HEALTH AND DEVELOPMENT IN NORTH-EAST INDIA

SANJAY SINHA
This book, containing sixteen papers including the introduction in two sections, attempts to examine the issues on health and development in North East India. It deals with the issues concerning interstate disparity of health performance in North East and comparison with India, barriers to health care access, reproductive health of women, energy intake, first birth intervals and implementation of ICDS. In the second section, the contributors discuss at length the role of medicinal plants in the development of rural economy, women empowerment through MGNREGA, condition of children in tea gardens, waste management etc. in the North-eastern region.
THE AUTHOR

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HEALTH AND DEVELOPMENT IN NORTH-EAST INDIA

SANJAY SINHA

MITTAL PUBLICATIONS
NEW DELHI (INDIA)
Health is a state of complete physical, mental and social well-being and not merely the absence of diseases. The popular saying ‘health is wealth’ stands true as healthy populations live longer, more productive, and contributes to economic development. According to the Constitution of World Health Organisation (WHO) the enjoyment of the highest standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic and social condition. WHO is concerned with the impact of improved health on development and poverty eradication, and conversely, with the impact of development policies on the achievement of health goals. In particular, it aims to build support across government for higher levels of investment in health, and to ensure that health is prioritized within overall economic and development plans. Government of India initiated a number of health care schemes and the primary health care infrastructure has recorded an impressive development since independence. Yet health scenario, in terms of rural health infrastructure, doctors-nurses per thousand population, SCs, PHCs, CHCs, drugs and laboratory, presence of doctors, health workers and health expenditure of gross domestic product, absence of transportation links with health centers, etc. The service delivery in the Northeastern region is systematically missing. Primary health care services exist but functioning is very poor. The Northeastern region has a difficult geographical setting, steps needs to be taken towards making health care facilities available to people easily especially in most remote villages. Although there has been improvement with the operation of NRHM for affordable and accountable quality health services to rural areas, the improvement has been quite uneven across regions with large-scale interstate variations. Providing quality health services in the rural areas needs rural infrastructure development like road communication, safe drinking water, proper sanitation, etc. Infrastructure development
ensuring better communication network and capacity building focusing on development of skills and training and identification of local means and production suited to the genius of the people needs to be explored for sustainable development.

The present volume is an attempt in the aforesaid direction. The edited volume “Health and Development in North-east India” is a collection of paper on the related issues of health and development in the region, including the introduction which presents a mirror view of what the contributors have discussed and analyzed in their scholarly papers.

I express my sincere thanks to the contributors who kindly accepted our request to include their papers and rendered necessary information, assistance and cooperation during the compilation of this volume.

I deeply express my heartfelt gratitude to my brother Dr. Harendra Sinha, Associate Professor, Government J. Buana College, Lunglei, Mizoram and thankful to the family of University of Science and Technology for their support and encouragement.

I wish to pass on my sincere thanks to many scholars worldwide whose valuable works have been consulted and drawn upon during the compilation work. The blessings of information technology are highly acknowledged through which much information, data and study materials were gathered.

I am deeply obliged to Mr. K M Mittal of Mittal Publications, New Delhi for accepting the manuscript and bringing out this volume in a short period and in graceful manner.

Meghalaya
15th August 2013

SANJAY SINHA
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GLOSSARY

**Anganwadi**: 'Bourtyard shelter' in Hindi. They were started by the Government of India in 1975 as part of the Integrated Child Development Services programme to combat child hunger and malnutrition. A typical Anganwadi centre also provides basic health care in Indian villages.

**Ayurveda**: A system of traditional medicine native to the Indian subcontinent and a form of alternative medicine.

**Awas**: House/Housing

**Char**: Means a small isle surrounded by water in a river.

**Chapari**: Means an area of sandy land in the bank of a river attached to the main land.

**Gaon Burha**: Village elder

**Gram**: Village

**Jhum**: Slash and burn method of cultivation, an agricultural technique which involves cutting and burning of forests or woodlands to create fields, also known as shifting cultivation or swidden cultivation.

**Kishori**: Young

**Kendra**: Centre

**Kuchha/Kaacha House**: A house made up of mud or hay stack or tin roof.

**Panchayat**: Local governing body

**Pradhan**: President/Head

**Pucca House**: A concrete (material) material building/house.

**Rogi**: Patient.

**Sabha**: Committee
Shakti: Energy
Yojana: Scheme.
Yoga: Commonly known generic term for the physical, mental, and spiritual practices or which originated in ancient India.
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
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<tr>
<td>ANM</td>
<td>Auxiliary Nurse Midwife</td>
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<tr>
<td>ARSH</td>
<td>Adolescent Reproductive and Sexual Health</td>
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<tr>
<td>AYUSH</td>
<td>Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy</td>
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<tr>
<td>AWC</td>
<td>Anganwadi Centres</td>
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<tr>
<td>BMI</td>
<td>Body Mass Index</td>
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<tr>
<td>BMR</td>
<td>Bacterial Multi Resistant's</td>
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<tr>
<td>BP</td>
<td>Blood Pressure</td>
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<tr>
<td>CBR</td>
<td>Crude Birth Rate</td>
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<tr>
<td>CDPO</td>
<td>Child Development Project Officer</td>
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<tr>
<td>CDR</td>
<td>Crude Death Rate</td>
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<tr>
<td>CED</td>
<td>Chronic Energy Deficient</td>
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<td>CHC</td>
<td>Community Health Centre</td>
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<tr>
<td>CHP</td>
<td>Child Health Programme</td>
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<tr>
<td>DLHS</td>
<td>District Level Household and Facility Survey</td>
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<td>GDP</td>
<td>Gross Domestic Production</td>
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<tr>
<td>GSDP</td>
<td>Gross State Domestic Product</td>
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<td>GOI</td>
<td>Government of India</td>
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<td>HDR</td>
<td>Human Development Report</td>
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<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
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<tr>
<td>ICDS</td>
<td>Integrated Child Development Services</td>
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<tr>
<td>IMR</td>
<td>Infant Mortality Rate</td>
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<td>IPHS</td>
<td>Indian Public Health Standards</td>
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<td>KSY</td>
<td>Kishori Shakti Yojna</td>
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<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>LEB</td>
<td>Life Expectancy at Birth</td>
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<td>MDG</td>
<td>Millennium Development Goals</td>
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<td>MGNREGS</td>
<td>Mahatma Gandhi National Rural Employment Guarantee Scheme</td>
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<tr>
<td>MHIP</td>
<td>Mizo Hmeichhe Insuihkhwam Pawl</td>
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<tr>
<td>MMR</td>
<td>Maternal Mortality Rate</td>
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<td>MPW</td>
<td>Multi Purpose Workers</td>
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<td>MSW</td>
<td>Municipal Solid Waste</td>
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<td>NER</td>
<td>North Eastern Region</td>
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<td>NFHS</td>
<td>National Family Health Survey</td>
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<td>NNMB</td>
<td>National Nutrition Monitoring Bureau</td>
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<tr>
<td>NGO</td>
<td>Non-Government Organisation</td>
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<tr>
<td>NABARD</td>
<td>National Bank for Agriculture and Rural Development</td>
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<tr>
<td>NFHS</td>
<td>National Family Health Survey</td>
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<tr>
<td>NRHM</td>
<td>National Rural Health Mission</td>
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<td>NSDP</td>
<td>National Skill Development Programme</td>
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<td>OBC</td>
<td>Other Backward Class</td>
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<td>OT</td>
<td>Operation Theatre</td>
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<tr>
<td>PHC</td>
<td>Primary Health Centre</td>
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<tr>
<td>RCH</td>
<td>Reproductive and Child Health</td>
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<tr>
<td>RTI</td>
<td>Reproductive Tract Infection</td>
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<td>SC</td>
<td>Sub-centre</td>
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<td>SC</td>
<td>Scheduled Caste</td>
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<td>ST</td>
<td>Scheduled Tribe</td>
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<td>SWM</td>
<td>Solid Waste Management</td>
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<td>TB</td>
<td>Tuberculosis</td>
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<tr>
<td>TFPG</td>
<td>Total Factor Productivity Growth</td>
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<td>VMG</td>
<td>Vigilance Monitoring Committee</td>
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<td>YMA</td>
<td>Young Mizo Association</td>
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<td>WHO</td>
<td>World Health Organisation</td>
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SECTION-I
Status of Health in Rural North-East India
Human development is multidimensional and health is one of the most important components among them. The popular saying 'health is wealth' stands true as healthy populations live longer, more productive and contributes to economic development. It is a vital component as well as a crucial index of social and economic development of the country. Undoubtedly, better health of community, in turn leads to better sustainable development. The Constitution of World Health Organisation (WHO) defines health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.” Thus, health of a community has to be viewed in a broad perspective than merely in terms of demographic indicators. The basic objective of any health care delivery system, therefore, would be to provide and organise the services in such a way that it reaches to everyone and available resources, knowledge and technology is optimally utilised. The Universal Declaration of Human Rights says, everyone has the right to a standard of living, adequate for the well-being of himself and his family. Recognizing its importance and imperatives, the WHO’s Constitution further states that “the enjoyment of the highest standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic and social condition”. WHO stressed on these diverse issues. It is concerned with the impact of improved health on development and poverty eradication, and conversely, with the impact of development policies on the achievement of health goals. The inclusion of health targets in the Millennium Development Goals (MDGs) supports the contention that good health is important for overcoming poverty and achieving
the wider goal of socio-economic development. While all MDGs are in some way related to health, three refer specifically to health: (a) Goal 4, reduce child mortality; (b) Goal 5, improve maternal health; and (c) Goal 6, combat HIV/AIDS, malaria and other diseases (UN, 2007). Though health forms the central feature of the MDGs, the primary problem lies with the failure of public health care infrastructure and growing privatization of health systems in the country.

In India, right to health is part of Right to Life enshrined under Article 21 of the Constitution and has been interpreted in this way in several rulings of the Supreme Court of India. What this means is that it is the states' primary responsibility to ensure primary health care in a socially just and equitable environment. Government of India initiated a number of health care schemes and the primary health care infrastructure has recorded an impressive development since independence. The health care system in India has been expanded and modernized considerably, with dramatic improvements in life expectancy and the availability of modern health care facilities and better training of medical personal. Yet health scenario, in terms of rural health infrastructure, quality, coverage, doctors-nurses per thousand population, SCs, PHCs, CHCs, drugs and laboratory, presence of doctors, health workers and health expenditure of gross domestic product, etc. is inadequate. The Constitution of India provides an agenda for a socialist model of development. While civil and political rights are enshrined as fundamental rights, social and economic rights like health, education and housing are considered directive principles. As such, the State continually fails to fulfil these rights, addressing them mostly through Five Year Plans and other policy initiatives.

In the North-eastern states of India (Assam, Arunachal, Manipur, Meghalaya, Mizoram, Sikkim and Tripura), there is major variation in health services across states, between urban and rural areas, in hilly terrains and so on. In some instances this is because of lopsided provisioning (as in Arunachal, where 88.5 per cent of the general and district hospitals are located in the urban areas), in others because of the absence of transportation links with health centres. As in many other states, primary health care provided in North-eastern region is generally poor in quality, inaccessible and unavailable, (perhaps with the exception of Mizoram, which appears to have a well-functioning system which people have faith in). Rural public healthcare services are especially abysmal with high levels of absenteeism, shortages of skilled medical and paramedical staff,
an absence of medicines and supplies and inadequate supervision and monitoring. The rural health services initiated so far had very little impact on the people. The Shukla Commission in 1997 highlighted that the real problems plaguing the North-eastern region is shortage of basic needs and pitiful infrastructure. The service delivery in rural areas in the region is systematically missing. Primary health care services exist but functioning is very poor. The North-eastern region has a difficult geographical setting, steps needs to be taken towards making health care facilities available to people easily especially in most remote villages. This can be done through regionalization of health services, rational transfer policies, incentives and career development opportunities, and minimizing inter and interstate differences.

Providing quality health services in the rural areas needs rural infrastructure development like road communication, safe drinking water, proper sanitation, etc. Although the region is extremely rich in terms of mineral and natural resources, yet suffers with low economic indicators. Problem of land ownership, shifting cultivation, improper land use etc. contribute to decreased low agricultural production. Lack of marketing facilities is a great constraint, particularly for commodities like pineapple, banana, orange, potato, ginger, etc. The marketing facilities are not available for the local products of the village and small scale industries. The per capita income in the North-eastern region is also very low compare to all India average per capita income. The document prepared by the National Institute of Public Finance and Policy for North East Council says the per capita Gross State Domestic Product (GSDP) of Northeast India is 31 per cent less than the national average. In 2004-05, the entire region’s GSDP, a measure of the standard of living for people, was Rs. 18,027 against the national average of Rs. 25,968. Even within the region, there are vast differences in the plains and hills. To reach all-India level of per capita income in 2020, the North East Vision 2020 Document Paper says that the GSDP of the Northeast region will have to grow at 11.8 per cent annually on an average. The present work is an attempt in the aforesaid direction. The book *Health and Development in North-east India* is a collection of sixteen papers which covered various dimensions concerning health and development focusing on North-east India. The book is divided into two sections. A section-wise highlight of this book is presented below.

The first section deals with the Status of Health in Rural
North-east India. North-east region is one of the most marginalised parts of India. In 21st century when India has entered into the 9 per cent growth trajectory, the North eastern region is lagging behind in almost every aspect of development including health. In this respect, Shamintra Ghosh in his paper 'Health Performance in North East: Inter-State Disparity and a Comparison with India' made a comparative analysis of health performance of North-east states with national performance and an interstate disparity among the states of this region. The study found that there exists wide gap among the states of North-eastern region regarding expenditure on health, a wide gap in the health outcomes and a long way to go in achieving proper sanitation, nutrition, anemia, safe drinking water, toilet facility etc. and suggested for increase in health expenditure. Pallabi Hazarika in her case study 'Barriers to Health Care Access for Rural Women: A Case Study of Selected Tribal Villages of Majuli, Assam' highlighted the various factors as barriers to health care access for rural women such as economic, social and cultural differences, limited educational opportunities, lack of recognition by legislators, and the isolation of living in remote areas all impact rural women ability to lead a healthy life. The government efforts are not adequate enough to solve the health problem and suggested for establishment of a strong integrated development of health systems, appropriately using the different systems of medicine and above all higher budget allocation for health. In their empirical study 'Energy Intake as Determinant of Heath: An Analysis of the Adults of Northern Part of Tripura' Sanjay Sinha and Sumanash Dutta examines the potential relationship between health and nutritional intake and their study reveals that the people of North Tripura, on an average, are not suffering from deficiency of energy as the average calorie intake of urban people is 2190.96 and for rural it is 2412.82. The study also found that education and urbanisation level of the respondent has positive impact on the daily calorie intake of the respondent which demands more attention from the government to make the society more educated for its health related returns.

Prateeti Barman in her paper 'Reproductive Health of Women in Assam: Emerging Concerns' opined that the reproductive and child health in India is targeting women community for a better future but it has somehow not taken into consideration of the socio-economic and patriarchal nature of the society where women lacks control over economic resources and women have very little to say as what they want to do when it come to reproductive rights and services. The first birth interval has an immense importance in fertility
study. Since the first birth can be considered as the insertion into motherhood and thereby the beginning of the reproductive process. The occurrence of the first birth ensures the actual start of the process of child bearing. The future course of childbearing then depends on the behaviour of spacing and stopping after a specific parity. The length of the first birth interval is one of the strongest and most persistent factors affecting fertility in non-contraception population. In this respect, Parbin Sultana in her study 'The Impact of Socio-economic and Demographic Factors on First Birth Intervals: A Hazard Model Analysis' based on the data from Guwahati Medical College and Hospital found that over all median length of the first birth interval is 19 months. Women whose age greater than or equal to 25 at the time of delivery have the longer first birth interval than all other groups. For this group the median first birth interval is 22.2 followed by 20 months for the age-group 20-25, 17.7 months for the age-group 15-20 and 18 months for the women, whose age at the time of delivery is less than 15. Sultana observed that work status does not show any significant effect on the tempo of attaining motherhood for the first birth. Lalsangpuii in her paper 'Implementation of ICDS in Mizoram: A Study in Lunglei District' found that community participation in the implementation of ICDS is very good in the district. Extensive awareness campaigns on ICDS programmes and the involvement of NGOs have helped better implementation with a well-coordinated system of distribution of supplementary foods to Anganwadi centres also exist which helped in reducing infant mortality rate over the decades of its implementation.

Fruits are the main source of energy in terms of nutrition. They are consumed worldwide for their nutritional, medicinal, refreshing, anti-oxidant, weight loss and many more important properties. North East India is native place for different types of fruits among which Citrus is gaining the strongest attraction. Indigenous Citrus spices are of great importance for their characterization for its identity and commercial value. The local people are benefited by the consumption of Citrus from this region but this information and knowledge have to be spread worldwide for the benefit and development of all North Eastern states and also for the development of country. Although different commercial processed products are available in market for consumption, Citrus in this regard is lagging behind than other fruits like mango, banana, pineapple, etc. In this regard, Sony Kumari in her paper 'Citrus: For Health and Development of North East India' highlighted the commercial value
and nutritional importance of citrus as a source of economy and its great role in economy and development of the region.

Development Issues in North East has been presented in section two. This includes the imperative studies entitled ‘Role of Medicinal Plants in the Development of Rural Economy of North East India’ by Bedabati Dasgupta and Arudyuti Chowdhury examines the role of medicinal plants as the tropical and sub-tropical forests around the habitat of rural population in North eastern region provide most varied and abundant sources of food and native folklore medicine based on herbs and animal parts which are integral part of their material and spiritual culture. Because of their proximity to nature and plants, they possess intimate knowledge about plants value and utilities developed through age old trial and error method. The different ethnic communities are considered as hidden wealth of information about plants used for medicinal purposes. Though agriculture is the main source of their livelihood but with the increasing demand of medicinal plants, cultivation of medicinal plants with good agricultural practices is going to be the order of future days because of quality consciousness at the consumer level. Medicinal plants based livelihood systems are often mediated by the market forces, and/or related directly to employment/income of the poor. Proper and optimum utilization of those resources will help in employment generation and economic development of the rural poor of the region. They conclude that for developing biodiversity and medicinal plant based livelihood; the biodiversity should be maintained properly. Muzharul Islam Akond in his paper ‘Technical Efficiency Estimation of Rice Producing Farms: A Case Study of Dhubri District Char-Chapari Area of Assam’ made an attempt to measure the level of technical efficiency in rice production in char-chapari areas of Dhubri district of Assam and found that the important factors directly related to yield of rice are irrigation, chemical fertilizer and labour mandays. The estimated farm level technical efficiency is found to be between 39.20 to 96.14 per cent with a mean of 81.827 per cent. About 90 per cent of the farmers had a technical efficiency index of above 70 per cent. The variations in the level of technical efficiency indicate that ample opportunities exist for farmers to increase rice productivity in their farms through improvement in technical efficiency for which development of small irrigation projects and distribution system of fertilizers are required to be emphasized at policy formulation level. The paper entitled ‘Women Empowerment and Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS): A Gender
Perspective' presented by Deepshikha Carpenter looks into the MGNREGA, in relation to the Panchayati Raj Institution in Assam and tried to analyse whether this Act really help in the empowerment of women. Carpenter found that women are positive about the economic gains because of MGNREGS and many women agree that it is helping in the education of their children, financial independence, helps in household repairing, buying of grains, clothes etc. S.I. Bhuyan, O.P. Tripathi and M.L. Khan in their paper entitled ‘Agricultural Systems and Rural development: An overview of Arunachal Pradesh’ highlighted the various constraints in development of agriculture in the hilly state like traditional practice of cultivation, lack of marketing facilities, road communication etc. and suggested for proper scientific research and appropriate policy to evolve farming systems which can provide adequate food and economic security for the people and enhance local crop diversity in the traditional ecosystems.

Children are considered as the blooming flowers of the nation. A child of today will be a resource of the nation tomorrow. So, each and every child should be provided proper care, education and above all a healthy socio-economic environment. But the reality is a bit different as the children are found to be leading premature adult lives and working under inhumane condition that not only destroy their childhood but also damage their health. In this regard, Papiya Dutta and Debasis Neogi in their empirical study entitled ‘Socio-Economic Conditions of The Children of Migrant Tribal Workers in Tea Gardens Of Tripura: An Analysis’ attempted to evaluate the conditions and the constraints faced by the tribal children who are engaged as workers in the tea gardens of Tripura. They found that as wages of the workers of tea garden is inadequate to run the family, parents believe in employment of their children to increase total family income and perform domestic chores in their place by leaving their study. As a result, children growing up on tea gardens know no other option but to work from an early age of their life and suggested for the state government to take care of the social amenities like school, housing, drinking water, health care facilities etc. of the tea garden workers to ensure their living standards. Ashish Taru Roy in his paper entitled ‘An Analysis of the Waste Management System in Silchar Municipal Area of Cachar District of Assam. How far it is Sustainable?’ This paper elaborates on the existing Solid Waste Management (SWM) situation in Silchar town and highlighted the existing legal framework, explores the major challenges that municipality face, and outlines the causes for deficient SWM and
non-compliance with the mandatory rules for the management and handling of solid waste due to lack of house-to-house waste collection and appropriate community bins in the residential areas, littering continues to be a problem. Roy suggested for door to door collection of MSW (Municipal Solid Waste) through methods like the collection on regular pre-informed timing and scheduling. He also suggested an improved waste storage and collection system to minimize cost. Each household should use standard waste bins that are placed outside for ease of collection. In areas where this practice is not suitable, centrally located waste collection points should be established that are shared by a number of household.

Uttam Deb in a study entitled ‘Total Factor Productivity Growth and the Rate of Technical Progress in Selected Tea Gardens of Assam’ measures total factor productivity growth and the rate of technical progress in selected tea gardens of Upper Assam and Barak Valley and found that the rate of technical progress appears to be declining. The direction of bias implies that technical progress is labour saving for Upper Assam while it is labour intensive in case of Barak Valley. The technical progress is land saving as well as pesticides and fertilizer saving but irrigation intensive in case of both Upper Assam and Barak Valley. The study concludes that inputs have grown at a very high rate, out pacing the rate of output growth. Almost all gardens exhibit negative TFPG each year with a few exceptions. A study on technical efficiency and its determinants needs to be conducted at the garden level in order to examine further the phenomenon of over use of resources in some gardens in contrast to others.

During the last few decades, the world is changing and developing in each and every aspects of life. Several processes play significant role in this evolution. As we know education is one of them. According to many research studies, our current education system indicates that knowledge should be distributed by the teachers to students, which could help them to contribute to the development of their country. Again the education system indirectly depends on many factors like how teachers select subject materials, textbooks and references, design the framework of the subject to be taught, etc. Moreover, it was also found that the successes and achievements of students also depend on teacher-student relationship. Student can learn more from the effective curriculum only if they can access support from their teachers and accordingly become capable to contribute to their country. If the “teacher-student
relationship” is good, it result a win-win scenario where teachers are able to teach more and students are able to learn more. This positive relation help the student to better adjust with the institution resulting in a faster learning. It is very important to examine the evidence to determine if the “student–teacher relationships” are indeed a factor for student’s achievements. Research suggests that students get more benefits from the teachers, if the latter know more about their students. So it is very important for the administration staff to know what kind of teacher-student relationship exists in their institution that could influence the academic achievements of the students and so the development of their region and so the country. In this respect Papor Baruah and Rashmi Rekha Baruah in their paper ‘Exploring Student’s Perception about Teacher-Student Relationship and their Academic Achievements — A Study on Postgraduate Programmes in North-eastern Region of India’ examined the student’s perception and regarding the linkage between students’ academic achievements and their relationship with the teacher in the North-eastern Region of India and found student’s academic results mainly influenced their views on teacher-student relationship to a great extent. So, the study concludes that a teacher-student relationship should be fostered in the postgraduate programme for achieving better academic performance of the students. At the same time the low performing students need to be given careful attention and support for building trust and a good relationship so that it might help in improving their academic performance and develop a positive perception about their teachers.

The anthology of the present publication is expected to be a significant contribution to knowledge on the issues related to health and development in North East India. It is expected to be very useful to the common people, policy makers, government officials and non-government organizations. The book may proved to be very helpful to the academicians, students and research scholars in particular as the papers will offer priceless inputs to make more in-depth study of the problems.

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HEALTH PERFORMANCE IN NORTH-EAST
Interstate Disparity and a Comparison with India
SHAMINTRA GHOSH

Introduction
The region comprising of the eight states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim (the last to be included in the region) and Tripura, constitutes a land surface of 262,230 square kilometres where a population of 38.9 million belonging to different ethnic and cultural groups inhabits. Topographically the region is a mixture of hills and plains. While Arunachal Pradesh, Meghalaya, Mizoram, Nagaland and Sikkim are almost entirely hilly, about four fifths of Assam is plain. Manipur and Tripura have both plain areas and hilly tracts. The hills account for about 70 per cent area and accommodate about 30 per cent of population of the region and the plains constituting the remaining 30 per cent of area hold about 70 per cent of its population.

Economic and social developments are complimentary to each other. Empirical evidence suggests that mere emphasis on economic development and neglect of social development results in lopsided development and ultimately slowing down the tempo of economic development. This rapid economic development has not been accompanied by social development particularly in health sector development. Health sector has been accorded very low priority in terms of allocation of resources. Public expenditure on health is only 1.3 per cent of GDP in India. It has further witnessed decline
during the post economic liberalization period. The meagre resource allocation to health sector has adversely affected both access and quality of health services. The unequal access to health services is reported across strata, gender and location (i.e. states, region etc.). With a view to improve access and quality of health services, government should enhance public spending on health sector in the vicinity of 3 per cent of GDP. India’s North-eastern part, comprising of eight states including Sikkim is a lowly developed, tribal population dominated region in India. The present paper, through a state-wise analysis, makes an attempt to find out the extent of this disparity, especially on health front. It illustrates the situations prevailing in health sector.

**Brief Review**

The 3rd National Family Health Survey (2007) depicts the vulnerable situation of health across different states. India Human Development Report (2011) reveals the regional disparity that exists in India regarding birth rate, death rate, IMR, MMR, child and reproductive health, health expenditure, etc. Debasis Neogi (2010) in *International Journal of Human and Social Sciences* discussed the internal variety in North-east region in health and socio-economic status. Ghuman and Mehta (2010) discussed problems and prospects of health outcomes and expenditure in India. Apart from them some other literature like State HDRs, NRHM reports have been reviewed.

**Objectives**

The major objectives of the study are:

- To study the performance of health sector in North-east as compared to India
- To analyse the interstate disparity of health status among North-east states.

**Data Source and Methodology**

Data has been taken from the Census of India (2001, and 2011), National Family Health Survey 2 (NFHS-2) (1998–99) and NFHS-3 (2005–6), data on health statistics from the Ministry of Health and Family Welfare and the National Sample Survey (NSS) 58th (2002) and 65th (2008–9) rounds-2. Further, India Human Development Report (2011), State HDRs of North-east, NRHM report etc. have been used to analyse the data.

**Analysis**

Northeast compared with India
### Socio-economic and Health profile of North-east States as compared to India figures

<table>
<thead>
<tr>
<th>Name of states</th>
<th>Per capita state income (in Rs)</th>
<th>Household in pucca &amp; semi-pucca houses</th>
<th>Access to electricity</th>
<th>Population below poverty line</th>
<th>Literacy rate</th>
<th>Sex ratio</th>
<th>Child sex ratio (0-6 yrs)</th>
<th>Population served per hospital bed</th>
<th>Access to safe drinking water</th>
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<tbody>
<tr>
<td>Arunachal Pradesh</td>
<td>17018</td>
<td>38.84</td>
<td>54.69</td>
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<td>66.95</td>
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<td>960</td>
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<td>957</td>
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<td>79.85</td>
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<td>934</td>
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<td>Meghalaya</td>
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<td>75.48</td>
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<td>970</td>
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<td>78.53</td>
<td>69.63</td>
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<td>91.58</td>
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<td>18.9</td>
<td>87.75</td>
<td>961</td>
<td>953</td>
<td>1165</td>
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<td>All India Average</td>
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<td>55.85</td>
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<td>914</td>
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<td>Highest among states and UTs</td>
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<td>8.4</td>
<td>63.82</td>
<td>618</td>
<td>830</td>
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</tbody>
</table>

*Health Performance in North-east — 15*

In terms of various indicators of human development, the region presents us with a mixed picture. Mizoram has the highest position regarding child-sex ratio in the country and sex ratio in the region. Arunachal Pradesh has better position in population served per hospital beds but that is mainly due to the low density of population of the state. All other states including Assam (2059) have worse position while Arunachal Pradesh herself is much behind the best state/union territory i.e. Pondicherry (162).

Per capita state income of Mizoram (Rs. 17,245), Arunachal Pradesh (Rs. 17,018) and Tripura (Rs. 16,947) respectively is above the all India average (Rs. 16,762) and the remaining states are below it. However, Nagaland is close to national average in respect of per capita state income. Assam has the lowest per capita (Rs. 12,529) income in NEI.

As far households in pucca and semi-pucca houses are concerned, all the concerned states lag behind all India average. 78.53 (highest among NE states) per cent households in Mizoram reside either in pucca or semi-pucca houses followed by Nagaland with 66.69 per cent. 61.16 per cent of total households in Arunachal Pradesh dwell kachcha or unclassified houses. Access to electricity recorded among the states shows a mixed picture in relation to national average (55.85). Access to electricity is the highest in Mizoram (69.63), Nagaland (63.60) and Manipur (60.04) respectively. In Assam, only one-quarter of households have access to electricity which is the lowest in NE region. Meghalaya and Tripura records much lower than all India average. States like Mizoram, Nagaland, Tripura, and Manipur have literacy rates which are higher than national average. Mizoram (91.58 per cent) has the 3rd best literate state in the country. Arunachal Pradesh (66.59 per cent) has the least achievement in terms of literacy rate among states of NEI and only above Bihar at the national level.

**Determinants of the gap between National Level and North-east**

Low level of human development in North-eastern states of India only reflects the high human deprivation among its populace. Mizoram, of course is an exception with moderate development in human development and health. Two crucial factors responsible for a dismal performance are low per state capita income and paucity of medical
<table>
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<tr>
<th>Indicator</th>
<th>India</th>
<th>Arunachal Pradesh</th>
<th>Assam</th>
<th>Manipur</th>
<th>Meghalaya</th>
<th>Mizoram</th>
<th>Nagaland</th>
<th>Tripura</th>
<th>Sikkim</th>
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<tr>
<td>Birth rate (per 1000)</td>
<td>22.1</td>
<td>20.5</td>
<td>23.2</td>
<td>14.9</td>
<td>24.5</td>
<td>17.1</td>
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<td>8.2</td>
<td>4.2</td>
<td>7.9</td>
<td>4.5</td>
<td>3.6</td>
<td>5.0</td>
<td>5.6</td>
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<td>Natural growth rate (per 1000)</td>
<td>14.9</td>
<td>14.6</td>
<td>14.9</td>
<td>10.7</td>
<td>16.6</td>
<td>12.5</td>
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<td>Infant mortality rate (per 1000)</td>
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<td>31</td>
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<td>14</td>
<td>55</td>
<td>37</td>
<td>23</td>
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<td>Under five mortality rate (per 1000)</td>
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<td>87.7</td>
<td>85.0</td>
<td>41.9</td>
<td>70.5</td>
<td>52.9</td>
<td>64.7</td>
<td>59.2</td>
<td>40.1</td>
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<tr>
<td>Life expectancy</td>
<td>66.9</td>
<td>69.9</td>
<td>62.2</td>
<td>69.9</td>
<td>70.0</td>
<td>69.9</td>
<td>69.9</td>
<td>69.9</td>
<td>69.8</td>
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<tr>
<td>Public expenditure as % of GSDP</td>
<td>1.3</td>
<td>3.46</td>
<td>0.86</td>
<td>1.32</td>
<td>1.75</td>
<td>3.28</td>
<td>2.49</td>
<td>1.32</td>
<td>3.82</td>
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<tr>
<td>Per capita exp. On health by govt. (in Rs.)</td>
<td>383.16</td>
<td>841</td>
<td>162</td>
<td>294</td>
<td>430</td>
<td>867</td>
<td>639</td>
<td>328</td>
<td>1082</td>
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<td>Per capita exp. on health by private (in Rs.)</td>
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<td>612</td>
<td>379</td>
<td>464</td>
<td>266</td>
<td>180</td>
<td>1158</td>
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</tbody>
</table>

facilities revealed through number of population served per hospital bed as well as lower access to safe drinking water. The low level of economic activity and dependence on central grants is responsible for low level of human development in the region even though the state has achieved regarding poverty reduction as India Human Development Report says. Though poverty level is better than the national average but it does not tell the ground deprivation of the common mass. There is tardiness in economic growth. Health care facilities are in a gloomy state. Along with these features, there remains the alarming problem of scarcity of water in the region. This is mostly due to the physical and climatic features of the region - being hilly and tropical in nature and at the same time, failure of government to make provisions for safe drinking water to the average citizens. Baring Arunachal Pradesh and Assam which has its many river tributaries and streams, availability of safe drinking water is in a meagre position with more than half of the population being deprived of this organic need of life. There is also the trace of high incidence of poverty which only speaks about the high volume of shortfalls in human development. However, the single area which shows considerable progress in the region is literacy rate.

**Arunachal Pradesh and India**

The Total Fertility Rate (TFR) of the State is NA. The Infant Mortality Rate is 31 and Maternal Mortality Ratio (MMR) is NA (SRS 2007 - 09). The Sex Ratio in the State is 920 (as compared to 940 for the country). Under-five mortality rate is 87.7 against the all India average of 74.3 and in life expectancy also better than all India position. She is spending 3.46 per cent of her GSDP in health sector far higher than India. Moreover, per capita expenditure on health by government is Rs... 841 which is higher than India but lags behind per capita private expenditure.

**Assam and India**

The Total Fertility Rate of the State is 2.5. The Infant Mortality Rate is 58 and Maternal Mortality Ratio is 390 (SRS 2007 - 2009) which are higher than the National average. The Sex Ratio in the State is 954 (as compared to 940 for the country). Under-five mortality rate is 85.0 against the all India average of 74.3 and in life expectancy also lower than all India position. Assam is spending 0.86 per cent of her GSDP in health sector far lower than India. Moreover per capita expenditure on health by government is Rs. 162 which is worse than India and also lags behind per capita private expenditure.
Manipur and India

The state is having higher population growth rate but regarding other health indicators she has performed better. The Total Fertility Rate of the State is NA. The Infant Mortality Rate is 14 and Maternal Mortality Ratio is NA (SRS 2007-2009). The Sex Ratio in the State is 987 (as compared to 940 for the country). Under-five mortality rate is 41.9 against the all India average of 74.3 which is really a good achievement and in life expectancy also higher than all India position. Manipur is spending 1.3 per cent of her GSDP in health sector far equal to India. On the other hand per capita expenditure on health by government is Rs. 294 which is worse than India and also lags behind per capita private expenditure.

Meghalaya and India

This state is one of the highest rainfall zones of the world while she has achieved much lower than national average in respect of growth rate of population as well as in IMR and MMR, the state’s performance is not satisfactory. The Total Fertility Rate of the State is NA. The Infant Mortality Rate is 55 and Maternal Mortality Ratio is NA (SRS 2007-2009). The Sex Ratio in the State is 986 (as compared to 940 for the country). Her performance in expenditure on health, child, mortality and life expectancy is average.

Mizoram and India

She has performed better than other states of the region regarding health indicators. The Total Fertility Rate of the State is NA. The Infant Mortality Rate is 37 and Maternal Mortality Ratio is NA (SRS 2007-2009). The Sex Ratio in the State is 975 (as compared to 940 for the country). Per capita government expenditure on health is much higher than national average with Rs. 867 against Rs. 383.1 and public expenditure as per cent of GSDP is 3.28 against national average of 1.3 per cent.

Nagaland and India

Nagaland is the only state to achieve negative growth rate of population and has better position in the other health indicator in comparison to India. The Total Fertility Rate of the State is NA. The Infant Mortality Rate is 23 and Maternal Mortality Ratio is NA (SRS 2007-2009). The Sex Ratio in the State is 931 (as compared to 940 for the country). Under-five mortality rate is 64.7 against the all India average of 74.3 and in life expectancy also higher than all India position. She is spending 2.49 per cent of her GSDP in health sector far higher than India. Moreover, per capita expenditure on health by government is
Rs. 639 which is better than India but falls behind per capita private expenditure.

**Sikkim and India**

The Total Fertility Rate of the State is NA. The Infant Mortality Rate is 30 and Maternal Mortality Ratio is NA (SRS 2007-2009). The Sex Ratio in the State is 889 (as compared to 940 for the country). Under-five mortality rate is 40.1 against the all India average of 74.3 and in life expectancy also better than all India position. She is spending 3.82 per cent of her GSDP in health sector far higher than India. Moreover, per capita expenditure on health by government is Rs. 1082 the highest in India and Rs. 425 in per capita private expenditure which good for a small state like Sikkim.

**Tripura and India**

The Total Fertility Rate of the State is NA. The Infant Mortality Rate is 27 and Maternal Mortality Ratio is NA (SRS 2007 - 2009). The Sex Ratio in the State is 961 (as compared to 940 for the country). Under-five mortality rate is 59.2 against the all India average of 74.3 and in life expectancy also she has a position. She is spending 1.32 per cent of her GSDP in health sector that is equal to India. But per capita expenditure on health by government is Rs. 328 the 2nd lowest after Assam in NER and Rs. 1158 of per capita private expenditure which shows bad condition of public health for a small state like Tripura.

**Interstate disparity in North-east**

Within North-east region there exists wide variety regarding health status. The Infant Mortality Rate came down well below the country average in all the states of the region barring Assam and Meghalaya. While identifying yawning gap between states, Mizoram had just a single nurse for every 22,000 persons, it was 5353 persons in case of Assam. Per capita expenditure on health by Government of Sikkim is Rs. 1082, the highest in India and Rs. 425 in per capita private expenditure which is good for a small state like Sikkim. But per capita expenditure on health by government of Tripura is Rs. 328 the 2nd lowest after Assam in NER and the amount of Rs. 1158 per capita private expenditure which shows bad condition of public health for a small state like Tripura.

The north-eastern states, excluding Assam, are generally doing better in all development parameters, despite the high concentration of STs in the population. However, it is important to qualify here that these groups form the majority and the mainstream in the total
population, unlike forest dwelling STs in states of central and eastern
belt. Thus, north-eastern state governments have ensured that they
share every benefit of the development process. Any policy/scheme
undertaken by the government is in effect directed towards this
majority group and thus they are included in their development
achievements (Government of Nagaland, 2004). The State
Governments have emphasized not only the adequate provision of
primary health care, but education and awareness of health issues,
dissemination of information on prevention, hygiene and healthy
practices, food security and nutrition, safe drinking water and good
sanitation, maternal, child health and family welfare. People in these
states now live longer than their parents did, and health profiles have
improved. Yet, health indicators in the state reveal inequity between
districts, between income and other groupings. There is a rural–
urban divide, and a gender gap reflected across almost all indicators.
Life Expectancy at Birth (LEB) is below that of the country as a
whole, and is one of the lowest amongst major Indian states. In
the 1970’s men could expect to live longer than women. This has
since been reversed; women can now expect to live longer than
men. This is a trend that began to take place initially in urban areas,
but is now true of rural areas as well. There is still a very significant
gap between the LEB for rural and for urban areas. There is rural–
urban gap and a gender gap too; males have a better chance of
surviving beyond forty years of age. In a word there is a lot of
disparity among the states of North East.

<table>
<thead>
<tr>
<th>Names of states</th>
<th>Decadal Growth of population (%)</th>
<th>Crude Birth Rate</th>
<th>Crude Death Rate</th>
<th>Natural Growth Rate</th>
<th>Infant Mortality Rate</th>
<th>Maternal Mortality Rate</th>
<th>Total Fertility Rate</th>
<th>Sex Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arunachal Pradesh</td>
<td>25.92</td>
<td>20.5</td>
<td>5.9</td>
<td>14.6</td>
<td>31</td>
<td>NA</td>
<td>NA</td>
<td>920</td>
</tr>
<tr>
<td>Assam</td>
<td>16.93</td>
<td>23.2</td>
<td>8.2</td>
<td>14.9</td>
<td>58</td>
<td>390</td>
<td>2.5</td>
<td>954</td>
</tr>
<tr>
<td>Manipur</td>
<td>18.65</td>
<td>14.9</td>
<td>4.2</td>
<td>10.7</td>
<td>14</td>
<td>NA</td>
<td>NA</td>
<td>967</td>
</tr>
<tr>
<td>Meghalaya</td>
<td>27.82</td>
<td>24.5</td>
<td>7.9</td>
<td>16.6</td>
<td>55</td>
<td>NA</td>
<td>NA</td>
<td>966</td>
</tr>
<tr>
<td>Mizoram</td>
<td>26.82</td>
<td>17.1</td>
<td>4.5</td>
<td>12.5</td>
<td>37</td>
<td>NA</td>
<td>NA</td>
<td>975</td>
</tr>
<tr>
<td>Nagaland</td>
<td>-0.47</td>
<td>16.8</td>
<td>3.6</td>
<td>13.6</td>
<td>23</td>
<td>NA</td>
<td>NA</td>
<td>931</td>
</tr>
<tr>
<td>Tripura</td>
<td>14.75</td>
<td>14.9</td>
<td>5.0</td>
<td>9.9</td>
<td>27</td>
<td>NA</td>
<td>NA</td>
<td>961</td>
</tr>
<tr>
<td>Sikkim</td>
<td>12.36</td>
<td>17.8</td>
<td>5.6</td>
<td>12.3</td>
<td>30</td>
<td>NA</td>
<td>NA</td>
<td>889</td>
</tr>
</tbody>
</table>

All the states of Northeast have higher growth rate of population with the exception of Nagaland. Arunachal Pradesh is a state with low density of population and high biodiversity. However, decadal growth rate of population is 25.92 per cent which is higher than national average of 17.64 per cent. Meghalaya, Mizoram have much higher growth rate than the national average while Sikkim and Tripura have lower than India and Assam and Manipur are at par with all India figure. Assam is the largest state of North-east with huge diversity in population as well as in development experiences. Assam has achieved lower decadal growth rate of population than India as a whole but regarding IMR and MMR her position is not at all satisfactory.

Body mass index shows the lack of body fitness more specifically, malnutrition level of adult population if scored less than 18.5. In this regard all states of the North-east have performed better...
than the national average except Assam and Tripura. The national achievement is 65.6 per cent population having BMI more than 18.5 i.e. 34.2 per cent below the cut-off level for male and 33 per cent for female. Arunachal Pradesh has 15.2 per cent male below the cut-off level and 16.4 per cent female. Assam and Tripura are the only states in the North-east who have performed worse than the
<table>
<thead>
<tr>
<th>Name of states</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arunachal Pradesh</td>
<td>15.2</td>
<td>16.4</td>
</tr>
<tr>
<td>Assam</td>
<td>35.6</td>
<td>36.5</td>
</tr>
<tr>
<td>Manipur</td>
<td>16.3</td>
<td>14.8</td>
</tr>
<tr>
<td>Meghalaya</td>
<td>14.1</td>
<td>14.6</td>
</tr>
<tr>
<td>Mizoram</td>
<td>9.2</td>
<td>14.4</td>
</tr>
<tr>
<td>Nagaland</td>
<td>14.2</td>
<td>17.4</td>
</tr>
<tr>
<td>Tripura</td>
<td>41.7</td>
<td>36.9</td>
</tr>
<tr>
<td>Sikkim</td>
<td>12.2</td>
<td>11.2</td>
</tr>
<tr>
<td>All India</td>
<td>34.2</td>
<td>33.0</td>
</tr>
</tbody>
</table>

Source: NFHS 2 and 3.

At the national level, 35.6% of males and 36.5% of females were underweight, while 41.7% of males and 36.9% of females were below the national underweight threshold. Manipur had the highest rate of underweight males and females at 16.3% and 14.8%, respectively. Meghalaya followed with 14.1% of males and 14.6% of females underweight. Mizoram had the lowest rates of underweight males (9.2%) and females (14.4%). Nagaland had the highest female underweight rate (17.4%). Tripura had the highest male underweight rate (41.7%). Sikkim had the highest female underweight rate (11.2%). All India had the highest underweight rate (34.2% males and 33.0% females).

<table>
<thead>
<tr>
<th>Name of states</th>
<th>Height for age</th>
<th>Weight for height</th>
<th>Weight for age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arunachal Pradesh</td>
<td>43.3</td>
<td>15.3</td>
<td>32.5</td>
</tr>
<tr>
<td>Assam</td>
<td>46.5</td>
<td>13.7</td>
<td>36.4</td>
</tr>
<tr>
<td>Manipur</td>
<td>35.6</td>
<td>9</td>
<td>22.1</td>
</tr>
<tr>
<td>Meghalaya</td>
<td>55.1</td>
<td>30.7</td>
<td>48.8</td>
</tr>
<tr>
<td>Mizoram</td>
<td>39.8</td>
<td>9</td>
<td>19.9</td>
</tr>
<tr>
<td>Nagaland</td>
<td>38.8</td>
<td>13.3</td>
<td>25.5</td>
</tr>
<tr>
<td>Tripura</td>
<td>35.7</td>
<td>24.6</td>
<td>39.6</td>
</tr>
<tr>
<td>Sikkim</td>
<td>38.3</td>
<td>9.7</td>
<td>19.7</td>
</tr>
<tr>
<td>All India</td>
<td>48</td>
<td>19.8</td>
<td>42.5</td>
</tr>
</tbody>
</table>

Source: NFHS-3. By the percentage of children below 2-SD.

The nutrition level of children is measured by height for age, weight for height and weight for age. Children are considered malnourished if their z-score of height-for-age, weight-for-height and weight-for-age is below minus two standard deviations from the
median of the reference population. In this parameter also, North-east states have performed at the tune of national average. In height for age India's condition is not only bad but also formidable as the figure is 48 per cent i.e. almost half of the children could not grow to the desired height according to their age. In Arunachal Pradesh the figure is 43.3 per cent and in Assam 46.5 per cent. Meghalaya has performed the worst with 55.1 per cent children below the deadline. In weight for height all states have performed better than the national average except Tripura and Meghalaya. In weight for age it is once again Meghalaya who has performed the worst. But truly speaking India along with all N-E states must go a long way in respect of children's health.

<table>
<thead>
<tr>
<th>Name of states</th>
<th>Any anaemia</th>
<th>Moderate anaemia</th>
<th>Severe anaemia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arunachal Pradesh</td>
<td>50.6</td>
<td>12.5</td>
<td>1.6</td>
</tr>
<tr>
<td>Assam</td>
<td>69.5</td>
<td>21.2</td>
<td>3.4</td>
</tr>
<tr>
<td>Manipur</td>
<td>35.7</td>
<td>5.1</td>
<td>0.5</td>
</tr>
<tr>
<td>Meghalaya</td>
<td>47.2</td>
<td>12.6</td>
<td>1.8</td>
</tr>
<tr>
<td>Mizoram</td>
<td>38.6</td>
<td>8.8</td>
<td>0.7</td>
</tr>
<tr>
<td>Nagaland</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Tripura</td>
<td>65.1</td>
<td>14.8</td>
<td>1.3</td>
</tr>
<tr>
<td>Sikkim</td>
<td>60</td>
<td>16.3</td>
<td>1.7</td>
</tr>
<tr>
<td>All India</td>
<td>55.3</td>
<td>15</td>
<td>1.8</td>
</tr>
</tbody>
</table>

Source: NFHS 2 and 3.

Anaemia shows the malnutrition of women especially lack of iron in the blood or decline in the level of haemoglobin. Women’s health is the most important from the point of view of children health and future human capital formation. The all India level condition is itself very gloomy as 55 per cent women are malnourished while more than 50 per cent in Arunachal Pradesh and 60 per cent in Sikkim. In Assam the situation is formidable as it is near to 70 per cent thus causing danger for pregnant and children. In Manipur and Mizoram the situation is a little better in Tripura once again it is 65.1 per cent women are anaemic.

The children born with anaemia also show a dismal condition in India. The horrible picture of children health can be understood from the above table. Once again Assam is the most formidable state with nearly 70 per cent children anaemic and more than the
<table>
<thead>
<tr>
<th>Name of states</th>
<th>Any anaemia</th>
<th>Moderate anaemia</th>
<th>Severe anaemia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arunachal Pradesh</td>
<td>56.9</td>
<td>29.1</td>
<td>0.8</td>
</tr>
<tr>
<td>Assam</td>
<td>69.6</td>
<td>38.7</td>
<td>2.2</td>
</tr>
<tr>
<td>Manipur</td>
<td>41.1</td>
<td>15.2</td>
<td>0.3</td>
</tr>
<tr>
<td>Meghalaya</td>
<td>64.4</td>
<td>31.7</td>
<td>1</td>
</tr>
<tr>
<td>Mizoram</td>
<td>44.2</td>
<td>20</td>
<td>0.6</td>
</tr>
<tr>
<td>Nagaland</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Tripura</td>
<td>62.9</td>
<td>34.6</td>
<td>0.7</td>
</tr>
<tr>
<td>Sikkim</td>
<td>59.2</td>
<td>29.5</td>
<td>0.8</td>
</tr>
<tr>
<td>All India</td>
<td>69.5</td>
<td>40.2</td>
<td>2.9</td>
</tr>
</tbody>
</table>

Source: NFHS 3.

The national average of 69.5 per cent. Tripura and Meghalaya are along with all India position while other states have kept the level below the national level.

**Findings and Recommendations**

Low public sector spending on health services results in over-dependence on private sector for getting health services. In India the share of private sector on health care expenditure constitutes around 72 per cent and household sector being the major constituent of the private sector claims 68.8 per cent of expenditure on health care. In other words out-of-pocket expenditure comprises major share of expenditure on health care. There exists wide gap among the states of NER regarding expenditure on health. So public health services must be widened in various regards.

India has entered a high growth rate trajectory of 9 per cent. This high rate of growth, however, is not accompanied by a high level of social development. The social sectors particularly health and education have been accorded a very low priority in terms of the allocation of resources. For example, public expenditure on health services as a percentage of Gross Domestic Product (GDP) in India is less than 1.5 per cent. So health expenditure by both central and state governments must increase.

It is a well known fact that the children from the economically and socially backward states face higher risks of mortality compared to the advanced ones. The examination of the NFHS data indicates that this is the case for most of the states of this region. The nature and degree of disparity varied for all the segments of anaemia. The
existence of large disparities in states with relatively low levels of mortality is a matter of great concern; clearly, the weaker sections have been deprived of recent advances and improvements in child survival.

There is wide gap in the health outcomes among the northeast states. Though Mizoram has performed better in IMR, sex ratio, child sex ratio, etc. but a long way to go regarding nutrition, anaemia, safe drinking water, toilet facility etc. All other states including Assam must increase expenditure on health and nutritional facility, especially for women and children.

REFERENCES


