of voters has improved over the years, the difference in the turnout rate of genders has narrowed, and government transitions within a constituent assembly have been relatively peaceful. These attributes of the people have contributed greatly to peace, order, and relative calm in Meghalaya.

2.1.3 The Autonomous District Councils (ADCs)

The entire state of Meghalaya is covered under the provisions of the Sixth Schedule of the Constitution. Accordingly, there are three Autonomous District Councils (ADCs) in the state:

(i) The Khasi Hills Autonomous District Council (KHADC) which covers the districts of East Khasi Hills, West Khasi Hills, and Ri Bhoi;

(ii) The Garo Hills Autonomous District Council (GHADC) which covers the districts of East Garo Hills, West Garo Hills, and South Garo Hills; and

(iii) The Jaintia Hills Autonomous District Council (JHADC) which covers the Jaintia Hills.

Table 2.1: Basic Statistics Relating to ADCs

District Council	Area *(km)*	Population **(2001)** *(lakh)*	Tribal Population *(lakh)*
Khasi Hills ADC	10,443	11.5	10.73
Garo Hills ADC	3,819	2.9	2.87
Jaintia Hills ADC	8,167	8.7	6.31
Total	**22,429**	**23.1**	**19.91**

Source: Report of the Expert Committee on Planning for the Sixth Schedule Areas, Ministry of Panchayati Raj, Government of India, September 2006, New Delhi.

The district council system of governance was created over the traditional institutions of governance in the north-eastern states by the British. In independent India, these were formalised in 1952 to govern the tribal areas in the composite state of Assam. They are vested with executive, financial, legislative, and judicial powers and functions under their jurisdiction. Each ADC consists of up to 30 members who form the legislature. A Chief Executive Member (CEM) is elected by the council members from among themselves by majority voting. The CEM then appoints (by selection) other members to the executive committee, up to a maximum of 10 members**.** The state legislature could include a minister in charge of the welfare of the autonomous districts.

The ADCs are given authority over the traditional institutions in matters related with the appointment and succession of chiefs and headmen, and other similar matters. The Sixth Schedule allows for the creation of autonomous regions if there are different scheduled tribes in an autonomous district. It provides for the constitution of district and regional councils for each autonomous district and region (*Tables 2.2, 2.3, and 2.4*).

There is also a provision to establish district (and regional) funds that are to be credited with collections from land revenue, taxes on land and buildings, tolls on residents, other taxes, and shares of royalties from licenses or leases for the extraction

of minerals (*see* Financial Powers in *Table 2.3*). The ADCs may further make regulations to control money lending and trading by non-tribals. Estimated receipts and expenditure pertaining to autonomous districts are shown separately in the annual financial statement.

Table 2.2: Organisational Arrangements in ADCs in Meghalaya

	KHADC	GHADC	JHADC
Date of Constitution	1952	1952	1964
Details of the Council	30 members (20 elected, 1 nominated)	30 members (26 elected, 4 nominated)	19 members (16 elected, 3 nominated)
	Only tribals and non-tribals who are permanent residents (12 years +) are eligible to vote		
	The Chairman and Deputy Chairman are elected by the Council		
	Five years tenure		
Details of the Executive Committee	Six executive members		
	Council elects CEM		
	Other EC members appointed with the CEM's advice		
	Performs all executive functions		
Administrative Structure	A secretariat headed by a chief executive officer and staff, including for line departments		
Village Councils	Elected village councils do not exist as legislation for this has not yet been brought into force		

Source: *Ibid*

Table 2.3: Powers of ADCs in Meghalaya

Legislative	Power to make laws related to allotment and use of land, management of forests, establishment and management of villages and towns, regulation of shifting cultivation, inheritance of property, and social customs, with the Governor's assent
Judicial	Powers to constitute village courts, with appellate powers with the Council
	Appeals from council courts lie with the High Court
	Village chiefs/headmen appointed chairmen of village courts
	Subordinate/additional district courts — EC appoints, with Governor's approval
	District council courts — one or more judicial officer(s) is designated; judges are appointed by the EC, with Governor's approval
	In Garo Hills, village courts consist of the Lasker of the village + two members elected by the village council
	In Jaintia Hills, village courts are headed by the traditionally elected village chief/headman and have 2–6 members
Executive	Appointment and succession of chiefs/headmen
	Establish and manage primary schools, dispensaries, markets, cattle pounds, fisheries, roads, waterways and road transport, and forests (excluding reserve forests)
Financial	Prepare and pass budgets, assess and collect revenue, impose taxes on trades and markets, collect tolls, manage licenses, and lease/share in royalties collected by the state government

Source*: Ibid*

The ADCs can also undertake several functions that are mandated to *panchayati raj institutions* (PRIs) elsewhere in the country (*see* Executive Powers in *Table 2.3*).

Table 2.4: Functions of ADCs in Meghalaya

1	Appointment/ succession of chiefs/headmen	2	Construction/management of primary schools (withdrawn by state government)	3	Management of land and forests (excluding reserve forests)	4	Control of money lending and trading by non-tribals
5	Marriage and divorce	6	Inheritance of property	7	Ponds	8	Ferries
9	Roads	10	Road transport and waterways	11	Markets	12	Social customs
13	Levying and collection of taxes						

Recent Initiatives

As mentioned earlier, the ADCs were created in 1952 to assist the composite state of Assam in administration and governance. In fact, in their creation, the role of the traditional tribal institutions was overlooked. After the creation of the state of Meghalaya, the rationale for the continuation of these ADCs is limited, particularly as they do not have organic link with the traditional institutions and do not have much of an oversight role. Even in enacting laws, the track records of the ADCs are not strong. Over the years, while the Khasi Hills ADC has enacted some laws, the record of the Garo Hills ADC has been poor even in this regard. Synergising local governance is possible only when the ADCs work in harmony with the traditional tribal institutions of governance, and acquire sufficient capability to function well and contribute to the development and welfare of people.

There have been some recent initiatives: (i) to strengthen existing traditional grassroots institutions so as to qualify as PRIs; and (ii) to endow and diversify the functions of town committees to bring them at par with municipalities (presumably as envisaged in the 74th Amendment to the Constitution relating to urban local bodies). Six town committees have been formed to deal with civic amenities, sanitation, waste management, and other civic services in Nongstoin, Mawkyrwat, Mawlai, Nongpoh, Sohiong, and Mairang. The committees were formed under the United Khasi-Jaintia Hills District (Establishment of Town Committee) Act 1960. The purpose and functions of the town committees are similar to that of a municipality. However, meagre resources of

the council and the absence of funds with committees have rendered the latter dysfunctional.

The Khasi Hills Autonomous District (Allotment, Occupation or Use of Setting Apart of Land) Regulation Bill 2005 was passed by the Council and is awaiting the assent of the Governor. All schemes or projects implemented by the KHADC are participatory in nature and people-centric. These projects are mostly implemented by people (or the community), and are owned and maintained by them. To increase the financial capability of the KHADC, a bill has been prepared — the Khasi Hills Autonomous District (Constitution and Administration of Community Development Organisation) Bill, 2006 — which is also awaiting the assent of the Governor. There are plans to provide all *elakas* with workable, modern offices. Plans are also afoot to set-up District Council Courts in Ri-Bhoi and West Khasi Hills districts, in addition to the one presently in East Khasi Hills. Further, measures would be adopted to include all council courts within the present e-project/scheme for an efficient justice delivery system.

The website of KHADC enlists 51 Acts and Rules that have received the Governor's assent or approval.[4] Of these, 18 pertain to rules and regulations, while the remaining 33 are acts of law. Of the 33 Acts, 23 pertain to the nomination, appointment, election, selection, succession, administration, defection, and so on of headmen/*sirdars*/*syiems* or to (some form of) compensation of council functionaries, and 10 Acts are related to economic and social issues. This indicates that the KHADC has made some progress in notifying rules apparently upholding the traditional institutions, a natural first step towards formalising and activating the village level governance structure. This could serve as a role model for the other two ADCs. A cause for concern, however, is that these Acts do not foster democratisation of grassroots institutions and thus inclusive governance. In particular, they make no moves to address the exclusion of women, youth, and non-tribals from the processes of election and selection in these areas.

[4] The website www.khadc.nic.in update downloaded on 9 November 2010 shows a list of 55 such Acts, Regulations, Rules, and Bills. In the previous update downloaded on 3 November 2009, the 51st entry was titled, 'The KHAD (Electors from the Twenty Three Clans of Raid San Shnong of Mylliem Syiemship) (First Amendment) Act, 2007.' However, the 51st entry in the website update of 1 November 2010 downloaded on 9 November 2010, is titled 'The KHAD (Appointment and Succession of Syiem, Deputy Syiem and Electors of Myriaw Syiemship) Act, 2007. All the new Acts (since the last download) however, pertain to nomination, appointment, election, selection, succession, administration, defection, etc. of headmen/sirdars /syiems or to (some form of) compensation of council functionaries.

2.1.4 Governance at the Local Level

2.1.4.1 The Traditional Institutions

Historically, the Khasis, Jaintias, and Garos have had well developed political systems of their own, with extended power and authority. The Jaintias and Khasis had a fairly organised three-tier system of governance under a *Syiem*, which was the highest level in the hierarchy. The Garos had a two-tier governance system.

The Garo hills were divided into a number of *akings*, corresponding to a village, under a *nokma.* The *laskar* headed a group of villages. The *nokma* regulated all aspects of life of the villagers under him, and discharged his functions with the consent of the joint assembly of village elders, organised into a village council or *dorbar*.

Headed by a *syiem,* the Jaintia system was divided into *elakas* (consisting of villages) under a *doloi* (second level). The next and lowest level of territorial/geographic entity was a village represented by a *wahehchnong* selected from amongst the male adults. Each of these three levels had councils or *dorbars*. Each village was usually organised along clan lines, with a *wahehchnong* concerned with basic administration and justice.

The traditional system of governance of the Khasis also functioned at three different levels. The highest level was the *Syiem.* The administrative, military, judicial, and religious functions vested in him were discharged in consultation with *dorbar myntri* (consisting of members of the principal clans) and the *hima dorbar* (which elected the *Syiem)*. The lowest level was the village with its own assembly or *dorbar* headed by a *rangbahshnong*, who is elected by the adult male population in the village. The *rangbahshnong* was responsible for village administration according to the rules and regulations, as legislated by the village *dorbar*. A unique feature of the Khasi political system was the democratic process followed in decision-making in *dorbars*[5].

Thus, well-developed traditional institutions of local government existed in the Khasi, Jaintia, and Garo hills even before colonisation. Traditional institutions may be functioning and strong even today, but all of them are not on an equal footing in terms of their control, influence, contribution to people's welfare, and recognition as modern political institutions. Elected village level institutions do not exist at present (or scarcely exist, so we do not have information on them) as legislation for them has not yet been brought into force. However, for the implementation of the Backward Regions Grant Fund (BRGF) and the National Rural Employment Guarantee Act (NREGA), some

[5] Noted by the Constitution Review Commission, as cited in the *Ramachandran Committee Report*, pp. 45

institutional mechanism has been established at the village level in the districts/areas covered under these schemes.

2.1.4.2 Institutional Arrangements for implementation of NREGA and BRGF

In Meghalaya, the South Garo Hills and West Garo Hills are covered under both NREGA and BRGF, and parts of Ri-Bhoi are covered under BRGF. In the NREGA districts, village employment councils (VECs) and area employment councils (AECs) have been set up to implement the provisions of the scheme. These institutions have been further supported and supplemented by participative bodies set up under the Natural Resource Management Project of the International Fund for Agricultural Development (IFAD). The VECs and AECs, along with the non-governmental bodies, are undertaking planning and implementation of the BRGF at the village level. For operationalisation of BRGF at the district level, it is proposed to set up a planning and implementation committee with the district collector as the chair-convener. The committee will include representatives from among the autonomous council and MLAs from the district. Funds will go to a separate bank account of the district committee, which shall be operated under the control and superintendence of the deputy commissioner, in his capacity as chairperson.

2.1.4.3 Distinctive Features of Institutions of Governance

Meghalaya is kept out of the purview of the 73rd Amendment to the Constitution. This is an explicit recognition of the strong semblance between provisions in this Amendment and the mandate of the special provisions (in Schedule VI). This is also supportive of intent to avoid disrupting existing structures, and also to initiate the traditional institutions' gradual evolution to assimilate greater democratic attributes, as in the PRIs.

Traditional institutions in the scheduled areas have juridical powers, while this is not so with the PRIs (*Table 2.5*). However, traditional institutions are often a consociation, unlike PRIs that are mandated to hold periodic elections for their office bearers. While there is a constitutional mandate for funds to be devolved to PRIs to perform their functions, they have no mandate to impose and collect taxes, although they are empowered to levy appropriate user charges for services to recover their operation and maintenance expenditures.

Table 2.5: Some Comparative Attributes of Institutions of Governance

Attribute	Traditional Institutions	Panchayati Raj Institutions	Autonomous District Councils	Legislative Assembly
Appointment/Choice of Members	Inherited, selected	Elected	Elected	Elected
Date of First Constitution			27 June 1952 (UKJHADC)	21 January 1972
Selectors/Electors	Permanent residents, males	Residents, all adults	Tribal residents and non-tribal permanent residents, adults (over 18 years)	Residents, all adults
Member Attributes	Males, clan affiliation, permanent residents	Residents, adults	As above, and adults (25 years)	Residents, adults (25 years)
Periodicity	Varies	5 years	5 years	5 years
Juridical Powers to Frame Laws and Rules	Yes	No	Yes	Yes
Resources at Command	Member contributions	Service charges, devolved funds	Service charges, devolved funds	Own taxes, service charges, devolved funds
Codified Rules	No (except few)	Yes	Yes	Yes
Size			30 (KHADC) 24 (JHADC) 30 (GHADC)	60
Electoral Apparatus	Rare		District Council Affairs Department	Election Commission

Source: Compiled by author

2.1.4.4 Study of a Traditional Institution: Hima Mawphlang

An analysis of relations in this *Hima* shows how social, economic, and political forces from within (such as demands for incorporating transparency and accountability in governance, and inclusion of women in decision-making) and from outside (from the evolving polity at the ADC and state level) are putting pressure on traditional institutions. Hima Mawphlang, located about 25 km southeast of Shillong, is a cluster of 16 villages which are multi-clan in character but mono-ethnic in composition, and with multiple religious persuasions. This is reportedly the only area in Meghalaya with a traditional institution that has codified customary beliefs and practices. Indiscriminate use of forests led to the codification of customary rules and regulations, with subsequent ratification by the council of the *Hima* in 1982, and by the KHADC the same

year. The codified rules and regulations stipulate conditions for access and use of community forests.

The two interesting messages of the case study appear to be: (i) traditional institutions are capable of providing an institutional link between ADCs and people at the village level; and (ii) the Khasi society is demanding that traditional institutions incorporate values of equity, transparency and accountability, and neutrality.

Box 2.1a : Identity, Authority, and Power Structure in Hima Mawphlang

Khasi are a matrilineal society, with property handed down through women and people taking the clan name of their mother. Without the clan identity, both male and female members, in a real or abstract sense, are persona non-grata in society. Another part of clan identity comes from the place of residence of the domestic group (iing). According to customary practice, only permanent residents of Hima are allowed to use the community forests. Non-permanent residents of the Hima constitute those employed in government offices, non-Khasis (locally referred to as Dkhar), or those working as daily wage labourers, and do not enjoy equal rights in the use of community forests. This group of people are accepted in the Hima if they perform a particular task or job, but the customs and law of the state clearly do not give them with the right to buy land, and their permanent residence in Hima is not accepted. They can live temporarily to complete a job or task and are then compelled to leave.

The Authority and Power Structure

Customary beliefs and practices legitimise the twelve clans' political positions and their status as distinct from other clans. At the Hima level, the political organisation is divided into (i) the chief and the council of ministers, who are the political administrators; and (ii) the council of the Hima, comprising the 16 village headmen, representative adult males, the chief, and the ministers. The council of the Hima is the highest authority. Participation of women, young people, and non-permanent residents in the council of Hima is not permitted. The everyday political administration of the Hima lies with the chief and the council of ministers. They oversee and are responsible for the maintenance of law and order, organising the annual festival, settling intra-village boundary disputes, interacting with government departments, implementing government schemes, and organising annual council meetings. Additionally, they submit an annual report that includes an audited statement of accounts, and the status of management and control of community lands and forests. However, they are required to report to the council of the Hima and seek its approval in matters concerning land, forests, and other important issues. The role of the Hima has become increasingly important as all issues concerning land and forests are under its authority. The process of decision-making is governed and guided by the 1982 codification of customary beliefs and practices, but in most cases the opinions of the chief and the council of ministers count for more than the views and opinions of members of the council. This is dependent, however, on whether their opinions are within the codified rules and regulations. The Chief and the council of ministers seek, deliberate, and make decisions. However, the council of the Hima has the power and authority to veto decisions and can impeach the chief and the council of ministers when they misuse or exercise their authority beyond what is defined in the rules and regulations.

Source: A Kyrham Nongkynrih (2005)

Box 2.1b: Challenges Faced by Traditional Institutions

In the last two decades, Khasi society has faced a number of challenges, which has led to serious public debates about traditional institutions. The debates are not only political in nature but are also rooted in the issue of equity. Traditional institutions face four main challenges:

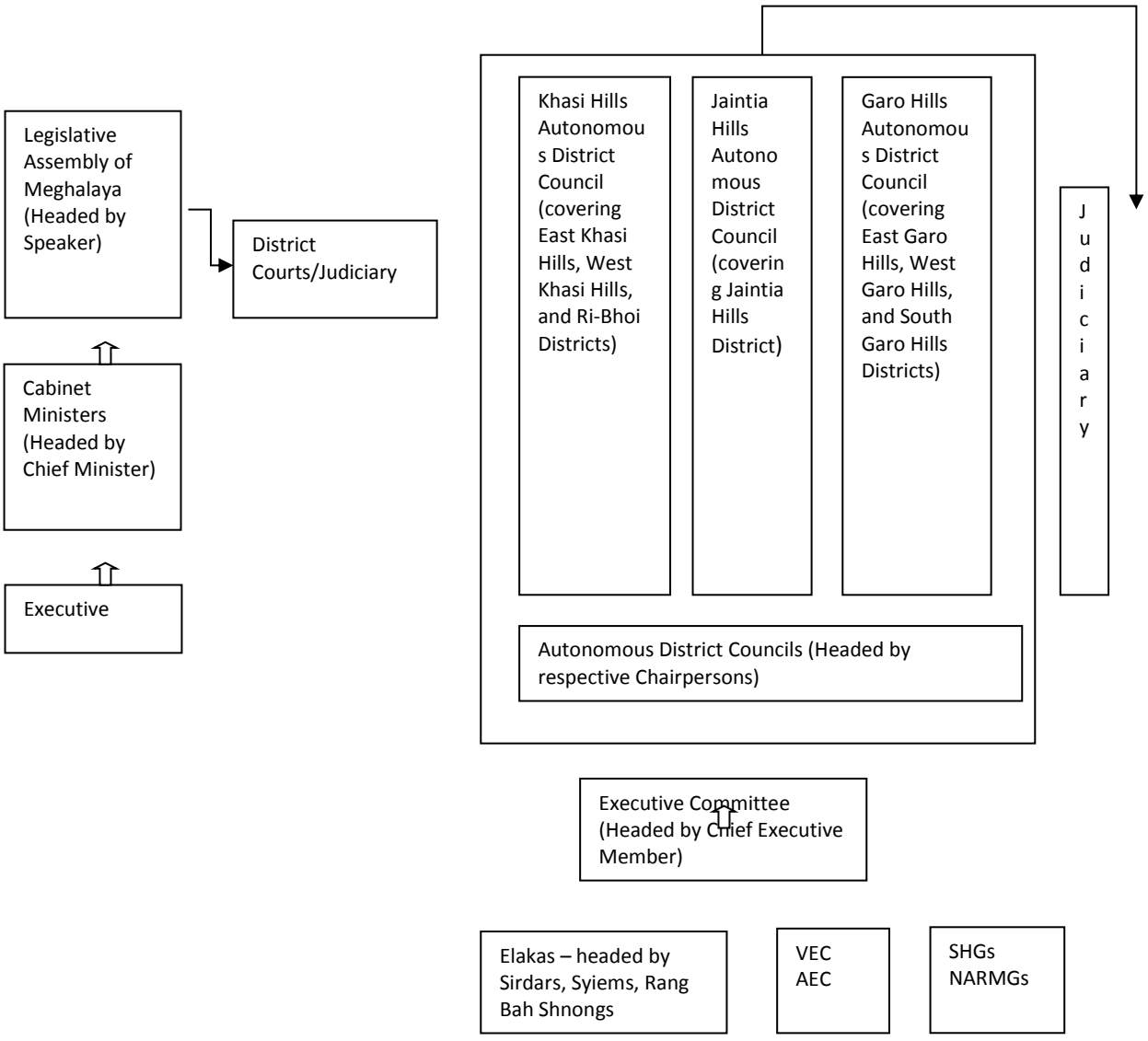
(i) The succession to the political office of chieftainship is a major source of conflict among groups belonging to the same clan. The clan council selects an adult male from among themselves as Chief. Due to internal conflicts, there is often more than one claimant to the position, and the ADCs are not able to confirm anyone. The political vacuum at the top has led to confusion in the administration at the local level. In such situations, the ADC usually appoints an acting chief, not necessarily from the particular clan. However, there have been serious allegations about acting chiefs misusing authority by permitting timber contractors to cut trees from community forests, and selling off community lands with rich mineral resources. This has resulted in conflicts between traditional institutions and ADCs on the succession and confirmation of chiefs, headmen and royalty rights.

(ii) Second, there are cases where chiefs of Hima, in collusion with politicians and timber merchants, have converted large tracts of community forests into private property without the consent of the people of the Hima. These forestlands are registered in the revenue department of the state government, which legitimises the conversion into private ownership. Further, personal benefits received by those who hold power in the traditional authority pose a threat to the equity of community forestry.

(iii) Third, parliamentary politics and development schemes of the state are changing political behaviour. Traditional institutions are based on customs and the decision making process is based on consensus. The party-based politics of electing MLAs and ADCs is creating divisions and political factionalism in traditional institutions. MLAs have power over development programmes, and ADCs have control over traditional institutions. Both bodies are legal authorities and have tremendous influence over people in general and traditional institutions in particular. People feel that the leaders of traditional institutions have been politicised and their decisions are no longer fair. In the process, the poor are increasingly becoming marginalised. It is also causing unscrupulous use of natural resources by new emerging elites from the community.

Figure 2.1 presents a pictorial depiction of the structure of governance in Meghalaya.

Figure 2.1: Structure of Governance in Meghalaya



2.2 THE DEVELOPMENT PLANNING STRUCTURE IN MEGHALAYA

In Meghalaya, the present planning structure consists of a State Planning Board (SPB) at the apex level, and District Planning and Development Council (DPDC) at the district level. In addition, there are two Regional Planning and Development Councils (RPDCs). The SPB consists of a chairman, 4 co-chairmen, 2 deputy chairmen, 6 official members, and 9 non-official members. Its main functions are to advise the state government on the formulation of annual plans and five-year plans, monitor and review development plans, and conduct special studies. RPDCs are an additional layer of planning between the SPB and the DPDC, but are reported to have had only a small role so far. The main function of the DPDC is drawing up of plans based on the need and potential of the district, coordinating and monitoring development programmes and projects, undertaking special studies, and providing advice to the state government on developmental issues. The members of the DPDC comprise all the MLAs from the district, the District Collector (DC), and the CEM. Thus, in this existing planning structure, there is no mechanism for the participation of the people at the grassroots level. Therefore, there is an urgent need to put such a mechanism in place.

2.3.1 THE WAY AHEAD: GOVERNANCE REFORMS FOR GRASSROOTS PLANNING AND SERVICE DELIVERY

Maximising self-governance is critical to empowering people, which will require strengthening of the institutions of governance, and planning at the village level. For this to happen, the traditional systems of governance in Meghalaya need to be included in development planning and service delivery, and given specific roles and responsibilities. In fact, given the relatively low population density and hilly terrain in the state, an intermediary tier may be placed between the ADCs and the village level institutions. It is important to mention that these suggestions have been made to generate a public debate and elicit public response, and do not necessarily represent the final views or recommendations of this report.

2.3.1 Democratic and Representative Village Level Institutions

The challenge in designing local planning approaches in Meghalaya lies in harmonising the functions and rights of traditional tribal self-governing village institutions with constitutionally approved institutional mechanisms designed for modern development and service delivery. Appropriate changes should be weaved in to make the traditional institutions forward looking, and give them the capacity to address the needs of today's development. This would mean activating and strengthening these

institutions through clarity in functional assignments, matching the assignment of functions with commensurate devolution of funds and functionaries, and building capacity to undertake planning. In addition, it is important to create systems and institutions for planning and delivery of public services, including the creation of information systems, and for monitoring, evaluation, and ensuring accountability.

For district planning to be both inclusive and representative, institutions at the village level, and in many cases at an intermediate level between the village and the DC ,will need to be established. How this challenge can be met has been addressed by the Ramachandran Committee Report (2007). Suggestions made in this chapter are in agreement with the recommendations of this Committee in terms of the basic premise that the provisions contained in the Sixth Schedule be followed in both letter and spirit.

Our recommendation is to work directly with the traditional institutions instead of creating new institutions at the village level and then trying to look for ways to find a connect between the traditional institutions and the new institutions. Wherever a mechanism for decentralised planning at the village level has been institutionalised under special projects or programmes such as the NREGA, BRGF, or IFAD, these should be used as good practices for demonstration and training of traditional institutions in participatory development planning and service delivery at the grassroots level. The ultimate aim of this exercise/process would be harmonisation of traditional institutions with these village level institutions.

Where no such institutions/bodies have been set up, the ADCs concerned may be persuaded by central and state governments and the Governor's office to initiate the process of setting up of village level bodies with powers in line with provisions in the Sixth Schedule. The new village level bodies (elected) need not replace the village *dorbar*, etc., but the conditions and environment should be created such that the members and functionaries of the village *dorbar* and any other such institutions participate in the setting up of new village level bodies.

The ADCs in Meghalaya are, in principle, in agreement with the need for a new paradigm for grassroots planning. They have also made some progress by drafting bills in this regard, which are at various stages of being considered and approved. However, the ADCs are at different levels in regard to restructuring traditional institutions. The differences are mainly in their willingness for the representation of women and youth, and democratisation of the process of setting up village level institutions. Since this is asking for a big change in the tribal society, there is need for caution and patience as opposed to imposing changes in a rush, as the latter would not be in the spirit of the provisions of the Sixth Schedule, and may even be counterproductive. If the impetus of change is from within, there will be ownership for this change and less conflict. This has

been well demonstrated by NGO-supported interventions such as IFAD. At the same time, we need not be overwhelmed by NGO interventions and refrain from using them as cover for inaction in mobilising, strengthening, and restructuring traditional institutions. Therefore, the need is to spread awareness among people about the benefits of democratic and representative political institutions at the village level, which will not just retain the power and functions of the traditional institutions but will have more powers, functions, and functionaries for fulfilling their role in the development process.

Once the process of setting up modern political institutions at the village level has set in, the next step would be to bring in role separation at various levels of governance. This can be done through the process of dialogue through the appointment of a well-represented committee or commission. Having streamlined the demarcation of the jurisdiction of functions and functionaries, the flow of funds (how, and how much) constitutes the next set of issues that will demand attention. And lastly, but most important, there would be an immediate need to take action on serious and sustained training of functionaries for capacity building in office procedures, maintenance of accounts and records, preparation of budgets, and professionalism. Capacity building will be equally required for executives and other functionaries of ADCs and state governments, not only in general administration and financial management, but also on the entire system and structure of governance, including demarcation of the jurisdiction of functions, functionaries, powers, and the system of flow of funds.

The concept of regular elections may not be in sync with traditional practices that are geared for stability and not for change. It is likely that introduction of modern political institutional structures (say, of regular elections) may exacerbate factionalism in the interim (or at best, do little to mitigate factionalism). Note that this in some way is perhaps manifest at the Assembly level, with frequent reconstitution of the government. But this does not mean that traditional institutions may be in conflict with non-traditional ones, when it is most likely a simple case of resistance to seemingly large changes.

As far as Constitutional provisions are concerned, however, there is scarcely any contradiction between the intent in the Sixth Schedule and in the PRI system. In comparison to formal provisions in the Constitution for relatively modern PRIs with a well-defined structure, traditional institutions have an amorphous appearance. This attribute allows them to permeate into the social fabric, often making them indistinguishable from observed social customs. Often, these are quite effective in inculcating certain morals and ethics while keeping incidences of infringement to a minimum, and causing speedy conclusion of trials.

Thus, the challenge lies in convincing people that such a hermetic existence in the modern world has been rendered near impossible. There is thus a need to inculcate a notion that this routine exercise need not be destabilising. On the contrary, this regular exercise may reaffirm the mandate to quell unrest and strengthen governance. Similarly, the contemporary development paradigm demands that every individual's aspirations be taken into account in development planning. The idea of decentralisation must be blended with proper democratisation of institutions and individual aspirations for inclusive economic and social development.

2.3.2 Governance Reforms at the ADC Level

The vision built from the grassroots level should be coordinated and compiled at the block and district levels to draw up district level visions. Each ADC in the state should coordinate and compile visions prepared by the districts, and build a vision based thereon for the region under its jurisdiction. This, in turn, should feed into the development vision for the state.

Some issues faced by ADCs constitute their marginalisation by the state government, lack of capacity, inefficiency and mismanagement, and lack of transparency in transfer of funds to them. Demarcation of functions and responsibilities between the ADCs and state governments should be guided by constitutional provisions and not by perceptions of state governments about their capacity. Any lack of capacity at the ADC level should be regarded as an opportunity for training and strengthening the ADCs.

The state government should set up a state finance commission to recommend devolution of grants to the ADCs. The central government and Governor should take the necessary initiatives in this regard. The Constitution provides for specific roles for the Governor of the state of Meghalaya (*Annexure Table 2.1*), and provides powers to fulfil these roles. The Sixth Schedule has entrusted several key powers to the Governor of the state concerned in respect of District and Regional Councils. These powers are classified and briefly described in *Annexure Table 2.1*.

Chapter 3

Agriculture and Rural Development

Future prospects for economic development of Meghalaya lie in strengthening and developing the rural sector of its economy. This is primarily because nearly two-thirds of the total work force depends on agriculture and allied activities for its livelihood, while the contribution of agriculture to the state's GDP is a little over 20 per cent. The role of the modern industrial sector in the economy is insignificant, and given the state's geographical constraints and size, the scope for large scale industrialisation is limited. Hence, the strategy for development should be to gradually transform the self-subsistence structure of the rural sector to a commercial commodity-producing one by creating opportunities for generating marketable surplus which can be exported. This will, in turn, raise the levels of rural income and enable farmers to extend their activities to non-farm production based on processing agricultural surpluses. As a result, dependence on agricultural farm production will decline and there will be a rise in people's engagement in non-farm economic activity. The long-run impact will be to raise agricultural productivity and create an agro-based industrial structure.

At some stage during this development process, Meghalaya can start exporting to outside markets those products in which it has a comparative advantage. The rise in trade will give rise to demand for tertiary activities, as a result of which the service sector will begin to expand. With an increase in connectivity and modes of communication, and with the generation of new skills, it is possible to imagine a phase when Meghalaya can think of specialising in the processing of high-value items based on imported inputs for export to the outside world.

3.1 Natural Resources and their Use

The *Meghalaya State Development Report 2008–09* points out: "Pattern of land holdings and the myriad of land tenure systems, extensive practice of 'Jhum' cultivation (shifting cultivation), other traditional agricultural practices including aspects of production for consumption rather than creating marketable surpluses for profitable returns, high cost of inputs and production are some of the realistic dimensions of agriculture in Meghalaya." (*Chapter IX*, pp. 212)

As a result, despite the large percentage of population engaged in agriculture, the state is still dependent on imports from other states for most food items, such as meat, eggs, and food grains.

A comparative picture of resource endowments and land occupational patterns between Meghalaya and the other north-eastern states with India (Table 3.A1 in the Appendix) shows that Meghalaya has 42 per cent forest land, slightly less than the forest coverage for the north-east region (52 per cent) as a whole, but certainly above the Indian average of only 23 per cent. The net sown area is only 9 per cent in Meghalaya, which is not only significantly lower than the country average which is 46 per cent, but also much lower than the north-east region as a whole (17 per cent). Similarly, area sown more than once is much lower than some of the other hill states such as Manipur and Arunachal Pradesh, although it is far higher than in Nagaland. However, 83 per cent of Meghalaya's net area sown is devoted to crop production, which is much higher than even Assam. On the other hand, the area sown more than once (17 per cent) is relatively low in Meghalaya, suggesting the severity of the impact of *Jhum* cultivation in Meghalaya.

Meghalaya has a very high percentage of cultivable wasteland compared to the total net sown area, indicating the scope for expansion of crop cultivation in the state. It is next to Mizoram in terms of the availability of forests to net area sown area, which means that forestry income should play a much bigger role in the GDP of Meghalaya. Interestingly, it has a very high percentage of land under trees and groves not included in the net sown area.

A district-wise analysis of resource endowments reveals wide variations across regions within Meghalaya (Table 3.1). For instance, South Garo has the highest proportion of forest land (54 per cent) and Ri-Bhoi the lowest forest coverage (35 per cent). Area under non-agricultural uses in all districts is very small, ranging between 2 to 6 per cent. A striking feature of land use in Meghalaya is that area under cultivable wasteland is quite high (20 per cent), with the highest figure of 31 per cent in the Jaintia hills. Apart from West Garo (9.4 per cent) and South Garo (12 per cent), the rest of the districts have on average more than 20 per cent cultivable wasteland. Total fallow land ranges between 4 per cent (East Khasi Hills) and 15 per cent (West Garo Hills). Meghalaya as a whole has 10.3 per cent fallow land.

District-wise, the major producer of both livestock and poultry is the West Garo Hills (28 and 25 per cent, respectively) (Table 3.2). It accounts for 28 per cent of the cattle, 45 per cent of buffaloes, 34 per cent of sheep, 36 per cent of goats, 24 per cent of fowls, and a staggering 64 per cent of ducks, all being the highest in terms of district-wise production levels. The West Khasi Hills and East Khasi Hills are at the top in the

population of horses and ponies (57 per cent) and pigs (25 per cent), respectively. On the other hand, the South Garo Hills is at the bottom of the list for all the livestock categories considered.

Meghalaya is relatively better off in terms of per capita availability of livestock products compared not only to the NER but also to India, except for the production of milk, and the population of buffaloes and sheep (Table 3.3)

Meghalaya seems to have a comparative advantage in livestock products in comparison with both the north-east and India. This means it can specialise in production for export to other regions and can also develop meat processing industries to increase value addition in its GDP.

Table 3.1: District-wise Resource Endowments and Land Use in Meghalaya

Districts	Forest Area	Area Under Non-agri Uses	Barren and Uncultivable Land/Area	Permanent Pastures and other Grazing Land/Area	Land Under Miscellaneous Uses, Tree Crops and Groves/Area	Cultivable Wasteland/Area	Fallow Land Other Than Current Fallow/Area	Current Fallow Land/area	Net Sown Area	Area Sown More Than Once	Total Cropped Area	Net Sown Area/Total Cropped Area	Area Sown More Than Once/Total Cropped Area	Area Sown More Than Once/Net Sown Area
Ri-Bhoi	35.4	5.6	8.4	-	11.8	23.9	4.0	2.6	7.9	1.0	8.9	88.6	11.4	12.9
East Khasi Hills	38.0	5.0	13.4	-	6.2	20.9	2.4	1.7	11.4	2.8	14.2	80.2	19.8	24.7
West Khasi Hills	39.6	4.1	9.3	-	8.1	20.9	9.1	3.5	3.9	1.1	5.0	78.2	21.8	27.9
Jaintia Hills	40.4	4.5	3.6	-	4.5	31.4	4.6	2.9	7.9	0.1	8.0	98.8	1.2	1.2
East Garo Hills	47.1	2.1	1.8	-	7.8	18.4	8.5	1.9	11.9	2.0	14.0	85.4	14.6	17.2
West Garo Hills	44.6	3.9	2.0	-	6.6	9.4	11.7	3.3	10.7	5.5	24.4	44.0	22.6	51.4
South Garo Hills	54.0	2.2	2.8	-	3.5	12.2	10.7	3.1	9.0	2.5	11.5	78.2	21.8	27.8
Total	42.0	4.0	6.1	-	7.0	20.1	7.5	2.8	8.4	2.1	11.8	71.1	17.6	24.7

Source: District-level Statistics, Directorate of Economics and Statistics, Government of Meghalaya, 2004 – 05

Table 3.2: District-wise Distribution of Livestock and Poultry in Meghalaya, 2001–05

(% share of total)

	Livestock							Poultry		
District	**Cattle**	**Buffaloes**	**Sheep**	**Goats**	**Horses and Ponies**	**Pigs**	**Total Livestock**	**Fowl**	**Ducks**	**Total Poultry**
East Khasi Hills	7.1	1.3	31.7	16.2	11.8	25.3	14.1	16.0	6.6	15.8
Ri-Bhoi	7.5	20.0	0.9	4.1	5.2	9.0	7.2	12.7	5.3	12.5
West Khasi Hills	13.7	16.0	28.2	16.7	57.3	15.0	14.9	13.4	2.4	13.2
Jaintia Hills	17.4	11.4	4.0	7.5	22.6	12.9	13.9	11.9	10.1	11.8
East Garo Hills	20.4	5.4	0.2	11.8	1.1	13.8	16.4	15.8	1.8	15.5
West Garo Hills	28.8	45.7	34.2	36.8	1.0	19.4	28.1	24.2	64.5	25.1
South Garo Hills	5.2	0.2	0.7	6.9	0.9	4.7	5.3	5.9	9.2	6.0

Source: Statistical Abstract of Meghalaya, 2004–05

Table 3.3: Distrcit-wise Ratio of Livestock to Population in Meghalaya, 2003–04

States	**Total Live stock**	**Poultry**	**Total Milk**	**Eggs**	**Cattle**	**Buffa loes**	**Sheep**	**Goats**	**Meat (5+6+7+8+9)**
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**10**
Meghalaya	0.669	1.217	0.030	40.538	0.331	0.008	0.008	0.141	1.704
North-East	0.539	0.935	0.029	23.317	0.295	0.022	0.006	0.112	1.369
India	**0.471**	**0.475**	**0.086**	**39.274**	**0.180**	**0.095**	**0.060**	**0.121**	**0.931**

Source: Statistical Abstracts of India, 2003–04

Note: Figures are calculated.

3.2 PRODUCTIVITY

Agricultural productivity in the state is fairly low, as indicated in Table 3.A2 in the annexure to this chapter. Specialisation is limited by the extent of the markets, which has forced every village into self-sufficiency, producing everything they need to survive irrespective of their comparative advantages in production. This means that no village has the incentive to produce a marketable surplus because of the limited scope of markets, a direct consequence of the lack of mobility of goods because of the lack of connectivity. Thus, a third possible way to increase land and labour productivity is from specialisation in

crop cultivation, which can be achieved only by intensifying trade, first within Meghalaya and subsequently with other states.

There is considerable scope for increasing agricultural productivity from specialisation in production. There will be several impacts of such an increase in productivity. First, Meghalaya will have to depend less on the outside world for food, and hence there will be a lower rate of leakage of income from the state. The direct consequence of this will be the increased multiplier effect on income generation. Second, it will raise the income of farmers, enabling them to invest more on land development and skill formation. Third, it may help develop some agro-based industry in Meghalaya. The last aspect is important for the future development of the state, which currently has very little scope for mineral-based industrialisation.

3.3 THE STATE'S COMPARATIVE ADVANTAGE

3.3.1 The Regional Specialisation Index and the National Specialisation Index

In the discussion on the agricultural sector in the north-eastern region, the NER Vision Document 2020 has observed that there is wide variation across the north-eastern states in agricultural productivity. Further, there is very little trade among the states of the north-east, and hence a lack of specialisation in production.[6] What are the products in which Meghalaya seems to have a comparative advantage? An attempt is made to discover the state's comparative advantages based on the Regional Specialisation Index (RSI), both in terms of net area sown and quantity produced,[7] the National Specialisation Index (NSI) in various agricultural crops,[8] consumption (demand), intensities for different crops, comparative productivity advantages in various crops for each district and the state, and dependency indices both in terms of value and quantity.

According to the RSI, Meghalaya has a production advantage in maize, small millet, sesamum, coffee, natural rubber, bananas, potatoes, chillies, ginger, turmeric, and

[6] *NER Vision 2020* (2008): *Annexure*s, pp. 38–43.

[7] The appendix to this chapter provides details of the methodology for constructing the index. First, in the context of Meghalaya in relation to the other north-eastern states, RSI is defined as the ratio of the net sown area devoted to a particular product as a percentage of the total net sown area in Meghalaya to the ratio of the total net sown area for the product in the entire north-east as a percentage of the total net sown area for the north-east as a whole. In other words, Meghalaya is considered in relation to the other north-eastern states. Subsequently, the different districts of Meghalaya are also analysed in a similar fashion. *Table 3.A4* in the Appendix shows the Regional Specialisation Index (RSI) for 20 crops in Meghalaya in terms of net area sown. An RSI value of more than 1 indicates that the particular state has a revealed comparative advantage in that crop compared to NER.

[8] The NSI is defined as the ratio of the net sown area of the product 'i' in state 'j' (where j = Meghalaya) as a percentage of the net sown area of the product for the NER to the net sown area of product 'i' in India as a percentage of the net sown area in India. The appendix to this chapter gives the formula and the calculation for the National Specialisation Index (NSI) for 20 crops (the same crops as for the RSI). *Table 3.A5* in the appendix gives these values.

pineapple. However, ginger has shown the greatest revealed production advantage for Meghalaya, as indicated by an RSI value of 5.27.

The next question is: Where does Meghalaya stand in comparison to the rest of the country? This is given by the NSI, which shows that ***Meghalaya has a comparative advantage in rice, maize, small millet, wheat, coffee, natural rubber, bananas, potatoes, chillies, ginger, turmeric, and pineapple. However, pineapples show the greatest revealed comparative advantage for Meghalaya, as indicated by an NSI value of 68.17.***

District-Level Comparative Advantages: The District RSI

Within Meghalaya the districts could be ranked in terms of their comparative advantages. District-level data are available for very few products. The agricultural products considered for the RSI at the district level (DRSI) are rice, maize, wheat, rabi and other pulses, rapeseed and mustard, sugdakuarcane, ginger, cotton and jute, and the horticultural products are pineapple, citrus fruits, banana, and papaya. The DRSI was constructed in two different ways: one, in terms of net sown area (NSA), and the other in terms of production in quantity (PQ).[9]

In terms of net sown area, the DRSI calculations (*Table 3.A6* in the Appendix) show that East Khasi Hills does not have a comparative advantage in any product, while Ri-Bhoi has an advantage in rice, maize, and ginger, with the highest advantage in ginger (1.19). West Khasi Hills can specialise only in maize (2.66) and so can Jaintia Hills (1.24), though rice could also be produced efficiently. Similarly, the East Garo Hills district can specialise in rice, sugarcane, cotton, and ginger, but its greatest comparative advantage lies in ginger (3.55). On the other hand, West Garo Hills can specialise in all the products except for ginger and maize, but its greatest comparative advantage lies in wheat (2.91). South Garo Hills can specialise in rabi and other spices, and jute, with its greatest comparative advantage in rabi and other spices (1.22).

When looked at in terms of production quantity (*Table 3.A7*), the DRSI shows that the East Khasi Hills district has a comparative advantage only in ginger (2.44). Ri-Bhoi can specialise in rice and maize, although its greatest comparative advantage is in maize (1.91). West Khasi Hills can specialise in maize and ginger, but its greatest comparative advantage lies in ginger (1.98). Jaintia Hills can specialise in maize (1.88), though rice can also be produced efficiently. The East Garo Hills can specialise in rice, sugarcane, and cotton; however, its greatest comparative advantage lies in cotton (4.41). The West Garo Hills district can specialise in all the products apart from ginger and maize, but its greatest comparative advantage lies in wheat (3.31). The South Garo Hills can specialise in rice, rabi

[9] See the appendix to this chapter for the formula.

and other spices, sugar cane, maize, and jute, but its greatest comparative advantage lies in rabi and other spices (2.59).

Interestingly, both DRSI measures reveal approximately similar kinds of comparative advantages except for East Khasi Hills and for some crops in the other districts. However, irrespective of the measures, the greatest comparative advantages remain almost the same in all the districts. For the horticulture crops in terms of net sown area, East Khasi Hills has a comparative advantage in citrus fruits and papaya (*Table 3.A8* in the appendix), but it can specialise in the production of citrus fruits (3.99). Ri-Bhoi can specialise in pineapple, banana, and papaya, but has the greatest advantage in pineapple (4.08). The West Khasi Hills can specialise in citrus fruits and bananas, but its greatest comparative advantage lies in bananas (1.24). The Jaintia Hills and West Garo Hills districts do not have a comparative advantage in any of the horticulture crops considered here. The East Garo Hills can specialise in bananas and papayas, with its greatest comparative advantage in papayas (1.80). The South Garo Hills can specialise only in pineapple (1.38).

In terms of production in quantity, the East Khasi Hills, West Khasi Hills, and Jaintia Hills have a comparative advantage only in citrus fruits (3.18, 1.84, and 3.97, respectively). Ri-Bhoi can specialise only in pineapple (1.51) (*Table 3.A9*). The East, West, and South Garo Hills have comparative advantages in all the horticulture crops except citrus fruits; however, these districts have greatest comparative advantages in the production of papaya (1.67), bananas (1.32), and pineapples (1.31), respectively.

3.4 THE WAY AHEAD: RECOMMENDATIONS FOR THE RURAL SECTOR

Despite the limited scope for agricultural growth due to the limitations of available cultivable land, agriculture has a lot of potential for increasing rural incomes, provided farsighted and judicious agricultural policies are adopted by the state. Transforming subsistence to commercial agriculture and improving the value chain requires the state government to adopt a focussed approach and strategy, and enable substantial investments in the sector. The focus missions on agriculture, livestock, forestry, and horticulture will have to come up with appropriate strategies to increase productivity, processing, distribution, and marketing. The state government should persuade the Central government to set up a Central University for Agriculture Research during the Twelfth Five Year Plan. It is also necessary to amend the APMC Act to enable the direct participation of farmers in marketing their products, and to facilitate private partnership in horticultural produce.

Appropriate Crop Cultivation

An issue of significant importance is appropriate crop choice to maximise productivity in agriculture. The demand for different crops and the state's and districts' dependencies on 'imports' from outside the region are given in Appendix *Table 3.2* to this

chapter.[10] Meghalaya's demand for meat, fish, and eggs is far higher than the national demand, and so is its demand for beverages. Its demand for rice is marginally higher than that of the country (*Table 3.A10*). Dependency indices for the state indicate a high dependency on 'imports' in all the districts for several products such as cereals, pulses, oilseeds, total foodgrain, and fish (*Tables 3.A11 to 3.A14*). Consumption demands could be used as indicators for increased cultivation for local consumption. With the development of markets, instead of cultivating traditional crops, Meghalaya can exploit its climatic advantage to cultivate certain high value horticulture and floriculture products for export to neighbouring markets.

Modernisation of Agriculture

Almost any effort to increase productivity will require phasing out of jhumming and replacing it with settled cultivation. The indirect benefits from the replacement of jhumming will be that the percentage of the fallow land to overall cultivable land will be progressively reduced. Production of horticulture and floriculture products will also require modernisation of farm techniques and expansion of irrigation facilities.

Water Management

Because of the state's high altitude and mountainous terrain, water run-off is very high, which makes multiple-cropping almost impossible. Thus, water harvesting and water retention, along with major irrigation based on river and stream water, may be the *sine qua non* of agricultural development in Meghalaya. Such steps also will increase both land and labour productivity in agriculture.

Developing Forest Resources

The abundance of forest resources could contribute significantly to income growth in the state. However, the share of the income from logging and forestry in GDP is abysmally low, indicating that the state still has unexploited potential in realising income from forestry.

Agro-Based Industry

There is a link between productivity, trade and urbanisation. The rate of urbanisation crucially depends upon the rate of industrialisation. Thus, in order to increase labour productivity in the relatively backward districts, one should focus on creating agro-based industrial clusters in backward districts having strong forward and backward linkages. The success of such agro-based industrialisation will depend upon (i) the creation of markets, and (ii) efficient and reliable transport connectivity. The important initiatives in this regard

[10] These are given by the demand intensity measure (DIM) which shows the intensity of consumption in the state *vis-à-vis* the rest of the country; and by the dependency index (DI) which has been calculated for the state and the region; and then for Meghalaya's districts using as bases the state, the region and then the country.

will have to include a thrust on improving the value chains. The private sector will have to play a crucial role in making investment not only in agro-based industries but also in building the infrastructure for improving the value chain through public-private partnerships.

Creating a Marketing Framework

The highly perishable nature of agricultural goods becomes an issue when there are several small farmers and little inter-state coordination. Farmers need some support in marketing their products if they are to be induced to make the shift to cash crop production. Further, unless states coordinate their production and storage plans, excessive production can lead to a market crash, as recently observed in the case of ginger production in some of the north-eastern states. The large demand for food items created by the 'captive markets' of the region, such as the army and security forces, could be tapped into to expand the regional market.

Cluster-based Development

The short-run development approach will be cluster-based to realise greater economies of scale and specialisation. For this, the cultivated area of the state can be divided into crop-wise clusters based on comparative advantages, with each cluster defined as a Crop Development and Marketing Unit (CDMU) which emphasises the marketing aspects of the cluster. Collection centres will need to be set up near the clusters, which will have linkages with clusters in other regions to promote economic linkages with wholesale markets. Marketing intervention, especially for horticultural produce, with a full complement of post-harvest infrastructure and market network is fundamental. These CMDUs would be given appropriate managerial and financial flexibility for assisting producers realise reasonable profits from their efforts.

Cold Chains

Establishment of a cold-chain along major arterial highways is critical if the region is to exploit its rich horticulture potential and market these products to the rest of the country. The operation of the cold chain could be based on a PPP model or on a lease basis with private entrepreneurs.

Transport Network

An efficient transport network allows farmers to expand their business horizon, resulting in specialisation in production and trade. In the absence of such networks and markets, villages have to become self-sufficient, where each farmer is essentially forced to produce everything he requires, without being able to create marketable surplus. The value of surplus production can be realised in the context of trading opportunities.

Chapter 4

Industry

While large scale industrialisation can never be a goal for this small hill state, growth and an improvement in people's prospects will require a shift away from a largely land-based primary production economy that still characterises the state. As pressure on the land increases, there has been a rise in the number of landless labourers and poverty. An increase in industrial activity in the state will expand employment opportunities and career choices, as well as increase the state's income and revenue base.

Developing an industrial base in an environmentally fragile hill state such as Meghalaya will call for an innovative approach to development. Added to the environmental and geophysical conditions are social and physical issues such as the absence of good connectivity, poor infrastructure, remoteness of small production units, a low technical and skills base, and the almost complete absence of any non-community land that can be used to promote enterprise.

4.1 Current State of Industry

The process of growth is typically associated with a structural change in the economy, which involves a shift from the agricultural and allied services sector towards industry. In Meghalaya, with over 80 per cent of the population dependent on land, a transfer of labour from agriculture to manufacturing and tertiary activities would represent an important step towards raising productivity. This shift is usually manifest in a rise in the share of industry and mining activity in the state's gross domestic product. Based on sectoral growth rates for the state over the past decade, the state appears to be undergoing the beginnings of a structural transformation.

Industry today accounts for one-fourth of the state's NSDP. Between 1999–2000 and 2007–08 (advance estimates), the trend share of industry in NSDP rose from 21.09 per cent to 25.7 per cent[11]. The growth rate of industry during the Tenth Plan was 8.67 per cent (against the national growth rate of 9.76 per cent), and the targeted growth rate in the Eleventh Plan is 8 per cent against a national target of 10.5 per cent.

Like almost all the other north-eastern states, Meghalaya is largely dependent on wood and wood-based industries. The mining sector also contributes significantly to the state's income, and private entrepreneurs are involved in this process. However, private entrepreneurs, who have coal and limestone deposits in their land holdings, often extract the minerals and send them to Assam and Bangladesh for sale.

[11] Directorate of Economics and Statistics, Meghalaya, from the State Development Report, *Table 5.2*

Thus, in the absence of downstream industries in Meghalaya, little value addition takes place. Important industries are the manufacture of cement, lime, mini steel plants, granite cutting and polishing, and so on. Almost all of them are medium scale industries. Small scale industries include tailoring, wooden furniture making, cane and bamboo works, flour and rice mills, weaving, and baking. In fact, there are only a few large and medium sized industries (*see, Table 4.1*), and the sector mainly comprises small scale enterprises. All the large and medium size units are located in the rural areas.

Table 4.1: Large and Medium Industries in Meghalaya

Type of Industries	**Number Of Units**	**Investment** *(Rs)*	**Employment** *(Number of Workers)*
Cements	10	36,067.45	1,311
Steel units	48	15,073.84	1,925
Limestone mining and crushing plants	4	1,796.00	336
Foods	12	3,831.48	373
IMFL	3	489.94	99
Coke	2	756.00	70
Information technology	2	283.00	85
HDPE bags	4	1,373.40	135
Others	31	13,361.09	1,083
Total	**116**	**73,032.20**	**5,417**

Source: State Development Report 2008–09, Government of Meghalaya.

The small scale industries (SSIs) in Meghalaya are mainly engaged in producing food items, wood furniture, or non-metallic products, or are printing presses, or deal in repairs and services. Despite various handicaps, such as inadequate capital investment, shortage of technical skills, and so on, the number of small-scale units has increased. In terms of employment, however, the average number of workers per unit has barely increased, and the average net value of output per worker has actually declined.

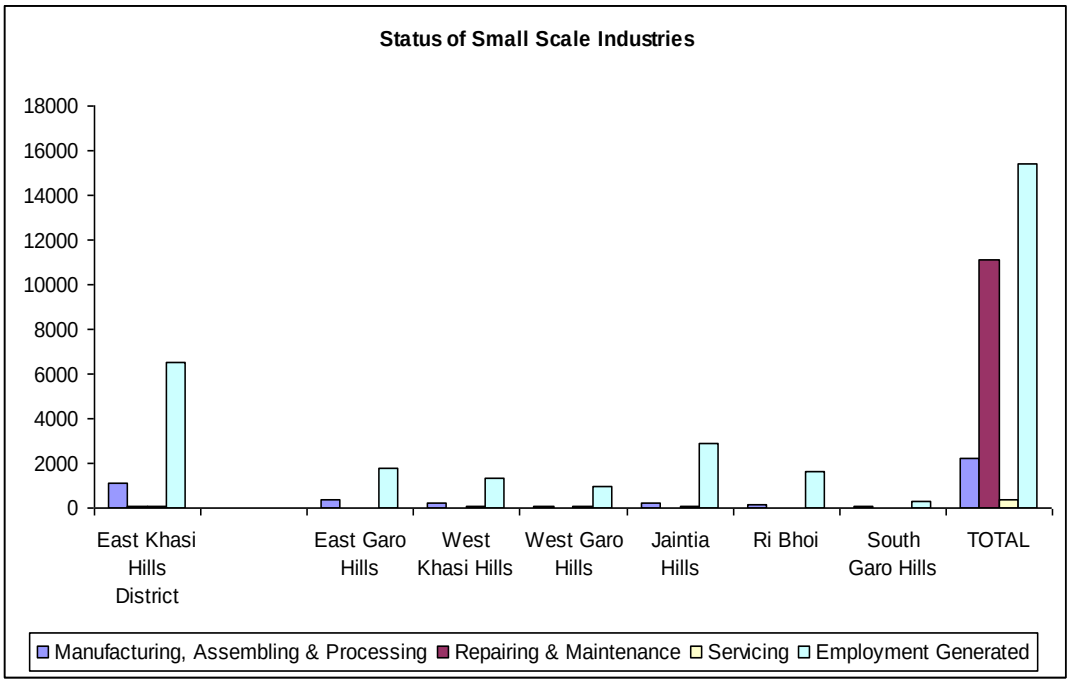
While the number of SSIs has increased in the state, the vast intra-regional disparities in the location of these units has continued, with East Khasi Hills accounting for 40 per cent of the total number of units, followed by West Garo Hills (20 per cent), Jaintia Hills (13 per cent), and Ri-Bhoi (11 per cent). The remaining districts account for less than 10 per cent of the SSIs in the state. The employment effects of this skewed distribution of industry are clear, as almost half (46 per cent) of the SSI employment occurs in the East Khasi Hills, with the share of SSI employment in the other districts mirroring the distribution of units (*Figure 4.1*).

Table 4.2: Small Scale Industries in Meghalaya

Districts	Manufacturing, Assembling, and Processing	Repairing and Maintenance	Services	Employment Generated
East Khasi Hills District	1,127	41	94	6,536
East Garo Hills	343	0	9	1,808
West Khasi Hills	214	27	86	1,307
West Garo Hills	100	11	75	959
Jaintia Hills	219	14	63	2,902
Ri-Bhoi	147	8	24	1,614
South Garo Hills	53	12	23	294
Total	**2,203**	**11,123**	**374**	**15,420**

Source: State Development Report 2008–09, Government of Meghalaya.

Figure 4.1: Small Scale Industries in Meghalaya



4.2 OPPORTUNITIES IN INDUSTRY

The state's human capital base and its strong resource base of land, forests, water, and mineral resources have been largely untapped for industrial purposes. Various opportunities and incentives have been extended to industrial units, both by the state and central governments, to attract private enterprises to invest in Meghalaya. Through its various industrial policies for the north-east (see the most recent one for 2007 in the annexure to this chapter), the government offers subsidies on the costs of infrastructure,

transport, training, power, and so on. New units in the north-east region are exempt from paying income tax for five years in sectors which are mineral based, horticulture and agro-based, and in the areas of power, tourism, healthcare, etc.

Agro and Horticulture-based Industry

An area with great potential for investment is food processing. The state produces a variety of fruit, vegetables, and other agro-based products that can be processed, packaged, and transported in various forms to other parts of the country. Fruits grown in the region include oranges, peaches, pineapples, pears, guavas, plums, and bananas, which can be prepared into jams, squashes, pulp, facial scrubs, and various other edibles and non-edibles for sale in markets away from the growing areas. Vegetables suitable for processing are jackfruit, tapioca, and so on. Turmeric of the best quality and a variety of medicinal herbs and plants are other items which flourish in the state and can be processed into herbal and health-based products. Other resource based products such as bamboo, silk, and forestry products are also common.

Minerals and Other Resource-based Industries

Meghalaya has proven deposits of several valuable minerals like limestone, coal, clay, glass sand kaolin, quartz, ironstone, and granite. Deposits of limestone and coal have been well explored in the state and sizeable reserves have been established, but the location and scale of other mineral deposits have not yet been verified.

The state also has sizeable deposits of radioactive minerals such as amounting to an estimated 13.5 million tonnes. In fact, uranium found in the West Khasi hills is of a higher grade than some of the best grade uranium being mined elsewhere in the country. However, protests by locals over the environmental and health related outcomes of uranium mining have stalled the development of this activity.

Handlooms and Silk Weaving

Weaving traditional shawls and textiles is a household occupation of most women in the state, and still continues in most rural homes. Around 90 per cent of all weavers in the state are women. Meghalaya's weaving tradition is based on excellent skill and workmanship. Cotton weaving is most common, but the yarn has to be 'imported' as there is no cotton production in the state. Of the 25,000 weaver households, 60 per cent are in the Garo Hills.

Another traditional occupation of rural women is the rearing of silkworms for eri, mulberry, and muga silk. This has mostly been done on a small scale in the past, catering mostly to the home and local areas because of the absence of marketing links. Both these enterprises can be scaled up with appropriate design and technical inputs, so that they provide a marketable surplus that can form a basis for rural non-farm employment and income for women. There is a large demand for silk from the Indian market, and exporters import large quantities of silk to fashion into finished garments for export. While Assam is

the largest producer among the north-eastern states, Meghalaya has conditions that are conducive to providing the Assamese silk industry some competition.

4.3 CONSTRAINTS IN AGRICULTURE AND HORTICULTURE

Despite its rich resource base, various handicaps have prevented it from developing strong linkages between the resource base and industry. Investment in industrial development has not been forthcoming in Meghalaya for various reasons.

Locational Issues

The state's location within the north-east region, with its tenuous connection to the rest of the country through a 22 km strip of land, has cut its production centres off from the main markets of Kolkata and Delhi, as well as raised the prices of inputs.

Physical Infrastructure

There is an absence of supporting infrastructure, both physical and financial. The hilly terrain, poor state of the roads, and absence of reliable transport infrastructure add to transport costs, and thus to the costs of production in this landlocked state. Existing power supply is inadequate to deal even with the present demand, even at this low rate of industrial activity. The state will need to have access to far larger quantities of good quality reliable power if it is to attract industry to set up production. Further, telecommunications remain weak at best, even though mobile telephony has begun to take off in the state. In short, the lack of connectivity to outside markets and centres hinders the growth of industry in today's climate, which relies on quick and easy communication.

Availability of Credit

A key handicap is the low availability of credit in the state and the region. The credit-deposit ratio of commercial banks was only 30 per cent and that of regional rural banks only 36.94 per cent in 2006.[12] Despite the priority lending targets of commercial and cooperative banks, credit to SSIs has been declining since the mid-1990s.

Marketing of Produce

Selling their output in larger markets so that they can realise good prices, rather than relying on local markets, remains a major aspiration for SSI producers, especially in rural areas. Poor physical connectivity limits their access to the markets of West Bengal and the rest of the country, and they are forced to rely on local demand, and thus local prices. Marketing is a major issue in Meghalaya for various reasons. For a start, producers lack access to information on markets and prices and on marketable products; they lack the skills and knowledge to tap new markets, or gauge the scale of operations and optimal volume of production. They may need to compete with larger producers, who can apply scale economies to their production processes.

[12] Meghalaya State Development Report

Low Base of Skills and Entrepreneurship

Despite its prominence as an educational hub for the north-east, Meghalaya has a paucity of skilled and trained professionals available for employment in industry because of the large-scale migration of young people to other parts of the country for work and training opportunities. An industry that sets up shop in the state may have to bring its own skilled workers, which may not always be practical. Another reason for the lack of industry is the general risk averseness of Meghalayans for various social and community reasons; they have traditionally preferred to invest surplus funds in fixed assets rather than in a business venture. The low rate of applications for the government self-employment schemes to ease rising youth unemployment is testimony to this lack of interest in starting a business venture and exploiting the market potential for locally produced goods.

Complex Land and Partnership Issues

Land tenure systems are complex and varied in the state, and there is very little land that is not community-owned which can be used for industrial purposes, or as collateral for raising loans. Business can often only be conducted through partnerships, which are based on non-business considerations as they involve having a local 'sleeping' partner, and this has led to complications for both partners.

Political Instability

Subversive political activity over the past decades also created an atmosphere of uncertainty and unstable investment climates, which have deterred private investors from sinking their money into what was already a new and untested location.

4.4 THE WAY AHEAD: OVERALL RECOMMENDATIONS FOR THE RURAL SECTOR

As we had mentioned above, developing an industrial base in Meghalaya will call for an innovative approach to development. Clearly, large scale and medium scale industry cannot proliferate in the state given the environmental and geo-physical constraints. Even private investment in smaller scale units has been slow to come despite various incentives, especially as many of the other states have equally attractive incentive packages. As has been often observed about Meghalaya and other north-eastern states, no amount of incentives and subsidies, such as those offered in various industrial policies, will attract industry to the state; private investment will only flow when there is a conducive environment that guarantees some returns on investment. Unless the government can set up an assured power supply, good reliable telecommunications networks, and transport links, large industrial enterprises, and perhaps even medium-sized ones, are not going to enter the state soon.

In the medium term, the way ahead has to be a focus on developing the state's stagnant SSI base through a judicious mix of direct and indirect state support, and inputs from the local people. Several of these units are located in the rural areas, and there is potential for an expansion in SSI activity, which would lead to a diversification in the rural

employment base, provide jobs for women, as well as stem the urban migration and urban congestion taking place.

Value Addition

Whether in the area of food, minerals, or forest-based products, efforts should be made to 'export' the produce in processed form, rather than in raw form, as is currently being done. Value addition carried out in the state, especially close to the centres of production, will add considerably to income and revenue for the state's exchequer, not to mention creating additional employment and income.

Cluster Approach

The scattered nature of small enterprises tends to hamper production, as producers face problems related to access to markets for produce and raw materials, information about techniques and designs, and so on. This has been tackled successfully in other parts of the country through a cluster approach to SSIs. This involves a locational clustering of enterprises producing the same, similar, or interrelated products, sometimes based on the same resources, which face common problems and need common markets. Meghalaya currently has two clusters — one for eri silk-weaving in Ri-Bhoi district, and one for cane and bamboo in Jaintia Hills. The functioning of these could be studied for recommendations and if successful, such clusters could be expanded to other types of SSIs.

Regional Distribution of Industry

Some attention has to be paid to the skewed distribution of industry in the state. As the table above showed, the East Khasi Hills district accounted for almost half the number of units and half the employment generated in SSIs. Efforts have to be concentrated on encouraging production and sale from other areas by setting up good marketing linkages and through concentrated inputs into technology and design.

Self-Help Groups

An attempt has been made to tackle various issues related to small enterprise — lack of access to credit and markets, inculcating the entrepreneurial spirit, and empowering women — through the promotion of self-help groups (SHGs), which have been very successful, especially in the southern states of the country. The number of SHGs has grown in Meghalaya since 1980 to around 9,000 today, with almost half (47.45 per cent) being located in the West Garo Hills, followed by the East Garo Hills (13.51 per cent), and the East Khasi Hills (12.65 per cent). Most of the funds raised are used for animal husbandry projects (24.7 per cent), followed by small business activities such as grocery shops, tea stalls, and fruit and vegetable vending outlets, and for horticulture and agricultural activities.

Upgrading the Skills Base/Accessing New Technologies

Many of those in SSIs have low productivity because of their lack of exposure to more modern techniques, equipment, or designs and products. Whether in the area of

handloom, handicrafts, agro-processing, or silk weaving, workers need to be exposed to and trained in more modern methods of production, and shown how to use more recent technology. They need a support system, at least initially, to help them acquire these skills and technical know-how. To some extent they will also need help accessing raw materials or inputs, and markets for their products, especially if they are tapping into new markets such as health and beauty products, hotels (to sell their food products), etc.

Infrastructure

Poor road connectivity, absence of public transport, and lack of electricity supply hampers productivity, and needs to be dealt with.

4.4.1 The Way Ahead: Sectoral Recommendations

- **Handlooms:** With design and marketing interventions, weaving of traditional textiles could become a very profitable source of non-farm rural employment for women. Here too the government has a role to play in ensuring weavers have access to modern, improved looms and accessories, improved techniques for indigenous and natural dyes, design inputs from designers, perhaps from professional institutions, and so on.
- **Silk Production:** Meghalaya has the ideal environment for the development of a high quality silk industry. This is possible if there are appropriate interventions at all stages of production and marketing. For a start, plantation areas for silkworm food plants need to be expanded in either the community lands or within individual holdings, and the government has to provide the necessary support in the form of good quality silkworm seeds, and promulgation of scientific methods of silkworm rearing. At present the silkworm farms are inadequately equipped and poorly maintained, with ageing technology. Finally, the marketing of the produce requires market infrastructure (there is an absence of organised markets), enhancing managerial skills and technical know-how, and other inputs to ensure that producers receive a fair price for their produce.
- **Agro-processing:** Given the difficulties of transporting fresh produce to markets, the best way to prevent losses through spoilage is to process surplus fruit and vegetables close to the farms. If these processing and packaging plants can be located close to the growing areas, this will minimise the losses from transporting perishable produce over long distances. The success of Uttarakhand in processing locally grown apricots into a variety of products — jams, pulps, facial scrubs and oils, and even apricot soap — over the past years acts as a 'best practice' in this area. There is a sophisticated market for 'organic' nature and health products that any fruit and vegetable growing area should tap into. The large variety of medicinal plants and herbs can also be processed into products for export to the rest of the country. Under this category we also include activities such as grain processing (rice and flour milling), oil pressing, and so on, which can be done close to the planting sites, forming a source of rural non-farm based income and employment, which could help keep people in the rural areas. Crucial for this type

of activity is infrastructure, such as an assured supply of power, and well-developed marketing links.

- **Minerals:** Mineral-based industries can be established once the potential for other deposits has been ascertained through detailed surveys and drilling, and the collation of the results done in a geological or feasibility report. Such geological data have helped in the growth of several mining activities in the state.
- **Other Non-Traditional Industry:** Building on natural talents would help the state. For example, the state is well-known for its musical talent, and Shillong hosts a Bob Dylan festival every May, in which several talented local and non-local bands participate. Meghalaya could take a leaf out of Nagaland's book, where the latter has managed to get 'industry' status for its music industry, with all the attendant benefits. Fashion and textiles is another area where the state could develop a comparative advantage by setting up a good training institute within the state, and helping with marketing efforts, at least initially. Another industry or service is IT and IT-enabled services, which could attract several young people who currently work in other metropolises in a similar field.

Chapter 5

Tourism

A development vision for Meghalaya will necessarily include appropriate promotion of the state's tourism potential. Despite its myriad natural tourist attractions, the potential for tourism remains underdeveloped, despite its potential for expansion of employment and income in a state with limited opportunities. The multiplier or ripple effects of tourism on the economy have been well documented, and the sector could also become an important source of revenue in a state with few sources of resource generation.

Meghalaya has many advantages in this sector over its north-eastern neighbours. For a start, Shillong has had a tradition of hosting tourists for decades, and has a fairly active private hotel industry. Visitors do not need travel permits (as they do in some other states), and the security situation has improved substantially. Many Meghalaya youth have trained in the hospitality industry either within the state (at the Institute for Hospitality Management in Shillong) or in other parts of the country, and could provide a ready recruitment pool for developing the industry.

If we look at the demand angle, predictions are that while the travel and tourism industry may be slowing down in other parts of the world, India's tourism industry is set to grow at an average of 8.5 per cent over the next ten years.[13] The domestic tourism industry has been expanding over the past decade, and domestic visitors have begun making their way into the north-east. The market for travel to 'remote' destinations with unspoilt environments is a growing segment of the industry globally; Meghalaya (along with several of its north-eastern neighbours) could very profitably cash in on this trend by appropriately developing their tourism potential. This section of the report briefly looks at the tourism situation in the state, and the advantages of expanding the sector for the economy and the people. It also lists the government position on tourism, and ends with a discussion of steps that could help develop the industry in a sustained fashion.

5.1 Tourism in Meghalaya: Profile and Issues

About 5 million foreign tourists visited India in 2007, and 561 million domestic tourist visits were reported during 2009.[14] While both domestic and international tourism have been steadily rising in the country, the north-east and Meghalaya have barely benefitted from this trend (*Table 5.1*).

[13] World Travel and Tourism Council (WTTC)
http://www.wttc.org/eng/Tourism_Research/Economic_Research/Country_Reports/India/
[14] http://www.itopc.org/travel-requisite/inbound-tourism-statistics.html

Meghalaya receives the second highest number of tourists in the north-east, followed by Tripura and Sikkim. While tourist arrivals, both domestic and foreign, have grown considerably since 2000, the state still receives only one-tenth of the number of visitors to Assam, the leading recipient of tourists in the region. Given that the approach route into Meghalaya is through Assam, it is possible that the state functions as an add-on destination to Guwahati and Kaziranga, the most popular tourist spots in the region. As regards foreign visitors to India, Bangladesh is the third largest point of origin of tourists to India[15], with a 10 per cent share, and it could be the origin of the most foreign tourists to these north-eastern states.

Table 5.1: Tourist Arrivals in North-Eastern States, 1996–2007

(Number)

State		1996	2000	2007
	Domestic	2,283	9,932	3,025
	Foreign	9	2,044	292
Arunachal Pradesh*	**Total**	**2,292**	**11,976**	**3,317**
	Domestic	3,27,260	10,01,577	34,79,870
	Foreign	5,885	5,959	13,657
Assam	**Total**	**3,33,145**	**10,07,536**	**34,93,527**
	Domestic	86,749	1,05,167	1,20,572
	Foreign	241	429	263
Manipur	**Total**	**86,990**	**1,05,596**	**1,20,835**
	Domestic	1,36,183	1,69,929	3,75,911
	Foreign	1,573	2,327	5,099
Meghalaya*	**Total**	**1,37,756**	**1,72,256**	**3,81,010**
	Domestic	23,434	28,221	44,226
	Foreign	93	235	735
Mizoram	**Total**	**23,527**	**28,456**	**44,961**
	Domestic	13,139	13,272	15,030
	Foreign	54	451	1,002
Nagaland*	**Total**	**13,193**	**13,723**	**16,032**
Sikkim				**2,24844**
	Domestic	2,06,229	2,31,902	2,29,621
	Foreign	156	0	3,177
Tripura	**Total**	**2,06,385**	**2,31,902**	**2,32,798**
	Domestic	7,95,277	15,60,000	42,68,255
	Foreign	8011	11,445	24,225
Overall North-east Region	**Total NE**	**8,03,288**	**15,71,445**	**42,92,480**

Source: Arunachal Pradesh at a Glance 2006, Statistical Handbook of Assam 2007, Manipur 2006, Meghalaya 2007, Mizoram 2008, Nagaland 2006, Sikkim: A Statistical Profile 2006–07, Tripura 2007, Department of Tourism, Tourism at a Glance 2008, *Table 9*, pp. 12

*Figures for Arunachal Pradesh and Meghalaya are for 2005, while for Nagaland it is 2006

[15] Tourism Statistics at a Glance 2008, http://incredibleindia.org/Tourism_Stastics2008.pdf,

A cause for concern would be that Meghalaya's share in north-eastern tourism has fallen in the decade 1996–2007 from 17.15 per cent to 8.88 per cent, largely because of a fall in its share of domestic visitors (*Table 5.2*).

Table 5.2: Share of Tourist Arrivals among North-Eastern States
1996–2007

(Per cent)

		1996	2000	2007*
	Domestic	0.29	0.64	0.07
	Foreign	0.11	17.86	1.20
Arunachal Pradesh	**Total**	**0.29**	**0.76**	**0.08**
	Domestic	41.15	64.20	81.53
	Foreign	73.46	52.07	56.38
Assam	Total	**41.47**	**64.12**	**81.39**
	Domestic	10.91	6.74	2.82
	Foreign	3.01	3.75	1.09
Manipur	**Total**	**10.83**	**6.72**	**2.82**
	Domestic	17.12	10.89	8.81
	Foreign	19.64	20.33	21.05
Meghalaya	**Total**	**17.15**	**10.96**	**8.88**
	Domestic	2.95	1.81	1.04
	Foreign	1.161	2.05	3.03
Mizoram	**Total**	**2.93**	**1.81**	**1.05**
	Domestic	1.65	0.85	0.35
	Foreign	0.67	3.94	4.14
Nagaland	**Total**	**1.64**	**0.87**	**0.37**
	Domestic	25.93	14.87	5.38
	Foreign	1.95	0.0	13.11
Tripura	**Total**	**25.69**	**14.76**	**5.42**

Source: Computed from *Table 3.1.*

No data is available on the seasonality of tourism arrivals, but the peak tourist season is possibly during October–November, as most domestic tourists tend to come from neighbouring Bengal and Assam, which have *puja* holidays during this time.

If we look at the supply side, it is clear that the industry faces many bottlenecks and hurdles in the state. The fact that the state is landlocked, with no rail, water, or air transport infrastructure, means that tourism expansion is heavily dependent on roads — the national and state highways, and rural roads. The hilly terrain and slow pace of development has hindered the construction and maintenance of good quality all-weather roads, and the best roads in the state remain those built by the British in pre-Independence times (the Guwahati-Shillong road was built in 1877, and the Shillong-Sawki-Tamabil road to Sylhet in Bangladesh was also pre-Independence).[16] While the road from Guwahati to Shillong is in fairly decent shape, it is still the state's only major link with the rest of the country. The poor

[16] Murayama, Inoue and Hazarika (eds.) *Sub-Regional Relations in Eastern South Asia,* pp. 128

quality of most roads linking Shillong to tourist sites or to other districts could be a deterrent to visitors.

As it was the capital of the undivided state of Assam, Shillong has some very respectable privately operated hotels. In contrast, other tourist centres in the state appear to have few options for staying. Development of many of these amenities, accommodation, facilities, and so on will require capital and land. A major issue that will need to be tackled is the lack of land for tourism development; with most of the land controlled by local communities, it will be important for the government to work in conjunction with them to develop the infrastructure for expansion.

The state's draft Tourism Policy announced in 2007 is a clear indication that the government recognises the contribution this sector can make to the state's economy, both in terms of income creation and employment generation. However, little has been done on the ground since then to see these initiatives through. Tourism has not been promoted in any organised manner, and there continues to be a lack of appreciation of the scope of the industry and its potential as a catalyst for the development of other areas of economic activity.

5.2 THE TOURISM INDUSTRY: MULTIPLIER EFFECTS AND LEAKAGES

If appropriately developed, tourism can have several beneficial effects on the economy. It is a largely labour-intensive industry or service, and generates employment not only across sectors, but also across various skill levels, from the unskilled to the semi-trained, trained, highly skilled, and professionals. The multiplier effects of tourism on other sectors in terms of employment and income generation have been well documented. Apart from the direct employment and income effects, an expansion in tourism activity has indirect expansionary effects on several other sectors and industries, such as construction, agriculture, food processing, handicrafts, and financial services, to name just a few.

As long as the demand for these goods and services are met by the local economy, and not 'imported' from outside the state, the boost to other sectors from tourism demand can be enormous. Thus the effectiveness of the multiplier depends on the extent to which services and industry in Meghalaya will be able to meet the demand from tourism. The tourism multiplier for the country has been estimated at approximately 3.5; in the north-east it is likely to be lower, because of the high 'import' of goods and services from outside the region, which increases leakages from the economy.

5.3 THE POLICY POSITION

Various documents indicate the state government's intention to develop the tourism potential of the state. For a start, it is committed to exploring the state's tourism potential in water sports, wildlife, trekking, adventure tourism, and eco-tourism (in its Eleventh Plan).

It recognises the need to develop tourism infrastructure, transport links, accommodation facilities, and wayside amenities, as these are major impediments to any expansion in the sector. One of the strategies proposed is to develop community assets which will then be given to local communities and authorities for management and maintenance.[17]

In the draft Tourism Policy, the intent is to promote the sector through public-private partnerships, and several incentives have been extended to encourage private entities to develop infrastructure and tourism-related assets. However, much like the industrial policy, these incentives have not been very successful, possibly for the same reasons that have so far deterred private investment in other areas and sectors.

The conclusions of the Northeast Summit on Tourism[18] are based on a regional approach, but recognise the shortage across the region of human resources, quality accommodation, and air routes linking the region; it promotes the need for a regionally developed tourism circuit for the north-east.

To promote tourism planning on a regional basis, the Ministry for the Development of the NER has commissioned studies through the Northeastern Development Finance Corporation (NEDFC)[19] and the analysis and recommendations of these would be very useful in throwing light on the way ahead for Meghalaya as well.

5.4 THE WAY FORWARD: WHAT NEEDS TO BE DONE

The employment and income multiplier effects of tourism would be a boon in a state where the lack of diversity of economic activity has suppressed employment opportunities, especially for young people. Travel and tourism is an industry that is seen to be exciting, interesting, and appealing to the young — its promotion in Meghalaya could help absorb many of the unemployed youth in the state or attract back those who have gone to other states to train in this industry. It could also provide entrepreneurship opportunities for people who want to set up eco-tourism or adventure tourism ventures on their own.

In a state like Meghalaya with its large regional and district-wise disparities, appropriate development of sustainable or eco-tourism initiatives could help decrease regional disparities in income. Further, with few alternatives to land-based occupations in the rural areas, such village-based enterprises could help diversify the base of rural livelihoods, providing alternative occupations, especially to the young, and help stem the urban migration. In fact, “being labour-intensive, having relatively high multiplier effects, and requiring relatively low levels of capital and land investment, tourism can yield

[17] State Eleventh Plan

[18] Held at Gangtok on **27–28 April 2008, organised by the North Eastern Council; see annexure.**

[19] The NDEFI financed Techno-Economic Development Fund (TEDF) has commissioned the following studies on tourism in the north-eastern region: development of tourism with special reference to the north-east to Spectrum Planning (India) Ltd., Delhi; and tea tourism, adventure tourism, wildlife tourism, and pilgrimage tourism to Dalal Mott MacDonald, Kolkata.

significant benefits in remote and rural areas where traditional livelihoods are under threat."[20]

The unexploited potential and the ripple effects of tourism make its development a vital part of any vision for Meghalaya for enhancing employment, and in the process boosting revenues. It is especially important given the limited scope for any large-scale expansion in industry and agriculture in Meghalaya, the 'bottoming out' of the government as a large-scale employer, and the limited infrastructure available for any significant expansion of other services in the near future. Further, by promoting 'non-mass' tourism — eco-tourism, adventure sports, and village-related activities — the tourist sector could serve the much needed goal of retaining people in the land, and placing some restraint on the rapid urbanisation process that is overwhelming urban environments in the state.

Appropriate Development of Tourism Potential

Meghalaya is in a fairly early stage of tourism development. Expansion of the industry needs to be carefully monitored to proceed at a pace appropriate to the characteristics of the region, with a limit on the tourism 'footprint' — as Bhutan has managed to do — to protect the social-cultural and physical environment. It is imperative that the state develops tourism to contribute to the rest of the economy; it is, however, equally imperative that development takes place judiciously to ensure it is sustainable economically, socially, and environmentally.

Important lessons on the strategy and the development path for tourism can be learnt by Meghalaya and other north-east states from the haphazard growth and expansion of mountain and hill resorts in Himachal Pradesh and Uttarakhand over the past decades. Uncoordinated development has begun to destroy the attraction of places such as Shimla, Manali, and Nainital as tourism destinations, quite apart from introducing large disparities among local communities. Already, with their haphazard construction, lack of sewage and garbage disposal, and inadequate sanitation, some of the urban centres of the north-east themselves, such as Shillong and Gangtok, are fast becoming urban environmental disasters.

All efforts to develop tourism infrastructure, such as resorts, hiking trails, hillside restaurants, and so on, have to be done very carefully, keeping in mind the fragility of the mountain environment in which it is being done. Apart from the physical sustainability issues, development has to contend with social and economic sustainability so it does not exacerbate economic disparities and continues to promote social and cultural harmony.

[20] International Centre for Integrated Mountain Development, http://www.icimod.org/

Box 5.1: Mountain Tourism

Tourism is the fastest growing industry in the world, increasing from 25 million international arrivals in 1950 to 842 million in 2006, a more than 30-fold increase, with international arrivals expected to double to 1.5 billion by 2020. Mountains are important assets for the tourism industry. They take up an estimated share of 15–20 per cent of the global tourism market, generating between US$ 100 and 140 billion per year.

With the highest and most famous mountain peaks of the world, its distinctive and rare flora and fauna, and a great variety of unique hill and mountain cultures, the tourism potential of the Himalayan region is beyond dispute. At the same time, the region is struggling with high poverty ratios, exacerbated by climate change, environmental degradation, and an increasing rural-urban migration, making traditional livelihood options increasingly unsustainable.

Tourism provides mountain people with alternative livelihood options, building on the strengths of the region. In spite of this huge potential, tourism has so far contributed little to poverty reduction in mountain areas. Major constraints include policy failures, a lack of human resource development, a lack of supply side facilities and management, and a failure to link tourism with the local production system, resulting in high 'leakages' of tourism-generated income from mountain areas.

Source: Website of International Centre for Integrated Mountain Development (ICIMOD), http://www.icimod.org/

Reliable Database

A fundamental task is the creation of a good database, routinely updated, that will allow the appropriate plans and policy measures to be set up. Planning and appropriate policy measures are possible when the data allows a detailed analysis of trends, seasonality, and so on. Data on tourism arrivals, especially domestic visitors in India, remains at best a 'guestimate' based on bookings in registered hotels and hostels. In addition, in Meghalaya, there exists little data or analysis on the seasonality of tourist arrivals, constraints faced by visitors, and so on, which could point the way ahead.

Tourism Planning

An accurate, up-to-date, and comprehensive database would also lay the foundation for the development of a tourism master plan for the state, outlining the different tourism strands that have potential and can be developed fruitfully. This will ensure that there is some coordination among the different agencies involved in the process — infrastructure, tourism circuits, wayside amenities and accommodation, and transportation facilities such as tourist taxis, buses, and so on. An important element of the master plan would be to

spread the development of tourism infrastructure and facilities across the districts to the greatest extent possible, so that all areas benefit from the opening up of opportunities.

Tourism Infrastructure

- Ideally, tourism infrastructure should be provided by private players, but the government has to work in conjunction with them by first setting up enabling conditions. Private investment will create the much needed amenities when government shows its own strong commitment and support through the creation of the basic physical infrastructure, especially good roads, acquisition of land, and supply of services such as water, electricity, and communications. IL&FS has signed a memorandum with the North Eastern Council to build budget hotels across the north-east, and Shillong is one of the 12 proposed sites.[21]

Regulation for Sustainable Development

While non-governmental organisations often play the role of environmental watchdogs, the government first needs to ensure that regulations and rules are in place to promote environmentally sustainable development of tourism. These regulations are needed to prevent ecologically inappropriate development of tourism assets, and need to be applied to construction of accommodation and amenities, road building and development of trails, and even the supply of basic amenities such as water and power. Once developed, regulation is needed to prevent the environmental degradation of these assets, destruction of natural habitats, theft of rare species, and so on. This should be a strong element in the tourism master plan, and will call for education of government officials, tourist operators, and tourists themselves. Heavy fines which will deter littering and other environmentally unfriendly behaviour should be imposed. There are many frequented travel routes and mountain paths that remain largely unspoilt by the traversing of tourists, but only a few 'badly behaved' tourists can destroy other similar trails. Thus, rather than limit the number of tourists at a place, it may be more effective to deter environmentally destructive behaviour.

Promotion of the State as an Overall Tourism Destination

This is being done to a large extent by the North Eastern Council which is promoting the entire north-east travel experience. The aim of the marketing strategy would be widening the scope of the "sending areas" for tourists (to capture tourists from the southern and western parts of the country, and Chennai, Mumbai, and Delhi), lengthen the tourism season, and appeal to various travel segments.

[21] *See* annexure on North East Summit on Tourism

Chapter 6

Infrastructure

In the policy analyses for increasing the pace of growth in the north-east, it has long been recognised that infrastructure is a fundamental pre-requisite for growth. In fact, the vision for the state is necessarily predicated on the creation of an infrastructural base, which is so far absent in the economy.

Infrastructure development in the state of Meghalaya includes a variety of projects that facilitate connectivity and communications, such as transport networks in the form of good state roads, inter-district roads, and village roads; airports, and inland waterways; and speedy and reliable communication networks and information systems. It also covers power generation and transmission capacity, basic necessities (such as adequate water supply both for drinking as well as for irrigation, environmental sanitation in the form of drainage, sewerage, and waste disposal, and housing), social infrastructure (largely linked to improving the supply of education and health services), and market related infrastructure (storage, cold chains and warehouses, and *haats*) to help the development of markets for agricultural goods. One may even include trade related facilities such as customs and check posts to promote the expansion of cross-border trade.

The importance of infrastructure in economic development has been well documented. Good transport networks especially are a key facilitating factor for the expansion of markets, which in turn provide scope for the division of labour and specialisation. Combined with the availability of good quality power and telecommunication connectivity, the effect on people's livelihoods is manifold. Apart from delivering essential services that are necessary to improve people's lives and their livelihoods, these elements of infrastructure underpin the transition to a more modern agricultural sector, the emergence of trade and industry, and the creation of employment opportunities in areas such as horticulture, tourism, and information technology.

6.1 State Of Infrastructure

Nowhere is the importance of good infrastructure more apparent than in a hill state such as Meghalaya. The geographical terrain hampers communication and connectivity, and producers and residents rely on good transport and telecommunication networks to ease these constraints. With the current condition of existing infrastructure in the state, it is unlikely that any area of the economy can be effectively expanded or improved if the basic infrastructure and supporting amenities are not first vastly enhanced and improved.

We attempt to examine the supply of infrastructure over time by looking at the share of various sub-sectors (electricity, gas, water supply, construction, transport, storage, and

communication, etc.) in the gross state domestic product (GSDP) or the net state domestic products (NSDP). Infrastructure appears to play an important role in Meghalaya as its share in NSDP ranged from 11 per cent to 20 per cent (Table 6.1) between 1993–94 and 2006–07, and this share has been rising steadily over time (except for a sharp decline from 1993 to 1995).

Table 6.1: Share of Infrastructure in GDP: Meghalaya and India, at constant base 1993–94

(Per cent)

Year	Meghalaya	India
1993	19.28	12.86
1994	12.64	12.22
1995	10.41	12.26
1996	11.14	12.57
1997	11.41	12.81
1998	13.35	13.38
1999	13.23	13.84
2000	13.09	14.33
2001	14.60	15.26
2002	14.93	15.62
2003	16.77	16.93
2004	17.15	17.47
2005	16.96	18.31
2006	17.03	18.82

Source: Central Statistical Organisation (CSO) website, as on 26 November 1999 for old series and 23 February 2006 for new series.

Note: 1. Owing to differences in methodology of compilation, data for different states/union territories are not strictly comparable.

2. Figures are calculated.

Interestingly, the share of infrastructure in Meghalaya mirrors the share of infrastructure in the country's NSDP, which ranges from 12 to 19 per cent. However, a simplistic comparison of proportional spending is misleading, as connectivity in a hill region is altogether different from connectivity in the plains. More importantly, while India as a country had inherited vast infrastructure from the colonial power, the north-east region remained relatively underdeveloped in this area for decades after Independence. Thus, railways, which were introduced into the plains of Assam by the early twentieth century, did not extend to the hill areas such as Meghalaya. The state has no air connectivity, and its topography presents little scope to promote inland waterways. The growth rate of infrastructure in Meghalaya (10.11 per cent) has been higher than that of the country (9.23 per cent) for the period 1993–94 to 2006-07 (at 1993–94 constant base); however, it clearly needs to grow at an even faster rate.

6.1.1 The Infrastructure Index for the North-east

A good starting point for analysis is the recently created Infrastructure Index for the north-eastern states (*Table 6.2*). It gives a current picture of Meghalaya's standing vis-à-vis the other north-eastern states on many of the basic services such as transport, health, education, and communications.[22] *Table 6.2* gives the position of the districts in Meghalaya in a ranking of 80 districts[23] in the eight north-eastern states according to their infrastructure status.

Table 6.2: Infrastructure Index for Meghalaya by District

District	NE Rank	State Rank	Score
East Khasi Hills	5	1	248.68
Ri-Bhoi	20	2	147.87
Jaintia Hills	28	3	129.61
West Khasi Hills	36	4	122.17
West Garo Hills	37	5	122.16
South Garo Hills	42	6	117.10
East Garo Hills	43	7	116.80

Source: District Infrastructure Index for the North Eastern Region, Table 6, Ministry of DONER, September 2009, http://mdoner.gov.in/index2.asp?sid=265

The overall ranking of all the districts shows that the smaller states like Sikkim and Tripura have performed better than the larger states, and that typically within a state, the district where the state capital is located generally has better infrastructure. This is borne out by the top ranking received by East Khasi Hills in Meghalaya. While almost all the districts in Meghalaya rank in the top half of the scale (mostly between 1 and 40), showing that they are not the worst performing areas in the region, the spread in scores across all the districts in Meghalaya indicates stark regional disparities in development which is a serious cause for concern.

On the actual supply of services (*see Annexure Tables 6.A2* to *6.A6*), the state performs poorly on village electrification (*Table 6.A2*), where all its districts rank in the second half of the spectrum (from 51 to 70). Meghalaya districts' ranking on different basic amenities shows vast disparities across the state in provisioning, especially in electrical and tap water connections (*Table 6.A2*), health infrastructure (*Table 6.A5),* schools per 100 sq. km (*Table 6.A3*), telephone exchanges per 100 sq.. km (*Table 6.A4),* and bank branches by area and population (Table 6.A6).

[22] The indicators and methodology used to arrive at the ranking and scores for the districts is based on the methodology used by CMIE to prepare its infrastructure index for the country, and are detailed in the MDONER publication. This study used seven broad indicators: transport facilities (road density and road quality), electricity, water supply, education, health facilities, communication infrastructure, and banking facilities.

[23] The total number of districts in the north-east is 86, but several of these are new and for data reasons, continue to be clubbed with the old districts from which they have been carved out.

6.2 TRANSPORT

Transport infrastructure is of great importance for the region to strengthen its integration with the rest of the country and its neighbours, as well as to transport goods more effectively within and out of the region. It is a vital input into the proposed shift from subsistence agriculture to cash crop based farming, as well as for the planned development of industry and the service sector. Most of the area of the region is hilly and undulating with low population densities, accompanied by low per area production of goods. In such terrain rail, air, and inland waterways are not cost effective ways to provide connectivity, so roads are the dominant infrastructure for connectivity and transportation.

6.2.1 Road Network

While road construction has been increasing in the state, road density by geographic area is still less than half the country's average (*Table 6.3*).

Table 6.3: Road Density by Area and Population: Meghalaya and India

(Length in km)

	1990–91		2004–05	
	Per 100 sq. km	**Per lakh people**	**Per 100 sq. km**	**Per lakh people**
Meghalaya	25.4	320.4	35.12	340.0
India	76.8	256.1	76.84*	246.0

Source: Meghalaya State Development Report

* For 1999

It would also be useful to look at the classification of roads as this has implications for funding of road development schemes. Most previous studies have by and large looked at development of either state roads or national highways.[24]

As far back as 1997, the Shukla Commission Report (1997)[25] had recommended that road construction be given high priority in the state's development plan. The Commission had suggested that the Dudhnoi-Damra-Nangalbibra-Baghmara-Gasuapara-Dalu road in Meghalaya (196 km) be constructed to connect NH37 and NH51. This road would pass through limestone and coal deposits and is the route for coal exports to Bangladesh. The other state highways, major district roads, and other district roads proposed were to be integrated through a regional master plan for roads. This initiative had resulted in the emergence of NH62 connecting Damra to Dalu.

[24] See, for example, the Shukla Commission Report (1997) for an excellent compilation of planned development of road network as per requests from state governments.

[25] Transforming the Northeast: High-level Commission Report, Planning Commission, Government of India, 1997

The state's lifeline is National Highway 40 — an all-weather road connecting Shillong with Guwahati, through which it is connected to major cities and states in the rest of the country. Other national highways in Meghalaya are NH44 from Nongstoin-Shillong to the Assam border (277 km), NH51 from the Assam border-Bajengdoda-Tura-Dalu (127 km), and the NH62 from Damra-Dambu-Baghmara-Dalu (190 km).

However, ***village and district roads in rural areas should constitute the dominant category of transport networks as these roads are particularly important for facilitating intra-state movement of people and commodities***.[26] The low level of inter-state trading of foodgrains and other commodities in the region indicates the need to focus on developing these roads within the broad category of state roads. A major issue in road infrastructure, especially in the hill states, is one of maintenance: with low internal resources and small state plan sizes (especially in the hill areas), expansion of the road network will mean that maintenance expenditure will take up a larger share of states' resources. As a result, internal roads are already falling into disrepair in most places.

Another major issue that has been flagged in various reports is the poor rural road connectivity in the state. In Meghalaya, almost half (47.02 per cent) of the villages are still not connected by all-weather roads, with wide variations across the districts, from a high of 61 per cent in the South Garo Hills to 26 per cent in the Jaintia Hills.[27] The dismal state of village and district connectivity indicates the neglect of this aspect of infrastructure by the state government, and the urgent need to prioritise initiatives in the state development plans for the construction of village and district level roads.

The disproportionate road availability across districts has directly impacted the availability of public and private transport facilities across the state (*see Table 6.A9* in Annexure). The public sector is hardly present in any district except for East Khasi Hills in all categories except for jeeps.

In the absence of rail and air links, roads are the only conduit for transporting people and goods in the state of Meghalaya. However, the poor condition of the existing roads, and lack of road connectivity have greatly restricted mobility, hampered the delivery of services, and prevented the emergence and growth of markets. As we have discussed in the chapter on rural development, the lack of markets has forced the various districts into self-sufficiency, preventing them from taking advantage of specialisation to increase productivity despite the wide variations in relative productivities across products.

[26] This point was also stressed in a meeting between the study team and officials in Meghalaya, who pointed out that central work on roads was very slow. The officials also pointed to the need for road connectivity between the Garo, Jaintia, and Khasi hills under the National Highways programme; a Shillong bypass has also become crucial, as traffic has begun choking the capital of Meghalaya.

[27] State Development Report, *Table 6.10*: Number of Unconnected Habitations in Meghalaya, 2008

Box 6.1: Some Recent Initiatives

The Chief Minister recently asked the Union Minister for Road Transport and Highways to take up the following issues on priority basis:

NH40 Shillong-Guwahati Road *four-laning will require land acquisition by the state. This needs to be implemented expeditiously in view of the traffic intensity on the road, and as it is the main road link connecting Meghalaya to Mizoram, Tripura, and the Barak valley of Assam and Manipur.*

Shillong-Nongstoin-Rongjeng-Tura Road *(length 256 km) under the SARDP-NE has been projected in four different stretches. The road plays an important role as it connects the Garo Hills region with Shillong. The road was given to the state Public Works Department (PWD) for implementation in a move to involve local contractors and builders so as to help develop their capacity.*

NH44 from Shillong to Tripura *via Badarpur (Assam) is a continuity of NH40 connecting Guwahati. This vital road connects the Barak Valley (Assam), Manipur, Tripura, and Mizoram. The four-laning of this road needs to be taken up on priority basis.*

NH37 which passes via Agiya *in Assam needs to be extended up to Tura, West Garo Hills via Tikrikilla and Phulbari as an extension of NH37. The Garo Hills region is frequently subjected to economic blockades due to bandhs and road blocks by various organisations demanding autonomy in Assam. This road can act as an alternative route, and it is critical that the extension is approved expeditiously.*

Under the ADB funded North Eastern State Roads Investment Program, Tranche I (Garobadha-Dalu Road: 93.4 km), Tranche II (Mawgap-Umpung Road: 76.2 km), and Tranche III (Mawsynrut-Hahim Road: 36.8 km) have been in the pipeline since 2004. The state government has taken the necessary steps for implementation.

The stretch between Umpung to Baghmara via Maheskhola *(170 km) will connect the NH62. This road has immense socio-political and economic importance as the area is rich in minerals and agro-horticultural products, apart from being connected with the land customs station.*

6.2.2 Rail Transport

Meghalaya has no railway links, but a rail link connecting Meghalaya with Guwahati would provide an important alternative to roads for the large scale movement of goods and people into and outside the state.

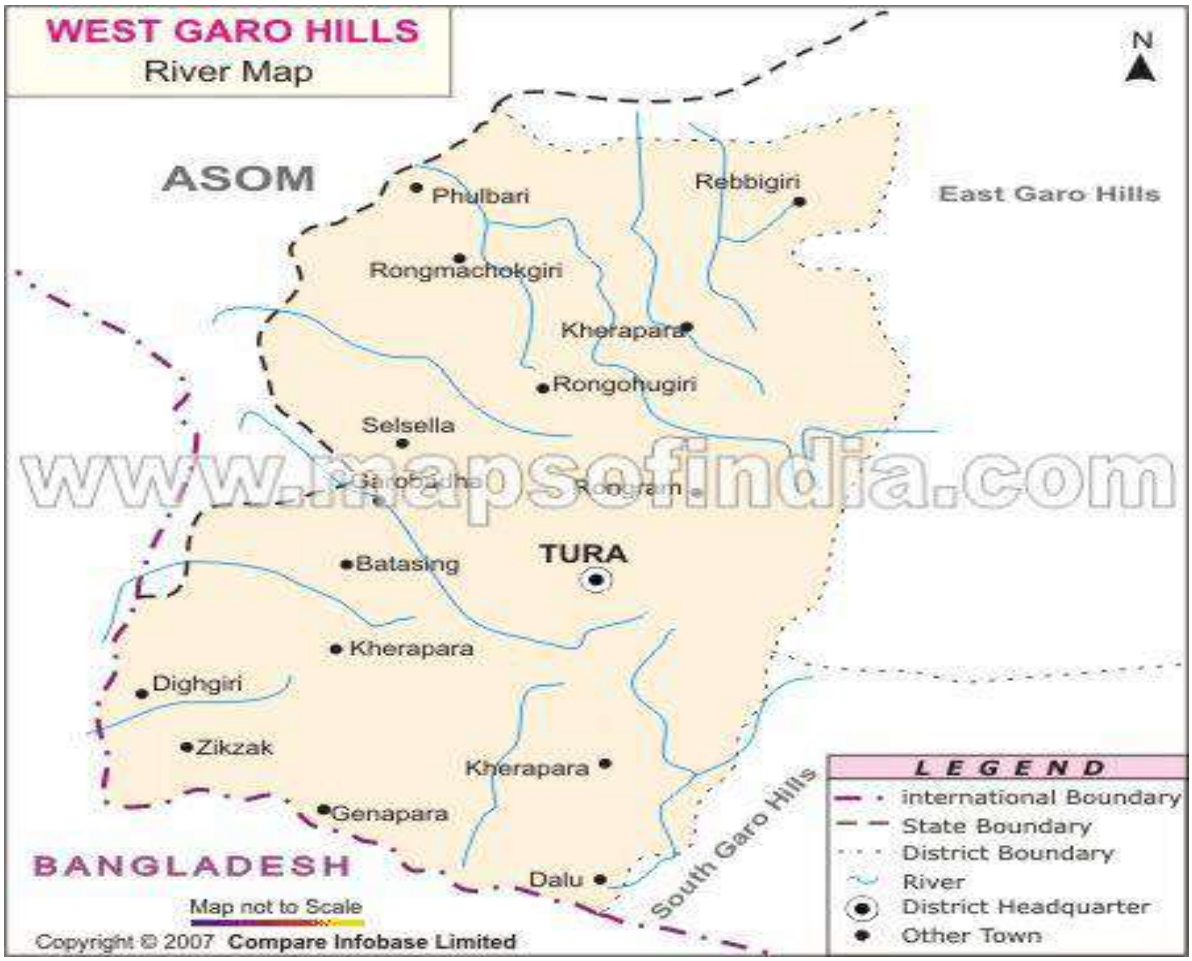
The Ministry of Railways had sanctioned rupees one crore in 2007–08 for construction of the Azra-Byrnihat railway line, which would be ultimately linked to Shillong as part of the centre's ambitious drive to link all state capitals in the north-east with a railhead. The 30 km rail line was declared a national project and included in the budget. The

anticipated cost of the project was estimated at Rs 200 crore, but it would increase manifold if extended up to Shillong.

The Ministry of Railways had also sanctioned a Dudhnoi-Depa railway line as far back as 1992–93. The 15.5 km Dudhnoi-Depa line was supposed to be completed at a cost of Rs 22.33 crore, but non-availability of land has forced the Ministry to shift the railway line from Dudhnoi to Mendhipathar, to pass through the West Garo Hills, East Khasi Hills, and Jaintia Hills districts. The Dudhnoi-Mendipathar link was supposed to be completed by March 2013 and the Sutnga-Silchar and Tetlia-Byrnihat sections are supposed to be completed by 2014–2015. The Ministry had taken up a final location survey for this alignment. The ambitious project was expected to start from Jogighopa in Asom (*see Annexure* 6.2).

6.2.3 Waterways

There is little scope for waterways in this landlocked hilly region. However, there is some water connectivity with the river Brahmaputra. The connection with the district headquarter at Dhubri (Assam) is through a road-cum-river route via Phulbari (see map). The Inland Water Transport Department sometimes operates a ferry service between Dhubri and Phulbari, a distance of 20 km. The introduction of riverine transport through Simsang River in Garo Hills has also been suggested to cut down transportation costs.



6.2.4 Airways

Given the scarcity of flat land, Meghalaya has limited scope for air transport. It currently has two airports, one at Umroi, 40 km from Shillong, and a partially operational one at Baljek. However, the Umroi airport has neither cargo handling facilities nor excise and customs clearance facilities, and is merely for the transport of people. The state's closest air link to the rest of the country is through Guwahati airport, and there is also a helicopter service between Guwahati, Tura, and Shillong. The central government is helping with land acquisition and the building of facilities to expand the Umroi airport. The setting up of a cold chain comprising storage and warehousing facilities at the airport would help in transportation of horticultural and floricultural produce from the state.

6.3 POWER SUPPLY

The reliable supply of quality power is an important component of economic progress and wellbeing. Despite the state's vast hydro-power potential and the low level of industrial activity, it is still deficient in power supply. While hydro-generation began in the early twentieth century, it has stagnated over the past 20 years. Today, in several districts, only half the villages are connected with power supply (*Table 6.A2* in *Annexure*).

Table 6.4: Power: Demand and Supply in NER, March 2005

(MU net)

State/Region	Requirement (MU)	Availability (MU)	Surplus/Deficit (+/-)	
			(MU)	(%)
Meghalaya	117	98	-19	-16.2
NER	585	538	-47	-41.0
India	**53,192**	**49,259**	**-3,933**	**-7.4**

Source: indiastat.com

Energy consumption by end consumers has been increasing over the years in Meghalaya. While the state was self-sufficient in power till around 2003–04, (*Table 6.4*) it has experienced a deficit amounting to 16.2 per cent since then, which is far higher than the national average of 7.4 per cent. During the Eleventh Plan, the generation capacity in the state was 185 MW as against the peak demand of almost 800 MW.

The state has an impressively high proportion of power from hydel sources (90 per cent), which is far higher than the national level of 26.9 per cent (*Table 6.A8* in the *Annexure*). Unlike other states in the north-east region, all the power capacity has been installed by the state and central government (65 per cent and 35 per cent, respectively) with no inputs from the private sector (*Annexure Table 6.A9*).

Despite its vast coal reserves and hydro-potential, the state continues to be deficient in power supply, at a very low level of economic activity. The development vision for the state is based on the expansion of opportunities in various service and industry sectors, IT, tourism, and horticulture, as well as the enhancement of peoples' capabilities through their

increased access to good health services and educational and skill enhancing opportunities. Each of these initiatives will require a vast expansion in the availability of power, which will depend on the government pushing through an ambitious agenda to increase generation and improve transmission capacity.

Keeping these in view, a number of initiatives have been put in motion during the Twelfth Plan period, not only to achieve self-sufficiency but also to generate surplus power in the state. The Ministry of Power has approved agreements to be signed between the Meghalaya government and the state-run North Eastern Electric Power Corporation Limited (NEEPCO) to execute two mega power projects in the state, namely the 500 MW thermal power project in Garo Hills, and the 85 MW Mawphu Stage II hydel project.

Other important initiatives for enhancing the generation capacity of the state are as follows:

- The 126 MW Kynshi and Umngot hydroelectric project is supposed to be commissioned during the Twelfth Plan.
- From Palatana (Tripura Gas Project), an additional 80 MW will be available to Meghalaya.
- Additional power will be available from the Bongaigoan Thermal Power Project
- The state government has taken up a number of micro-hydropower and mini hydropower projects in PPP mode, and some of them are likely to be commissioned during the Twelfth plan period, which would also augment power supply in the state.
- The projects taken up in the north-east by the central power undertakings, such as NTPC and NHPC, are likely to augment supply of power in the region as well as the state.
- In addition to all these, the Rural Energy Mission has initiated decentralised energy solutions.
- World Bank assisted investment on transmission infrastructure is likely to improve the transmission system.

All these initiatives are likely to transform the state into a power surplus state in 2014. This would have significant implications for the rapid industrialisation in the state.

6.4 TELECOMMUNICATIONS

Electronic connectivity through telecommunications can play a very important role in a hill state like Meghalaya, where physical connectivity in the form of roads is limited by the topographic layout of the state. Electronic connectivity through telecommunications, with satellite, high-bandwidth fibre-optic cables, and wireless connecting all areas of the state with each other and other parts of the country, is essential for integration and functioning in

a modern economy. Quite apart from providing the much needed linkages between the more remote rural areas (which often have no roads or other linkages) with each other and with towns, a good telecommunications network can help expand the supply of facilities like speciality health services, training, and education to areas without these facilities. A recent study by the Indian Council for Research on International Economic Relations[28] shows that "access to telecommunications is an important catalyst to realising productivity and efficiency improvements and thereby making it possible for the benefits of economic growth to be shared… Citizens with access to telecommunications can tap into the benefits of broad economic and social growth much more easily than those who are unconnected."

Further, by helping to propel the state onto the IT growth path (like several other states in the country), good telecommunications networks can expand employment opportunities and economic growth by laying the foundation for an IT and ITES industry in a state with limited avenues for employment. Many earlier studies have pointed to the need to promote the IT sectors. As the IT industry moves from the metros of the country to outlying areas, Meghalaya might be considered the next most likely destination, given its high rates of literacy, large pool of educated people, and dust-free environment.

In 2001, only 6 per cent of the households in the state had a telephone, against a country average of 9.1 per cent (Census). Meghalaya's teledensity (number of telephone lines per 100 people) was 3.73 in 2004. In 2010, India's teledensity was 56.83 per cent; unfortunately separate teledensity data is not available for Meghalaya, but for the entire north-east it is 46.53 per cent.[29] Thus, telecommunications infrastructure in the state lags behind the rest of the country. Here again, there is a fair amount of district-wise disparity in the availability of telephone services: the East Khasi Hills accounts for the lion's share of public call offices (67 per cent) and telephone connections (64 per cent), while the South Garo Hills has the lowest share (*Table 6.5*).

Table 6.5: District-wise Telecom Services in Meghalaya, 2006

(Per cent)

Districts	Telephone Exchanges	Public Call Offices	Telephone Connections
Jaintia Hills	22.09	12.27	9.58
East Khasi Hills	27.91	67.55	64.20
West Khasi Hills	10.47	0.86	2.87
Ri-Bhoi	13.95	6.67	6.06
East Garo Hills	8.14	1.75	2.48
West Garo Hills	15.12	10.05	14.11
South Garo Hills	2.33	0.86	0.71

Source: Statistical Abstract Meghalaya 2006

[28] http://www.icrier.org/pdf/public_policy19jan09.pdf

[29] http://www.trai.gov.in/WriteReadData/trai/upload/Reports/52/5octoblerindicatorreporton13oct.pdf

Despite the rapid growth in Internet users in Meghalaya, the state continues to lag far behind the country in its Internet density. The constraints to increasing telecommunications connectivity in the state have been well documented in the state's Human Development Report (HDR), and broadly rest on issues related to building infrastructure given the state's terrain, high rainfall and landslides, and the overall environment of insecurity.

6.5 AGRO-MARKETING INFRASTRUCTURE: WAREHOUSING AND COLD STORAGE FACILITIES

The absence of good quality storage facilities for agricultural produce leads to loss of output through spoilage, and attacks by pests and other organisms. The damage from such infestations leads to a reduction in market value and loss for producers. The availability of good infrastructure, storage facilities, and cold chain systems would greatly improve farming gains and incomes.

Warehousing and transportation form the backbone of the supply chain of all activity. Adequate storage capacity and the strategic location of warehouses enable the efficient functioning of supply and distribution networks and provide strategic competitive advantages to producers. Proper material handling, storage conditions, and timely movement of goods are necessary as improper handling and prolonged storage can deteriorate the quality of the stored product, especially perishable goods, biological drugs, and food stuffs.

6.6 LAND CUSTOMS CHECK POSTS

Well integrated customs check posts are crucial for the development of border trade, especially in Meghalaya, which has an almost 450 km long border along its southern and western boundary with Bangladesh. Given its proximity, Bangladesh continues to be a major destination for produce from the state, and the vision for the state's development is an expansion in ties to promote greater trade and cooperation between Meghalaya and its southern neighbour.

At present the state has eight functioning land customs stations (LCSs) — at Borsora (West Khasi Hills), Dawki (Jaintia Hills), Gasuapara and Baghmara (South Garo Hills), Shella Bazar and Bholaganj (East Khasi Hills), and Dalu and Mahendraganj (West Garo Hills) — exporting goods to Bangladesh. Two non-functional LCSs exist at Balat and Ryngku in the East Khasi Hills. There is a proposal to open three more at Kuliang (Jaintia Hills), Maheshkhola (South Garo Hills), and Lew Thymmai (East Khasi Hills).

However, these LCSs (and their counterparts across the border) largely suffer from inadequate and outdated infrastructure, including facilities related to weighing of produce, testing and certification of agricultural and horticultural produce, other facilities such as

banking, telecommunications, and electricity, as well as good road linkages with the main markets of the state.

In order to redress the situation, the central government has decided in the Eleventh Plan to set up 13 integrated check posts (ICPs) at identified entry points on the international land border of the country, one of which will be in Meghalaya at Dawki. A Land Port Authority of India (LPAI) will be established and charged with the responsibility of construction, management and maintenance of the ICPs. The LPAI has been envisaged as a statutory body which will function as a body corporate under the administrative control of the Department of Border Management, Ministry of Home Affairs. However, the LPAI has not yet been ratified by the Parliament. For the ICP at Dawki, land inspection of the site was made by the Director (Border Management) on 22 January 22 2010.

6.7 BASIC SERVICES INFRASTRUCTURE

A good picture of the overall supply of basic amenities in the districts of Meghalaya vis-à-vis other parts of the north-east region can be derived from the Infrastructure Index for the north-east, discussed in section 6.1.1 above. When it comes to the actual supply of individual services, the state performs especially poorly on village electrification, where all the districts rank in the second half of the spectrum (from 51 to 70) (*Table 6.A2* in the *Annexure*). The ranking of Meghalaya's districts on different basic amenities mirrors this gap, especially in electrical and tap water connections (*Annexure table 6.A2*), health infrastructure (*Table 6.A5*), schools per 100 sq. km (*Table 6.A3*), telephone exchanges per 100 sq. km (*Table 6.A4*), and bank branches by area and population (*Table 6.A6*): there is a marked difference between provisions in the East Khasi Hills and the other districts.

Access to basic services in the rural areas — which, for the purposes of this chapter, include social infrastructure such as education, health, environmental sanitation, housing, rural roads, telephony, and so on — had been low (*Table 6.6*) for two main reasons.

One is a problem which Meghalaya shares with other hilly states: the scattered nature of habitations in the remote and rural areas, which '*calls for a new model of development and delivery of services. Of the total of 5,782 villages in Meghalaya, 2,762 villages, comprising 48 per cent of the total, have a population of less than 200. These small sized villages are scattered throughout the State. As such, the cost of providing physical and social infrastructure like roads, electricity, health care, primary education, potable drinking water, etc. is very high as compared to other states in the country.*"[30]

Added to this is the lacuna in local level planning, and in the monitoring and delivery of services to rural inhabitants — largely the result of the absence of local level institutions mandated to carry out this work. The Sixth Schedule of the Constitution is in operation in the entire state, but the functions of promoting grassroots development through local level

[30] From *Meghalaya Human Development Report*

planning, and ensuring that people have the basic amenities they are entitled to, even through central schemes such as the *Sarva Shiksha Abhiyan*, National Rural Health Mission, and so on, seem to have slipped through the cracks.

Table 6.6: Profile of the Villages: Rural Amenities in Villages

(Per cent)

	East Khasi Hills	West Garo Hills	Ri-Bhoi	South Garo Hills	Jaintia Hills	West Khasi Hills	East Garo Hills
HDI Rank	1	2	3	4	5	6	7
Inhabited villages (number)	920	1469	543	595	467	924	864
Safe drinking water	88.15	89.45	83.79	61.01	88.87	77.81	84.14
Electricity	74.13	36.49	66.11	19.66	62.31	35.28	33.22
Education							
• Primary schools	82.39	76.11	84.16	69.92	82.01	94.91	82.87
• Middle schools	20.22	19.47	18.23	11.93	26.55	20.02	15.51
•Secondary/Higher secondary schools	7.07	6.60	4.24	3.70	10.06	6.39	4.63
• Colleges	0.11	0.14	0.18	0.00	0.64	0.11	0.00
Health							
• Medical facilities	5.87	10.07	6.81	3.70	14.99	7.58	10.53
• Primary health centres	3.15	1.97	2.58	1.01	4.28	2.27	1.74
• Primary health sub-centres	0.43	3.00	2.95	1.18	3.64	3.14	5.09
Post, telegraph, and telephone facilities	12.72	6.54	7.55	4.03	18.63	9.52	4.40
Bus services	52.17	24.23	39.23	18.66	63.17	27.49	20.95
Roads							
• Paved approach roads	50.54	28.93	46.96	25.71	44.33	30.95	30.21
• Mud approach roads	61.20	82.85	79.56	66.05	86.72	56.28	67.25

Source: Census of India 2001

6.8 THE WAY AHEAD FOR INFRASTRUCTURE: RECOMMENDATIONS

A vision for Meghalaya has to be underpinned by major improvements in the state's infrastructure. Any attempt to integrate Meghalaya with the rest of the north-east region and the country will be meaningless till inter- and intra-state connectivity is ensured, particularly through road and rail links. Even more importantly, the development of infrastructure in Meghalaya must be viewed from the standpoint of the region as a whole, rather than as a component of the individual state's plans.

Role of the Centre

Much of the infrastructure development in Meghalaya would have to be done by the central government, rather than by the state government. Developments in the power sector bear this out. In the case of roads, the hilly terrain of most of the state makes infrastructure development particularly expensive. Here, too, the centre must play a leading

role, as maintenance expenditure would swallow up the small budgets of the hill states, especially as the road network expands. There is some evidence that state roads are already falling into disrepair.

Involvement of the Private Sector

With insurgency receding in the state, a vision for its development should attempt to involve the private sector, with the state playing a leading role. The PPP model should work well in the setting up of power projects and telecommunication networks.

6.8.1 Sectoral Suggestions

Roads

In the development of road infrastructure, public-private partnership (PPP) models in the build-operate-transfer (BOT) format being implemented in other states are unlikely to succeed, because the low levels of existing traffic would not justify PPP models. Hence, there must be exceptions from the use of PPP in state highway projects.[31] In planning road networks under the SARDP, attention should be given to roads within the state as these are crucial to creating a unified market within the state and increasing tourism activity.

Air Connectivity

In the absence of a large road network and any rail connection, some focus has to be placed on increasing air connectivity in the state.

Power

The state's power policy (2007) outlines a very comprehensive path for the power sector, which continues the emphasis on hydel power, but will also promote thermal power to meet the immediate needs of the state.

Customs Stations

Given that one of the goals of the vision for the state is expanding trade linkages with Bangladesh, there is an urgent need to upgrade all the facilities related to this area. This includes infrastructure related directly to border trade, such as weighing stations, laboratories, certification facilities, and so on, and facilitating infrastructure such as banking services, power supply, internet and telecommunication services, warehousing facilities and cold storage, and a good road network capable of allowing heavy load-bearing vehicles.

[31] Similar concerns were expressed in the Sixth Sectoral Summit of the NEC.

6.8.2 Basic Services Infrastructure

Devolution of Service Delivery

There are several well documented advantages of devolution of service delivery to local communities in various services such as water supply, rural roads, small works, housing, and sanitation. For a start, devolution helps reduce the cost of delivery, as the active participation of beneficiaries tends to lower the costs of service interventions. Another major benefit is that local residents are most familiar with local conditions, and can use their knowledge to best decide where to situate the service, whether it is an irrigation system, local road, or community centre, etc., how to conserve natural resources, and how best to maintain other resources. User preferences are also more likely to be reflected in local delivery mechanisms. Although, as communities are not homogeneous, it is important to examine whose preferences are being voiced. Delivery of services to economically and socially disadvantaged groups could face a threat of capture by local elites unless some safeguarding measures are introduced — measures that are typically ensured by some sort of elected body.

Water Supply

The state is blessed with abundant rainfall and this natural resource can be tapped by harvesting rain water. An obvious area that has to be tackled scientifically and immediately is to effectively tap rainwater through rainwater harvesting systems, especially in areas where feasible surface or underground sources are not available. This could be done through the construction of rain fed reservoirs. Further, in urban areas, prefabricated tanks can be given to households to harvest rain water, which can meet the 'non-consumption' needs of people, and save precious treated water supply for drinking and cooking.

Box 6.2: *Hill Areas: Diverting Streams*

Traditionally, wherever there were streams, especially in the hill and mountain regions of India, people diverted the water with the help of simple engineering structures into artificial channels that would take the water to agricultural fields. The most technologically sophisticated system can be traced to north-eastern India where people built bamboo pipes to carry water from natural springs over long distances using an intricate network of pipelines spread over difficult terrain.

The entire system worked like a modern drip irrigation network that delivers measured quantities of water straight to the roots of the plants. Some 18–20 litres of water enters the bamboo irrigation systems every minute, and after getting transported over several hundred metres, is reduced to 20–80 drops per minute at the site of the plant.

Source: Binayak Das, Prabhanjan Verma, and Suresh Babu (2002), "A Midsummer Dream," in *Down To Earth*, June 30, Society for Environmental Communication, New Delhi; quoted in Sunita Narain (2006) "Community-led Alternatives to Water Management: India Case Study" Occasional Paper for the *Human Development Report 2006* http://hdr.undp.org/en/reports/global/hdr2006/papers/Narain_Sunita.pdf

In a state where over half the population is below the poverty line, harnessing water is at the heart of alleviating poverty by providing livelihood opportunities to the rural poor. Therefore, the Government of Meghalaya has launched a programme called 'Integrated Basin Development and Livelihood Promotion Programme (IBDLP)' during the Twelfth Five Year Plan, wherein harnessing water has been assigned the central focus. The thrust areas of the IBDLP include integrated water resources management, creation of Small Multipurpose Reservoirs (SMRs), and generating water centric livelihoods such as fisheries and aqua tourism. The objective is not only to capture surface run-off and water along the drainage lines and reduce erosion but also to formulate water policy and aim at better river governance. The SMRs will be used for various productive purposes like aquaculture, drinking water supply, mini hydel (<100KW) irrigation, aesthetic value, tourism, and eco-system promotion. Considerable investments are supposed to be made in this flagship programme.

Chapter 7

Trade and Regional Cooperation

Like the other seven states of the north-east, Meghalaya also faces the disadvantages of remoteness from the mainland of the country. It has to generate not only internal trade — with other states of the north-east and the country as a whole — but also external trade with neighbouring countries, such as Bangladesh. This chapter has been divided into two parts: external trade, and internal trade.

7.1 External Trade: The Importance of Trade with Bangladesh*

It is very well recognised that openness to trade and investment accelerates growth and reduces poverty. An expansion in trade enables a developing state to reap economies of scale, strengthens backward linkages for manufacturing activity with resources of the region, helps move production up the value chain, and accelerates the growth process based on comparative advantage (Brunner, 2009; Brunner and Allen, 2005). Open trade helps attract investments into the region and, with it, new technology which can increase productivity. The dynamics of the openness of the developmental process of an economy results not only in higher incomes but also ensures faster trickle-down to poorer and disadvantaged sections of society.

Moving up the value chain and achieving comparative advantage in production and activities, however, requires identification of products with significant export potential, and geographical mapping of countries with the potential to expand trade. The state has tremendous potential to develop horticulture, floriculture, organic food items including tea, spices, forest-based environmentally sound processed wooden goods, handlooms including sericulture and handicrafts, besides mineral based produce such as coal and limestone, and industries such as cement. With an enabling policy environment, connectivity, and infrastructure, it should be possible to move up the value chain in these products and export the processed products to the neighbouring market in Bangladesh.

Expanding exports and moving up the value chain requires opening up for trade and attracting investments. Access to land and sea routes through neighbouring countries, particularly Bangladesh, will significantly reduce transportation costs of both commodities and people in Meghalaya. Similarly, given the distance of Meghalaya from other regions in the country apart from the NER, promoting trade between the state and Bangladesh could benefit the residents of both. Trade facilitation through diplomatic initiatives, and development of border infrastructure, therefore, is extremely important. In fact,

* This section is based largely on Rao, Govinda M, "Promoting Trade and Investment in India's Northeastern Region" Working Paper Series on Regional Integration No. 30. Asian Development Bank, 2009.

strengthening infrastructure and connectivity could expand trade with not merely the neighbours but also with East Asian and South East Asian countries.

An analysis of India's trade with the countries neighbouring the NER does not look optimistic. In general, India's exports to South Asian countries as a ratio of its total exports in 2008–09 were just about 5 per cent, and the share of South Asian imports in total imports was an abysmal 0.63 per cent. In contrast, India exported almost 11 per cent of its total exports to ASEAN countries and its imports were close to 9 per cent. Similarly, there has been a sharp increase in trade with China in recent years and in 2008–09, India's exports to China constituted 5.06 per cent of the total, and its imports accounted for 10.68 per cent of total imports. Unfortunately, there is no information on the volume of trade of the NER with contiguous countries.

7.2 BORDER TRADE WITH BANGLADESH

The partition of the country disrupted the age-old trade and communication links for the state of Meghalaya. It abruptly stopped the free and open trade with the districts of Sylhet and Mymensingh which became part of East Pakistan (which later became Bangladesh). To revive some of these linkages, measures have been undertaken by the central and state government: several old roads have been made functional to revive border trade, and several of the land border points have been converted into land custom stations (LCSs) on the international border between Meghalaya and Bangladesh.

Of the 17 LCSs being used for border trade in the NER, eight are located in Meghalaya, four each in the Khasi-Jaintia Hills and the Garo Hills; these are Dawki, Borsora, Mahendraganj, Gasuapara, Dalu, Baghmara, Shella Bazar, and Bholaganj. For want of authentic data either from official or non-official sources, it is difficult to know the precise nature and extent of border trade from these LCSs. The problem is essentially rooted in the ways in which trade takes place, which is broadly divided into two types — official and unofficial. While trading activity through official channels is recorded at the different LCSs, unofficial trade is more often designated as illegal trade or simply trans-border smuggling. Further, the LCSs in Meghalaya are mainly used for the export of raw materials and locally produced perishable items, and it is difficult to estimate how much of these commodities are exclusively produced within the state and then exported to Bangladesh.

Table 7.1: Exports of Agriculture and Horticulture, March 2007 to January 2008

Produce	Quantity	Value *(Rs)*
Dawki		
Orange	2,576,530 Nos.	1,922,395.10
Citrus Fruit	49,080 Nos.	71,955.00
Mahendraganj		
Bamboo	177 MT	126,765.00
Ginger	155 MT	1,120,224.00
Tamarind	80 MT	267,304.00
Total		3,508,643.10

Source: Commissioner, Customs, Government of Meghalaya

Presently, items exported to Bangladesh from Meghalaya are mainly those which are available in the hills of the state (*see Tables 7.1A* and *7.2A* in the *Annexure*). People living in the border areas have been traditionally cultivating crops such as oranges, bananas, betel nuts, betel leaves, and bay leaf, and selling them at border *haats*. The system was almost institutionalised, but as a result of numerous barriers and formalities imposed by governments on both sides of the border, these cultivators are unable to export these crops through the official routes. Under the circumstances, a large section of cultivators use unofficial channels to export their products.

Meghalaya thus primarily exports mineral and horticultural products to Bangladesh, which constitute almost 90 per cent of the total exports from the NER. Coal and limestone, two major mineral products found in the southern belt of Meghalaya, are exported through the LCSs at Dawki, Borsora, Mahendraganj, Baghmara, Gasuapara, Dalu, and Mankachar (Assam). In fact, there exists a complementarily between the resource base of the hills of Meghalaya and the nearby plains of Bangladesh. A cement factory at Chhatak in Bangladesh, for instance, fully depends on Meghalaya for limestone. Likewise, the tea gardens, jute mills, and brick manufacturing units in Bangladesh largely depend on coal mined in Meghalaya.

7.3 THE WAY AHEAD: RECOMMENDATIONS FOR IMPROVING BORDER TRADE

Economic isolation has been a major reason for stagnancy in Meghalaya, and acceleration in growth can be achieved only by expanding trade and investment in the state. This calls for opening up the trade routes and promotion of trade relations with the neighbouring countries and creation of excellent infrastructure and connectivity to facilitate movement of people and goods, and attract investment. The large volume of investment required to accelerate the rate of growth also requires heavy investments in infrastructure, not only on the Indian side but also on the side of Bangladesh, which does not have the required volume of resources to create world class infrastructure. Institutions will have an important role not only in making neighbouring countries realise the importance of

expanding trade, promoting understanding between them, and providing the necessary funds for financing the large requirements in infrastructure. The ADB has experience with such initiatives in the Mekong sub-region and elsewhere, which could be applied along the state's border with Bangladesh.

7.3.1 Strengthening Infrastructure

As stated earlier, for Meghalaya to catch up with the living standards in the rest of the country, a massive increase in investment is required. Much of this will have to come from the private sector, including foreign investment. The most important condition for attracting private investment to the state is the provision of good infrastructure. Provision of quality infrastructure not only enhances the quality of life but also dictates the pace of economic activity, and the nature and quality of economic growth.

So far, the state's poor connectivity within the state, with its neighbouring states, and the rest of the country has virtually isolated its residents. The high dependence on road transportation has hampered intra-regional mobility and has hindered the development of markets. The blocking of access to Chittagong port and the land route through Bangladesh has closed access to sea transportation. Good transportation networks are necessary to interlink potential growth centres, promote tourism, connect to border trade points, and support economic, social, and security needs. Apart from transportation infrastructure, an expansion in markets and trade depends on the existence of good quality supply of power, an efficient telecommunications network, border infrastructure, etc.

7.3.2 Government Support

Meghalaya needs to take full advantage of the various central government funded schemes like ASIDE, EDF-NER, etc., to increase exports with Bangladesh.

The ASIDE Scheme

The government has launched the ASIDE (Assistance to States for Development of Export Infrastructure) scheme to promote infrastructure for exports. The funds are broadly meant to be used for creating new export promotion industrial parks and zones (including special economic zones and agri-business zones), augmenting facilities in existing zones, and developing complementary infrastructure such as connection roads, and freight stations. Since 2002–03, the government of Meghalaya has utilised Rs 49.06 crore under ASIDE. It approved 30 projects at a total cost of Rs 97.16 crore, of which 16 projects have been completed (May 2010).

Table 7.2: Funds Released to Meghalaya under the ASIDE Scheme

(Rs lakh)

Year	Amount Allocated/Sanctioned	Amount Released
2002–03	200	200
2003–04	250	250
2004–05	572	572
2005–06	834	834
2006–07	917	917
2007–08	917	299
2008–09	917	889
2009–10	917	917

Source: Department of Commerce, Government of India

Export Development Fund for North East Region (EDF-NER)

With a view to promote exports from the NER, a North East Cell has been set up in the Department of Commerce, and an Export Development Fund (EDF) was set up to promote exports from the region. Activities eligible for assistance from the EDF include: setting up of pioneering/pilot projects aimed at exports; provision of equipment and machinery for the pioneering pilot projects aimed at exports; creation of common facilities for facilitating exports; facility for testing and standardisation as well as quality improvement of export products; funding related to the exchange of trade delegations; and any other activity as notified by the Department of Commerce having a bearing on export promotion in the NER.

Chapter 8

Environmental Concerns in Meghalaya

The key environmental concerns in Meghalaya constitute deforestation, fragmentation of forests, soil degradation, biodiversity loss and contamination and silting of water bodies. Unregulated, unscientific, and often illegal mining and logging, and the practice of short cycles of *jhum* are responsible for these. While unregulated and illegal activities are a result of an absence of clear resource use policies, including the land use policy, and lack of clarity in ownership rights of resources, the paucity of technical and other support for improvement in *jhum* cultivation, and an almost total absence of inputs emanating from research on small area and eco-friendly high yielding varieties of rain-fed crops has resulted in soil erosion, degradation, and low productivity. Contamination and silting of water bodies has been caused by unregulated and unscientific mining, forest clearing, and unsustainable short cycles of *jhum*.

8.1 Key Environmental Concerns

Deforestation

The loss of natural forests is a serious concern in Meghalaya. In addition to providing an economic and cultural backdrop for the lives of people, the vast forests in Meghalaya deliver an array of essential local and global environmental services, including water storage and filtration, soil stabilisation and carbon sequestration, prevention and reduction of floods, food, fodder, fuel, medicines, etc. However, the existence of clear and enforceable property rights in unreserved forests, which is central to effective ownership, remains a contentious issue in many areas. Substantial forest area is under the unclassed category, and is owned by private individuals, clans, village councils, district councils, and other traditional community institutions. The autonomous district councils (ADCs) control the unclassed forests, comprising 8,503 sq. km (96 per cent of the total forests). It is reported that local elites have often usurped and reallocated traditionally held community and tribal rights — rarely recorded in any official statute book — with predictable consequences in terms of local tensions and conflict, resulting in unplanned clearing of forests, with no planning or effort towards maintaining forests.

It is often quoted that the state, with about 69 per cent of its total geographical area under forest cover, is a forest-surplus region, but the quality of the forest has deteriorated, and dense forests with canopy closure of 40 per cent or more have been degraded into open forests or scrub. Since the state is predominantly mountainous, deforestation and the resultant loss of soil, especially in the hill areas, are leading to increased siltation of rivers and streams. The deep pools that are the favored habitats of many species are rapidly

becoming shallow and choked with silt, leading to a decline in habitat. At the same time, swamps, marshes, and other wetlands are increasingly being reclaimed for urban and agricultural expansion.

As far as global benefits from forests are concerned (carbon sequestration and protection of biodiversity), in principle these benefits should motivate at least some partial payments. The Twelfth Finance Commission has, again in principle, recognised the need to compensate states with forest cover for loss of revenue, loss of alternative economic activities, and higher cost of providing public services. It is important for the state to make a representation to the Finance and Planning Commissions collectively to receive the necessary compensation for providing a global public good.

Given that there is a trade-off between commercial and conservation benefits from forests even from a national perspective, Meghalaya should explore the possibility of resource transfers from the central government for the spillover benefits generated from forest conservation/opportunity cost of forest conservation. Estimation of these would, however, require detailed data which are hard to obtain.

In this context, it may be noted that the greatest gain in carbon storage and biodiversity would potentially come from protecting mature marginal frontier forests that would have been harvested without the offset payment. Therefore, payments to protect the full forest are not necessary because the volume at risk is mainly the forest at the margin.

This, however, should not be taken to underplay the socio-economic logic behind the idea of 'compensation and conservation'. Compensation should be paid because forest-rich states are also forest-dependent states. Loss of revenue from resources they possess affects them in two ways. One, they can hardly afford to budget for maintaining and enhancing their forest resources; besides, revenue compression leads to cuts in vital developmental expenditures. Two, since it is the poorest who bear the burden of conservation as their lives are crucially linked to both resources and services the forests provides, social and economic inequities widen and often find expression in extremism.

Shifting Agriculture/Jhum

Jhum is a prominent traditional agricultural land use type associated with the social framework of a large number of tribal communities in Meghalaya. Local terrain in the region coupled with dynamic practices (both in time and space) of shifting cultivation, and lack of cadastral maps make it difficult to provide accurate estimates of areas under such usage. In Meghalaya, over 7,000 sq. km is reported to be still under *jhum*. The *jhum* cycle used to be longer than 15 years, which enabled regeneration of forests before the same land was cultivated again. However, in the recent past, due to an increase in population, and social and other changes in the traditional way of life, the cycle has shrunk, in extreme cases, to as little as one to two years. As the *jhum* cycle becomes successively shorter, the *jhum* sites cannot remain under vegetal cover, and degrade relatively quickly.

Because of the hilly terrain, settled cultivation is practiced only in a small portion of the total cultivated land, mostly confined to the valleys. In view of the high labour cost and energy input involved in terrace cultivation, and in absence of other viable alternatives to shifting cultivation, the majority of the population of the state continues to depend on shifting cultivation for their subsistence livelihood. Frequent shifting from one land to the other for practicing *jhum* has adversely affected basic life support systems such as vegetation and soil. The decline in the area under natural forests, the fragmentation of habitat, local disappearance of native species, and invasion by exotic weeds are some of the ecological consequences of shifting agriculture. Due to shifting cultivation on steep slopes, downstream siltation of water bodies is apparent in many districts.

The following categories of *jhum* have been identified in the north-east:

(i) **Long cycle *jhum***: This is still practiced in the remote, sparsely populated areas of the Garo hills of Meghalaya and parts of Nagaland. Such *jhum* is generally sustainable and is the best cropping method in areas where flat land is not available. The practice has survived the test of time and it enables the people to live in harmony with nature;

(ii) **Stressed *jhum***: With an increase in population, villagers are forced to reduce the fallow period (even to as little as two years), which is insufficient for natural regeneration to take place, and has resulted in land degradation. This type of *jhum* is neither productive nor sustainable and is mainly found in the West Khasi Hills of Meghalaya; and

(iii) **Modified *Jhum***: This includes land-levelling, bunding, cultivation of multiple crops including leguminous varieties with traditional crops in the *jhum* fields (such as green peas in Pomlakarai, Meghalaya, and indigenous kolar beans and rajma in high-altitude villages of Nagaland where rice cannot be grown). Such practices maintain soil fertility, and help augment household incomes.

Interventions for improvements in *jhum* through developmental projects have been made in the states of Nagaland (through NEPED — Nagaland Environmental Protection and Economic Development — with support from the India-Canada Environment Facility), Meghalaya, Manipur, and the hill districts of Assam (NERCORMP — North-Eastern Region Community Resource Management Project by IFAD and NEC). Improvements in livelihoods through the promotion of tree husbandry and cash crops have been achieved by NEPED, while institution building and microfinance are NERCORMP's achievements. Such programmes to manage *jhum* through land-levelling, contour-bonding, and multiple cropping offer great opportunities. The success of these programmes has shifted the focus from the total replacement of *jhum* to an improvement in traditional practices.

Mining Activities

Meghalaya has rich mineral deposits. Important mineral resources found in the state are coal, limestone, feldspar, quartz, glass sand, sillimanite, clay, and kaolin. Of these, coal is found in every district in the state, has low ash content, and is very high in calorific value, although it is also high in sulphur content. Meghalaya has estimated coal reserves of 559 million tonnes (MT), spread over an area of 213.9 sq. km (approximately 1 per cent of the total geographical area of the state). The Garo Hills district has the maximum coal reserves of 390 MT, followed by West Khasi Hills (98 MT), Jaintia Hills (39 MT), and East Khasi Hills (31 MT). Despite its large reserves of coal, domestic consumption is low due to the absence of industrial activity; consequently the state is a large exporter of coal. This is the case with limestone, too.

Unscientific methods used in coal mining have caused land and water degradation, besides causing damage to roads, and health hazards to labour engaged in mining and local residents.

Meghalaya has huge limestone deposits. Limestone caves, apart from their significant tourism potential, could be a precious economic resource for the people. Limestone mining too has had adverse outcomes for land, forest, and water resources. Unregulated mining carried out on private and/or community land, without the necessary measures to control and mitigate the adverse environmental impacts, has had a negative effect.

We endorse the suggestion of the government of Meghalaya to make environmental clearances mandatory for mining, irrespective of size. (At present, this is not essential for areas less than 5 ha.) This should be supplemented with measures to promote education and awareness campaigns about adverse environmental impacts and low productivity of using unscientific methods of mining.

8.2 THE WAY FORWARD

- We endorse the recommendation of the Report of the Task Force on Hilly Areas[32] that the Natural Resource Analysis and Advisory Centre (NRAAC) should be upgraded, or a new institute should be established with the following mandate: The institute should have full digital data on the resource base of the hill states/regions; it should be able to analyse data to detect changes or see trends; and should be able to guide policy makers and planners on any activity that is likely to affect any resource or the environment of the region. Consultation with this body should be mandatory before any major activity in the state/region is undertaken. For effectively carrying out all the recommendations, and to support their planning as well as for much needed monitoring, all hill states need to join in and establish a user friendly digital databank (spatial and non-spatial).

[32] Planning Commission (Government of India) 2010.

- It is essential to formulate and strictly implement a land-use policy specific to local conditions that takes into account the fragility of the region and local customs. This would require, among other things, documentation of present land use and ownership patterns. The plan must prioritise zoning of regions to clearly demarcate what activities are permitted and in which areas. Simultaneously, extensive grassroots-engaged programmes to develop region-specific skills, technology, and education must be launched.
- In order to effect sustainable forest management practices in community forests, specific areas of intervention, and the extent of these interventions need to be carefully identified. A people friendly policy needs to be developed by the government that would ensure a favourable environment for government and community participation in conserving community and private forests. Areas where facilitation is required, areas where regulatory mechanisms are to be instituted, and strategies for strengthening traditional institutions for effective forest management need to be identified for formulating an effective and implementable community forest policy for the state. While identifying such areas of intervention, sensitivity regarding autonomy of traditional institutions should be kept in mind. The fear of land alienation due to government interference in people's minds and the issue of possible alteration of land ownership must be given top priority while undertaking such an exercise for developing an appropriate policy.

  There is a need to promote scientific forestry in community and private forests, as this is a viable strategy to ensure the continued existence of forests. Given the limitations of state forest departments in terms of staffing vis-à-vis the large forest areas under community/private ownership, it is desirable to train representatives of traditional village level institutions on various aspects of modern scientific forestry which would complement their traditional knowledge and experience in forest management.

  Rewards as well as compensation mechanisms should be put in place at the national level to acknowledge and maintain the flow of life supporting ecosystem services from hill states to the rest of the country. For the maintenance of forests, incremental compensation should be provided based on scientific norms.

- Interventions are also required to manage, improve, and supplement *jhum* to help minimise erosion and silt flow; facilitate functional land consolidation; and regulate mining irrespective of size to reduce environmental degradation. Areas where shifting or terraced agriculture is practiced should be earmarked for unique crops, organic agriculture, horticulture, agro-forestry, and for introducing better management practices.

The practice of *jhum* could be reduced by:

(i) Providing alternative employment opportunities such as handicrafts through cottage industries; encouraging cooperative efforts for carrying out forest based activities like basket making, rope making, cane furniture making, processing of minor forest produce, honey collection, etc.; popularisation of new land based activities such as fisheries and horticulture. However, these will have to be made commercially viable by providing proper marketing facilities; and

(ii) By forming village forest committees for the protection and development of degraded forests. These committees may be able to generate employment opportunities during the lean season through various forestry and other land based activities. Grassroots level organisations such as self-help groups have been effective in working out alternative livelihood strategies and thus, reducing the area under shifting cultivation.

- Industrial zones should only be located in non-fragile areas, and should include only those activities which are favourable to the local environmental and resource conditions, such as processing non-toxic, locally available raw materials, and investment that generates local employment. There is good potential in the state for the development of small and cottage industries. This will add value to locally available raw material, mainly based on forest, plant, animal, and mineral wealth. This will also provide dispersed employment.
- The adoption of scientific mining and compliance with a well-designed environmental management plan under the EIA notification should be able to check environmental problems relating to mining to a great extent. However, the challenge is that neither the EPA 1986 nor the EIA notification 1994 is applicable to all these areas.

  In view of the enormity of the environmental concerns, besides revenue implications for the state, environmental clearance should be made mandatory for mining in the state irrespective of size. (At present, this is not essential for area less than 5 ha.)

  Owners of the mines and people engaged in the activity and living locally should be educated about the environmental consequences of unscientific mining. A well thought out and planned awareness programme should be undertaken for all the stakeholders. For this, a nodal agency needs to be identified and adequate resources should be provided for such programmes.

  There is a dearth of appropriate technology for rehabilitation of mine-affected areas, which are site-specific. Therefore, a comprehensive programme of technology development for eco-restoration of these areas needs to be taken up. Besides, existing technologies should be applied immediately for the rehabilitation of mined areas. Social issues and human health problems in mining areas also need to be addressed.

Chapter 9

Public Finances

The state of Meghalaya, along with all the other states in the NER, has been given special category[33] status by the central government.[34] Special category status is accorded to a state with certain characteristics that necessitate stronger than normal hand-holding by the central government. The predominant characteristics relate to geographic terrain, specifically hilly or mountainous tracts.

9.1 GSDP of Meghalaya: In Perspective

The Gross State Domestic Product (GSDP) is likely to underestimate income in Meghalaya, which is characterised by subsistence agriculture and a significant dependence of people on community forests for meeting various needs. However, in the absence of any firm estimates of the value that does not get captured in the GSDP, this often serves as a useful, albeit limited, comparative.

The real GSDP of Meghalaya grew at a trend rate of 5.93 per cent per annum between 1999–2000 and 2007–08 (at 1999–2000 prices). The population of Meghalaya during the same period grew at a trend rate of 1.39 per cent per annum. Real per capita GSDP of Meghalaya thus grew at 4.48 per cent per annum during that period. Of the eight north-eastern states, Meghalaya is the third largest, but has the third smallest population in that group. Thus, Meghalaya covers almost 8.6 per cent of the north-east, but houses only about 4.8 per cent of its population. Low population density accords certain natural advantages from (potentially) larger availability of terrestrial resources, but several disadvantages from the point of view of ensuring reach of public services to a sparse population. For example, Meghalaya reports a lower literacy rate and a higher poverty ratio than that of the NER as a whole.

Table 9.1 presents comparable estimates of trend growth rates of population and income for Meghalaya with that for the whole of the north-east (NER), and the north-east region excluding Assam and Meghalaya (henceforth, NEREAM). Of particular interest is the comparison between Meghalaya and NEREAM. It turns out that between the years 1999–2000 and 2005–06, for all the broad components of GSDP, Meghalaya reported a lower

[33] Special category states in the country are all the north-eastern states, Himachal Pradesh, Jammu and Kashmir, and Uttarakhand.

[34] The National Development Council (NDC) determines whether a state should be accorded special category status. The special category status affects the manner or structure in which plan funds are made available to states. Planned federal transfers to special category states are structured as 90 per cent grant and 10 per cent loans. In comparison, plan transfers to non-special (or general) category states are structured as 30 per cent grant and 70 per cent loans.

trend growth rate than that for NEREAM.[35] Thus, trend growth rate of aggregate GSDP for Meghalaya and NEREAM stood, respectively, at 5.99 and 7.35 (*Table 9.1*) per cent per annum.

Table 9.1: Trend Growth Rate between 1999–2000 and 2005–6[36]

(Per cent)

State/Region	GSDP for Groups of Sectors			Total GSDP	Population Growth	Per Capita GSDP
	Agriculture and Allied Activities	Industry	Services			
1	2	3	4	5	6	7
Meghalaya	4.60	7.95	5.68	5.99	1.49	4.44
NER	2.79	9.96	5.96	5.81	1.89	3.85
NEREAM	5.52	12.50	6.33	7.35	2.44	4.79

Source: Central Statistical Organisation (CSO)

Notes: Figures for GSDP and its components at constant 1999–2000 prices

However, the population of Meghalaya grew at a significantly lower rate than that of the NEREAM. As a result, the difference in the trend rate of growth of per capita GSDP for Meghalaya (4.44 per cent) and NEREAM (4.79 per cent) is significantly lower than the difference between the rates for Meghalaya and the NER. But despite relatively slower growth in recent years, per capita GSDP for Meghalaya is more than 80 per cent higher than that for NEREAM.[37] Meghalaya thus has a significant head start (as compared to NEREAM) in its effort to catch up with the average all India per capita GDP. Despite the head start however, this gap remains daunting.

A distinctive feature of the growth pattern between 1999–2000 and 2005–06 in almost all north-eastern states has been a gradual revival in the fortunes of the industrial sector (*Table 9.2*). As a corollary, there has been some decline in the share of agriculture and allied sectors, as also in the service sectors. Of the three broad categories, agriculture and allied sectors continue to be the slowest growing group. Its share in Meghalaya is significantly lower than its corresponding share in NEREAM.

[35]Total GSDP is classified into three broad groups. In practice, there are two ways commonly utilised to construct the three groups. In one scheme these are (i) primary, (ii) secondary, and (iii) tertiary sectors. In the other scheme these are (i) agriculture and allied activities, (ii) industry, and (iii) services. Primary sector constitutes (a) Agriculture, (b) Forestry and Logging, (c) Fishing), and (d) Mining and Quarrying sectors. Agriculture and Allied Activities constitute Primary sector excluding Mining and Quarrying. Secondary sector constitutes (a) Manufacturing (both Registered and Unregistered), (b) Construction, and (c) Electricity, Gas, and Water Supply. Industry constitutes Mining and Quarrying, and Secondary sector. The composition of Tertiary sector is identical to that of Services and includes the following: (a) Transport, Storage, and Communication, (b) Trade, Hotels, and Restaurants, (c) Banking and Insurance, (d) Real Estate and Ownership of Dwellings, (e) Public Administration, and (f) Other Services.

[36]Comparable and consistent data for all relevant states is available up to 2005–06 only. However, data for Meghalaya is also available for 2006–07 and 2007–08.

[37]In 2005–06, at current prices, the per capita GSDP of Meghalaya and NEREAM stood at, respectively, Rs 25,707 and Rs 13,601.

Table 9.2: Structure of GSDP in 1999–2000 and 2006–07

(Percentage Share at Constant 1999–2000 prices)

State(s)	Agriculture and Allied Sectors		Industry		Services	
	1999–2000	2006–07	1999–2000	2006–07	1999–2000	2006–07
1	2	3	4	5	6	7
Meghalaya	22.93	20.09	23.31 (38)	27.86 (32)	53.76	52.05
NER	32.35	25.26	18.38 (24)	22.35 (16)	49.27	52.38
NEREAM	27.94	24.78	17.41 (4)	23.97 (3)	54.64	51.25

Source: Same as in *Table 9.1*

Notes: Figures for GSDP and its components are at constant 1999–2000 prices. Figures in parentheses indicate the per cent share of mining and quarrying sectors out of the total for Industry.

In 1999–2000, the mining and quarrying sector contributed almost two-fifths of industry GSDP in Meghalaya (*Table 9.2*), but the share has gradually declined to about one-third in 2005–06. However, for NEREAM, mining and quarrying barely constituted 4 per cent of industrial GSDP in 1999–2000. By 2005–06 its contribution had further depleted to about 2 per cent only. The mining and quarrying sector could constitute a key concern for the economy of Meghalaya, which needs to be addressed fast on account of the fragile ecosystem and perceptible environmental degradation of the state. Efforts must therefore be redoubled to evolve a far-sighted policy for sustainable harvesting of mineral resources. Further, it is likely that there are abundant opportunities in moving up the value chain in mineral refining and processing within the state. This would also help shore up incomes (and employment) and promote more sustainable upstream (backward linkage) mining activity.

9.2 INVESTMENT FOR ACCELERATING GROWTH

Improving the standard of living of the people would require sustained increases in per capita income levels. Given the current levels of income, this will require a significant acceleration in growth rate. If by 2030 the people of Meghalaya are to achieve living standards comparable to the rest of India, their per capita GSDP would need to grow at an average rate of 11.5 per cent.

Following the *North Eastern Region: Vision 2020*, an illustrative scheme for accelerating the growth process is shown in *Table 9.3a.* To be realistic about the feasible path of acceleration, it is necessary to split the time frame into the plan periods. It is also assumed that the growth momentum achieved by 2020 is sustained up to the terminal year of projection in 2030.

Table 9.3a: Projected Trajectory of Growth of Meghalaya (at 2009–10 prices)

Plan Period	Years	Required GSDP CAGR (%)	Projected GSDP (Rs crore)	Projected Population CAGR (%)	Derived Per Capita GSDP (End Year)	Implied Per Capita GSDP Growth (%)
11th	2010–11 to 2011–12	7.85	54,950	1.19	48,039	6.66
12th	2012–13 to 2016–17	9.45	83,154	1.15	71,265	8.30
13th	2017–18 to 2021–22	10.25	1,34,713	1.09	1,09,955	9.16
14th	2022–23 to 2026–27	10.25	2,19,433	1.04	1,70,100	9.21
15th	2027–28 to 2029–30	10.25	1,93,294	0.67	2,23,453	9.58
Average Annual Growth Rate (%)		9.92		1.04		8.88

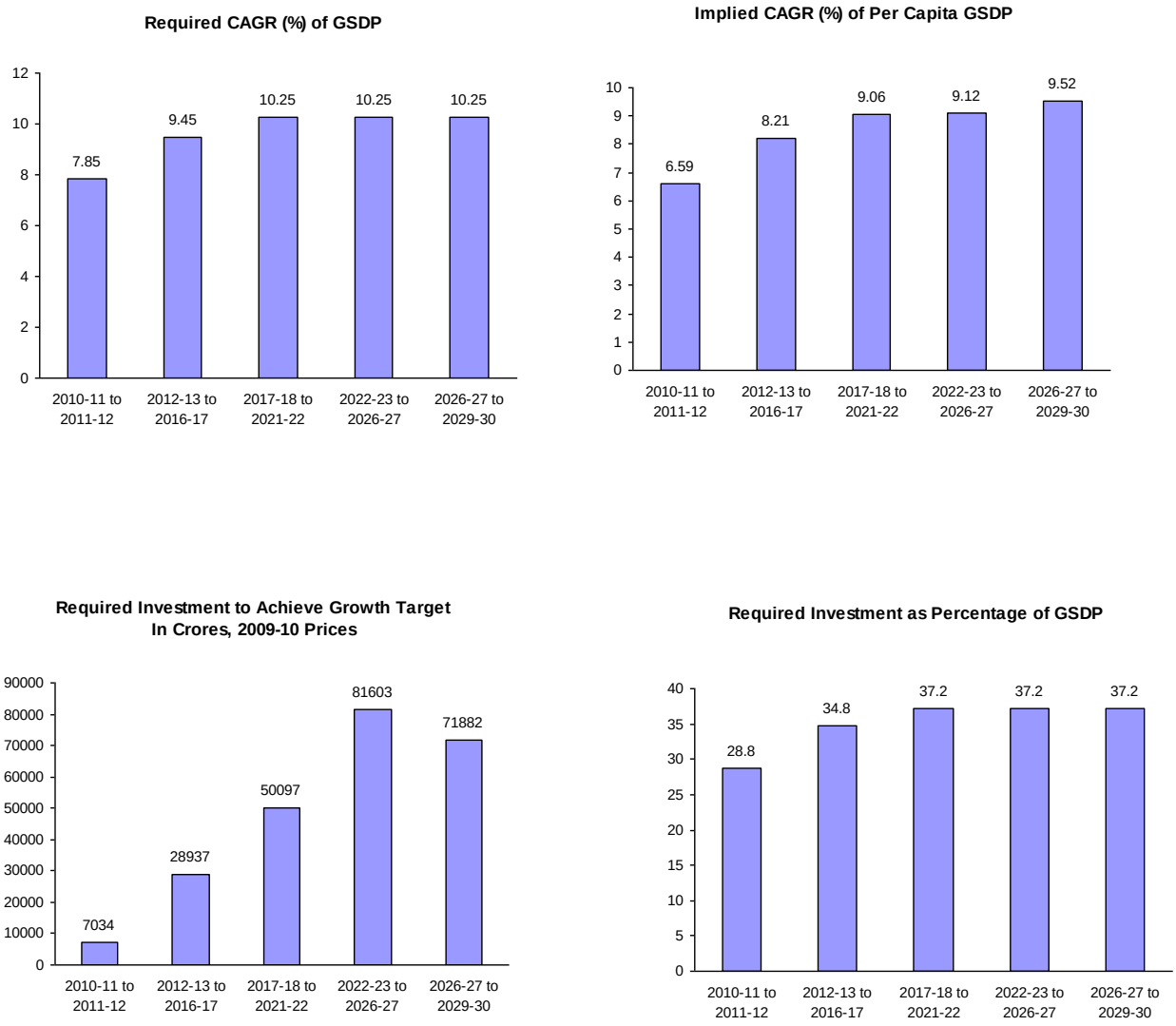
Source: Authors' own computation

Table 9.3b: Projected Investment Requirement (at 2009–10 prices)

Plan Period	Years	Investment Required (Rs crore)		Investment Required (Per cent of GSDP)	
		Assumption I ICOR constant at 4.0	Assumption II ICOR declines from 4.0 to 3.6	ICOR I	ICOR II
11th	2010–11 to 2011–12	7,034	7,014	28.8	28.7
12th	2012–13 to 2016–17	28,937	28,287	34.8	34.0
13th	2017–18 to 2021–22	50,097	47,673	37.2	35.4
14th	2022–23 to 2026–27	81,603	75,507	37.2	34.4
15th	2027–28 to 2029–30	71,882	65,048	37.2	33.7

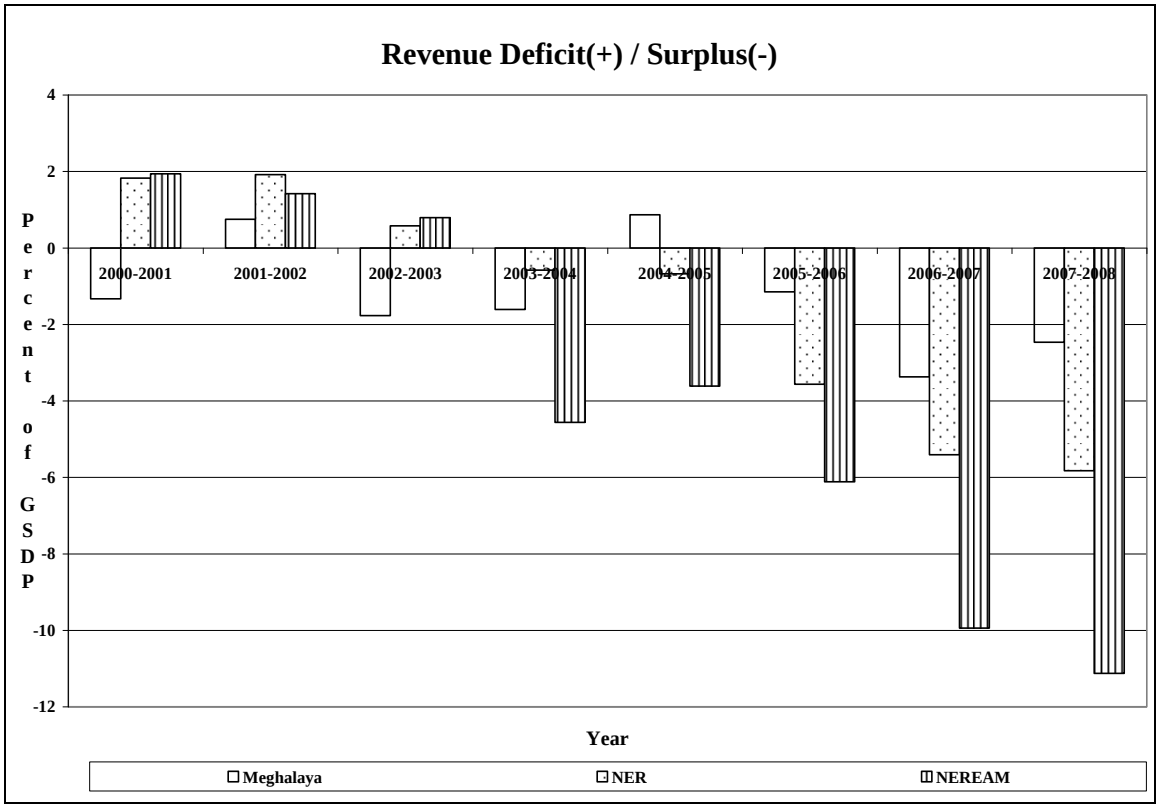
Source: Authors' own computation

Figure 9.1: Projection of Investment Requirements to Achieve Economic Target by 2030



It is evident from *Tables 9.3a* and *9.3b* that Meghalaya requires a massive investment as well as significant increase in productivity if it desires to achieve a standard of living somewhere near that of the rest of India by 2030. Investment requirements may be met from savings and borrowings, both government and private. In the case of the government, capital expenditure is of the nature of investments and may be financed from current revenues (tax and non-tax), but only if there is revenue surplus (zero revenue deficits). In the eight year period, from 2000–01 to 2007–08, Meghalaya was revenue surplus in six years (all but 2001–02 and 2004–05) (Figure 9.2). However, the revenue surplus is barely 2 per cent of GSDP and can at best cover only a small fraction of the additional investment requirements. Even with optimistic assumptions on the ICOR (Column 5, *Table 9.3b*), the (desirable) investment rate averages about 37 per cent of GSDP. Thus other feasible avenues of resources have to be rigorously explored.

Figure 9.2: Revenue Deficits as Percentage of GSDP



A possible source of investment lies in additional government borrowing, which adds to government public debt either through public accounts or other internal and external borrowings. This in turn results in an increase in the fiscal deficit in government accounts. Between 2000–01 and 2007–08, the fiscal deficit for Meghalaya has varied between 1.1 per cent and 6.3 per cent of GSDP (with an average of 3.8 per cent; *see Table 9.4*). In years of revenue surplus, the full measure of fiscal deficits may, arguably, be assumed to finance capital expenditures or new investments. Thus, revenue surplus and budgetary borrowing together allow for (on an average) about 5 per cent of GSDP as new investment or capital expenditure. In fact, capital expenditure as derived from budgets averaged less than 4.5 per cent of GSDP between 2000–01 and 2007–08.

Table 9.4: Revenue and Fiscal Deficits, 1987–88 to 2008–09

(Per cent of GSDP)

	Meghalaya		NER		NEREAM	
Year	**Revenue**	**Fiscal**	**Revenue**	**Fiscal**	**Revenue**	**Fiscal**
1987–88	-10.93	0.06	-1.00	7.47	-3.93	11.56
1988–89	-11.51	1.42	-1.06	6.50	-3.16	12.17
1989–90	-5.52	3.82	-0.50	7.23	-4.24	10.19
1990–91	-4.15	4.05	-3.17	3.92	-14.08	-0.59
1991–92	-3.01	6.10	-3.83	3.70	-7.14	6.23
1992–93	-1.38	7.07	-3.67	2.06	-9.37	1.49
1993–94	-1.19	5.80	-4.24	0.76	-8.44	1.64
1994–95	-4.41	2.12	-0.72	4.11	-6.04	4.72
1995–96	-5.19	2.60	-1.36	4.01	-5.98	5.87
1996–97	-5.16	1.05	-2.81	2.37	-5.47	7.11
1997–98	-0.47	5.06	-1.37	3.51	-1.80	9.18
1998–99	-0.59	5.01	-1.19	2.95	-3.08	5.85
1999–2000	-0.44	5.84	2.17	6.23	1.12	10.09
2000–2001	-1.33	6.30	1.83	5.99	1.94	9.89
2001–2002	0.75	4.93	1.92	5.85	1.42	10.23
2002–2003	-1.77	3.38	0.58	4.24	0.79	8.91
2003–2004	-1.61	3.82	-0.58	3.55	-4.56	4.74
2004–2005	0.86	5.39	-0.68	4.90	-3.62	6.83
2005–2006	-1.15	2.83	-3.56	1.43	-6.12	5.40
2006–2007	-3.37	1.07	-5.41	0.04	-9.94	2.24
2007–2008	-2.47	2.82	-5.83	0.21	-11.13	2.42
2008–2009	-6.26	1.50	-4.62	5.42	-10.32	10.24

Source: Authors' own computation, derived from RBI Study on State Finances, various issues.

Current borrowings, as reflected in the measure of the fiscal deficit, are not the only source of public sector investment. State corporations may make investments from their internal resources or from borrowing that may not be fully reflected in state budgets, unless the budgets and annual accounts of the public sector corporations are fully integrated. It appears that less than 15 per cent of investment needs are being met from public sources. The remainder of investment has to come from the private sector. In many cases, this can be facilitated through public-private partnerships.

9.3 GROWTH OF REVENUE AND EXPENDITURE

The investible resource position of a government is determined by its savings and borrowings programme. In turn, the measures of revenue surplus and fiscal deficit may be loosely construed to correspond with the savings and borrowings programme. However, the deficit indicators are only an ex-post rendition. The active measures constitute revenue and expenditure programmes.

Between 2000–01 and 2007–08, total revenues for Meghalaya show the lowest rate of growth as compared to the NER or NEREAM (*Table 9.5*). Growth rates of total revenues reflect a similar picture even for a longer period between 1987–88 and 2007–08. Further, for the period between 2000–01 and 2007–08, the rate of growth of each category of revenue (tax, non-tax, grants-in-aid, and contributions) in Meghalaya trails the rate of growth of the respective components for NEREAM. However, over a longer period, between 1987–88 and 2007–08, both tax and non-tax revenues in Meghalaya showed a significantly higher rate of growth (compare Columns 2 and 6, *Table 9.5*) than for NEREAM.

Table 9.5: Trend Growth Rates of Revenue and Expenditure

(Per cent)

	Meghalaya		NER		NEREAM	
	1987–8 to 2007–8	2000–1 to 2007–8	1987–8 to 2007–8	2000–1 to 2007–8	1987–8 to 2007–8	2000–1 to 2007–8
1	2	3	4	5	6	7
Receipts						
Total Revenue	11.47	12.13	12.24	15.71	12.05	15.23
Tax	10.82	19.00	11.89	17.78	8.85	21.21
Non-tax	13.86	13.45	11.05	22.41	9.76	20.27
Grants-in-Aid and Contributions	11.48	8.73	12.69	13.44	13.51	13.33
Expenditure						
Total Expenditure	11.92	10.96	12.06	11.83	12.11	11.86
Revenue	12.49	11.09	12.15	10.50	12.12	9.95
Capital	9.19	10.47	11.55	19.34	11.97	19.48

Source: Basic data from Public Finance Information System (Databank), National Institute of Public Finance and Policy.

The tax-GSDP ratio of Meghalaya increased from 7.14 per cent in 2000–01 to 11.61 per cent in 2007–08. Similarly, the tax-GSDP ratio for NEREAM has also increased from 6.54 per cent in 2000–01 to 11.24 per cent in 2007–08. Thus, despite the higher growth rate of GSDP and buoyancy in taxes, the tax-GSDP ratio for NEREAM is lower than for Meghalaya. But it is also apparent that in the last decade or so, NEREAM has been gradually catching up with Meghalaya, which is possibly losing its pre-eminent position in the NER. Alternatively, one may interpret this as an improvement in balanced development of the NER.

Total expenditure in Meghalaya has grown at a lower rate (compare Columns 3 and 7 in *Table 9.5*) than that for NEREAM. This is true for the period between 2000–01 and 2007–08, as well as for the longer period between 1987–88 and 2007–08. The rate of

growth of expenditure between 2000–01 and 2007–08 is lower than the rate between 1987–88 and 2007–08 for both Meghalaya and NEREAM. Further, analysis of the broad components of expenditure reveals that between 2000–01 and 2007–08, in Meghalaya the trend rate of growth of revenue expenditure was higher than the rate for capital expenditure (Column 3, *Table 9.5*). In the case of NEREAM, however, over the same period the trend rate of growth of capital expenditure is almost double the rate for revenue expenditure (Column 7, *Table 9.5*). This suggests that perhaps Meghalaya is the only outlier in the entire group of 11 special category states that has not accelerated its capital expenditure.

Between 2000–01 and 2007–08, the rate of growth of revenue expenditure in Meghalaya was slightly higher than that for NEREAM (compare Columns 3 and 7 in *Table 9.5*). In comparison, the rate of growth of capital expenditure in Meghalaya is almost half the rate observed for NEREAM.

Thus, capital expenditure in Meghalaya is critically straining existing infrastructure, with consequent social and economic costs in terms of growth and employment. This feeds back into revenue mobilisation performance as observed with a deceleration in tax revenues for Meghalaya. An urgent redressal of this situation appears to be desirable. The next section therefore details the structure of revenue and expenditure. The discussion is intended to examine any anomalies in the emergent structure that may seriously impede prospects for economic growth.

9.4 Structure of Revenue and Expenditure

The differences in growth rates of the components of revenue and expenditure have resulted in significantly altering their structure in the last decade. Thus, the share of grants-in-aid and contributions, which constituted more than two-thirds of revenues for Meghalaya in 2000–01, has declined to about 56 per cent in 2007–08 (Columns 2 and 3 in *Table 9.6*). For NEREAM this declined from more than three-fourths to about two-thirds over the same period (Columns 6 and 7, *Table 9.6*). Conversely, for Meghalaya the share of tax revenues (in total revenues) increased from about one-quarter in 2000–01 to more than one-third in 2007–08. The share of non-tax revenues has shown some increase over the period, but remains less than 10 per cent. The overall trend for Meghalaya and NER are however similar, with an increase in the share of tax and non-tax revenues and a decline in the share of grants-in-aid and contributions.

On the expenditure side, in contrast, Meghalaya presented a change in structure that was contrary to that for NEREAM. In Meghalaya, the share of revenue expenditure in total expenditure increased by about 3 percentage points, with an equivalent reduction in the share of capital expenditure. But for NEREAM, the share of revenue expenditure declined by almost 9 percentage points, with a corresponding increase in the share of capital expenditure.

Table 9.6: Structure of Revenue and Expenditure

(Per cent)

State/Region	Meghalaya		NER		NEREAM	
Year	2000–1	2007–8	2000–1	2007–8	2000–1	2007–8
1	2	3	4	5	6	7
Receipts						
Tax	24.99	36.18	34.02	37.51	17.17	22.57
Non-tax	7.63	8.15	7.28	10.72	5.40	8.14
Grants-in-aid and Contributions	67.38	55.67	58.69	51.77	77.43	69.29
Expenditure						
Revenue	82.68	85.19	87.18	80.80	83.75	73.96
Capital	17.32	14.81	12.82	19.20	16.25	26.04

Source: Same as *Table 9.4* and *9.5*

We further investigate the components of tax revenues and expenditures to see if there are similarities or differences in the respective trajectories. Segregating tax revenues into own-tax revenues and share in central taxes shows that between 2000–01 and 2007–08, for Meghalaya, there is some decline in the proportion of own-taxes (*Table 9.7*). NEREAM also presents a similar picture, though less pronounced.[38]

Table 9.7: Structure of Tax Revenue

(Per cent)

State/Region	Meghalaya		NER		NEREAM	
Year	2000–1	2007–8	2000–1	2007–8	2000–1	2007–8
1	2	3	4	5	6	7
Own	41.94	36.13	41.39	36.36	29.40	27.13
Share in Centre	58.06	63.87	58.61	63.64	70.60	72.87

Source: Same as *Table 9.4* and *9.5*

The proportion of revenue from share in central taxes is about 60 per cent for Meghalaya, and almost 70 per cent for NEREAM. Conversely, the proportion of own-tax revenues for Meghalaya is almost 10 per cent more than the corresponding proportion for NEREAM. A few perceptible changes are also observed in the distribution of revenue expenditure or capital expenditure. Almost two-fifths of revenue expenditure is incurred towards what is termed as 'non-developmental' expenditure (and includes fiscal and general services) in NEREAM. The proportion of such expenditure for Meghalaya is not only marginally lower but appears to depict a marginal decline between 2000–01 and 2007–08 (Columns 2 and 3 in *Table 9.8*). For NEREAM the proportion is almost unchanged in the same period (Columns 6 and 7 in *Table 9.8*).

[38] But there does not appear to be a clear trend as a significant fluctuation in proportions is observed for the intervening years.

Almost 60 per cent of developmental revenue expenditure in Meghalaya was incurred on social services in 2000–01. But this proportion has been declining and is close to one-half in 2007–08. Conversely, developmental revenue expenditure on economic services has increased in Meghalaya. The pattern is similar, though less pronounced for NEREAM (Columns 3 and 7 in *Table 9.8*).

In contrast to the revenue expenditure scenario, non-developmental capital expenditure entails only a small proportion that was less than 5 per cent of total capital expenditure in 2000–01. This proportion appears to be rising but remained less than 10 per cent in 2007–08. The remainder (above 90 per cent) is being incurred as developmental capital expenditure. Unlike the pattern emerging for developmental revenue expenditure, the proportion of developmental capital expenditure incurred on social services appears to be rising in Meghalaya. Again, in contrast to the scenario for developmental revenue expenditure, a larger fraction (between 60 to 70 per cent) of developmental capital expenditure goes towards economic services. The pattern is similar but relatively less pronounced for NEREAM.

Table 9.8: Distribution of Expenditure over Broad Services

(Per cent)

State/Region	Meghalaya		NER		NEREAM	
Year	2000–1	2007–8	2000–1	2007–8	2000–1	2007–8
1	2	3	4	5	6	7
Revenue Expenditure						
Non-developmental	37.16	34.52	39.35	38.58	39.37	39.24
Developmental (of which)	62.84	65.48	60.45	61.15	60.34	60.27
Social services	60.45	51.07	64.14	57.71	56.38	53.21
Economic services	39.55	48.93	35.86	42.29	43.62	46.79
Grants-in-aid and Contributions	0.00	0.00	0.20	0.26	0.29	0.49
Capital Expenditure						
Non-developmental	3.64	7.07	3.89	7.45	5.01	9.28
Developmental (of which)	96.36	92.93	96.11	92.55	94.99	90.72
Social services	36.01	41.89	25.52	29.44	32.32	33.63
Economic services	63.99	58.11	74.48	70.56	67.68	66.37

Source: Same as *Table 9.4* and *9.5*

Notes: (a) Non-developmental expenditure covers expenditure on (i) organs of the state, (ii) fiscal services, (iii) interest payments and servicing of debt, (iv) administrative services, (v) pensions and other retirement benefits, and (vi) miscellaneous general services. Grants-in-aid and contributions cover expenditure on (i) assignments to local bodies and panchayati raj institutions, and (ii) aid materials and equipment.

(b) Developmental expenditure covers expenditure on social and economic services. The sum of their proportions is 100 per cent of developmental expenditure.

(c) The sum of expenditures on non-developmental, developmental, and grants-in-aid and contributions is 100 per cent.

As discussed earlier, differences in the growth rates of components of revenue and expenditure have affected their structures. In turn, this has affected the structure of deficits. From the beginning of the last decade, revenue deficits showed a decline, and for the NER states as a whole, revenue deficits were quickly transformed into surplus that has been rising. This reversal of deficits to surplus also has to do with the promulgation of fiscal responsibility and budget management (FRBM) acts, duly incentivised by the recommendations of the Twelfth Finance Commission. Unfortunately, the effort appears more to satisfy accounting prudence than to influence expenditure efficiency and effectiveness that improves outcomes.

Among several causes impacting GSDP of a state and its consequent resource mobilisation capacity, issues in extant governance in the state play a critical role. The present polity of the state of Meghalaya does not present itself as a coherent, synchronised, and harmonious institution. In particular, this impacts not only the direction of public expenditure, but more so its effectiveness. Analogously, it presents difficulties in exercising tax or revenue efforts, with consequent influence on scope, level, and coverage of public services.

9.5 FINANCES OF THE AUTONOMOUS DISTRICT COUNCILS (ADCS)

Information on finances of the ADCs is scanty and difficult to locate. In this section we discuss information on the KHADC and GHADC from two different sources. On the basis of analysis of this information, some observations on the working of these ADCs have been made.

Information on funds received by GHADC has been taken from the Expert Committee Report (2006). *Table 9.9* provides information on the funds received by GHADC over the last 10 years. However, no information on expenditure was available. It is reported that a large part of these funds is used to support salaries of a large number of employees and functionaries (1,213). Excerpts from the Report (see Box 9.1) provide additional insights into ongoing tensions between the state government and GHADC, which adversely impact development programmes.

Box 9.1: *Interactions between the State Government and the GHADC*

Discussions with the councils revealed that no allocation has been received from the Twelfth Finance Commission in 2008 or 2009. Since 2005-06, the Council has not received funds from the Rural Development branch of the District Collector's office, because KHADC had not submitted its accounts, which has consequently affected the other two councils.

Further, the state government has not released the Council's share of forest revenues and major minerals in time. The state government also did not inform the Council how much tax they were collecting in this regard. Earlier, the councils received a 40 per cent share, but this has been reduced to 25 per cent. Discussions revealed that much of the resources were used for salaries, allowances and other administrative expenditure. There were a large number of employees, including traditional functionaries to whom salaries and allowances were paid. It is entirely believable that very little funds are left for development, in the circumstances.

Discussions with the GHADC revealed that there is a routine failure to pay staff salaries in the council. Quite often delays in payment of salaries have resulted in gheraos of the council by distraught family members of the staff and even forcible closing down of the councils. These are hardly conducive to a strong district council, capable of shouldering responsibilities of development. Council representatives therefore made a strong case for the Council to receive money through the mechanism provided in Article 275(i) of the Constitution, directly from the centre.

Source: *Expert Committee Report (2006)*

Table 9.9: Receipts of GHADC (total of ten years)

(Rupees crore)

Funds from the Centre	Funds received on account of the recommendations of the Eleventh and Twelfth Finance Commissions		25.36
	Construction of council buildings through civil works		
	Grants-in-aid for council's own plan schemes from the Rural Development Ministry		
Funds from the State Government	Grants-in-aid for rural road communication		20.09
	Grants-in-aid for forest protection schemes and other development works and plantations		
	Grant for maintenance of enforcement staff		
	Grants-in-aid for survey works and maintenance		
Funds from Council's Own Resources	Forest branch	Share of royalties from major and minor minerals	62.48
		Sale of timber and other forest produce	
	Taxation	Professional taxes	
		Share of motor vehicle tax	
		Taxes on cycles, carts and cars	
	Land revenue and other taxes	Land revenue	
		Revenue from *haats*, fisheries, cattle pounds, and ferry *ghats*	
		Settlement premium	
		House taxes	
		Water taxes and new connection charges	
	Total		**107.93**

Source: Report of the Expert Committee (2006)

Information on actual receipts and expenditure of the KHADC for the period between 2004–05 and 2007–08 has been obtained from its website and presented in *Table 9.10*. In 2005–06, expenditure by KHADC exceeded its receipts by almost one-quarter (*Table 9.10*). However, over the next two years, almost one-fifth of the receipts remained unexpended.

Table 9.10: Receipts and Expenditure of KHADC

(Rupees)

	2007–08	**2006–07**	**2005–06**	**2004–05**
Receipts	185,869,229	167,827,316	126,892,452	177,686,404
Expenditure	148,831,417	135,819,645	156,977,853	163,336,712
Deficit (-) / Surplus (+) (Row 1 – Row 2)	37,037,812	32,007,671	-30,085,401	14,349,692
Row 3 / Row 1 (Per cent)	20	19	-24	8

Source: Authors' own computation, derived from Budget Papers, Khasi Hill Autonomous District Council

District councils have an important role to play in local development, but they lack both the capacity to function as modern development institutions and the trust of the state government and traditional institutions to effectively carry out their statutory functions. There is an urgent need for the district councils to reorient themselves to cope with the demands of development in Meghalaya. The state government, the central Ministry of Panchayati Raj, and the Governor's office have a huge task in facilitating this. Given the massive magnitude of gaps in existing capacity, a sustained effort in this direction is required. We feel a professional agency should be engaged for this task.

9.6 Other Sources of Plan Financing: Non-Lapsable Central Pool of Resources (NLCPR) and Externally Aided Projects[39]

The Non-Lapsable Central Pool of Resources (NLCPR)

The Non-Lapsable Central Pool of Resources (NLCPR) comprises the accrual of the unspent balances out of the 10 per cent earmarked for the NER in the budgets of various ministries and departments. The broad objective is to promote development of infrastructure in the NER by increasing the flow of budgetary financing for new infrastructure projects and schemes. This applies to both physical and social infrastructure, such as power, roads and bridges, and infrastructure for education, health, water supply, sports facilities, etc. Funds from the Central Pool can be released for state sector and central sector projects, but these funds are not meant to supplement the normal Plan programmes, either of the state governments or the central ministries, departments, and agencies.

[39] A list of externally aided projects is given in Annexure 9.A1, Volume II

Budgetary provisions for the north-eastern states in the central plan of various ministries and departments has steadily increased from Rs 3,211.00 crore in 1998–99 to about Rs 15,526.82 crore in 2008–09. In 2006–07, total expenditure by the central ministries and departments in the NER was Rs 9,723.06 crore, and during 2007–08 it was Rs 1,836.52 crore.

Box 9.2: New Guidelines for Administration of NLCPR Projects

New guidelines for administration of NLCPR were issued on 6 August 2009, aimed at speedy completion of these projects:

- *State governments have to submit annual priority lists along with concept papers by 30 November every year.*
- *Retention of projects by the Ministry is to be completed in a month's time.*
- *State governments have to submit DPRs of retained projects within two months of retention.*
- *Examination of DPRs to be completed and projects to be sanctioned within two months of completion of DPRs.*
- *State governments have to award the work by tendering within three months of sanction of the project.*
- *Funds in the sanctioned projects will be released in three instalments of 40 per cent, 40 per cent, and 20 per cent.*
- *Funds are to be utilised within 12 months of their release.*
- *State governments have to transfer funds to the implementing agency within 15 days of its release.*
- *State governments have to complete the project by the target date (as given in the DPR of the state government) with a six month leeway; otherwise it will receive no more funds from the Ministry, and will have to complete the remaining work with its own resources.*
- *If, during implementation of a project, a state government wants to change the completion schedule, it has to be done at the level of the state Chief Secretary and with specific reasons at least six months before the original date of completion.*

Of the 67 sanctioned projects for Meghalaya, only 18 have been completed so far (as on 30 September 2009). The remaining 49 projects are at various stages of implementation.

Table 9.11: Meghalaya: Projects Sanctioned and Completed

(Rupees crore)

State	Projects Sanctioned		Projects Completed		
	No.	*Cost*	*No.*	*Cost*	*Percentage*
Meghalaya	67	600.84	18	148.27	26.87
Total for all NE States	1,070	8,256.96	499	2,396.71	46.64

Table 9.12: Meghalaya: Release of Funds under NLCPR (as on 30 September 2009**)**

(Rupees crore)

Year	Meghalaya	All NE States
1998–99	3.79	106.34
1999–2000	9.00	409.96
2000–01	31.88	309.25
2001–02	22.39	491.57
2002–03	23.77	550.00
2003–04	49.99	550.00
2004–05	21.71	650.00
2005–06	27.50	679.18
2006–07	38.58	700.00
2007–08	60.39	736.00
2008–09	94.82	727.41
2009–10	24.58	216.35
Total	**408.40**	**6,126.07**

Chapter 10

Building Capabilities of People and Institutions

10.1 INTRODUCTION

A human development approach places people at the centre of development. Rather than focusing on increasing incomes and output, the aim here is to create an environment such that the people of Meghalaya can realise their potential, expand their choices, and take advantage of emerging opportunities. Thus, instead of passively observing progress in other places, residents' capacities are enhanced so they become active participants in, and can contribute to and benefit from development taking place **in their region, country, and around the globe**. In fact, it may safely be said that no vision for the state can be realised if the political, social, and economic capacities of its residents are not built up adequately.

People's capacities are built in a variety of ways. Good healthcare and education can be said to be the underpinnings of the process, especially in Meghalaya with its overwhelming young population. Well nourished, healthy people, who have the basic skills and education to choose their vocation, are the basis and goal of a state with a developmental vision. No less important for full participation in the development process are the basic necessities of permanent housing with access to toilets, electricity, clean water supply, environmental sanitation, good road access, and mobile connectivity.

While literacy in the state is roughly on par with the rest of the country, the poor quality of education and shortage of vocational training and professional options in Meghalaya has led to a steady haemorrhaging of the best students from the state over the past decades. Healthcare, too, is an area of serious concern as the state's indicators, especially on infant, child, and female health, are nowhere in line with its literacy levels.

Table 10.1: Population: Share by Age Group, 2001

	2001				2011 Projected		
State	**0–14**	**15–29**	**15–65**	**65+**	**0–14**	**15–65**	**65+**
Arunachal Pradesh	39.8	26.37	57.8	2.4	33.1	63.6	3.3
Assam	36.6	27.17	59.6	3.8	31.8	64.3	3.9
Manipur	31.8	30.20	63.6	4.6	25.6	68.8	5.6
Meghalaya	41.6	27.13	55.5	2.9	34.9	62.0	3.1
Mizoram	34.6	30.56	61.6	3.8	28.6	66.7	4.7
Nagaland	35.1	32.13	61.8	3.1	31.1	65.1	3.8
Sikkim	33.6	30.72	62.9	3.5	27.4	68.3	4.3
Tripura	31.7	27.90	63.2	5.1	26.2	68.6	5.2
India	**34.3**	**26.58**	**60.9**	**4.8**	**30.7**	**64.1**	**5.2**

Source: 1. Registrar General of Population, 2. Census of India

Meghalaya has the largest proportion of people in the youngest age group out of all the states in the north-east, and indeed across the country (41.6 per cent of the people in Meghalaya were below 14 years in 2001 against a national average of 34.3 per cent), and even in 2011, the state is estimated to continue to have more than a third of its population below 14 years (*Table 10.1*). Education and healthcare have to, from the early years, adequately equip this vast emerging pool of youth with the skills and capabilities to engage politically, socially, and economically with the mainstream of national and global events. If this does not happen, we are likely to see an intensification of rural-urban migrations within the state as well as Meghalaya-rest-of-India migrations, and a widening of the intraregional disparities that now characterise the state.

10. 1.1 The Human Development Index: Developmental Imbalances

As a starting point to this exercise, one can look at how the state performs nationally in the human development context. Meghalaya's position is low and has been slipping in the national rankings of states by human development indicators — based on levels of education, health, and livelihoods (*Table 10.2*). In the most recent rankings in 2005, it is 26th out of 35 states and union territories, and second lowest in the north-east; its ranking has also slipped from 21st and 24th in 1981 and 1991, respectively.[40] On the rural HDI, its rank slipped from 20th position to 24th between 1981 and 1991, and has remained unchanged for 2005; and its ranking by the urban HDI has swung from 21st, to 10th, and back to 22nd, in the three years under consideration. However, a greater focus on human development outcomes, and appropriate state and local policies and measures could play a key role in building these capacities and bringing Meghalaya on par with neighbouring states like Mizoram and Nagaland, which ranked 4th and 7th in the 2005 HDI rankings.

[40] The ranking of all 35 states by HDI can be seen in *Table 10.A1* in the *annexure*.

Table 10.2: Human Development Index (HDI) Rankings for North-eastern States, 1981, 1991, 2005: Rural-Urban

	1981*			1991*			2005#		
	Rural	**Urban**	**Both**	**Rural**	**Urban**	**Both**	**Rural**	**Urban**	**Both**
Arunachal Pradesh	28	24	31	28	15	29	23	1	22
Assam	26	28	26	26	19	26	28	25	29
Manipur	2	5	4	7	12	9	10	17	11
Meghalaya	20	21	21	24	10	24	24	22	26
Mizoram	9	4	8	10	5	7	6	2	4
Nagaland	19	8	20	13	7	11	4	8	7
Sikkim	16	11	18	17	11	18	11	10	13
Tripura	23	12	24	20	20	22	19	20	23

Sources: *National Human Development Report, 2001

#Meghalaya Human Development Report

Note: The 2005 ranking is for a total of 35 states; rankings for the other two years are for a total of 32 states.

A closer look at the HDIs for the districts and their components across the districts (*Table 10.3*) reveals a picture of lopsided development in the state. Apart from being slow, human development and progress in the past decades has been focused only on some regions and urban areas.

The Rural-Urban Divide

Development in the state has been largely urban-centric and, within that, concentrated in Shillong, and to some extent in its other urban centre, Tura. It is not surprising that the two districts with the highest Human Development Index (HDI) rankings in the state, namely East Khasi Hills and West Garo Hills, are home to the two big urban centres, Shillong and Tura, respectively (Table 10.3).[41]

[41] District-level HDIs were calculated for the *Meghalaya Human Development Report*, which used the infant mortality rate (IMR) as the indicator in the health dimension mainly for reasons of reliability and comparability; for the knowledge indicator it used two — the literacy rate with two-thirds weight, and the combined gross enrolment ratio (primary to higher secondary level) with one-third weight; the standard of living was represented by per capita income.

Table 10.3: District-wise Human Development Indicators, Index and Rank, 2005

Districts	Infant Mortality Rate	Literacy Rate	Combined Gross Enrolment Ratio	NSDP*	HDI	HDI Rank
East Khasi Hills	34.51	76.98	63.10	24,793	0.676	1
West Garo Hills	18.13	51.03	65.99	13,782	0.571	2
Ri-Bhoi	60.63	66.07	50.47	14,752	0.496	3
South Garo Hills	102.01	55.82	85.52	23,321	0.484	4
Jaintia Hills	77.34	53.00	43.31	20,405	0.469	5
West Khasi Hills	86.17	86.17	65.64	9,926	0.405	6
East Garo Hills	90.60	61.70	60.91	12,047	0.396	7
Meghalaya	**52.28**	**63.31**	**62.87**	**17,595**	**0.55**	

Source: Meghalaya Human Development Report 2008, Government of Meghalaya
Notes: * Rs per capita current prices

In sharp contrast, rural Meghalaya still remains largely underdeveloped, with most of its inhabitants lacking access to an efficient transport network, good healthcare, educational facilities, and basic amenities. While this can partially be attributed to the scattered and sparse clustering of rural habitations which makes service delivery a more expensive and complicated task, it is also an outcome of the lack of political will from the state government, buoyed by the absence of supporting demand from local communities. Poor delivery systems and absence of rural infrastructure have stunted the ability of rural inhabitants to build capacities, greatly limiting their choices of livelihoods and leading to a poverty of access to basic amenities. These have, in turn, further widened the rural-urban divide, and increased migration to, and consequently the pressure on urban areas.

The Regional Divide

Of equal concern is the wide disparity in human development across districts (Table 10.3). The wide range of human development indices for the seven districts, from 0.39 to 0.68 across these districts, is a good indicator of uneven development and the extent of disparity across the state — with infant mortality rates ranging from 18 to 102, literacy from 51 to 86, gross enrolment ratios from 43 to 85, and per capita income from Rs 10,000 to 25,000. A more participatory, people-centric approach to development will promote more equal development outcomes across the seven districts in the state, and ensure that rural areas are not excluded by strengthening connectivity and communication links, improving employment opportunities and capacities, and ensuring better access to social services.

Women have a tremendous impact on human development outcomes, and their contribution to improvements in services has been well documented. The next section looks at building women's capacities in Meghalaya and empowering them as stakeholders in major decision-making processes at all levels.

10.2 THE GENDER DIMENSION: NEED FOR TRUE EMPOWERMENT

The matrilineal nature of society in the state, good education linked indicators like female literacy and enrolment, and a high sex ratio, especially vis-à-vis the rest of the country, mask major deprivations that women in Meghalaya face. These have impacted health related indicators, and some say even violence is faced by women in the state.

The deprivation which has the greatest impact on the development of women's capacities and their empowerment is the almost total absence of female engagement in political decision-making. While Meghalaya women have apparently been at the forefront of their society for decades, political representation has eluded them. They are banned from representation in their village durbars (the main decision-making body at the village level) and district councils (middle-level bodies), which have no women members. Not only can they never become tribal chiefs or village headpersons, they do not even have the right to elect candidates to these posts.[42]

Why is the political representation of women at various levels important for a developmental vision for the state? The entry of women in the planning and policy spheres has been shown to have a beneficial effect on the delivery of services, governance issues, general developmental activities, and promotion of human rights. Because of their greater sensitivity to family and women-linked matters, their voice in political decision-making has led to an improvement in living conditions and the inclusion of women's issues in a state's political agenda.[43]

[42] There have been various recommendations to introduce representation of women and non-tribals in the traditional Autonomous District Councils, each of which currently has 30 seats. One recommendation is that the number be increased to 40, and the Governor nominates five women and non-tribal members to each ADC. The other five may be elected as follows: by Syiems and Myntris from among themselves to the Khasi Autonomous Council; by Dolois from among themselves to the Jaintia Autonomous District Council; and by Nokmas from among themselves to the Garo Autonomous District Council. See http://lawmin.nic.in/ncrwc/finalreport/v1ch9.htm

[43] The delivery of services is especially important for women because in their primary roles as caregivers, they rely more on necessities such as healthcare, water supply, sanitation, and education for children than do men. Some ways in which women, through the Panchayati Raj institutions (PRIs), are changing governance are evident in the issues they choose to tackle — water, alcohol abuse, education, health, and domestic violence — and the entrance of women in substantial numbers leads to a change in structures so that they more closely reflect the concerns of women.

Box 10.1: *Women in the Local Durbar*

The Durbar is the traditional Institution at the village level. Traditionally, women were restricted from attending Durbar unless specifically called for a particular purpose. It has been considered abnormal for women to air their views and voice their opinions in public matters among Khasis and Jaintias. Among the Garos, for instance, women are not allowed to hold the position of Nokma; for Khasis the position of headman, and for Jaintias the position of Dalois are off limits for women. They are yet to get a place in representing women's issues in the local durbar and of electing its traditional heads, where only male members are legible to participate in the election. This is, of course, taking a different turn in urban areas. In the political arena, participation of women as candidates is still receiving a lukewarm response from the male members in particular, and the society in general.

Source: *From the Meghalaya Human Development Report.*

The lack of women's representation and participation in traditional administrative institutions in Meghalaya finds reflection at the state level, where very few women candidates are fielded: Agatha Sangma won the bye-election to the Tura Lok Sabha seat in 2008 after a gap of 56 years, when Mrs Bonily Khongmen had entered Parliament as the first woman MP from the then state of Assam in 1952.

Ironically, the fact that Meghalaya is a matrilineal society has worked against empowering its women, the assumption being that in such a society, women 'have all the economic power' and are already are assured of their rights. This is far from the truth, as even though women inherit property under the law, they have no freedom to sell or bequeath it as they wish, or indeed to profit or benefit from it, these decisions being left to the males of their maternal home.

"A lack of awareness about reproductive rights and health tie the women of NER, in particular, to domestic chores and play a role in replicating poverty and nullifying development initiatives. There is a propensity to see women only as members of Self-Help Groups (SHGs), as vehicles for savings and credit. The self-help concept should cover mass-based organisations of women who are legitimately concerned about the lack of food, drudgery, housing, potable water and employment."

The NER Vision Document, 2020

10.2.1 The Way Forward on Women's Empowerment

- Develop a strong, reliable and up-to-date database which will lay the basis for the introduction and monitoring of gender budgeting in all programmes; more conscious efforts to target women as beneficiaries in health and livelihood related schemes;

- Push forward on recommendations to include women's representation in ADCs and village durbars;
- Push forward on the NERCOMP/IFAD model of setting up parallel organisations at the local level that mirror panchayats in their functioning, which have proportional representation for women; and
- Build capacity among women to undertake electoral responsibilities. Women elected to local bodies need support beyond mere technical training; they are more effective in pushing ahead their agenda in local bodies when linked to other organisations, such as women's organisations and elected bodies, and acquire institutional knowledge related to health, education, credit, etc.

In the rest of this chapter we look at the major lacunae in building capacities among the people in Meghalaya, crucial areas that need to be tackled, and measures that will bring the state on par with the rest of the country and, if possible, beyond. The various facets of the human development map of Meghalaya have been thoroughly and expertly explored in the forthcoming publication *Meghalaya Human Development Report;* this section will draw from the conclusions therein and flag areas that need attention so as to build human capacities to realise a vision that is founded on a participatory approach to development.

10.3 EDUCATION: FOCUS ON SCHOOLING

The importance of equipping very young people in the state with the basics to bring forth their full potential cannot be overstressed. Not only do infants and children face nutritional challenges in this hilly state (as we will see in the following section on nutrition and health), but the quality and supply of elementary school education, and professional and vocational opportunities leave a lot to be desired. Even though post-school educational options have been increasing, a large segment of the higher achievers leave for further studies or training in urban centres in other parts of the country, and stay on to work there.

10.3.1 The State of School Education in Meghalaya: A Brief

Meghalaya is a state with a very young population — almost half (41.6 per cent) its population was below 14 years of age at the time of its last census, and 68.7 per cent was below the age of 30. What could prove to be even more challenging for Meghalaya, given its fairly high birth rate, is that by 2030 the number of children under 14 years of age will still account for over one-fourth of the population (26.0 per cent), marginally higher than the average for the country (Table 10.A2 in the Annexure). This has important policy implications for schooling in a state that plans to catch up with the rest of the country by 2030. Much of the human development planning it undertakes will need to focus on providing this young pool of people with the capabilities, environment, and opportunities to become effective contributors to the development effort, as well as beneficiaries from it. There are also the well documented spillover effects of education and literacy on other

developmental parameters, such as health and nutrition levels, unemployment, poverty, awareness, and participation in civic life.

Meghalaya has, for decades, been a sought after destination by other states in the region for its excellent educational institutes. As capital of the undivided state of Assam, over the decades, Shillong developed several excellent schools, boarding schools, and colleges, which attracted students from across the entire state and the north-east region. It provided a variety of educational choices both for schooling and college, as its educational institutes are managed by many different bodies — religious, district council, and state government. Even today, the share of private schools in the state is far higher than the average in the rest of the country (Table 10.A3 in the Annexure).

The *Meghalaya Human Development Report* contains an excellent in-depth analysis of the state of the education sector in Meghalaya. The draft State Education Policy for Meghalaya, 2007 has also highlighted several constraints to improved school education in the state, and a brief summary from both documents is given below, along with suggestions for future action.

10.3.2 Education: Constraints and Issues

As in other states, increased government funding under the *Sarva Shiksha Abhiyan* (SSA) in the past decade has seen some improvement in education indicators such as school enrolments, school infrastructure, hiring of teachers, and so on. Despite these, the state still lags behind the rest of the country on important indicators such as dropout rates, school infrastructure and facilities, and educational outcomes. The following section highlights some of these issues in schooling in Meghalaya.

Unequal Provision

The pattern of educational development over the past decades has resulted in unequal provision of education across the state both in terms of infrastructure and quality. For a start, schools, both secondary and higher secondary, are skewed in favour of the urban areas, particularly Shillong, and to a certain extent the urban centre of Tura; further, almost all the colleges and higher education institutes are also located in these two urban centres. There is high urban-rural disparity in gross enrolments, and rural enrolments in Meghalaya after primary school are below the national average (Table 10.4). The sharp drop in enrolment after primary school — especially noticeable among the boys — could indicate poor access to schools beyond the primary level in these areas.

Table 10.4: Gross Enrolment Ratio by Residence and Sex, 2004–05

(Per cent)

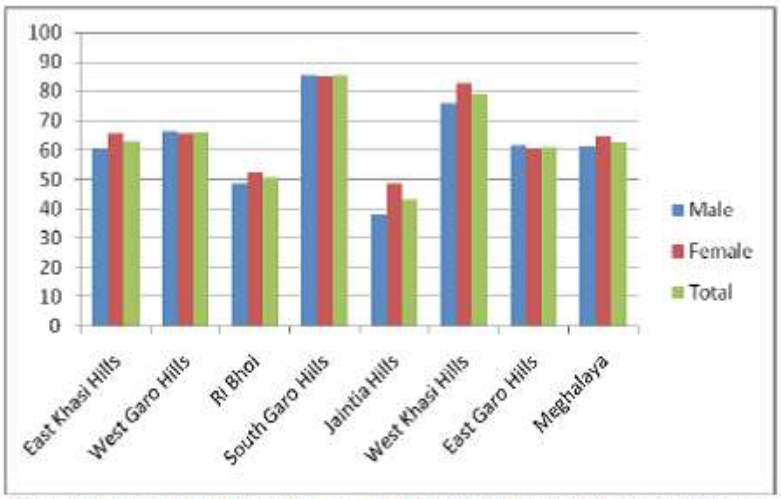
Standard	Rural			Urban		
	Boys	Girls	All	Boys	Girls	All
Meghalaya						
Primary	117.22	118.12	117.63	105.97	96.62	101.58
Middle	51.96	66.69	58.87	110.17	72.42	88.52
Secondary / Higher Secondary	44.29	48.46	46.28	91.47	93.76	92.66
Graduate and Above	1.29	3.32	2.36	16.91	12.67	14.53
All India						
Primary	112.05	106.86	109.63	105.92	100.10	103.09
Middle	80.96	69.44	75.57	85.35	82.71	84.07
Secondary / Higher Secondary	57.30	41.52	50.05	72.19	72.54	72.35
Graduate and Above	7.73	4.49	6.08	18.42	15.99	17.29

Source: From the Meghalaya Human Development Report, based on a special tabulation by the authors of the background paper using NSS 50th and 61st round Employment and Unemployment Data

Low rural enrolments tie in with a related issue of access to schooling. Children are more likely to go to school when they are located close to home. In some districts in the state, almost half the upper primary schools and one-fourth of the primary schools are situated a kilometre away from the habitations (Table 10.A4 in the Annexure). Given the difficult terrain of much of the state, this could deter many young children from attending school.

The disparity in urban and rural school enrolment is mirrored in the literacy rates. Thus, while the state has higher than average literacy rates both among women and men in the urban areas (Tables 10.A5a and 10.A5b in the Annexure), rural literacy remains lower than the national average, and dampens total literacy in the state to below the national average.

Figure 10.1: Gross Enrolment Rates by Districts and Gender, 2002



Note & Source: (a) The gross enrolment ratio is obtained by dividing the combined enrolment numbers by the population aged 5 - 19 years in 2001. The combined enrolment numbers are for Classes I - XII as per the All India Seventh Educational Survey, 2002.

(b) The figures are used for calculating the HDI and GDI of districts and are reported in Table 2.4 and Table 2.5

Further, while female enrolment *vis-à-vis* male enrolment is not an issue in the rural areas (Table 10.4 and Figure 10.1), it is the high intra-district disparities in school enrolment that need to be tackled to ensure more equitable human development in the state.

Infrastructure and Facilities

Many of the schools are in dismal shape, and operate from semi-permanent buildings, often with broken windowpanes, leaving children vulnerable to the elements. A large proportion still does not have the facilities necessary for their effective functioning, such as separate toilets for girls (Table 10.5), drinking water and blackboards (*Tables 10.A6*a and *10.A6b* in the *Annexure)*.

Table 10.5: Schools with Girls Toilets, 2006–07

(Per cent)

Districts	Primary Only	Upper Primary (UP) Only	Primary + UP	UP + Secondary	Primary + Secondary / Higher Secondary
East Khasi Hills	10.9	17.6	22.2	55.6	65.2
West Khasi Hills	2.7	9.3	15.8	37.1	29.6
Jaintia Hills	7.4	18.4	22.4	40.9	36.4
Ri-Bhoi	6.5	15.9	18.3	41.7	29.3
East Garo Hills	2.8	12.2	32.3	63.6	57.1
West Garo Hills	2.4	6.1	10.0	17.7	50.0
South Garo Hills	3.4	3.2	0.0	100.0	100.0

Source: DISE, 2006–07

Dropouts

Dropout rates are far higher in the state than the average for the rest of the country (Annexure Table 10.A7), and have been increasing. The reasons have been well documented and varied: a non-conducive school environment and untrained teachers have been acknowledged to be responsible to a large extent. The Eleventh Plan attributes high dropout to a "poor school environment, curriculum and under-trained and under-qualified teachers."

Quality of Education

In recent years, the overall quality of education in the state has been declining. Schools have ceased to attract the best students in the region, and post-schooling, most of the best students from within the state choose to move outside the region for higher education or training programmes. An independent assessment of rural children's educational performance across all states[44] shows that among all the north-eastern states, Meghalaya has the lowest proportion of children who can read at the highest (story) level, and that this is half the average of children across the country. Its performance in arithmetic also raises a red flag, as it is the only state in the country with fewer than 20 per cent (18.69 per cent) of its rural children being able to perform division at the grade 5 level, thus making it the worst performing state in this regard (*Table 10.6*).

Table 10.6: Assessment of Rural Children's Educational Performance: Meghalaya versus India, 2009

	Reading Assessment					
	Nothing	**Letter**	**Word**	**Paragraph**	**Story**	**Total**
India	6.93	14.95	14.44	16.86	46.81	100.00
Meghalaya	10.97	29.07	15.74	15.84	23.38	100.00
	Arithmetic Assessment					
	Nothing	**NR1**	**NR2**	**Subtraction**	**Division**	**Total**
India	6.91	15.47	19.57	21.61	36.44	100.00
Meghalaya	10.91	21.69	23.62	25.09	18.69	100.00

Source: Annual State of Education Report, ASER 2009 at http://www.asercentre.org/index.php

Notes for Reading: All children in the age group 5–16 are given a "floor level" reading test in the language of their choice, with the highest level equal to Standard 2. Each child is marked at the highest level s/he can comfortably read.

Notes for Arithmetic: All children in the age group 5–16 are administered the "floor level" test of basic arithmetic, and each child is marked at the highest level s/he can comfortably perform as per the following criteria:.

Division: child can solve three-digit by one-digit division; Subtraction: child can solve two-digit by two-digit subtraction with carryover; NR2 (Number recognition 11–99): child can identify four out of five numbers from 11 to 99; NR1 (Number recognition 1–9): child can identify four out of five numbers from 1–9; Nothing: child identifies fewer than four out of five single digit numbers correctly.

[44] http://www.asercentre.org/index.php

Teaching

The teacher is the most important factor in an education system, and the low proportion of trained teachers in the state has spawned issues related to the quality of education, as demonstrated in Table 10.6. Efforts to expand elementary education for all children to meet targets set by the SSA have resulted in an expansion in the provision of school related infrastructure and facilities. However, Meghalaya, like most states across the country, has found it far more challenging to staff this vast expansion in classrooms with adequately trained teachers.

Table 10.A8 in the Annexure shows the share of teachers in the state who have been trained, which declines as one goes to the higher sections. The intention during the Eleventh Plan was that 55 per cent of untrained elementary teachers (the total number was around 22,000 at the beginning of 2007) would be trained by 2010.[45] However, how much progress has been made remains to be seen. Secondary and higher secondary school teachers are largely untrained, and in fact, the share of trained teachers was only 30 per cent in 2007.[46]

10.3.3 Education: The Way Ahead

Universal Enrolment and Reducing Dropout Rate

The state's Eleventh Plan has ambitious plans to achieve universal enrolment among the 6–14 year olds under the SSA by opening new primary schools, upper primary schools, EGS, and AI centres. Several factors feed into the high dropout rates, apart from lack of access to schools. These range from poor school infrastructure, such as amenities and facilities, irrelevant curriculum, and the absence of teachers or poor teacher instruction. A revision of curriculum is currently being taken up by the DERT. A recent evaluation by the North-Eastern Hill University in Meghalaya has found that enrolment and retention has improved as a result of the midday meal programme.

The absence of schools close to where children live, especially in the lower grades, has an inevitable negative effect on enrolments and dropouts. In fact, this is an issue faced by many of the hill states in the country. The scattered nature of habitations and terrain in the rural areas of the state make the provision of schooling — and all the other social services — difficult and inefficient. Innovative solutions have been promoted by the SSA to deal with similar situations, such as the mobile teacher initiative in Mizoram to reach children of *jhum* farmers in the western hills. Instead of children going to school, the teacher brings schooling to the children. He/she cycles to the settlements, carrying his blackboard, teaching supplies, and textbooks, and teaches local children in their own surroundings.

Making rural schools more accessible will help stem the flow to urban areas for all levels of education. As young people stop needing to leave their rural surroundings in search

[45] Education section of State Eleventh Plan
[46] Education Policy

of educational opportunities, they will better integrate with and contribute towards developing rural society and the economy.

Quality of Teaching: Training and Recruitment

- The state has four teacher education colleges which can train and equip teachers with qualifications to teach in secondary or higher secondary schools. The capacity of these colleges needs to be increased to accommodate not only in-service but also pre-service trainees.
- There is a huge backlog of untrained teachers at the elementary level. The DIETs are expected to deal with the backlog of training, but they lack the capacity or the space to deal with the current pool of untrained teachers. They need to be strengthened so that they can help wipe out the backlog of untrained teachers, and to facilitate the adoption of a policy of appointment of only pre-trained teachers.
- Recruitment of teachers should be streamlined, and guidelines formulated and carefully implemented to ensure objectivity in postings and transfers. Minimum educational qualifications for school teachers need to be raised and strictly enforced.

Active Community Participation

Management of schools is increasingly taking place through school management committees and village education committees comprising members of the local community. In fact, the most important initiatives that impinge on education, such as the *Sarva Shiksha Abhiyan*, emphasise deep community ownership in implementation through school management committees, village and urban slum-level education committees, tribal autonomous councils, and other grassroots structures in the management of elementary schools. These committees look into school improvements, and monitor the functioning of these institutions. However, these committees in Meghalaya have largely proved ineffectual in tackling issues related to teacher absenteeism, hiring of qualified and trained teachers, improving school infrastructure, quality of instruction, and overall educational quality.

Greater empowerment of these committees and increasing the accountability of teachers to committees has had successful outcomes in Nagaland's well documented communitisation initiatives. The devolution of similar responsibilities to local government institutions functioning in Meghalaya could have the same effects, but they need to be accompanied by a shift in accountability to parents and an increase in awareness among people about their rights. Most local communities would need some capacity building to improve their management skills, and their ability to act as pressure groups to raise the overall level of school outcomes. Here, non-governmental organisations (NGOs) or community based organisations (CBOs) can play a key role in increasing awareness, so that improvement in the overall supply and quality of education becomes a demand driven

process propelled by the beneficiaries. For this to be made into an effective exercise, the capacity of local NGOs and CBOs will first need to be built up.

10.4 HEALTHCARE AND NUTRITION

Meghalaya is one of very few (only eight) states in the country in which over two-thirds of all households (65 per cent) use government health facilities when they are sick, in contrast to the national practice where on average only 35 per cent of people use government facilities (see Table 10.A9 in the Annexure). This could be the outcome of the low supply of private health services in the non-urban areas, as the wide dispersion of homes and hamlets makes private provision of health services unprofitable outside urban areas.

Among the few homes in Meghalaya that do not rely on government facilities, the most commonly reported reasons for not doing so are the absence of a nearby government facility and the poor quality of health care in government hospitals.

10.4.1 Major Issues in Healthcare Provision

The problems faced in the provision of healthcare services in Meghalaya have been extensively explored and analysed in the *Meghalaya Human Development Report*.[47] In brief, healthcare services in the state need to be drastically improved. Services have not been able to meet the needs of the people, let alone keep up with the increase in communicable and non-communicable diseases in the state, and worse, the availability of healthcare is poorest in areas where it is most needed. At the broader level, services suffer from poor and declining public funding, lack of long term planning in health services, poor coordination among the services provided by directorates, and low absorption capacity for programme funds. The outcomes are severe gaps in and inefficient use of staff, infrastructure, facilities, drugs, and resources. In fact, the almost complete absence of good quality medical services and facilities has propelled residents of the state to seek medical care outside en masse, as described below:

"In Meghalaya, the dependence on external medical diagnosis and healthcare is even more pronounced. Late in 2004, the Meghalaya state government announced, with some fanfare, the inauguration of a 'Meghalaya House' in Vellore, Tamil Nadu, to "provide accommodation to Meghalaya people going for treatment at the Christian Medical College" there. Reportedly, the state government has so far paid Rs 6,500,000 to the Tamil Nadu Housing Board for the 10 houses purchased solely to accommodate those from the state who travel to Vellore — this is a high-traffic route — seeking medical diagnosis and healthcare."[48]

[47] See Chapter 3: Health and Health Care Services in Meghalaya

[48] From "Nagaland has 500 doctors for 2 million people" by Rahul Goswami, infochangeindia.org, June 2005; infochangeindia.org

We discuss below some of the main issues related to health outcomes in the state:

Public Health Spending A root cause of the poor healthcare outcomes in the state is the low and declining levels of public spending on health, which mirrors the situation in the rest of the country. Over the past decade, instead of raising the share of spending on health and family welfare, the state government has allowed it to steadily slide from 8 per cent of total expenditure in 2001–02 to 3.9 per cent in 2008–09 (*Table 10.7*).

Table 10.7: Expenditure on Health and Family Welfare in Meghalaya

Year	State Total Expenditure *(Rs lakh)*	State Expenditure on Health and Family Welfare *(Rs lakh)*	Share of Expenditure on Health and Family Welfare *(% of total)*
1999–2000	85,864.37	6,368.00	7.4
2000–01	1,03,697.08	7,050.59	6.8
2001–02	1,02,447.99	8,206.93	8.0
2002–03	1,09,579.18	8,186.40	7.5
2003–04	1,82,084.77	8,256.43	4.5
2004–05	2,07,234.21	9,194.87	4.4
2005–06	2,00,709.28	9,602.81	4.8
2006–07	2,32,010.25	9,910.97	4.3
2007–08 (RE)	3,44,846.82	12,742.89	3.7
2008–09 (RE)	3,97,322.38	15,484.94	3.9

Source: MHDR, 2008 from Government of Meghalaya "Budget at a Glance", various issues

Poor Child-Related Healthcare and Nutrition

In this state with its young population, the importance of ensuring good health amongst the youth to help utilise their full potential cannot be stressed enough. Infants and children in Meghalaya face severe health and nutritional challenges. While some medical and health related initiatives for children have resulted in improved outcomes for their health, there are other alarming trends that need to be tackled immediately.

On the positive side, the infant mortality rate (IMR)[49] for Meghalaya has improved over the past 15 years (from 64 to 45), and is almost at par with the country's IMR of 44 (Table 10.A10 in Annexure). Vaccination coverage of children up to two years has also improved considerably, from 14 per cent of children to 33 per cent between 1998–99 and 2005–06, although this still means that only one-third of the children in the state are immunised against major illnesses such as tuberculosis, DPT (diphtheria, pertussis, tetanus), polio, and measles, which is far below the national average of 44 per cent of all infants being immunised (*Table 10.A11* in *Annexure*).

[49] IMR is the number of infant deaths per 1,000 live births.

Table 10.8: Trends in Child Nutrition (Children under 3 years)

(Per cent)

	Year	Stunted	Wasted	Underweight
Meghalaya	1992–93	47	18	44
Meghalaya	1998–99	45	13	38
Meghalaya	2005–06	42	28	46
India	2005–06	45	23	40

Source: National Family Health Survey-3

One of the most alarming trends relates to the nutritional status of children in Meghalaya. Almost half the children (42 per cent) under three years of age in the state are stunted, which means that they are too short for their age, indicating they have been undernourished for some time. An even larger share (46 per cent) of children in the state is underweight — a result of chronic and acute undernourishment (Table 10.8).

A large proportion (28 per cent) of children under three years of age was wasted — too thin for their height — as a result of inadequate food intake or a recent illness. In fact the NFHS-3 summary result flags "nutritional problems" in Meghalaya as a cause for concern.[50] A bigger cause for concern is that rather than recognising and tackling these important problems relating to children in the state, the proportion of children found to be wasted and underweight has been increasing since 1992.

Poor Female Health and Nutrition

The absence of a local body to plan and monitor local level delivery of health services, as well as the exclusion of a female 'voice' from the village bodies has manifested itself in poor health and nutrition indicators for women and children. A shockingly low proportion of women in Meghalaya (7.6 per cent) have had contact with a health worker, including auxiliary nurse midwife, woman health visitor, *aanganwadi* worker, or community health worker (the country average is 17.3 per cent) (*Table 10.A12* in Annexure).[51]

Table 10.9: Institutional Care and Antenatal Care (Births in the last 3 years)

(Per cent)

	Women having Institutional Deliveries		Women Availing Any Antenatal Care	
	Meghalaya	**India**	**Meghalaya**	**India**
NFHS-1	31	26	55	65
NFHS-2	17	34	54	66
NFHS-3	30	41	68	77

Source: NFHS-3

[50] "…under nutrition is most pronounced in Madhya Pradesh, Bihar, and Jharkhand. Nutritional problems are also substantially higher than average in Meghalaya and (for stunting) in Uttar Pradesh. Nutritional problems are least evident in Mizoram, Sikkim, Manipur, and Kerala," http://www.nfhsindia.org/NFHS-3%20Data/VOL-1/Chapter%2010%20-%20Nutrition%20and%20Anaemia%20%28608K%29.pdf

[51] Data for 2005–06, NFHS-3

Further, while institutional deliveries have been increasing on average across the country, the proportion of women in Meghalaya who have had institutional births has actually fallen since this was first monitored in NFHS-1 (Table 10.9). Another indication of Meghalaya women's lack of exposure to institutional healthcare is the low level of mothers availing antenatal care, which has resulted in high levels of anaemia among women (Table 10.A13 in Annexure).

Shortage of Medical Personnel

As in most parts of the north-east, Meghalaya suffers from a major shortage of medical and support healthcare staff, especially in the rural areas, and at the secondary and tertiary levels of healthcare. There is a severe shortage of specialists, especially in obstetrics and gynaecology, paediatrics, general surgery, and anaesthesiology, most acutely felt in the community health centres (CHCs) (Table 10.A14 in annexure), and healthcare suffers from poor referral services as well. The newly commissioned medical college in the state, the North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences (NEIGRIHMS) — the first medical college in the state — still has several vacancies in various departments. Healthcare is further hampered by the low skills base of existing medical and health personnel, and their lack of exposure to recent advances and technological innovations.

10.4.2 Health: The Way Forward

Improved Monitoring and Supervision

Better monitoring and supervision of the everyday functioning of health facilities are necessary to raise services to the desired level, and the state has been experimenting with different ways to do this. Two such cases are documented below and, given their success so far, these models could be scaled up across the state.

Hospital Management Committees: The Rogi Kalyan Samiti

This is a management structure in which the health centre or hospital is managed by a committee made up of members belonging to local NGOs, local elected representatives, and government officials. The committee is responsible for the centre's functioning, and has a mandate to generate and use its own funds to ensure efficient functioning and the provision of quality health services.

Box 10.2: *Outsourcing Health Management I:*
The Hospital Management Committee (Rogi Kalyan Samiti – RKS)

The first hospital in Meghalaya to experiment with a hospital management committee or RKS was the government-run Ganesh Das Hospital in Shillong in February 2006. The society comprises eight members, two of whom are women. Its main functions are:

- *Maintenance of the hospital in an environmentally sustainable manner;*
- *Acquiring equipment and expanding hospital buildings;*
- *Improving boarding and lodging for patients' attendants;*
- *Partnering with private providers for services such as cleaning, laundry, diagnostic facilities, and ambulances; and*
- *Developing and leasing premises for generating funds.*

Private wards used to be the only source of income for hospitals, but the funds went to the state government. With the RKS' mandate to generate its own funds, it can keep the money generated from private wards and other sources like user fees, donations, renting out of space for shops, and so on.

With its own source of funds, the hospital has the flexibility to prioritise its spending on medicines, equipment, and minor repairs, without waiting for government approval. Funds for schemes such as the Janani Suraksha Yojana (JSY) under the National Rural Health Mission (NRHM) are now given directly to the RKS from the State Health Society, which has improved the disbursal process for beneficiaries. Community involvement has added a sense of ownership, and improved the overall management and services of the hospital. The number of patients going to the hospital has increased, and so has the number of referral patients to PHCs and to district hospitals.

The concept was first applied in the Ganesh Das Hospital in Shillong (see Box 10.2 for details) and is now being extended to the PHC in Mawphlang which caters to 65 villages and 3 sub-centres. It has a ten member RKS with representations from the church, school, and a community based organisation, with the village headman as the member-chairperson. Each member contributes to the society in her/his own capacity. The church leader has provided an ambulance, and the CBO, Sengkynthei, has supplied dustbins. The chairperson, who also works with the state Public Health Engineering Department (PHED), has donated benches. His links with the PHED have proved beneficial in prioritising road building in the area, which has benefitted patients living some distance away from the centre.

Public-Private Partnerships with a Private Trust

Following the example of its neighbour Arunachal Pradesh, the state government has invited a private trust, The Karuna Trust, to manage health centres in Meghalaya (see Box 10.3), through a public-private partnership (PPP) model. This was a new concept for residents of Meghalaya, who initially opposed it, thinking it was a form of privatisation which would require them to begin paying for services. The Trust had to conduct public meetings in the areas served by the health centre to explain how the PPP would work, and to assure people of their right to demand services.

Although these centres are not far from the capital, their communities have been deprived of primary health care. In the past, health centre staff appointed by the government lived in Shillong and would commute to work, with the result that they barely stayed 2–3 hours at the centres.

The main problems faced in services delivery in Meghalaya are lack of awareness among the community about its rights to demand services and the poor infrastructure in the centres.

Box 10.3: *Outsourcing Health Management II:*
The Karuna Trust in Meghalaya

The Karuna Trust has taken over the management of one community health centre (CHC) and two primary health centres (PHCs) in the East Khasi Hills district since March 2009. These are the Ichamati CHC near the Indo-Bangladesh border, and the Mawlong and Mawsahew PHCs.

The Trust has committed to maintaining and operating the health centres along prescribed health and safety norms, and providing the following:

24 hours emergency/casualty services; out-patient services six days a week, 24 x 7; 5–15 bed in-patient facilities; 24-hour labour room and essential obstetrics facilities; minor operation theatre facilities; 24-hour ambulance; essential medicines free of cost; laboratory testing facilities at the PHC level; national health programmes such as the National Rural Health Mission; outreach/IEC activities through medical camps; and management of the sub-centre attached to the PHC/CHC.

The Trust manages the entire operations of health centres, from recruiting new staff, paying salaries, stocking medicines, and so on. It regularly liaises with the government, and tries to ensure community participation through the rogi kalyan samitis, VHSCs, and so on. As in Arunachal Pradesh, the main problem the Trust faces in Meghalaya is a shortage of doctors, specialists, and GNMs, and a high turnover of staff.

While road communication and infrastructure are better in Meghalaya than in Arunachal Pradesh, bus services to the centres are infrequent. Also there are no telephones or mobile services in Mawlong; while Ichamati and Mawsahew are connected through mobile phones, connections are erratic. The power supply to all the PHCs is erratic, and none of them have an ambulance.

Source: From The Karuna Trust (by e-mail)

10.5 UNEMPLOYMENT AND SKILLS DEVELOPMENT

Development is ultimately measured by the people's quality of life and welfare — key determinants of which are their income and employment levels, and access to basic social and economic amenities. Raising income and employment levels will call for building up the skills and knowledge base of youth and other people in the state, so that they can expand their choice of employment options, and improve their income-earning capacity. This is vital for the realisation of the Vision, as moving the state to a higher growth path will require the creation of new skills, as well as a scaling up of old ones.

This section of the report looks at the supply side of unemployment in the state, focusing on building capacities in people for employment, for self-employment, and to meet the needs of the growth spurt in the economy. Demand side factors such as the lack of absorptive capacity in the economy for educated people in the organised sector, low levels of private investment, slow growth of industry and services, and the factors that hamper these will be dealt with in the relevant sections.

10.5.1 Unemployment in Meghalaya

The state suffers from structural unemployment. As we mentioned earlier, Meghalaya has the largest proportion of its population in the 'young' category, which means a large pool of people of employable age, and an equally large pool poised to enter when they finish their education and training. However, the structure and development of the economy has thrown up few opportunities in the organised sector outside the government, and in the last decade even public sector employment has bottomed out. Schemes and opportunities for self-employment have had little success, as these are conceived in a vacuum with little planning for forward or even backward linkages. At the same time, the low skills base among the local population has meant that almost all the labour for construction related jobs, repair work, and so on, has to be brought in from outside the state.

One indication of the unemployment situation can be had from the numbers registered in the state's Live Register of Unemployment Exchanges, which was 37,396 in 2005. However, this is typically a vast underestimation of the actual situation, as it only indicates those who choose to list themselves. A more accurate picture is given by the NSSO data (*Table 1*). Unemployment is particularly high in the urban areas in the 15–19 age group, in the 25–29 age group for men, and in the 20–24 age group and 25–29 age group for women. Further, while rural unemployment rates have increased marginally between 1993–94 and 2004–05, the real increase has been in urban rates, especially for men.

Table 10.10: Meghalaya: Unemployment Rate by Age, 1993–94, 2004–05

(Per cent)

Age Group	Rural			Urban			Total		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
1993–94									
15–19	0.05	0.00	0.03	9.71	0.00	6.64	0.53	0.00	0.33
20–24	0.65	0.00	0.30	6.70	16.10	10.53	0.98	0.50	0.72
25–29	0.00	0.00	0.00	0.84	11.41	3.66	0.08	0.56	0.28
2004–05									
15–19	0.00	0.00	0.00	29.41	3.01	14.33	1.55	0.35	1.10
20–24	0.42	2.49	1.48	2.56	14.86	8.08	0.61	3.38	2.02
25–29	0.06	1.08	0.53	11.12	10.36	10.75	1.27	2.14	1.68

Source: From *Meghalaya Human Development Report,* Table 6.17; special tabulation by authors of the background paper based on unit record data on employment and unemployment conducted by the NSSO

Another relevant factor is that the unemployment rate tends to be high among the best educated, and that the rate increases as education levels increase. Thus, in 2004–05, the unemployment rate went from zero for the lowest educated level (illiterate) to 8.01 per cent for the highest level (graduate and above in general subjects), with 11.29 per cent for females and 3.76 per cent for males. This high discrepancy between female and male rates for the highest educated levels is largely because of the high female unemployment rate of 22.26 per cent in the rural areas.[52]

A survey in 2003 by the Institute of Applied Manpower Research[53] shows that most of the unemployed (74.8 per cent in the urban areas and 54.2 per cent in the rural areas) are looking for jobs with the government. Interestingly, in both areas, more women than men are looking for these jobs (63.2 per cent of rural women and 77.4 per cent of urban women). The next most sought after occupation is self-employment in business or trade, especially in the rural areas, with 22.6 per cent of people (30.1 per cent male and 14 per cent female) listing this as their preferred occupation.[54] The private sector attracts only a very small proportion (3.7 per cent in the rural areas and 5.8 per cent in the urban areas) of the unemployed, which could be a reflection of the prevailing condition of and perceived prospects in the private sector in the state.

There is no dearth of higher educational institutions in Meghalaya, which has 56 colleges (3 government, 15 deficit, 10 *ad hoc*, 8 newly permitted, and 20 unaided). The state was once the educational hub of the north-east, but it appears to have lost its competitive edge, and while the migration of people for work and study is desirable from various viewpoints — professional, cultural, and so on — the economy of the state would benefit

[52] From *the Meghalaya Human Development Report*

[53] Institute of Applied Manpower Research, New Delhi, IAMR Report No. 8/2006

[54] *Table 6.20* in *Meghalaya Human Development Report*

immensely from a reverse 'brain drain' of well qualified and experienced people, both local and non-locals.

New professional and training institutes have recently been set up such as the Indian Institute of Management Shillong, North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences (NEIGRIHMS), teacher training institutes, and so on. However, many of the new and old institutes are hampered by a shortage of qualified academics and teachers, and the quality of the training imparted will only be as effective as the quality of the teaching staff.

10.5.2 Laying the Skills Foundations and Creating Opportunities

There has been a steady migration of youth from the state in search of better education, skill enhancement and training, and employment opportunities — a migration that has begun to escalate as the rest of the country moves ahead, young Meghalayans' aspirations increase, and opportunities in the state continue to stagnate. Rising unemployment among the youth is a matter of serious concern in any part of the country. In a state which has recently been riven with insurgent sentiment, it can have a catastrophic effect on the political stability of the state if it is not dealt with immediately.

Relevant training and skills development are important to realise the development vision for Meghalaya for three main reasons:

- The establishment of new services and industries in the state (being recommended in this vision document), and modernisation or rejuvenation of traditional areas will require a complementary pool of skills, which should ideally be provided by local residents. The multiplier effects of setting up new institutions such as the IIM or NIFT, for example, can be fully experienced by the state when there are complementarities in place, such as an experienced, trained workforce, in addition, of course, to physical infrastructure, ancillary services, and so on.
- Further, the right kind of training and education is important to tap into or build on the innate skills and interests of the youth of the region, whether in the area of IT, the hospitality or music industry, education, nursing, graphic design, or fashion.
- A third reason for providing good training is to develop skills that are necessary for realising the development vision, but are in short supply in the region. These include the need to train professionals in the areas of teacher training, healthcare, medicine and veterinary sciences, horticulture, including medicinal herbs, etc.

The *Meghalaya Human Development Report* contains several sound recommendations for increasing employment opportunities in the state. From the demand side, there are several suggestions, many agro-based, while others are in the services

(banking, tourism, IT, and healthcare industry) sectors. There are also supply side recommendations, such as an expansion in the courses offered by technical institutes. Underlying these suggestions, the report stresses the need to build up infrastructure and basic amenities, especially in the rural areas, before any large scale expansion in employment opportunities can take place.

In its Eleventh Plan, the government stated its intention to strengthen vocational training by increasing the number of ITIs in the state, and by expanding the skills taught. However, before doing so, it may be judicious to carefully analyse the current and projected needs of the state economy, as there appears to be a significant imbalance between this analysis and the training programme of ITIs, which still offer skills that are in decline rather than those in emerging areas of the economy. Towards this end, the Eleventh Plan also had an ambitious plan to promote training in information technology (see Box 10.4), and drew up the IT Vision 2020.

Box 10.4: *State-promoted IT Training*

The state government has drawn up an IT strategy titled IT Vision 2020 which deals with developing ICT for the state and promoting IT education. One of its objectives is to use ICT to create jobs within the state in order to stem the flow of qualified youth from Meghalaya to other areas to find jobs in the IT sector and software companies. In fact, the government has hopes that this strategy will eventually increase state GDP, and lead to socio-economic uplift and an improvement of human development indices.

The IT Department has envisaged the need to have a finishing school in the IT sector. The school will provide training, expertise to students and youth, and also create a talent pool to make them employable in the rapidly growing ICT sector, and meet the local needs of the NeGP. The government intends to train 2,000 students into IT professionals over two years to prepare them for the job market. This is an area that seems to still have infinite scope across the country and in the state.

Source: From the state's Eleventh Plan

One more recommendation that can be added to those presented in the Eleventh Plan and the *Human Development Report*: this is an area that would greatly benefit by inputs from the private sector, to map skills that could be in demand in the near future in the training process via suggestions for curriculum content, special lectures, as a venue for practical training, and eventually in recruitment.

10.6 BUILDING INSTITUTIONAL CAPACITY

Realisation of the vision based on broader participation from the people in Meghalaya will require organisational entities and structures in the state to play a proactive role in the process. Almost all the institutions in the state are weak and not functioning to full capacity. The World Bank in its most recent Country Strategy has identified that in the "North Eastern states, which face significant capacity constraints, the WB would engage in capacity building, analytical work, and possibly lending in selected priority sectors and dialogue on regional issues."[55]

The shift in the policy stance from top-down planning will also call for a substantial shift in the way institutions function currently, so as to provide an effective bridge between the policy context of the vision and the enactment of directives. A wide range of institutions need to be engaged in playing a supporting role — government agencies and departments, academic and research institutes, non-governmental and community-based organisations, etc. Institutional capacity building focuses on overall organisational performance and functioning capabilities, as well as the ability of an institution to adapt to change.

10.6.1 The Different Institutional Agencies

Government Institutions and Agencies

The need to build institutional and administrative capacity among public entities is becoming an increasingly explicit goal of development policy in general. In the state of Meghalaya, it is vital, as many of the key administrative institutions lack the training, ability or even flexibility to work as effective agents in a participatory developmental process. The inefficiencies inherent in traditional public administrative practices in general advocate a shift towards a "management-type approach" based on management practices from successful public sector bodies and private and non-profit organisations.

- A key feature would be increasing exposure to and incorporation of technologies and technical advances that would improve the functioning of these institutions, and at the same time improve monitoring and evaluation of progress towards declared goals. Strengthening the use of ICT through using new technologies to provide more rapid information and more accurate analysis would help in improving transparency; as would promoting the ability to use modern IT tools such as a range of software packages, computational applications, and so on at all levels of the government to improve communication, planning and implementation.
- Building their capacity to partner with community based organisations, and the private sector to provide planning and services delivery, monitoring of projects, and evaluation.

[55] World Bank: Country Strategy for India 2009–12, November 14, 2008

- Building statistical capacity to generate more accurate and timely data from primary sources, to analyse both secondary and primary data using sophisticated statistical tools, presenting them in an easily comprehensible format, preparing social budgets, and so on. For effective policy and planning, an accurate and up-to-date statistical base is vital.
- At the district level, several schemes like the NREGS (National Rural Employment Guarantee Scheme) and the Swarnjayanty Gram Swarozgar Yogna (SGSY) have not performed well in the absence of constitutionally mandated devolution of powers to the third tier of government in Meghalaya. Government agencies like the DRDAs play the role performed by PRIs in the "PRI states", but these agencies need to build up their technical capacities and technical staff to effectively perform the required tasks.
- Other government agencies, organisations, and departments also need to be 'professionalised' in their functioning — whether it is agricultural extension services, the Khadi and Village Industries Commission, labour welfare centres, government health centres, and schools — if they are to provide the required support to the process.

Village Level Entities

Meghalaya, like other Sixth Schedule states, lacks third tier institutions that are non-hierarchical and empowered to undertake participatory planning and implement schemes and projects. District level planning in the state is still carried out largely at the state level, with only a few inputs from district level government entities (District Planning and Development Councils). A shift towards decentralised planning and implementation of projects, as advocated by this vision document, will call for a "redesign of institutions, to empower and ensure participation of people in the planning process."[56]

Just as the panchayati raj institutions have been strengthened to play a more proactive role in planning and implementation at the grassroots, it is as important that tribal councils, village employment councils and the various agencies involved in implementing schemes are strengthened through awareness building, improved knowledge and skills, and sustained efforts to engage them in the processes. For example, the Village Employment Councils (VECs) set up with tribal authorities to implement the NREGS still have to shift from the traditional way of functioning to their new roles.

Community Based Organisations and Non-governmental Organisations

Community based organisations (CBOs) and non-governmental organisations (NGOs) have an important linking role between people and government bodies. Meghalaya already has a good network of CBOs and NGOs that have been working with local communities in some districts to improve livelihoods and involve them in planning processes.

[56] State Human Development Report

Civil society and community involvement can also help promote demand side accountability from potential beneficiaries of developmental schemes and entitlements, given the lack of knowledge of these among many villagers in the state. Civil society, CBOs, and NGOs working in these areas need to have their capacity built for various tasks:

- They need to be able to work effectively as intermediaries with government agencies as well as with citizens to demand transparency and accountability.
- It is important to make people aware of their entitlements, so they can demand accountability from public agencies. Creating awareness among communities, disseminating useful information related to schemes and plans in easily accessible formats, and training people and organisations to effectively monitor progress are all part of this process.
- Models of successful interventions by CBOs, such as the NERCOMP project, can be scaled up to other districts. For this, the capacity of organisations already working in the field with local communities and that of their functionaries needs to be enhanced, and the efforts broadened so that more agencies are involved in the process. Alliances among organisations often help in this process.
- They have played an active role in encouraging the formation of SHGs. They can continue to work through SHGs towards strengthening women's awareness about their health and educational rights, and build their ability to participate in various sectors such as the management of natural resources, and so on. SHGs have been involved in implementing schemes like the SGSY, but are still new to the process and need to be motivated and trained to perform.

Skills and Training Institutions

The high degree of unemployment in the state and growing youthful population places pressure on professional training institutions to provide the youth with employable skills, to raise their employment potential both locally and outside the state. The state is fortunate in that it is home to several institutions of higher and professional education and training — ITI, IIM, NIFT, a nursing college, and several institutes under consideration — for public health, IT, music, and several other sectors. Meghalaya could emerge as a regional hub for professional education and training if the existing institutions and planned ones become strong centres of excellence.

- A starting point would be to improve the quality of physical infrastructure of existing institutions, which should equip them with the environment for the transfer of cutting edge knowledge and skills. Many of the buildings and surroundings need repair, apart from the libraries, laboratories, auditoria, and so on.
- Fundamental to the strengthening of each institution is a realistic assessment of their existing human resource base. The skills base can be strengthened in the state when the

skills of the staff and trainers are strong and up to date. Among other things, we need to ensure transparent staff selection and promotion processes, a focus on performance appraisal, and identification of knowledge/skill gaps and staff training needs.

- The course content is as important as the quality of teaching; curricula have to be current, and structured towards providing employable skills.
- Technical institutes and training centres will benefit from collaboration with private organisations, by setting up strong linkages for practical training, internships, guest lectures, visits, and so on. Thus, they will have to build up their ability to interact effectively with private entities.

10.6.2 Recommendations for Building Institutional Capacity

This section looks at exactly how the capacities of the various institutions listed can be built. Capacity cannot be created overnight, nor is it without costs. It takes time to develop capacity and the necessary systems cannot be put in place at short notice. They need long term nurturing to deliver sustainable benefits. However, the potential benefits are large enough to justify the investment and the recurrent costs needed to set up these systems.

- Systematic capacity building will require a supportive and enabling policy environment, monitoring of progress, and adequate investment in the process.
- A key component of the institutional strengthening process will be IT. Today, IT can be harnessed to combat a wide range of problems, especially those faced by Meghalaya in terms of geographical remoteness from other parts of the country, and the difficult terrain which isolates many communities from markets, services, and so on. This will require the large scale infusion of IT skills and knowledge into the society, both at the educational and professional level. This scale of capacity building will require support from IT professionals from other parts of the country to train the vast majority of government officials and agencies, non-governmental bodies, community groups, those seeking employment, and students.

Part- II
Annexures

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Annexure A1

Questionnaire for Meghalaya Vision 2030

In an attempt to broad-base *the Meghalaya State Vision 2030* and capture public views on the developmental issues faced by the state, the NIPFP team invited inputs from interested individuals in the state through various channels. On the NIPFP website, we posted a questionnaire focused on a wide range of issues that could have a bearing on development and progress in the state, and invited public comment and recommendations on these, as well as any other pertinent issues, through advertisements in local English and Khasi newspapers. The questionnaire was also mailed to prominent public figures in the state, professors, administrators, educators, politicians, journalists, and other individuals, for their inputs.

We welcome your views on the following questions:

1. What are your views, if any, on the *Northeast Vision 2020* document adopted by the North Eastern Council? Does it adequately represent the concerns of Meghalaya?

2. What in your view should be the vision for development of Meghalaya in 2030? Some of the objectives in the *Northeast Vision 2020* document are: bringing peace and prosperity to the region, accelerating growth so that the states can catch up with the rest of the country, ensuring participatory governance and planning to achieve inclusive growth, empowerment of people through education and healthcare, and eradication of poverty. Do you agree? Would you like to add to these goals?

3. Participatory governance and planning is a key strategy detailed in the *Northeast Vision 2020* document. How can we promote participatory governance and planning for the development process in Meghalaya?

4. A key to the progress and prosperity of Meghalaya lies in improving connectivity. Access to a seaport and land connectivity through Bangladesh is critical for the development of the state. What initiatives should the Government of India take to ensure better connectivity through Bangladesh?

5. At present, states do not have any role in improving connectivity and trade with neighbouring countries. At the same time, the economic condition of states depends critically on greater trade and connectivity through neighbouring countries. What changes are needed to assign a greater role to the state in its relations with neighbouring countries?

6. What steps can be taken to improve the productivity of the main agricultural crops in the state?

7. There is widespread practice of Jhum cultivation in the state. Do you think it is detrimental to the environment? In your view, is there a sustainable alternative to jhumming?

8. What initiatives are needed to improve marketing links and cold storage facilities for agricultural produce in the state?

9. What initiatives are needed to attract investment in agri-processing activities? How can we co-ordinate policies with other north-eastern states so that producers have a large enough processing activity to make it economically viable?

10. What are the major infrastructure initiatives you would recommend for the development of markets and promotion of trade and investment in the state?

11. What specific initiatives would you recommend to improve (i) land connectivity, (ii) inland water connectivity, (iii) air connectivity, and (iv) rail connectivity?

12. What in your opinion has been Meghalaya's experience with the North East Industrial and Investment Promotion Policy (NEIIPP) of the Government of India?

13. Do you think there is scope for setting-up of major industries like cement manufacturing in Meghalaya? What initiatives would be required to attract private investment in such industries? Should the Government of India take initiatives to invest in large public sector industries in the state?

14. Given that Meghalaya has a large forest area, what would be the most appropriate way to promote sustainable development of forest and mineral resources?

15. Do you think the Government of India should provide a transport subsidy to reduce cost disadvantages faced by the state?

16. What measures would you recommend to increase development expenditure by the state government?

17. How can we enhance the revenue base of the state to generate more revenue for development?

18. What are the critical bottlenecks in promoting trade with neighbouring countries, particularly Bangladesh? How can we ease these bottlenecks?

19. What are your views on promoting public-private partnerships (PPP) in Meghalaya?

20. What are the policy and institutional changes needed to attract private investment to Meghalaya?

21. What measures can you recommend for building people's capacity to participate in and contribute to the development process in the state?

22. What are the measures needed to augment education facilities — general, professional, and vocational education and skill development?

23. What measures could you recommend for developing the capacity of various institutions in the state (government, non-government, etc.) so that they can play a role in the development process?

24. What steps can be taken to raise the effectiveness of village education committees in improving the quality of school education, especially in rural and remote areas?

25. What measures would you recommend to improve the quality of healthcare in Meghalaya and people's access to good services?

26. What steps are needed to minimise rural-urban disparities in the provision of basic services and improving the quality of services, such as sanitation, drinking water, and transport?

27. In what ways can the constitutional provisions relating to institutions of governance be moulded to promote harmony and integration within the state?

28. What measures would you recommend to encourage people's participation in governance to make it more inclusive and also promote liberalisation and outward orientation?

29. How can the North Eastern Council become a more effective agency for planning? What restructuring would you recommend to make it an agent of transformation?

30. What measures do you recommend to control insurgency in the state?

Annexure A2

Public Responses to the Questionnaire for the Meghalaya State Vision 2030

Responses were received from around 50 people, largely from the government, but also from academic institutions and concerned individuals. Most respondents had a clear understanding of the basic constraints to development planning faced by a small hill state like Meghalaya. The views of the responders have been summarised under various headings below, corresponding to topics in the questionnaire. These views provide us important underpinnings to the vision for long-term planning for the development of Meghalaya.

A2.1 General Comments

In general the view was that the vision for Meghalaya should be based on a bottom-up approach, so that planning is based on the panchayati raj system. A major constraint to growth and prosperity identified by almost all respondents was the state's poor connectivity transport-wise, which has hindered the creation of robust markets, led to the isolation of rural communities, exacerbated intra-state disparities, and hampered human development by impacting delivery of services, such as healthcare and education. A major issue repeatedly identified was the absence of employment avenues for the young in particular, but for the state in general. While demand side factors were acknowledged through the lack of industry and services in the state, many pointed to the absence of employment-oriented training and professional education in the state as a major hindrance. Finally, a key thread that ran through the responses was the need for any developmental strategy to be very sensitive to the long term ecological and environmental security of the fragile hill state, with minimal adverse impacts on forests, environment, and wildlife.

A2.2 Agriculture

Several recommendations were put forward for expanding agricultural activity and increasing growth of the sector. These are as follows:

- Encourage the application of modern technology by making up-to-date techniques and inputs easily available, and by providing agricultural equipment and machinery. Most of the land is single-cropped, and there is a need to introduce double-cropping, crop rotation, and short-duration cropping, and high yielding varieties (HYVs) of paddy, maize, wheat, and horticultural crops on a priority basis. Implement the free distribution of seeds and plant protection measures; encourage the use of fertiliser, especially organic fertiliser, by making it available in a timely manner, and by subsidising all fertiliser and animal feed. Strictly enforce the *Land Ceiling Act*.
- **Shifting Cultivation:** All respondents were against *jhumming* for various reasons, especially ecological. Suggestions included policy interventions to discourage *jhumming,* awareness programmes to motivate people to shift to permanent cultivation through terrace farming and tree farming, and promoting horticulture.

- **Horticulture:** This needs to be promoted as an alternative to *jhumming* and because it has excellent potential for the state. Encourage double-cropping — fruit trees can be planted in vacant land to reforest the hills; encourage judicious crop choices that minimise water use; focus on fruits such as oranges, chestnuts, peaches, which were grown in the past. There are several projects to promote this, but although a Technology Mission exists, the state needs to have a proper market strategy for horticulture, and to support farmers during the gestation period till the crops take off. Medicinal plants should not be ignored.
- **Animal Husbandry:** Farmers in this sector can benefit from the setting up of abattoirs by the government and through public-private partnerships.
- **Water Management:** This is required, and recommendations included the provision of assured irrigation facilities for farmers; improved water harvesting technology; protecting the catchment to increase the yield of water resources; and terracing of gentle slopes to prevent water runoff.
- **Marketing and Distribution:** A supply chain for farm produce needs to be in place. For a start, poor rural connectivity results in the loss of perishable goods, and with improved connectivity, farmers get better prices. Thus there is a need for new roads and proper maintenance of existing roads. Well-run markets are a necessary condition to make agriculture a profitable activity. For this we need to modernise existing traditional *haats* and construct new markets with proper connectivity and good transport facilities. Procurement centres must be set up near production centres, offering market prices for all produce. These can be set up by private players with government supervision. Storage and cold storage facilities should be set up in each district and sub-district. Cold storage could be privatised and well regulated.
- Policies to improve the welfare of farmers.

A2.3 Non-Farm Activity

- **Non-Farm Employment:** The promotion of small and medium enterprises (SMEs), based on processing, value addition, and marketing of renewable forest resources such as bamboo, cane, medicinal and aromatic plants, and other non-timber forest products (NTFP), is needed to provide employment opportunities for *jhumias.* Piggeries, dairy, fish farming, and cottage industries should also be encouraged.
- **Forest-based industry:** One suggestion was to relocate farmers to areas with basic facilities and use the forest resources by setting up forest-based industry in these areas. Private investment in forestry by non-tribals and companies could be encouraged by leasing out barren and degraded non-forest land on a medium-term lease (say 30 years) to raise captive plantations of fast-growing forest species.
- **Silk Farming:** The geography of the state is congenial for rearing of silkworms which produce silk comparable to that in Japan and China. For this, the state should produce good quality leaves by planting HYVs of mulberry trees, and transfer these to villages. The state should provide for reeling units of cocoons and market facilities for both mulberry and Muga culture.

A2.4 Industry, Mining, and Private Investment

- **Attracting Private investment:** Private investment can be attracted by amending the Land Regulation Act of 1972 to allow the transfer of land by reducing red tape, having single window clearances, and easing other bottlenecks.
- **Types of Industry:** There is scope for mineral-based, forest-based, agro-based and horticulture-based industry in the state. Only small and medium industry should be set up. Need to attract investment in agro-processing activities: special incentives are needed in the Industrial Policy for this. Community processing units based on SMEs may be initiated to add value to forest-based products. There is scope for MCCL established in the 1960s to be upgraded into a large scale industry.
- **NEIIPP:** Many feel that the NEIIPP has not worked in the state; it has benefited large business houses from outside the state, but not local businesses, added to which it has exacerbated shortages of power and water, and added to pollution.
- **Cement:** There were conflicting views on promoting a cement industry in Meghalaya. Many underlined the polluting effects of unregulated cement manufacture currently being carried out. The cement industry so far has not followed regulations and added considerably to environmental damage. Waste products from existing industries have caused great injury to the environment and ecological balance, besides polluting rivers and streams known for their rich biodiversity and as habitats for endangered species and aquatic life. Some felt that the central government should encourage large PSUs to set up major cement industries in the state, but to regulate these well to prevent any ecological fallout. The adverse impact on the ecology and environment and on the flora and fauna in particular, should be taken into account in deciding the location, number, and capacity of severely polluting industries like cement plants.
- **Transport Subsidy:** There were divergent views on this. Some felt this would help reduce costs and encourage industry, others felt that subsidies should be done away with as they have been misused or misappropriated by the state over the past years. Still, others felt that the subsidy should be provided on a selective basis, be need-based, and applied only for industrial development.

A2.5 Infrastructure and Amenities: Schemes and Implementation

- **Amenities:** The scattered nature of the villages and low density of population has had an adverse impact on the supply of basic services and central schemes. Many villages in Meghalaya are disqualified for setting up certain basic service facilities because of the planning norms. There are over 6,000 villages; 50 per cent of them have less than 200 people. Only 4 per cent of the villages have more than 500 people. This has an impact on the state's ability to access central schemes designed for different geographical and demographic configurations. The recommendation is that if within a radius of 10 km the number of people in the villages is 500 or more, then they should qualify for the services. Services such as potable water and basic sanitation should not be a problem in a rain-fed state like Meghalaya.
- Planners in a state like Meghalaya, where villages are scattered and population densities abnormally low, recommend the organisation of clusters, either for locating industries or setting up service facilities (such as hospitals, schools, etc.). A

cluster approach helps realise economies of scale and also generates the necessary forward and backward linkages, with their own external benefits on other areas.

- **Water Schemes:** Need private participation in the provision of essential services like drinking water in urban areas.
- **Sanitation:** The sanitation drive needs awareness campaigns to encourage people to construct, use and maintain latrines.
- **Transport:** Improving connectivity over land, water, and air is essential for development of markets and promotion of trade and investment in the region.
    - Need proper maintenance of existing roads and road connectivity with four lanes on all existing NHs and two lanes on all inter-state roads.
    - Need a four-lane east-west highway from Garobaha to Garampani to open up the plateau to development. From this, north-south highways would branch out to all economic regions and sub-regions.
    - Upgradation of a functional airport at Umroi in East Khasi hills and Balpagram in Garo hills; air connectivity from Baljek airport in West Garo to Dhaka.
    - Introduction of waterways at Simsang, Daring, and Ginginram rivers in Garo hills.
    - A railway line up to Byrnihat in Ri-Bhoi district.
- **Constraints:** Acquisition of land is a major constraint to infrastructure development, and in fact to the setting up of industry, attraction of private investment, and almost all developmental activities. Only 4.5 per cent of land is not owned by the community, and can be used for infrastructure and other purposes. Policy intervention on this is important, as land need to be released for public purposes, such as genuine housing projects, other projects, and commercial activity. Further, the practice of confining non-locals to select areas of the capital has created ghettos in some towns and cities: such a move may have been necessary in 1972, but it has now served its purpose.

A2.6 Health

- The vision would be to improve the quality of health care especially in the areas of infant and maternal mortality, and to introduce measures to improve life expectation, reduce the incidence of diseases both communicable and non-communicable, and reduce disparities across community and regions.
- **Recommendations:** Increasing public expenditure on health; reducing regional imbalances in health infrastructure; pooling resources, integration of organisational structures; optimisation of health manpower; decentralisation, and district management of health programmes, community participation and ownership of assets; induction of management and financial personnel into district health system; operationalising community health centres into functional hospitals; and meeting Indian public health standards in each block.
    - These can be done by boosting family planning services, providing round the clock PHC services, making drugs freely available, having an adequate supply of essential drugs and equipment, providing regular courses to expose doctors to modern medical techniques, and providing a blood bank in each district.

- **Rural Health:** Greater importance needs to be accorded to infrastructure, amenities, and healthcare centres in rural areas to remove disparities with urban centres. Also, incentives are needed to attract healthcare providers to serving in difficult areas; there should be regular monitoring and supervising officers with regular updates to the directorate; and transport facilities (ambulances) to reach difficult areas.
- **Health Insurance** should be provided to poor and BPL families.
- **PPPs in Health Sector:** PPPs in health are in their early stages, but the experience so far indicates that while they can help with curative aspects of healthcare, they may not work for preventive care. These PPPs can be expanded, but with careful supervision and regulation. Preventive care needs outreach to the communities, which can only be done through field health workers.
- **Community Awareness:** Immunisation scheme for preventable diseases needs to be explained to people in order to prevent morbidity from those diseases.
- Need strict competency and quality standards for the regulation of private health institutions.
- **Environmental Sanitation:** Clean air, water, and food should be a focus, as good sanitation facilities, sewage, and solid waste disposal, etc., have direct impacts on health. Thus, integration with other linked line departments such as PWD, PHE, MSEB, is essential.

A2.7 Education:

Schools

The general consensus was a need to increase the access to and quality of education.

- **Access to Education:** Have quality schools in every village according to number of inhabitants. Need to have proper road connectivity between villages and schools and school buses in rural areas. Focus needed on helping physically challenged students access education.
- **Infrastructure:** Need to improve school infrastructure and provide ample facilities, such as libraries, laboratories, computers, playgrounds, toilets; the lack of toilets and hand washing facilities, in particular, affect attendance and performance of schoolchildren.
- **Quality of Teaching:** Recruitment of teachers should be streamlined and guidelines formulated to ensure objectivity in postings and transfers. Provision should be made for lecturers and teachers from the state to travel to upgrade skills and knowledge. Only qualified teachers should be recruited to teach at all levels of education; and these should have regular refresher training. The lack of trained teachers in the state is an issue as only 30 per cent of those teaching have a B. Ed. degree (2007); this should be the minimum entry requirement. New teachers should be better prepared, and provided with pre-service training. More incentives are needed to attract qualified maths, science, and language teachers to teach in schools.

- The DIETs need to be strengthened (perhaps by developing linkages with other educational institutions) to become institutions of excellence for teacher education at the district level, both pre-service and in-service. Their role could include secondary and pre-school education.
- Teacher training institutes (TTIs) to be made residential to improve the attitude and quality of the trainees passing from those institutions.
- Non-government teachers should be given adequate post-retirement benefits.
- **Curriculum:** The curricula need to be revamped to be aligned to changing needs of the times and become more relevant to the occupational needs of the state; teachers can help provide inputs into developing curricula. Curricula can include eco-friendly programmes to teach ways to save energy, improve air quality, and preserve the environment; safety education to inculcate life skills; sports and co-curricular activities; and a focus on moral values and ethics.
- **Student Evaluation:** There should be a shift to comprehensive and continuous evaluation of students rather than examination oriented evaluation; introduce open book exams that test higher level competencies like interpretation, analysis, and problem solving.
- **People's Participation**: Create a sense of community 'ownership' of schools to strengthen curriculum and involve parents in the educational process. This calls for the creation of a local village body and enhancement of capacities related to school management. In the first stage, village education committees need to be formed with representatives from all relevant sections of the community. These committees have to be made aware of their roles and responsibilities. In the second stage, a village education plan can be drawn up based on a household survey.
- **Monitoring:** There should be effective monitoring of teachers' and students' performances. The monitoring body should have community representation. This can be done by setting up school monitoring cells at the village level headed by a youth organisation which will submit weekly reports to the District Inspector of schools/Inspector of schools with copies to the Director DEME/DTHE. School management committees at the village level can be constituted with government supervision and will submit monthly reports to the DI and SI of schools based on criteria outlined by the government. Currently school inspections do not take place regularly but they need to be conducted.
- Free and compulsory medical check-ups should be introduced for students and teachers on a regular basis.
- There needs to be a publication cell for the publication of textbooks, research work, reports, etc.

Beyond Schooling/Professional Development

- A majority of respondents pointed to the lack of employment based training and education in the state. The recommendation was to begin at the school level, by setting up educational and vocational guidance cells in every higher secondary school. High schools should offer a variety of vocational subjects — shoe making,

furniture making, TV repair, dress making, library attendant, beauty culture, bee keeping, two- and four-wheel mechanism, poultry farming, etc. — to introduce students to the world of work.

- The government department could tie up with industry and factories to help students with vocational skills be absorbed in work after school.
- Need to provide more professional and training opportunities within the state and set up job oriented technical institutions, such as a training school for nursing staff, technicians, and paramedics.
- Need to help entrepreneurship development as residents need to become self-sufficient and not rely on partnerships with people from outside the state. A management information system could be set up for collection of data on demand and supply of job skills, at the same time research in education should be encouraged to provide inputs into policy planning, improvements in education, etc.

A2.8 Women's Empowerment

- The vision should include empowerment of women politically, economically, and socially in all spheres of development; and to reduce crime and violence against women in the state.

A2.9 Urban Development

- Master plans are needed to check the unplanned sprawl of all the towns and cities in the state. The unplanned ribbon development of towns like Nongpoh along the highway to Shillong has exacerbated urban problems in the area.
- Basic infrastructure needs to be provided for the people: these include pavements, street lighting, garbage disposal, drainage, solid waste management plants and incinerators, etc. These will help prevent environmental damage and improve health outcomes.
- Local bodies in urban centres need to be strengthened.
- Slums and shanty towns need to be improved.

A2.10 Participatory Planning

- It may be difficult, perhaps impossible, to promote participatory governance and planning for the development process in the state until Parts IX and IXA of the Constitution are applied to the state either fully or partially.
- **Panchayati Raj Institutions:** It is vital to involve people in planning for their development. The active participation of people will call for the creation of a suitable institutional mechanism based on adult franchise, similar to PRIs at the grassroots. This will call for suitable amendment to statutes governing the composition, manner of constitution, powers, functions and responsibilities of

grassroots level institutions of self-governance, such as the village durbars, to empower them in the same way as *panchayati raj institutions* have been.

- **Awareness of Schemes:** Participation will increase when people become aware of the works to be implemented. Thus, the government and grassroots organisations need to make people more aware of these. The introduction of social auditing will also enable people to better understand these schemes and how they can be improved. However, the people need to be equipped to carry out these roles, and will need capacity building.
    - One method would be to involve the youth in the planning and provision of various community and basic services.
    - The Meghalaya State Planning Board should have only people from specialised sectors with close links to government implementation agencies and rural communities.
    - Funds allocated for NREGA and other developmental schemes should be employed to truly benefit the people. Need regular monitoring of projects and schemes to ensure effectiveness, appropriateness, and acceptance by locals. Also, linkages and inter-sectoral coordination of various institutions and departments (government, NGOs, developmental, etc.) will improve the developmental role.

A2.11 Links with Bangladesh

While some felt that links with Bangladesh were important for the development of agro-industries and promotion of local employment opportunities in Meghalaya, a few felt that this would lead to an influx of people from across the border.

- **Transport:** Many recommended reviving air, rail, and road access from Kolkata to Shillong through Bangladesh, as this would contribute to the state's development through the expansion of markets and access to resources.
- **Trading Infrastructure:** What is needed is better connectivity for trade with neighbouring countries with consulate offices and custom offices, especially for the movement of perishable goods. Some recommended giving incentives to open up more border *haats* along the Bangladesh border and increase trade facilities without jeopardizing national security. Other suggestions included improving marketing links and strengthening existing land ports such as Dawki, setting up border trading infrastructure such as storage depots, weigh bridges, and customs stations along the border to facilitate the trade of bamboo and other forest products, as well as other products.
- Lafarge Company carries limestone from Lummawshun near Shella to Bangladesh. If the state's resources and minerals are going to be exploited, it is preferable that value addition is done within the state.

A2.12 The Northeast Vision Document and the North Eastern Council (NEC)

- The general view was that the recommendations of the Northeast Vision 2020 document were acceptable, but needed to be made more specific to be applicable

in a state like Meghalaya. Other goals (apart from those articulated in the NE Vision Document) were: an economically strong state that attracts and retains a wide range of career advancement employment opportunities; need to attract businesses that balance economic needs with environmental concerns; a workforce development system to ensure job readiness of residents.

- Rather than acting as a coordinating agency, the NEC has become an implementation body with strict rules for implementation. The council should first serve the NE states and not the central government. Hence, sectors like connectivity, agriculture, horticulture and allied sectors which are based on linkages need to be prioritised.
- The NEC can become more effective by involving economists and experienced administrators from the region as members of the Council. Those from other parts of the country are not in a position to be successful members of the Council!
- More than three-fourths of the area under the jurisdiction of the NEC is under forests. To ensure effective protection and conservation of forest resources, some posts at all levels within the Council need to be set aside for officers with special knowledge or experience of forestry and wildlife.

A2.13 Fiscal Concerns

- **Revenue:** There was agreement on the need to expand sources of revenue in the state. At present the main source of revenue is royalties from minerals. There needs to be a proper assessment of the transportation of minerals/transport subsidy claimed by manufacturing units, and an assessment of royalty paid.
- Revenues can be increased by increasing or introducing state taxes where there is scope:
    - Introduce reasonable taxes, especially service taxes, where not levied by the central government;
    - Levy a tax called the Meghalaya Development Tax (or some appropriate name) on tribal residents with incomes above a certain level, who are currently exempt from paying tax; levy a 10 per cent cess on all employees in the state exchequer, which is deducted at source; similarly, politicians should pay a cess of 12 per cent deducted at source.
    - Set up a mechanism to claim royalties on minor minerals extracted by private individuals and NGOs; there should be effective weightment of coal, limestone, and other minerals exported outside the state to prevent under-realisation of royalties; increase the cess on coal exports, minerals, and cut timber; provide a suitable mechanism to collect stone boulders from rivers draining into Bangladesh and export them to Bangladesh, Tripura, Mizoram and other boulder-deficit states;
    - Make municipalities self-sufficient in urban areas so that they pay for the amenities, such as water supplied by the department for distribution to the public;

- Strengthen and upgrade the tax-collection mechanism to prevent leakages; streamline and modernise customs and excise facilities with proper monitoring strategies at border check posts;
- Develop tourism which is as yet untapped; and
- Promote new industries like IT, BPO, pharmaceuticals, biotechnology, hotels, banking, organised real estate development, etc.

- **Expenditure:** Developmental expenditure can be increased by skill upgradation of key functionaries; installing an efficient and transparent mechanism for award of contracts and a need-based and unbiased transfer and postings policy; the objective allotment of funds to prevent and minimise duplication of effort and resource allocation to non-priority sectors; periodic reviews and monitoring of ongoing projects to prevent cost overruns; and curbing non-developmental expenditure;
- 'High society of the government' should practice austerity: there is a need to phase out unessential posts, and political appointments; abolish or reduce medical reimbursements; and reduce the number of vehicles run by government officials.
- The timely release of central funds to departments will enable them to use the funds appropriately and in a timely fashion;
- The present allocation of funds from the centre is too meagre to meet the developmental needs of the people of the border areas, especially in view of infrastructural needs.

A2.14 Governance and Insurgency

- Meghalaya is exempt from Parts IX and IXA of the Constitution, but it should have laws modifying the provisions in these two Parts relating to the third tier of representative government in the state. The relationship between the state and the centre: need further amendments to the Tenth Schedule regarding which cases should rest with the Election Commission and with the speakers of Parliament and the State Assembly.
- **Insurgency:** Unemployment is the main cause of insurgency, and employment opportunities need to be enhanced. Development planning in the state should focus on setting up infrastructure that attracts private investment in every sector including social sectors, thus providing employment opportunities for the youth, which will help curb insurgency activities.
- Insurgency can be controlled through persistent dialogue and follow-up; also through employing police and paramilitary action; religious institutions, churches, NGOs, and village durbars should regularly counsel youth, and invite experts to talk to them.

Annexure A3

People Consulted With in Preparation of this Document

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Chapter-Wise Annexures

Annexures to Chapter 1: Meghalaya: A Socio-Economic Profile and Projections

Table 1.A1: Population: Share by Age Group, 2001

	Age Groups *(Years)*			
State	**0–14**	**15–29**	**15–65**	**65+**
Arunachal Pradesh	39.8	26.37	57.8	2.4
Assam	36.6	27.17	59.6	3.8
Manipur	31.8	30.20	63.6	4.6
Meghalaya	41.6	27.13	55.5	2.9
Mizoram	34.6	30.56	61.6	3.8
Nagaland	35.1	32.13	61.8	3.1
Sikkim	33.6	30.72	62.9	3.5
Tripura	31.7	27.90	63.2	5.1
India	**34.3**	**26.58**	**60.9**	**4.8**

Source: Census of India, 2001

Table 1.A2: Meghalaya Districts: Rural-Urban Population Ratios

	As a % to State		**(A) Rural-Urban % within District**	
District	**Rural**	**Urban**	**Rural**	**Urban**
East Khasi Hills	23.97	12.62	88.32	11.68
Ri-Bhoi	11.54	7.43	86.07	13.93
West Khasi Hills	5.47	2.19	90.85	9.15
Jaintia Hills	14.46	7.22	88.85	11.15
East Garo Hills	9.85	4.23	90.26	9.74
West Garo Hills	19.33	61.52	55.58	44.42
South Garo Hills	15.38	4.79	92.75	7.25

Source: Provisional Population Totals of Meghalaya, Census of India 2011

Table 1.A3: District-wise Indicators

	Literacy Rate	Density of population (people per sq. km)	BPL Households (%)	Infant Mortality Rate	Per Capita Income (Rs) (Ad. Est.)	Villages Electrified (%)
	2011	**2011**	**2002**	**2007**	**2007–08**	**2001**
Jaintia Hills	68.38	173	39.51	77.34	26,015	62.31
East Khasi Hills	75.51	122	46.74	34.51	31,202	74.13
Ri-Bhoi	72.39	77	49.94	60.63	19,866	66.11
West Khasi Hills	79.3	73	47.66	86.17	12,592	35.38
East Garo Hills	77.22	109	55.94	90.60	15,365	33.22
West Garo Hills	84.7	292	53.71	18.13	17,566	36.49
South Garo Hills	63.26	103	45.33	102.01	28,749	19.66
Meghalaya	**75.48**	**132**	**48.90**	**52.28**	**22,352**	**44.93**
India	**74.04**	**382**		**34.61**	31,29,717	

Sources: *Meghalaya Human Development Report and State Development Report;* infant mortality rates from the Birth and Mortality Survey, 2007; literacy rates and density of population (people per sq. km) from Census 2011, and electrification of villages from the Census 2001; per capita income is based on GSDP at constant 1999–2000 prices from the Directorate of Economics and Statistics, Government of Meghalaya (Table 5.2.4 (3) from the SDR).

Table 1.A4: Per Capita NSDP and Growth Rates, Meghalaya and India

(1999-2000 to 2010-11 at constant 2004-05 prices)				
Year	**Meghalaya**		**India**	
	Per Capita NSDP (Rs)	**Increase over Previous Year (%)**	**Per Capita NSDP (Rs)**	**Increase over Previous Year (%)**
1999–2000	19,651		19,675	
2000–01	20,410	3.87	20,092	2.12
2001–02	21,243	4.08	20,943	4.23
2002–03	21,741	2.35	21,368	2.03
2003–04	22,803	4.89	22,857	6.97
2004–05	24,086	5.62	24,143	5.63
2005–06	25,642	6.46	26,015	7.75
2006–07	27,242	6.24	28,067	7.89
2007–08	27,764	1.92	30,332	8.07
2008–09	30,963	11.52	31,754	4.69
2009–10	32,569	5.19	33,843	6.58
2010–11	34,430	5.71	35,993	6.35

Source: Central Statistical Organisation, www.mospi.nic.in; Older series (1999–2000) data adjusted for change of base to 2004–5

Table 1.A5: Sectoral Composition of GSDP: Meghalaya and India
(Percentage of GSDP at constant (1999–2000) prices)

	1999–2000	2004–05	2010–11
India			
Primary	25.00	19.03	14.51
Secondary	25.30	27.93	27.81
Tertiary	49.70	53.04	57.68
Meghalaya			
Primary	22.93	23.25	17.01
Secondary	23.31	26.14	31.42
Tertiary	53.76	50.61	51.57
NER			
Primary	32.35	25.71	22.25
Secondary	18.40	26.30	24.57
Tertiary	49.26	47.98	53.18

Source: Central Statistical Organisation, Ministry of Statistics and Programme Implementation, GoI. www.mospi.nic.in

Notes: Data for all NER states, except Mizoram is available for 2011–12 also.

[Caution: The Fifteenth Plan period has its first year overlapping with the last year of the Fourteenth Plan in the following three tables 1.A6, 1.A7, and 1.A8.]

Table 1.A6: India: Projected Trajectory of Growth

(At 2009–10 prices)

Plan Period	Years	Assumed Average Annual Growth Rate (%)	Projected GDP (Rs crore)	Assumed Population Growth	Derived Per Capita (End year)	Implied Per Capita GDP Growth (%)
11th Plan	2007–08 to 2011–12	7.84	29,390,920	1.39	56,968	6.63
12th Plan	2012–13 to 2016–17	9.00	44,678,592	1.24	82,082	7.58
13th Plan	2017–18 to 2021–22	9.00	86,417,000	1.11	1,18,645	7.65
14th Plan	2022–23 to 2026–27	9.00	105,770,475	1.00	1,72,017	7.71
15th Plan	2026–27 to 2029–30	9.00	89,140,690	0.90	2,15,266	7.76
Average Annual Growth Rate (%)		8.79		1.27		7.74

Source: NIPFP estimates from the data sources listed under *Table 3*.

Table 1.A7: Meghalaya: Projected Trajectory of Growth

(At 2009–10 prices)

Plan Period	Years	Required GSDP CAGR (%)	Projected GSDP (Rs crore)	Derived Per Capita GSDP (End year)	Implied Per Capita GSDP Growth (%)
11th	2010–11 to 2011–12	7.85	54,950	48,039	6.59
12th	2012–13 to 2016–17	9.45	83,154	712,65	8.21
13th	2017–18 to 2021–22	10.25	134,713	109,955	9.06
14th	2022–23 to 2026–27	10.25	219,433	170,100	9.12
15th	2026–27 to 2029–30	10.25	193,294	223,453	9.52
Average Annual Growth Rate (%)		9.92			8.80

Source: NIPFP computations

Data Source: Population estimates: Registrar General of India; GDP and GSDP Estimates: Central Statistical Organisation, Ministry of Statistics and Programme Implementation, Government of India

Table 1.A8: Projected Requirement of Investment

(At 2009–10 prices)

Plan Period	Years	Investment Required in Rs Crore		Investment Required as Per Cent of GSDP	
		Assumption I ICOR constant at 4.0	Assumption II ICOR declines from 4.0 to 3.6	ICOR I	ICOR II
11th	2010–11 to 2011–12	7,034	7,014	28.8	28.7
12th	2012–13 to 2016–17	28,937	28,287	34.8	34.0
13th	2017–18 to 2021–22	50,097	47,673	37.2	35.4
14th	2022–23 to 2026–27	81,603	75,507	37.2	34.4
15th	2026–27 to 2029–30	71,882	65,048	37.2	33.7

Source: NIPFP estimates

Annexures to Chapter 2: Participatory Planning and Inclusive Governance

Table 2.A1: Role of the Governor of the State in Respect of District and Regional Councils

Description of the Powers Entrusted to the Governor	Details of the Provision in the Sixth Schedule	
	Para	**Brief Content**
Powers to constitute district and regional councils	19	To constitute district councils for each autonomous district as soon as possible and until constitution of district council, to be the head of the administration of the district
	1(2)	Divide areas of district council into autonomous regions
	1(3)	Issue notification for inclusion, exclusion, creation, increase, decrease unite or define areas of district council or alter the name of any district council
	2(6)	Frame rules for the first constitution of district council or regional council
	14(3)	Place one of the Ministers in charge of the welfare of the autonomous district region
Powers to dissolve and supersede councils	16(1)	Dissolve a district or regional council and assume to himself all or any of the functions or powers of the district or the regional council on the recommendation of the commission appointed under Paragraph 14
	16(2)	Dissolve a district or regional council and assume to himself all or any of the functions or powers of the district or the regional council if satisfied that the administration of the autonomous district or region cannot be carried out in accordance with the provisions of the sixth schedule of the constitution
Powers affecting electoral representation in the council area	2(1) & 2 (6A)	Nominate four members in each district council who hold office at his pleasure
	17	For the purposes of elections to the legislative assembly of the state, declare that any area within an autonomous district shall not for part of any constituency to fill a seat or seats in the assembly reserved for any such district, but shall form part of a constituency to fill a seat or seats I the assembly not so reserved to be specified in the order
Powers to enlarge, diminish powers or review decisions of District and Regional councils	4(3)	Extent of jurisdiction of the High Court over suits and cases tried by District Council Courts
	5	Confer power under CPC and CrPC on district council courts for trial of specified nature of cases and withdraw or modify the same
	6(2)	Entrust conditionally or unconditionally all or any of

Description of the Powers Entrusted to the Governor	Details of the Provision in the Sixth Schedule	
	Para	**Brief Content**
		the executive powers available to the state to the District Council or its officers with the consent of the District Council
	15(1)	Annual or suspend acts and resolutions of the district and regional council if such act or resolution is likely to endanger the safety of India or is prejudicial to the public order
Give prior assent to laws, rules and regulations of the District and Regional Councils	3(3)	Assent to laws made by the District and Regional councils, without which they have no force of law
	2(7)	Approve the rules made by the District an Regional councils for composition and delimitation of the Councils, qualification terms of office etc., of its members and generally for all matters regulating the transaction of business pertaining to the administration of the district
	6(1)	Give prior approval for the framing of regulations by the District Council for the regulation and control of primary schools, dispensaries, markets road transport, waterways etc.
	4(4)	Approve rules regarding constitution procedure et. of village council and district council courts, made by the district and regional councils
	7(2)	Make rules for the management of district and regional fund
	8(4)	Give prior assent for regulations framed by District and Regional Council for levy and collection of taxes, without which they do not have the force of law
	10(3)	Give prior assent to regulations framed by the district council for the control of money lending, without which they do not have the force of law
Powers of arbitration	9(2)	Give the final decisions in respect of disputes between district council and regional council in cases of royalty for extraction of minerals, which shall be referred to the governor for resolution
Powers to appoint a Commission	14(1)	Appoint a commission to inquire into the administration of autonomous district regions
	14(2)	Report of commission appointed under paragraph 14 is required to be laid before the state legislature with the recommendations (except in the case of state of Assam) with respect thereto

Source: Report of the Expert Committee on Planning for the Sixth Schedule Areas, Ministry of Panchayati Raj, Government of India, September 2006, New Delhi

Annexure to Chapter 3: Agriculture and Rural Development

Table 3.A1: NER and India: Resource Endowments and Land Occupational Patterns in 2008–09

(Per cent)

States	Forest/land	Net area shown/ land	Net area sown/ total cropped area	Not available for cultivation/ Net area shown	Forests/ Net area shown	Permanent pastures & other gands/ land	Land under misc. trees & groves not included in net area sown/ net area sown	Culturable waste land/ net area shown	Fallow lands other than current fallows/ net area shown	Current fallows/ net area shown
Arunachal Pradesh	91.08	3.73	76.45	30.33	2442.65	0.34	17.54	30.81	33.18	18.96
Assam	23.61	35.07	69.10	95.39	67.31	2.04	7.12	2.80	2.14	4.58
Manipur	86.16	12.01	100.00	11.44	717.37	0.05	2.54	0.42	0.00	0.00
Meghalaya	42.57	12.75	84.27	79.58	333.80	0.00	56.34	138.38	55.28	20.77
Mizoram	75.58	4.50	100.00	140.00	1677.89	0.24	48.42	5.26	180.00	63.16
Nagaland	53.24	19.49	78.61	31.01	273.10	0.00	38.29	18.99	28.16	23.10
Sikkim	44.12	14.80	90.68	233.64	298.13	0.55	4.67	1.87	28.04	4.67
Tripura	57.77	26.69	94.92	47.86	216.43	0.00	9.64	0.36	0.36	0.36
North-East	**26.65**	**18.45**	**74.56**	**83.09**	**144.40**	**0.81**	**13.97**	**14.11**	**13.48**	**8.50**
India	**22.78**	**46.24**	**72.46**	**30.65**	**49.26**	**3.38**	**2.41**	**9.03**	**7.30**	**10.29**

Source: *Statistical Year Book India, 2012, MOSPI, CSO, GoI*

Note: Fallow land is permanent fallow land. Where the current fallow land is the land which had been under cultivation for reasons like flood and drought, it remains fallow temporarily. Therefore, it cannot be added over time but can be added at a given point in time.

Table 3.A2: Value of Agricultural Product Per Agricultural Worker

Districts	**Value of Agricultural Output** (Rs lakh)**	**Agricultural Workers** (No.) *	**Value of Output per Agricultural Worker** (Rs)	**Proportion of Agricultural Labourers to Total Workers**
East Garo Hills	9,718	89,519	10,855	12.1
East Khasi Hills	28,470	76,748	37,095	13.3
Jaintia Hills	9,059	96,402	9,397	28.6
Ri-Bhoi	8,040	68,217	11,785	18.4
South Garo Hills	6,978	35,037	19,916	12.6
West Garo Hills	28,067	1,52,508	18,403	16.4
West Khasi Hills	8,935	1,11,739	7,996	23.3
Meghalaya			**15,752**	**12.54**

Source: *State Development Report*, Government of Meghalaya 2008–09

** At constant (1999–2000) prices

* Sum total of cultivator and agricultural workers (2001 census)

Table 3.A3: Sectoral Shares in NSDP (at constant base 2004–05)

State	**Year**	**Primary**	**Secondary**	**Tertiary**
Meghalaya	2004–05	**24.46**	24.74	**50.80**
	2010–11	**16.88**	27.18	**55.95**
NER	2004–05	26.83	24.52	48.65
	2010–11	23.39	22.28	54.32
India	2004–05	***19.03***	***27.93***	***53.05***
	2010–11	***14.51***	***27.81***	***57.68***

Source: Central Statistical Organisation (CSO)

3.1: INDICES OF SPECIALISATION

3.1.1 Regional Specialisation Index (RSI)

This index is defined as the ratio of the net sown area devoted to a particular product as a percentage of the total net sown area in Meghalaya to the ratio of the total net sown area for the product in the entire north-east as a percentage of the total net sown area for the north-east as a whole. That is,

$$\mathbf{RSI = X_{ij}/X_j/X_{iNE}/X_{NE}}$$

where X_{ij} is the net sown area of the product *i* in State *j* (j = Meghalaya), X_j = net sown area in State *j*, X_{iNE} = net sown area of the product *i* in the NE (NE = north-east) and X_{NE} = total net sown area in the NE. An RSI value of more than 1 indicates that the particular State has a revealed comparative advantage in that crop compared to NER.

Table 3.A4: Regional Specialisation Index (RSI) for Meghalaya, 2003–04

Crop	Regional Specialisation Index (RSI)
Rice	0.57
Maize	**1.8**
Small millet	**1.42**
Wheat	0.2
Total cereals	0.62
Total pulses	0.49
Total food grains	0.61
Sesamum	**1.25**
Rapeseed & mustard	0.39
Total oilseeds	0.43
Tea	-
Coffee	**3.19**
Natural rubber	**2.93**
Bananas	**1.31**
Sugarcane	-
Potatoes	**2.61**
Chillies	**1.06**
Ginger	**5.27**
Coconut	-
Turmeric	**1.95**
Pineapple	**2.94**

Source: Statistical Abstract of India, 2003–04
Note: Figures are computed.

District-wise Regional Specialisation Index (DRSI) for Meghalaya, 2004–05

This section constructs DRSI on two different ways: one, in terms of net sown area (NSA) and the other in terms of production in quantity (PQ). The district-level DRSI (NSA) is defined as:

$$\mathbf{DRSI_{NSA} = X_{ij}/X_j/X_{iM}/X_M}$$

where X_{ij} is the net sown area of the product *i* in district *j*, X_j = net sown area in district *j*, X_{iM} = net sown area of the product *i* in Meghalaya and X_M = total net sown area in the Meghalaya.

And the district-level DRSI (PQ) is defined as:

$$\mathbf{DRSI_{PQ} = Q_{ij}/Q_j/Q_{iM}/Q_M}$$

where Q_{ij} is the production in quantity of the product *i* in district *j*, Q_j = production in quantity in district *j*, Q_{iM} = production in quantity of the product *i* in Meghalaya and Q_M = total production in quantity in the Meghalaya.

DRSI for Agricultural Crops

Table 3.A5: Meghalaya: District-wise DRSI for Agricultural Crops by Net Sown Area

	District-level Regional Specialisation Index (DRSI) by NSA						
Crop	**East Khasi Hills**	**Ri-Bhoi**	**West Khasi Hills**	**Jaintia Hills**	**East Garo Hills**	**West Garo Hills**	**South Garo Hills**
Rice	0.35	1.13	0.86	1.10	1.13	1.21	0.97
Wheat	-	-	0.02	-	0.51	2.91	-
Rabi and other pulses	0.73	0.28	0.09	0.37	0.68	1.95	1.22
Sugar cane	-	-	0.66	0.64	1.85	1.61	0.96
Jute	-	-	-	-	0.41	2.71	1.05
Rapeseed and mustard	0.06	0.26	0.04	0.07	0.71	2.60	0.39
Maize	0.81	1.05	2.66	1.24	0.45	0.81	0.65
Cotton	-	-	-	-	2.61	1.90	0.35
Ginger	0.35	1.19	0.39	0.19	3.55	0.82	0.22

Note: Figures are calculated

Table 3.A6: Meghalaya: District-wise DRSI for Agricultural Crops by Agricultural Production Quantity

	District-level Regional Specialisation Index (DRSI) by Product Quantity						
Crop	**East Khasi Hills**	**Ri-Bhoi**	**West Khasi Hills**	**Jaintia Hills**	**East Garo Hills**	**West Garo Hills**	**South Garo Hills**
Rice	0.19	1.79	0.42	1.69	1.64	1.35	1.62
Wheat	-	-	0.00	-	0.44	3.31	-
Rabi and other pulses	0.37	0.38	0.08	0.61	0.72	2.26	2.59
Sugar cane	-	-	0.33	0.31	2.64	2.02	2.52
Jute	-	-	-	-	0.74	3.04	1.44
Rapeseed and mustard	0.03	0.17	0.02	0.17	0.69	2.98	0.96
Maize	0.52	1.91	1.36	1.88	0.54	0.95	1.08
Cotton	-	-	-	-	4.41	1.84	0.69
Ginger	2.44	0.01	1.98	0.15	0.07	0.08	0.08

DRSI for Horticultural Products

Table 3.A7: Meghalaya: District-wise DRSI for Horticultural Produce by Net Sown Area

RSI	**District-level Regional Specialisation Index (DRSI) of Horticulture by NSA**						
	East Khasi Hills	**Ri-Bhoi**	**West Khasi Hills**	**Jaintia Hills**	**East Garo Hills**	**West Garo Hills**	**South Garo Hills**
Pineapple	0.62	4.08	0.83	0.11	0.66	0.81	1.38
Citrus fruits	3.99	0.23	1.04	0.83	0.20	0.40	0.51
Banana	0.82	1.62	1.24	0.43	1.73	0.83	0.71
Papaya	1.00	2.97	0.53	0.17	1.80	0.62	0.88

Table 3.A8: Meghalaya: District-wise DRSI for Horticultural Produce by Production Quantity

RSI	**District-level Regional Specialisation Index (DRSI) of Horticulture by PQ**						
	East Khasi Hills	**Ri-Bhoi**	**West Khasi Hills**	**Jaintia Hills**	**East Garo Hills**	**West Garo Hills**	**South Garo Hills**
Pineapple	0.35	1.51	0.71	0.25	1.00	1.02	1.31
Citrus fruits	3.18	0.14	1.84	3.97	0.19	0.33	0.14
Banana	0.73	0.77	0.98	0.49	1.39	1.32	1.02
Papaya	0.76	0.90	0.47	0.19	1.67	1.08	1.20

3.1.2 National Specialisation Index (NSI)

To see where Meghalaya stands in comparison to the rest of the country, the National Specialisation Index (NSI) is constructed for the same 20 crops and is defined as a ratio of the net sown area of the product i in State j (J= Meghalaya) as a percentage of the net sown area of the product for the NE (NE= north-east region) to the net sown area of product i in India as a percentage of the net sown area in India. That is,

$$\mathbf{NSI = X_{ij}/X_{iNE}/X_{iI}/X_I}$$

where X_{ij} is the net sown area of the product *i* in state *j*, X_{iNE} = net sown area of the product *i* in the NE, X_{iI} = net sown area of the product *i* in India and X_I = total net sown area in India.

Table 3.A9: National Specialisation Index (NSI) for Meghalaya, 2003–04

Crop	National Specialisation Index (NSI)
Rice	1.59
Maize	1.42
Small millet	1.53
Wheat	0.02
Total cereals	0.8
Total pulses	0.13
Total food grains	0.67
Sesamum	0.69
Rapeseed and mustard	0.8
Total oilseeds	0.26
Tea	-
Coffee	3.46
Natural rubber	4.3
Bananas	6.18
Sugarcane	-
Potatoes	8.59
Chillies	1.48
Ginger	60.67
Coconut	-
Turmeric	7.97
Pineapple	68.17

Source: *Statistical Abstracts of India*, 2003–04
Note: Figures are calculated.

3.1.3 Demand Intensity Measure (DIM)

The Demand Intensity Measure (DIM) is used to indicate the intensity of the consumption of the product in the state or region. It is defined as the consumption share of the i^{th} product in State j with respect to the all-India consumption share in that product. *Table*

3.A10 shows the outcome of calculations of the Demand Intensity Measure, Z, which is defined as:

$$\mathbf{Z = (c_{ij}/C_{il}) \; X \; 100,}$$

where C_{ij} is the per capita consumption expenditure in state i for the jth commodity and C_{il} = national average per capita consumption expenditure for the same commodity. This shows the intensity of demand relative to the country. Thus, a value of Z greater than 100 indicates high demand intensity relative to the all-India level.

Table 3.A10: Meghalaya and NER: Demand Intensity Measure (DIM) for Crops

Crop	Meghalaya	NER
Rice	101.38	259.79
Wheat	21.1	21.29
Maize	14.38	77.12
Cereal	69.14	166.46
Gram	1.32	21.19
Cereal substitutes	76.83	103.66
Pulses	30.93	73.29
Milk & milk products	28.91	47.56
Edible oil	55.71	86.61
Meat, fish and eggs	205.17	346.91
Vegetables	68.12	150.94
Fruits (fresh)	52.7	97.72
Fruits (dry)	8.12	20.11
Sugar	48.06	73.6
Salt	63.04	174.35
Spices	28.55	75.71
Beverages, etc.	125.38	87.6
Food total	**71.14**	**125.74**

Source: National Sample Survey, 2003

Based on the DIM in *Table 3.A10*, Meghalaya's demand for meat, fish, and eggs is far higher than the national demand, and so is its demand for beverages. Its demand for rice is marginally higher than that of the country. Similarly, the entire NER has a higher than national average demand for meat, fish, eggs, and for rice. Apart from having a higher overall DIM compared to the country as a whole, the region also has a high demand for vegetables, cereal, and salt.

3.1.4 Dependency Index (DI)

The Dependency Index (DI) is the ratio of per capita consumption to per capita production. Here an attempt is made to explain whether there is any matching between the consumption of the crop and its production in the state. A state can consume more of a product it produces or else it can import and specialise only in an export oriented crop pattern which is driven by geography, climate, soil, rainfall, etc.

Calculation of the DI is somewhat risky as data is not available on the same products both for consumption as well as production for all NE states. Consumption data is obtained from NSS which has a different set of product classifications in contrast to the *Statistical Abstract of India* where production data is listed. Despite these problems, a mapping has been prepared which approximately places similar products in the desired product category. *Table 3.A11* shows the mapping of Cij and Pij for ease of calculation for all NE states, except Nagaland and Sikkim.

$$\mathbf{DI = (c_{ij}/C_{il})/ (P_{ij}/P_{il}) \ X \ 100}$$

P_{ij} and P_{il} have been defined above. The results of these calculations are shown in *Tables 3.A12a* and *3.A12b*; thus, a DI greater than 100 indicates dependency. (Due to non-availability of data, the DI cannot be calculated for all commodities.)

Table 3.A11: Mapping

Consumption	Production
Rice	Rice
Wheat	Wheat
Maize	Maize
Cereal	Total cereals
Pulses	Total pulses
Edible oil	Total oilseeds
Fruits (fresh)	Banana
Sugar	Sugarcane
Spices	Spices
Food total	Total foodgrains

Note: Consumption data is taken from NSSO and production data from Statistical Abstracts of India.

Table 3.A12a: Meghalaya and NER: Dependency Index (DI) for All Products, 2003–-04

Crop	Meghalaya	NER
Rice	100.37	165.96
Wheat	1,715.11	676.57
Maize	18.61	343.57
Total cereals	134.52	228.63
Total pulses	260.38	476.96
Total oilseeds	529.34	415.03
Fruits	44.65	95.69
Sugarcane	-	618.62
Spices	2.02	27.74
Total food grains	146.28	182.77
Milk	82.74	168.72
Meat	11.15	23.59
Egg	79.07	283.66
Fish	166.71	127.00

Source: Calculated from NSSO, 2003 and *Statistical Abstract of India, 2003–04*

Table 3.A12a clearly shows the dependency of the NER on outside regions for many agricultural commodities: it is dependent for all the products listed, except for fruits, spices, and meat, while Meghalaya has a surplus situation in maize, fruits, milk, meat, and eggs.

Table 3.A12b: Meghalaya and NER: Dependency Index for Milk, Meat, Eggs, and Fish, 2003–04

	Meghalaya	NER
Milk	82.74	168.72
Meat	5.58	23.59
Weights Assigned	*0.05*	*0.10*
Eggs	108.72	141.83
Weights Assigned	*0.55*	*0.20*
Fish	133.37	177.80
Weights Assigned	*0.40*	*0.70*

Source: *Statistical Abstracts of India*, 2003-04 and *NSS*, 2003
Note: Figures have been calculated.

District-level Dependency Indices

Now we are interested to know the dependency situation across different districts of Meghalaya for which we need to prepare a correspondence between consumption data and the production data as these data read taken from different sources. *Table 3.A13* provides a mapping between consumption and production at the district level.

Table 3.A13: Meghalaya Districts: Mapping – District-level Dependency Index

Consumption	Production
Rice	Rice
Wheat	Wheat
Pulses	Total Pulses
Sugar	Sugarcane
Edible oil	Rapeseed & mustard
Maize	Maize
Spices	Ginger
Fruits (fresh)	Banana

Note: Consumption data is taken from NSSO and production data from *Statistical Abstracts of India*

Table 3.A14a: District-level Dependency Index (DI) for All Products, 2004–05: Meghalaya as Base

Crops	Districts DI – Meghalaya as Base						
	East Khasi Hills	Ri-Bhoi	West Khasi Hills	Jaintia Hills	East Garo Hills	West Garo Hills	South Garo Hills
Rice	541.62	55.27	220.86	103.29	66.03	58.14	83.03
Wheat	-	-	521967.71	-	6402.96	611.77	-
Rabi and other pulses	10045.40	9224.78	42496.83	10169.04	5350.94	1234.50	1850.47
Sugar cane	-	-	118869.5	240195.5	17347.17	16389.27	22525.25
Rapeseed and mustard	87894.06	13196.30	86123.23	22823.11	3534.38	590.81	3154.47
Maize	229.33	59.15	78.75	105.99	231.02	94.81	143.38
Ginger	16.35	2985.71	18.20	445.85	637.13	365.78	656.23
Fruits	82.34	15.04	101.86	152.29	33.04	52.86	41.50

Dependency scores (*Table 3.A14a*) are defined by taking Meghalaya as the base to show the relative situation of a district as compared to the state. It reveals some interesting information. For instance, only the East Khasi Hills and West Khasi Hills have surpluses in ginger while Ri-Bhoi and the entire Garo Hills show surpluses in rice, and Jaintia Hills is only very marginally dependent on rice. Since wheat is produced only in small quantities and is not a major consumable item, all the districts are highly dependent on wheat. A few districts have shown surpluses in maize and fruits. In general, all the districts are highly dependent on imports.

Table 3.A14b: District-level Dependency Index (DI) for All Products, 2004–05 NER as Base

	Districts DI – NER as Base							
Crops	East Khasi Hills	Ri-Bhoi	West Khasi Hills	Jaintia Hills	East Garo Hills	West Garo Hills	South Garo Hills	Meghalaya
Rice	908.84	92.74	370.59	173.32	110.81	97.55	139.32	170.11
Wheat	-	-	875856.24	-	10744.1	1026.54	-	4386.32
Rabi and other pulses	16856.08	15479.09	71309.23	17063.54	8978.82	2071.48	3105.07	6038.20
Sugar cane	-	-	199461.73	403045.4	29108.4	27501.0	37797.1	71664.9
Rapeseed and mustard	147485.3	22143.26	144513.86	38296.94	5930.64	991.37	5293.16	3818.39
Maize	384.81	99.26	132.14	177.85	387.64	159.09	240.60	194.75
Ginger	27.44	5010.00	30.54	748.14	1069.11	613.78	1101.14	65.53
Fruits	138.16	25.24	170.92	255.55	55.43	88.69	69.64	85.44

The dependency scores by taking NER as the base show that all the districts except East Khasi, West Khasi, and Jaintia hills show scores less than 100 for fruits. For rice, only Ri-Bhoi and West Garo Hills; for maize only Ri-Bhoi; and for ginger only East Khasi Hills, West Khasi Hills, and Meghalaya as a whole show less than 100 scores. As in the first case, for the rest of the products in all the districts, dependency scores have been exorbitantly high.

Table 3.A14c: District level Dependency Index (DI) for All Products, 2004–05: India as Base

Crops	Districts DI – India as Base								
	East Khasi Hills	Ri-Bhoi	West Khasi Hills	Jaintia Hills	East Garo Hills	West Garo Hills	South Garo Hills	Meghalaya	NE
Rice	556.38	56.78	226.88	106.10	67.83	59.72	85.29	104.14	159.1
Wheat	-	-	536193.1	-	6577.5	628.44	-	2685.3	665.8
Rabi and other pulses	10319.17	9476.19	43655.01	10446.2	5496.8	1268.2	1900.9	3696.6	2132
Sugar cane	-	-	122109.1	246741.6	17819.94	16835.94	23139.14	43872.79	219.28
Rapeseed and mustard	90289.47	13555.95	88470.38	23445.12	3630.70	606.91	3240.44	2337.59	1541.29
Maize	235.58	60.77	80.90	108.88	237.31	97.40	147.29	119.23	1088.73
Ginger	16.80	3067.08	18.70	458.00	654.50	375.75	674.11	40.11	1439.19
Fruits	84.58	15.45	104.64	156.45	33.94	54.30	42.63	52.31	387.35

When the entire country is used as a base (*Table 3.A14c*), all the districts except for West Khasi Hills, Jaintia Hills, and NER as a whole show scores less than 100 for fruits. For rice only Ri-Bhoi, East Garo Hills, West Garo Hills, and South Garo Hills are not dependent; for maize only Ri-Bhoi, West Khasi Hills, and West Garo Hills; and for ginger only East Khasi Hills, West Khasi Hills, and Meghalaya as a whole show less than 100 scores. As in the other two cases (where the state and region are used as bases), for the rest of the products, the dependency scores have been exorbitantly high in all districts.

3.1.5 Relative Productivity of Principal Crops

Agricultural productivity, however, also depends on factors other than land utilisation, such as differing natural land requirements for different crops, or the role played by trade in determining resource allocation. Further, land utilisation pattern in a relatively closed subsistence economy is crucially determined by the consumption needs of farmers, i.e., local demand patterns. Some of these have been factored in the comparison of relative

productivities across states in the top five commodities (as indicated by the RSI) to national productivity levels.[1]

Table 3.A15: Relative Productivity of Principal Crops in Meghalaya, 2003–04

(Quintals per hectare)

Crop	Relative Productivity
Rice	0.88
Maize	0.75
Small millet	**1.65**
Wheat	0.61
Total cereals	0.89
Total pulses	**1.16**
Total foodgrains	1.00
Sesamum	**1.11**
Rapeseed & mustard	0.56
Total oilseeds	0.61
Tea	0.18
Coffee	-
Natural rubber	-
Banana	0.49
Sugarcane	0.03
Potatoes	0.46
Chillies	0.62
Ginger	**1.49**
Coconut	-
Turmeric	**1.54**
Pineapple	0.56

Source: *Statistical Abstracts of India*, 2003–04

Note: Figures are calculated.

The relative productivity figures as shown in *Table 3.A15* show that Meghalaya has productivity advantages for the following products: small millets, pulses, sesamum, ginger, and turmeric.

[1] Yield per hectare has been used to indicate productivity. A relative productivity greater than one would indicate that the specialisation given by the RSI has some economic basis.

Annexures to Chapter 5: Tourism

Table 5.A1: Tourists in North-East India, 2010

(Number)

States	Tourists		
	Domestic	Foreign	Total
Arunachal Pradesh	227,857	3,395	231,252
Assam	4,050,924	15,157	4,066,081
Manipur	114,062	389	114,451
Meghalaya	652,756	4,177	656,933
Mizoram	57,292	731	58,023
Nagaland	21,094	1,132	22,226
Sikkim	700,011	20,757	720,768
Tripura	342,273	5,212	347,485

Source: *NEDFi Databank.* http://db.nedfi.com/user

Annexure 5.A2: North-East Summit on Tourism

http://db.nedfi.com/content/tourism

Gangtok Summit on the Tourism Sector,27–28 April 2008

http://mdoner.gov.in/writereaddata/linkimages/fourth414626002.html

S.No.	Actionable Points	Action Taken
1.	A forum consisting of representatives from the Ministries of DoNER, Tourism, Civil Aviation, and NEC, public and private stakeholders, tour operators, etc., would be established for the formulation of: -State tourism circuits -Inter-state tourism circuits -Eco- and village tourism -Promotional events -Advocacy	NEC has constituted the North Eastern States Tourism Forum (NEST) with the Secretary, NEC as its Chairman; Director (Tourism), NEC as its Member Secretary; and including respective commissioners and secretaries (Tourism) of different states of the NER. The Forum will prepare plans to promote tourism in: • Intra- and inter-state tourist circuit • Eco-tourism • Village tourism • Promotional events • Destination promotion for the north-east The meeting of this Forum will be held quarterly, either at Shillong or any other state.

		The first meeting was held on 30 April 2008 at Shillong. M/s NEDFi have engaged a consultant to prepare a Regional Roadmap/ Action Plan for development of tourism in the NER.
2.	In consultation with the NE states, the Ministry of DoNER/NEC in consultation with the Ministries of Tourism, Home Affairs, External Affairs, Defence, etc. will formulate and launch a professionally prepared publicity programme on security for tourists in the north-east.	A committee was constituted to formulate a strategy for promotion of tourism in the NER comprising representatives from DoNER, MHA, DAVP, and Indian Institute of Mass Communication. The campaign is expected to cost about Rs 2.50 crore. Three TV spots ('Mesmerizing NE') have already been telecast on popular channels and have received appreciation. These spots, based on the theme of the north-east as a safe destination for investors as well as tourists, were given to an agency. MHA has also begun a campaign with emphasis on security aspects to allay apprehensions about travel restriction in consultation with MDoNER. The Ministry organised a successful conclave on 16 January 2008 to educate government officials on the north-east as a safe and attractive destination. The seminar had participation from NE states, tour operators, central ministries, etc. An exhibition will also be held on the sidelines of the seminars. The Ministry is also working with the MHA to highlight the potential of the north-east through the NE Newsletter being published, and widely circulated by the MHA, primarily containing development news.
3	Ministry of DONER/NEC, in consultation with Ministries of Tourism, Home Affairs, External Affairs, Defence, etc. will take up with the Commonwealth War Graves Commission the possibility of organising major commemorative events to which descendants of those buried in the north-east war cemeteries will be invited. This will incidentally project the security environment in NER more accurately to western tourists.	Ministry of DoNER has written to the State Governments of Nagaland and Manipur to develop a proposal for the same. Plans from the state governments are awaited. The Ministry of DoNER is also working on a media strategy to comprehensively focus on the North East Region. Firms have been short listed for the campaign.
4.	Ministry of DoNER/NEC will sponsor NE promotion films (cultural and touristic) aimed at schoolchildren and college students in other parts of India. SPICMACAY will be requested to screen these in universities.	The Ministry has produced some documentaries. More such programmes are likely to be awarded during the current year and a panel of agencies for undertaking the work has been formed.
5.	NEC to broaden its collaboration with ILFS for facilitating construction of star category hotels at identified locations. The scope of the North East Tourism Fund needs to be widened.	NEC has finalised an agreement with the Infrastructure Leasing and Finance Services (IL&FS) which has been signed on 17 October 2007. ILFS has initiated steps for supporting budget hotels in the

	Ministry of DONER also to be associated.	North Eastern Region in twelve cities which are under various stages of funding/construction. These are at Agartala, Guwahati, Jorhat, Tezpur, Dibrugarh, Manas, Dimapur, Kohima, Aizawl, Shillong, Tawang, and Bomdila, and Gangtok. The Budget Hotel at Agartala has been commissioned.
6.	A dedicated airline for the NE region, particularly for establishing connectivity within the NE states, is under consideration by NEC/DoNER. This arrangement could be widened subsequently to provide connectivity with Nepal, Bhutan, Dhaka, Yangon, Bangkok, Kunming, etc., for the promotion of regional tourism.	Bids were invited for this purpose by NEC. Only two bids were received by the last date. These were found invalid. It has been decided to modify and redraft the bid document. NEC is finalising the bid document for inviting fresh bids.
7.	NEC/Ministry of DoNER will organise promotional events at different locations in the country aimed at government servants for LTC visits to tourism destinations in the NE.	The Ministry initiated a COS Note for relaxation of LTC Rules for travel to the NER. DOPT has recently issued orders for allowing air travel to non-entitled officials and conversion of HTC to LTC for travel to the NER. A major event was organised in Vigyan Bhawan, New Delhi on 16 January 2008 for LTC holders inviting them to come to the NER. Government of India employees from Ministries and Organisations, State Governments, domestic tour operators, and the Indian Association of Tour Operators attended. Presentations were made by the State Governments and Ministry of Tourism, Indian Railways Catering and Tourism Corporation (IRCTC), and Infrastructure Leasing and Financial Services (IL&FS). An exhibition on the tourism sector was organised at the venue. Over 1000 delegates participated in the event.
8.	The Thai Minister of Commerce will be visiting the NER with a business delegation between 21–24 June 2007. This visit will promote tourism and also Thai business investment in the NER.	The Thai Commerce Minister visited the North Eastern Region (Agartala, Guwahati, and Shillong) in June 2007 with a delegation of 33 officials and businessmen. Ministry of DoNER held the North East India Trade and Investment Opportunities Week at Bangkok from 1–4 October 2007 which was attended by more than 500 participants from both the countries. The Deputy Minister (Industry), Thailand along with a delegation of 17 Thai officials and businesspersons visited the North Eastern Region (Assam, Arunachal Pradesh, and Sikkim) between 9 to 12 January 2007 to discuss investment prospects in the North Eastern Region. They had extensive discussions with State Government representatives as well as business persons from the region.

9.	The Union Minister of Tourism and Culture, Smt. Ambika Soni, announced the establishment of one Institute of Hotel Management (IHM) in each state of the NER that does not have such an institutions (Assam and Meghalaya already have one IHM each).	Ministry of Tourism has sanctioned an Institute for Hotel Management (IHM) at Aizawl for Rs 10 crore for which Rs 4 crore has already been released. The Institute for Nagaland will be approved shortly by Ministry of Tourism. Arunachal Pradesh, Manipur, and Tripura have yet to forward their project proposals. Institutes are already available at Guwahati, Shillong, and Gangtok.
10.	HRD and capacity-building of NE youths in the tourism, hotel, and hospitality services are being undertaken by Ministry of DoNER/NEC/Ministry of Tourism. These efforts would be synergised for undertaking capacity-building in a planned way.	Ministry of Tourism/DoNER/NEC can work out a strategy to impart training in tourism related skills to candidates from the NE States. The training could be funded from the Capacity Building schemes of the Ministry of DoNER. DoNER has approved a programme for the training of 125 youth from NER in Aviation Hospitality and Tourism Management. The programme is to be imparted by Ashok Institute, a unit of ITDC, at Bangalore from 1 July 2008.
11.	Ministry of DoNER will follow up issue of relevant Notifications by the DIPP under the North East Industrial and Investment Promotion Policy (NEIIPP) 2007 within June 2007.	The necessary notifications have been issued by DIPP which includes the services sector.
12.	Ministry of Home Affairs will consider and expedite issue of appropriate orders for relaxation of PAP/RAP restrictions on the entry of foreign nationals into Mizoram, Nagaland, Arunachal Pradesh, and Sikkim based on inputs given by the states. Mizoram, Nagaland, and Arunachal Pradesh to consider simplification of procedures for issue of ILPs. For example, all central and state government employees and employees of central and state PSUs may be allowed to enter based on official identity proof. State governments to identify inter-state tourism circuits and share the details with the Ministries of Home Affairs, Tourism, DoNER, and the NEC both for relaxation of the PAP/RAP restrictions and extension of technical and financial assistance for development of these identified circuits.	MHA received proposals from state governments. In the case of Arunachal Pradesh only, relaxation of PAP/RAP restrictions has been made and orders issued by MHA in May 2008. Proposals from the states of Mizoram, Nagaland, Manipur, and Sikkim are still under examination by MHA.
13.	NEC, jointly with Ministries of DoNER, Tourism and the state governments, to take forward the suggestion of the Ministry of Tourism to take advantage of Meeting Incentive Convention Event (MICE) Tourism by setting up convention centres at suitable locations	Ministry of Tourism has sanctioned a Convention Centre at Hotel Brahmaputra Ashok at Guwahati.

	and with all required infrastructure with assistance of the Ministry of Tourism.	
14.	NEC/Ministry of DoNER to organise a tourism promotional event at Bangkok jointly with the Ministry of Tourism and the Embassy of India at Bangkok after the Thai Commerce Minister's visit to the north-east in June, 2007.	Ministry of DoNER organised the 'North East India Trade nd Investment Opportunities Week' at Bangkok from 1–4 October 2007 with a session dedicated to Tourism.

Annexures to Chapter 6: Infrastructure

Tables from the Infrastructure Index for the Northeast: Tables 6.A1 to 6.A6

Table 6.A1: Growth Rates of Infrastructure, 1993–94 to 2006–07 (at constant base 1993–94)

(Per cent)

States	Growth Rate of Infrastructure
Meghalaya	10.11
India	**9.23**

Note: 1 Owing to differences in methodology of compilation, data for different states/UTs are not strictly comparable.
2. Figures are calculated.
Source: *Central Statistical Organisation* (CSO) website as on 26 September 1999, or old series and as on 2 February 2006 for new series.

Table 6.A2: Meghalaya Districts: Electricity, Water Supply, and North-East Rank, 2009

District	Villages Electrified (%)	Rank	Households with Tap Water Connections (%)	Rank
East Khasi Hills	71.85	57	62.60	4
Ri-Bhoi	74.22	52	35.83	11
Jaintia Hills	74.73	51	16.54	43
West Khasi Hills	54.00	68	28.69	17
West Garo Hills	53.85	69	17.42	40
South Garo Hills	44.20	72	28.92	16
East Garo Hills	53.36	70	21.26	30
North-East	**68.41**		**15.04**	

Source: "District Infrastructure Index for the North Eastern Region", Ministry of DONER, September 2009 http://mdoner.gov.in/index2.asp?sid=265

Table 6.A3: Meghalaya Districts: Education Infrastructure and North-east Rank, 2009

District	Schools per 1,000 People	Rank	Schools per 100 sq. km	Rank
East Khasi Hills	2.92	16	68.37	17
Ri-Bhoi	4.11	8	33.38	34
Jaintia Hills	3.59	10	28.15	36
West Khasi Hills	5.83	2	32.88	35
West Garo Hills	3.90	10	54.45	22
South Garo Hills	6.38	1	34.83	31
East Garo Hills	4.77	6	45.95	24
North east	**1.84**			

Source: "District Infrastructure Index for the North eastern Region", Ministry of DONER, September 2009 http://mdoner.gov.in/index2.asp?sid=265

Table 6.A4: Meghalaya Districts: Communication Infrastructure and North-East Rank, 2009

District	Post and Telegraph Offices per 10,000 People	Rank	Post and Telegraph Offices per 100 sq. km	Rank	Telephone Exchanges per 10,000 People	Rank	Telephone Exchanges per 100 sq. km	Rank
East Khasi Hills	2.04	37	4.79	21	0.51	28	1.21	9
Ri-Bhoi	2.28	33	1.85	39	0.78	18	0.63	31
Jaintia Hills	2.67	24	2.09	37	0.8	16	0.46	43
West Khasi Hills	2.50	25	1.41	49	0.44	31	0.25	51
West Garo Hills	1.99	40	2.77	32	0.35	40	0.48	41
South Garo Hills	1.39	55	0.76	62	0.20	62	0.11	67
East Garo Hills	1.52	51	1.46	48	0.48	29	0.46	43
North-East	**1.60**		**2.39**		**0.30**		**0.44**	

Source: "District Infrastructure Index for the North Eastern Region", Ministry of DONER, September 2009 http://mdoner.gov.in/index2.asp?sid=265

Table 6.A5: Meghalaya Districts: Health Infrastructure and North-East Rank, 2009

District	Hospital Beds per 10,00 People	Rank	Hospital Beds per 100 sq km	Rank
East Khasi Hills	23.71	6	55.57	5
Ri-Bhoi	14.00	23	11.36	33
Jaintia Hills	13.71	27	10.74	34
West Khasi Hills	12.84	30	7.24	47
West Garo Hills	10.22	35	14.27	19
South Garo Hills	12.87	29	7.03	48
East Garo Hills	13.17	28	12.68	25
North-East			**10.59**	

Source: "District Infrastructure Index for the North Eastern Region", Ministry of DONER, September 2009 http://mdoner.gov.in/index2.asp?sid=265

Table 6.A6: Meghalaya Districts: Banking Infrastructure and North-East Rank, 2009

District	Bank Branches per 10,000 People	Rank	Bank Branches per 100 sq km	Rank
East Khasi Hills	1.5	6	3.51	5
Ri-Bhoi	0.99	17	0.8	36
Jaintia Hills	1.1	13	0.86	35
West Khasi Hills	0.74	27	0.42	50
West Garo Hills	0.73	28	1.02	34
South Garo Hills	0.59	42	0.32	54
East Garo Hills	0.72	31	0.69	41
North-East	**0.57**		**0.85**	

Source: "District Infrastructure Index for the North Eastern Region", Ministry of DONER, September 2009 http://mdoner.gov.in/index2.asp?sid=265

Table 6.A7: Ratios of Types of Vehicles to Total Number of Vehicles (2006–07)

(Per cent)

Districts	Type	Trucks	Buses	Cars	Jeeps
East Khasi Hills	Govt	0.176	0.147	0.039	0.321
	Private	0.824	0.853	0.961	0.679
Ri-Bhoi	Govt	0.002	0.055	0.003	0.057
	Private	0.998	0.945	0.997	0.943
West Khasi Hills	Govt	0.000	0.000	0.005	0.102
	Private	1.000	1.000	0.995	0.898
Jaintia Hills	Govt	0.006	0.054	0.004	0.081
	Private	0.994	0.946	0.996	0.919
East Garo Hills	Govt	0.011	0.007	0.009	0.122
	Private	0.989	0.993	0.991	0.878
West Garo Hills	Govt	0.031	0.007	0.012	0.073
	Private	0.969	0.993	0.988	0.927
South Garo Hills	Govt	0.011	0.000	0.007	0.250
	Private	0.989	1.000	0.993	0.750
Meghalaya	Govt	0.092	0.088	0.030	0.243
	Private	0.908	0.912	0.970	0.757

Source: Statistical Abstract Meghalaya 2006

Table 6.A8: Power: Installed Capacity in Meghalaya and NER

(MW)

States	1996–97	1999–00	2003–04	2010–11
Meghalaya	189 (98.94)	189 (98.94)	188 (98.93)	289.62
NER	983 (27.87)	1,035 (24.02)	1,115 (25.56)	2,530.82
India	**87,595 (24.72)**	**97,884 (28.97)**	**1,12,684 (26.18)**	**1,26,994**

Note: Figures in parenthesis show the percentage of hydel power in total.

Source: Statistical Abstract of India, various issues; ** NEC database

Table 6.A9: Power in the NER — Installed Capacity: State, Central, and Private Sources, 2011

(MW)

State	State	Private	Central	Total
Arunachal Pradesh	94.71	0.03	118.62	213.36
Assam	446.80	24.50	507.54	978.84
Manipur	50.86	0.00	106.94	157.80
Meghalaya	186.08	0.00	100.54	289.62
Mizoram	88.33	0.00	50.59	138.92
Nagaland	30.67	0.00	72.51	103.18
Sikkim	52.11	0.00	149.37	201.48
Tripura	169.36	0.00	95.71	265.07

Source: NEDFi Databank of NER databank http://db.nedfi.com/user

Table 6.A10: State-wise Storage Capacity with Different Storage Agencies, 2005

State	FCI*	CWC**	SWC**	Others***	Grand Total
Andhra Pradesh	33.68	14.40	22.82	12.85	83.75
Bihar	4.91	0.97	2.03	5.49	13.40
Gujarat	5.70	6.23	2.27	2.25	16.45
Haryana	22.95	4.40	16.07	15.90	59.32
Karnataka	6.30	4.54	8.98	4.31	24.13
Kerala	5.36	1.30	1.92	0.79	9.37
Madhya Pradesh	5.46	6.75	11.38	5.25	28.84
Maharashtra	15.71	15.64	12.20	13.69	57.24
Orissa	6.25	1.88	4.05	4.52	16.70
Punjab	77.81	7.74	60.12	60.67	206.34
Rajasthan	9.09	3.75	7.19	0.03	20.06
Tamil Nadu	7.67	8.02	6.36	24.33	46.38
Uttar Pradesh	25.60	11.56	28.88	14.95	80.99
West Bengal	10.62	6.86	2.27	1.31	21.06
Jammu and Kashmir	1.03	0.21	0.00	1.49	2.73
Himachal Pradesh	0.26	0.07	0.00	0.40	0.73
Goa	0.15	1.04	0.00	0.14	1.33
Assam	2.52	0.64	2.48	1.10	6.74
Arunachal Pradesh	0.18	0.00	0.00	0.05	0.23
Manipur	0.18	0.00	0.00	0.23	0.41
Meghalaya	**0.19**	**0.00**	**0.11**	**0.01**	**0.31**
Nagaland	0.27	0.13	0.00	0.11	0.51
Sikkim	0.11	0.00	0.00	0.07	0.18
Tripura	0.34	0.24	0.00	0.31	0.89
Mizoram	0.18	0.00	0.00	0.00	0.18
Jharkhand	1.11	0.36	0.00	0.35	1.82
Uttranchal	2.11	0.75	0.00	0.00	2.86
Chhatisgarh	9.27	2.37	6.07	0.00	17.71
Union Territories	5.30	2.05	0.00	0.00	7.35
Grand Total	260.31	101.90	195.20	170.60	728.01

Notes: * Storage capacity of FCI as on 1 April 2005

** Storage capacity of CWC and SWCs as on 1 April 2005***This information have been taken from the State Profiles prepared on the basis of the information obtained from various states in 1998–99

6.1 Reports

A number of new line and gauge conversion projects are in progress in the NE Region for development of rail infrastructure (see NER Vision 2020). The proposed new railway line between Dudhnoi to Depa in Meghalaya could not be started because land could not be made available.

The Ministry of Railways has sanctioned rupees one crore for construction of the Azra-Byrnihat railway line during 2007–08, which would be ultimately linked to Shillong as part of the Centre's ambitious drive to link all state capitals in the north-east with railhead.

The 30 km rail line was declared a national project and included in the current budget. The anticipated cost of the project would be about Rs 200 crore rupees, but it would increase manifold if extended up to Shillong, a railways official said. "Preliminary arrangements have been made to take up the work," the official said. Besides Azra-Byrnihat, the Railways Ministry had sanctioned Dudhnoi-Depa railway line way back in 1992–93. At present, only Guwahati has a railhead, and Agartala is going to be linked up with rail line from Kumarghat soon.

The 15.5 km Dudhnoi-Depa line was supposed to be completed at a cost of Rs 22.33 crore, but non-availability of land has forced the ministry to plan the railway line from Dudhnoi to Mendhipathar, and ultimately passing through the West Garo Hills, East Khasi Hills, and Jaintia Hills districts, the official said. The Ministry has taken up final location survey for this alignment. The ambitious project will start from Jogighopa in Assam.

Construction of railways in NER is costly due to the terrain, and the operations are likely to be economically unviable. However, for the development of NER as well as from strategic considerations, it is necessary that a policy for expanding the railway network in the NER is adopted through declaring the projects as National Projects where funds are provided additionally, over and above the normal Gross Budgetary Support for Railways.

The study commissioned by the North Eastern Council had suggested the following rail links for major development of NER. The details of these rail links, with updated status, are as follows:

S. No.	Name of project	Remarks	Status
6	Dudhnoi-Depa: 15.5 Kms	This will bring Meghalaya on the railway map.	The state government is unable to provide land due to stiff local resistance and has proposed an alternative route from Depa to Mendhipathar. Railways have been advised to carry out a final location survey for this alignment.

Major development/modernisation works planned/in progress at non-metro airports (as on 01 December 2006):

S.No.	Airport/State	Scheme	Estimated Cost (Rupees crore)	Present status
5	Shillong, Barapani	Construction of new terminal building complex for 150 passengers	30.00	Drawings have been finalised and estimated under preparation. Work likely to be taken up during 2006–07.

Annexures to Chapter 7: Trade and Regional Cooperation

Table 7.A1: Commodity Exports through LCS, 2005–06

Land Customs Station	Commodity	Quantity (Mt)	Value (Rs)
Dawki	Coal	2,92,313.6	47,62,11,782.00
Borsora		4,61,026.0	82,89,59,408.00
Mahendraganj		5,176.0	99,79,032.00
Ghasuapara		1,18,080.8	23,36,16,121.00
Dalu		46,399.0	11,42,63,305.00
Dawki	Lime stone	552.0	1,40,637.00
Borsora		29,475.3	1,73,71,971.00
Shella Bazar		1,10,491.0	2,81,44,829.00
Bholaganj		2,21,643.5	7,46,20,658.00
Dalu		504.7	1,32,980.00
Shella Bazar	Boulder stone	8,200.0	20,60,455.20
Mahendraganj	Crushed stone	5,023.0	30,88,745.00
Mahendraganj	Ginger	617.0	41,45,566.00
Dawki	Orange (nos.)	22,46,980.0	21,45,691.00
Dalu		20.0	1,88,580.00

Source: Meghalaya State Development Report 2008–09

Table 7.A2: Commodity Exports through LCS, 2006–07

Land Customs Station	Commodity	Quantity (Mt)	Value (Rs.)
Dawki	Coal	2,39,138.6	47,18,34,816.00
Borsora		4,73,528.9	92,42,23,201.00
Mahenderaganj		3,309.0	68,22,234.00
Ghasuapara		2,31,499.4	47,26,83,846.00
Dalu		53,363.4	10,81,07,840.00
Baghmara		2,055.5	36,78,777.00
Dawki	Lime stone	6,322.4	16,35,279.00
Borsora		1,25,408.7	3,26,70,466.00
Shella Bazar		6,00,975.0	17,05,51,740.00
Bholaganj		4,02,961.0	11,29,58,849.00
Dalu		235.5	63,466.00
Dawki	Boulder stone	531.9	1,93,507.00
Bholaganj		530.0	1,13,585.00
Mahendraganj		2,000.0	8,67,583.00
Dalu		200.0	71,840.00
Mahendraganj	Crushed stone	1,472.0	10,02,849.00
Mahendraganj	Ginger	415.0	29,17,209.00
Gasuapara		21.2	1,58,202.00
Dawki	Tomato	600 kg.	78,000.00
Dawki	Raw hides and skins	57.0	10,29,360.00

Source: Meghalaya State Development Report 2008–09

Annexures to Chapter 9: Public Finances

9.1 Externally Aided Projects

9.1.1 International Fund for Agricultural Development (IFAD)

IFAD and the government of Meghalaya have been exploring options for reducing poverty in this state. Among these was a Sustainable Livelihoods Approach (SLA) analysis that IFAD organised to gain an understanding of the views of poor people regarding their own situation. The objective of the SLA analysis was to interact with rural poor people to help IFAD and the central and state governments understand their strengths**,** the obstacles they face, and the vision they have of their future.

Relevant Points for Project Design

The SLA analysis recommended two major actions for reducing poverty in Meghalaya:

- **Supporting the poor to use and improve existing village institutions in ways they choose:** Capacity building of village institutions and individuals (such as the headman, durbar, or village council) was recommended to address people's needs, especially access to resources. Capacity building of government institutions outside the villages was also recommended so they would be more supportive and responsive to poor people's institutions. Capacity building across these levels is essential to create bridges between those who make decisions and those whose lives are affected by the decisions made.
- **Promoting agricultural growth:** Agricultural growth needs to be promoted by helping poor people access new goods, knowledge, power, and information. The idea is not to provide technical inputs directly but to ensure that the demand that develops as a result of the first action is supplied in a free and fair way. (Many interventions are needed on the supply side as well as on the market institutions themselves.)

  The analysis highlighted that these actions would have a significant impact on reducing poverty and food insecurity. Moreover, they are easy to implement. The analysis also emphasised that these actions — whether at the village, state or national level — would succeed only if they were steered by the poor people.

Impact of the SLA Analysis on Project Design

The recommended actions in the SLA analysis were included as the first components of the project proposal in its Inception Report. These components are summarised below. The primary objective of this component is to facilitate community level decision-making and to strengthen the capability of communities to take responsibility for managing their own development. The specific objectives include:

- Establishing and strengthening village institutions to promote community self-reliance
- Further integrating women into community decision-making
- Reorienting the local power structure so that it reflects the interests of marginalised groups
- Helping government service organisations and NGOs focus their efforts on developing alternative livelihood activities for community members

Livelihood Enhancement Activities

The overarching goal of this component is to provide viable opportunities for the poorest people to increase their incomes. All of the activities will be based on the following criteria to

ensure that they provide viable and realistic opportunities. The activities must:

- Have an established market for goods and services they generate
- Provide adequate remuneration to participants
- Be substantially directed toward women and serve as substitutes for less remunerative and more labour intensive work
- Incorporate local knowledge
- Make use of existing skills or provide training
- Be environmentally sound

The SLA analysis, along with the other studies, workshops, and field visits conducted with experts from many economic sectors and government departments, resulted in a much broader livelihood agenda. They clearly demonstrated that there are multiple opportunities for poor households in Meghalaya to improve their economic security. The sub-sectors go beyond the traditional paddy cultivation, and include organic agriculture, horticulture, livestock, aquaculture, and forestry-related activities (timber and non-timber forest products). At the same time, the actual selection of activities will be made by the poor households.

The SLA analysis brought to light the need to explore the issue of access to land. Any livelihood strategy would be compromised if some solutions to tenure security and access to land were not developed alongside the livelihood enhancement activities. The project proposes to include a Land Bank pilot initiative that promotes long-term tenure arrangements through purchase or long-term lease of productive land. The pilot will work with individual households, self-help groups and village and district institutions. The underlying objective is to increase the motivation of the cultivators for making greater investments of their time, labour, and capital.

9.1.2 Asian Development Bank (ADB)

The proposed North-Eastern States Roads Investment Programme (NESRIP), a centrally sponsored scheme of the Ministry of Development of North-Eastern Region with assistance from the Asian Development Bank (ADB) is included in the 2009—10 pipeline. The total cost of the project in the first investment programme is USD 298.6 million and the target date for ADB approval for the Tranche 1 loan (USD 94.8 million) is February 2010.

A total length of 522.6 km of roads and bridges covering six north-east states, excluding Arunachal Pradesh and Nagaland, is proposed to be taken up for construction/upgradation during Tranche 1 and Tranche 2 over five years. The project also includes in Meghalaya construction of 93.4 km of road from Garobadha to Dalu (NH51) costing Rs 154.91 crore and expected to be completed by 2015.

9.1.3 The World Bank

In the north-eastern states which face significant capacity constraints, the World Bank engages in capacity building, analytical work, and possibly lending in selected priority sectors, and dialogue on regional issues. The World Bank has contributed to the implementation of various schemes in sectors such as education and health, and Meghalaya should also take advantage of such contributions.

Annexures to Chapter 10: Building Capacities of People and Institutions

Table 10.A1: Human Development Index of Indian States, 2005

State	HDI 1999–2000	HDI 2007–08	Rank 1999–2000	Rank 2007–08
Kerala	0.677	0.79	2	1
Delhi	0.783	0.75	1	2
Himachal Pradesh	0.581	0.652	4	3
Goa	0.595	0.617	3	4
Punjab	0.543	0.605	5	5
NE (excluding Assam)	0.473	0.573	9	6
Maharashtra	0.501	0.572	6	7
Tamil Nadu	0.48	0.57	8	8
Haryana	0.501	0.552	7	9
Jammu and Kashmir	0.465	0.529	11	10
Gujarat	0.466	0.527	10	11
Karnataka	0.432	0.519	12	12
West Bengal	0.422	0.492	13	13
Uttarakhand	0.339	0.49	16	14
Andhra Pradesh	0.368	0.473	15	15
Assam	0.336	0.444	17	16
Rajasthan	0.387	0.434	14	17
Uttar Pradesh	0.316	0.38	18	18
Jharkhand	0.268	0.376	23	19
Madhya Pradesh	0.285	0.375	20	20
Bihar	0.292	0.367	19	21
Orissa	0.275	0.362	22	22
Chhattisgarh	0.278	0.358	21	23
All India	**0.387**	**0.467**		

Source: Santosh Mehrotra's own computations, India Human Development Report 2011: Towards Social Inclusion by Santosh Mehrotra

Table 10.A2: Population by Age Group, 2001, and Projected, 2031

(Per cent)

	2001				2031 Projected		
State	**0–14**	**15–29**	**15–65**	**65+**	**0–14**	**15–65**	**65+**
Arunachal Pradesh	39.8	26.37	57.8	2.4	25.6	67.8	6.6
Assam	36.6	27.17	59.6	3.8	26.0	67.1	6.9
Manipur	31.8	30.20	63.6	4.6	21.5	67.9	10.6
Meghalaya	41.6	27.13	55.5	2.9	26.0	68.1	5.9
Mizoram	34.6	30.56	61.6	3.8	22.7	68.1	9.2
Nagaland	35.1	32.13	61.8	3.1	23.0	69.0	8.0
Sikkim	33.6	30.72	62.9	3.5	22.8	68.9	8.3
Tripura	31.7	27.90	63.2	5.1	21.9	68.7	9.4
India	**34.3**	**26.58**	**60.9**	**4.8**	**25.7**	**66.4**	**7.9**

Source: Census of India

Table 10.A3: Educational Institutions by Management

(Per cent)

	Government	Local Bodies	Private Aided	Private Unaided	Total Number
	Pre-Degree/Junior College/Higher Secondary Schools				
Meghalaya	21.43	0.00	43.88	34.69	98
India	32.23	1.12	30.05	36.60	
	High/Post Basic Schools				
Meghalaya	2.07	0.00	67.75	30.18	676
India	30.62	8.70	27.15	33.53	
	Middle/Senior Basic Schools				
Meghalaya	2.48	0.00	43.38	54.14	2,259
India	44.83	25.71	6.75	22.72	
	Primary/Junior Basic Schools				
Meghalaya	39.98	0.00	38.97	21.05	6,351
India	46.01	43.39	3.19	7.42	

Source: DISE (various years)

Table 10.A4: Distribution of Schools in Meghalaya by Distance from Habitations

Districts	Primary Stage			Upper Primary Stage		
	Within the Habitation	Within One km but Not Within the Habitation	Beyond One km of Habitation	Within the Habitation	Within One km but Not Within the Habitation	Beyond One km of Habitation
Jaintia Hills	75.3	11.48	13.22	18.56	32.84	48.6
East Khasi Hills	69.55	19.96	10.49	21.45	43.45	35.1
West Khasi Hills	77.47	12.5	10.03	15.97	38.19	45.83
East Garo Hills	74.68	12.07	13.25	11.68	45.14	43.18
West Garo Hills	70.29	17.17	12.54	15.57	49.85	34.58
South Garo Hills	53.14	20.74	26.12	7.81	56.47	35.72
Ri-Bhoi	52.38	22.92	24.7	14.43	38.99	46.58
Meghalaya	69.09	16.37	14.54	15.34	44.13	40.54

Source: MHDR, 2008, Government of Meghalaya

Table 10.A5a: District-wise Literacy Rates in Meghalaya: Urban-Rural

Districts	1981			1991			2001			2011		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
West Garo Hills	21.69	61.25	25.91	34.34	78.29	39.32	46.09	85.17	50.78	65.06	92.58	68.38
East Garo Hills	33.05	47.41	33.51	46.99	68.79	48.38	57.97	82.15	61.57	72.71	91.84	75.51
South Garo Hills	NA	NA	NA	NA	NA	NA	62.66	77.10	63.67	70.41	91.52	72.39
West Khasi Hills	31.47	52.35	31.97	49.06	71.82	50.52	63.13	83.83	65.50	78.01	89.36	79.30
Ri-Bhoi	NA	NA	NA	NA	NA	NA	52.28	83.96	55.21	76.26	85.71	77.22
East Khasi Hills	31.95	65.25	43.73	46.36	83.68	60.04	63.72	88.65	74.74	78.64	91.55	84.70
Jaintia Hills	20.77	66.01	24.51	30.35	81.37	35.32	48.97	91.14	52.79	60.75	91.78	63.26
Meghalaya	27.45	64.12	34.08	41.05	81.74	49.10	57.00	87.12	63.31	71.15	91.33	75.48
All India	29.65	57.40	36.23	44.70	73.10	52.20	59.40	80.30	65.38	68.91	84.98	74.04

Source: Census of India, 1981, 1991, 2001, and 2011 (The South Garo Hills and Ri-Bhoi districts were only created in 1992. Hence, data is NA for prior census years.)

Table 10.A5b: District-wise Literacy Rates in Meghalaya; Male-Female

Districts	1981			1991			2001			2011		
	Male	Female	Persons	Male	Female	Persons	Male	Female	Persons	Male	Female	Persons
West Garo Hills	32.04	19.55	25.91	46.93	31.32	39.32	57.51	44.51	51.03	73.38	63.34	68.38
East Garo Hills	39.01	27.66	33.51	54.7	41.7	48.38	67.39	55.74	61.7	79.56	71.32	75.51
South GaroHills	NA	NA	NA	NA	NA	NA	62.6	48.61	55.82	76.77	67.72	72.39
West Khasi Hills	34.08	29.75	31.97	52.98	47.94	50.52	67.02	64.21	65.64	80.29	78.30	79.30
Ri-Bhoi	NA	NA	NA	NA	NA	NA	69.22	62.67	66.07	78.52	75.85	77.22
East Khasi Hills	46.96	40.3	43.73	62.86	57.04	60.04	78.12	75.82	76.98	85.26	84.15	84.70
Jaintia Hills	24.63	24.38	24.51	34.37	36.31	35.32	50.52	55.54	53	59.75	66.71	63.26
Meghalaya	37.89	30.08	34.08	53.12	44.88	49.1	66.14	60.41	63.31	77.17	73.78	75.48
All India	46.89	24.82	36.23	64.13	39.29	52.21	75.85	54.16	65.38	82.14	65.46	74.04

Source: Census of India, 1981, 1991, 2001, and 2011

Table 10.A6a: Schools with Drinking Water, 2008–09

(Per cent to total)

Districts	Primary only	Primary + UP	P+Sec/HSec	UP only	UP + Sec
East Khasi Hills	72.99	2.88	2.52	19.57	2.04
West Khasi Hills	64.66	7.35	7.75	13.60	6.64
Jaintia Hills	71.18	5.58	4.52	13.41	5.31
Ri-Bhoi	60.57	15.24	6.91	13.01	4.27
East Garo Hills	80.35	2.65	0.88	14.87	1.24
West Garo Hills	70.76	2.16	3.07	19.11	4.89
South Garo Hills	75.10	4.72	1.67	14.67	3.84

Source: DISE, 2008–09

Table 10.A6b: Schools with Blackboards, 2008–09

(Per cent to total)

Districts	Primary only	Primary + UP	P+Sec/HSec	UP only	UP + Sec
East Khasi Hills	76.33	2.25	1.71	18.14	1.57
West Khasi Hills	68.36	7.28	5.86	13.86	4.64
Jaintia Hills	73.15	5.22	3.46	14.58	3.59
Ri-Bhoi	65.67	14.17	4.90	12.53	2.72
East Garo Hills	80.64	1.79	0.77	15.64	1.15
West Garo Hills	76.38	1.57	1.32	17.11	3.62
South Garo Hills	77.55	4.09	1.32	14.04	3.01

Source: DISE, 2008–09

Table 10.A7: Drop-out Rates — All Classes: Meghalaya and India

State	Classes I–V			Classes I–VIII			Classes I–X		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Meghalaya	37.2	35.51	36.36	62.51	58.34	60.43	76.78	75.5	76.14
India	25.7	24.41	25.09	43.72	41.34	42.68	56.55	57.33	56.71

Source: Selected Educational Statistics 2007–08

Table 10.A8: Meghalaya: Trained Teachers 2006–07

(Per cent to total)

Districts	Primary		Primary with Upper primary		Primary with Upper Primary Sec/Higher Sec		Upper Primary Only		Upper Primary with Sec/Higher Sec	
	M	F	M	F	M	F	M	F	M	F
East Garo Hills	70.27	85.33	0.54	1.33	0.54	0.00	28.11	13.33	0.54	0.00
East Khasi Hills	53.59	61.90	12.93	12.17	7.76	7.50	19.68	15.30	6.03	3.14
Jaintia Hills	58.32	70.70	8.22	7.51	3.21	4.32	25.85	15.12	4.41	2.35
Ri-Bhoi	60.61	57.80	12.63	16.06	5.05	4.13	20.20	19.27	1.52	2.75
South Garo Hills	81.87	89.86	0.00	1.45	0.52	0.00	17.62	8.70	0.00	0.00
West Garo Hills	61.85	69.71	0.29	0.68	0.07	0.34	36.90	29.10	0.88	0.17
West Khasi Hills	62.40	66.88	4.00	7.64	4.80	1.27	23.20	15.92	5.60	8.28

Source: DISE 2008–09

Table 10.A9: Use of Public Health Facilities in North-East States, 2005–06

(Per cent)

States	Percentage of households that do not generally use government health facilities	Reasons for not generally using government health facilities among households that do not generally use government health facilities					
Arunachal Pradesh	17.5	50.1	24.4	7.0	18.3	36.7	6.5
Assam	34.8	48.9	6.6	6.1	11.2	39.4	7.3
Manipur	21.0	29.8	20.2	11.2	19.4	46.4	10.6
Meghalaya	35.2	33.4	17.2	14.1	21.7	33.3	8.6
Mizoram	9.4	26.4	7.2	2.2	23.2	42.5	8.6
Nagaland	47.9	54.1	14.7	8.3	14.6	29.8	8.3
Sikkim	8.2	8.4	22.0	4.7	50.7	47.7	5.5
Tripura	20.1	29.4	20.4	6.6	23.8	47.1	9.0

Source: Central Bureau of Health Intelligence

Table 10.A10: Infant Mortality Rates: Meghalaya and India

(Per cent)

	NFHS-3	NFHS-2	NFHS-1
Meghalaya	45	89	64
India	44	42	36

Source: NFHS-3

Note: NFHS-1 was conducted in 1992–93; NFHS-2 in 1998–99; and NFHS-3 in 2005–06

Table 10.A11: Trends in Vaccination Coverage

(Percentage of children aged 12–-23 months who have received all recommended vaccines)

	Meghalaya	India
NFHS-1	10	36
NFHS-2	14	42
NFHS-3	33	44

Source: NFHS-3

Note: NFHS-1 was conducted in 1992–93; NFHS-2 in 1998–99; and NFHS-3 in 2005–06

Table 10.A12: Quality of Healthcare for Women

State	**Women with Any Contact with a Health Worker** (Per cent)
India	17.3
North	
Delhi	2.9
Haryana	11.2
Himachal Pradesh	9.1
Jammu and Kashmir	4.1
Punjab	11.9
Rajasthan	11.7
Uttaranchal	18.7
Central	
Chhattisgarh	19.4
Madhya Pradesh	16.9
Uttar Pradesh	19.8
East	
Bihar	19.2
Jharkhand	14.7
Orissa	22.6
West Bengal	23.3
North-East	
Arunachal Pradesh	9.6
Assam	8.9
Manipur	4.6
Meghalaya	7.6
Mizoram	6.2
Nagaland	4.5
Sikkim	13.2
Tripura	14.4
West	
Goa	14.5
Gujarat	27.3
Maharashtra	16.5
South	
Andhra Pradesh	9.0
Karnataka	19.9
Kerala	22.6
Tamil Nadu	15.2

Source: NFHS 3

Table 10.A13: Meghalaya: Anaemia among Adults

(Per cent)

	NFHS-3			NFHS-2
	Total	Urban	Rural	
Ever married women age 15–49 years who are anaemic	45.4	36.1	47.9	63.3
Pregnant women age 15–49 years who are anaemic	56.1	*	57.1	58.6
Ever-married men age 15–49 who are anaemic (%)	34.2	25.8	36.3	

Source: NFHS-3

Note: * Not shown; based on fewer than 25 unweighted cases.

Table 10.A14: Shortfall in Health Personnel in PHCs and CHCs, 2008

(Number)

Position	Shortfall
Radiographers (at CHCs)	1
Pharmacists	16
Laboratory Technicians	None
Nurse Midwives/Staff Nurses	111
Total Specialists	102
Surgeons	*25*
Obstetricians and& Gynaecologists	*26*
Physicians	*25*
Paediatricians	*26*

Source: RHS, 2008