Development and Deprivation in Meghalaya

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Abstract

The present paper is an attempt to evaluate the relative status of development and deprivation of the state of Meghalaya vis-à-vis other states in northeast India. The first two sections of the paper are devoted to an introduction to the state whereas the rest of the sections deal with evaluation of development status through various socioeconomic parameters. The study reveals that in terms of sex ratio the state is much ahead of the country and two of its districts are having more number of females than that of males. Although the state is marginally ahead of the country in terms of literacy her relative position in the region is poor. However, it has been able to substantially reduce the urban-rural gap in literacy and male-female gap in average years of schooling. In terms of sanitation facilities it is a laggard state in the region but it has achieved a tremendous success in supplying drinking water and electricity connection to urban households at the cost of neglecting households in rural areas. The economic backwardness of the state is evident from her low per capita income. However, the state does not lag behind the country in respect of per capita monthly consumption expenditure. Infant mortality of the state is highest in the region. Human development is quite poor in the state compared to other states in the region and country. Relatively it is in better off position in terms of poverty reduction. Although there is no railway network in the state, road network and telephone connectivity are satisfactory but traffic congestion is quite high because of excess number of vehicles. The state is lagging behind in terms of agriculture and industrial development. There is widespread prevalence of shifting cultivation in the state.

Introduction: Meghalaya is one of the smallest and predominantly a tribal state in North East India. The Khasi, Garo, and Jaintia tribes living in the state each had their own Kingdoms, until they came under the British administration in the 19th Century. Later, the British incorporated Meghalaya into Assam in 1835. The state attained her full statehood on 21st January 1972. The state is surrounded in the East and North by the state of Assam and in the West and South by Bangladesh. It is a hilly strip in the eastern part of the country and about 300 km long from East to West and 100 km wide. It lies between $85^0\,49'$ and $92^0\,53'$ East Longitude and $20^0\,1'$ and $20^0\,5'$ North Latitude. The total geographical area is about 0.7 per cent of the total area of the country and 8.6 per cent area of the North Eastern Region. However, area-wise it is the third biggest state in the region after Arunachal Pradesh and Assam. It has a rising and falling topography. About 37 per cent of the total area of the state is forest which is notable for their biodiversity. Much of the forest is privately managed and controlled by the district council. The state government controls only area under the reserved forest, which is about 4 per cent of the total forest area. The climatic condition though varies with altitude it is moderate and humid. With average annual rainfall as high as 1200 cm in some areas, Meghalaya is the wettest state of the country. The western part of the plateau, comprising the Garo Hills Region with lower elevations, experiences high temperatures for most of the year. The climate of Khasi and Jaintia

Hills is uniquely pleasant and bracing. The maximum temperature rarely goes beyond 28 degrees, whereas temperatures during winters are of sub-zero degrees and common. The state gets adequate rainfall throughout the year and the annual rainfall ranges between 2000 to 5000 mm. The state is a storehouse of economic minerals. The major minerals that are presently exploited are Coal, Limestone, Clay and Sillimanite.

Meghalaya is the homeland of the three major ethnic groups, namely, the Khasi, the Jaintia and the Garo. There are, however, other tribes like the Kochs, the Hajongs, the Rabhas, the Mikirs, and other minor tribes who are also the aboriginal of the state. About 45 per cent of the total population belong to Khasi, 32.5 per cent Garo and the rest 22.5 per cent are from various communities such as Bengali, Assamese, Nepali/Gurkha, Hindi speaking, Koch, Rabha, Mikir, etc. The Khasi and Jaintia Hills districts have a similar language but different dialects. The Garo Hill districts have very different customs and have a different language. Though principal languages are Khasi and Garo, English is used as the official language in the state. Since matrilineal is practiced by the dominant tribes, the status of women in the state is considered to be superior as compared to the status of women in other parts of India, including tribal elsewhere. However, in respect of exercise of powers the story is different.

The state has a total geographical area of 22,429 sq km. Originally Meghalaya had two districts and three Subdivisions. As per the latest statistics, the state now has 11 districts. However, according 2011 Census for which district wise data are available there were only 7 districts, 8 Sub-Divisions, 39 Community Development Blocks, 16 Towns and 5780 Villages. Most of these administrative units starting from villages to districts are very small. Villages are widely scattered. The then seven districts in the state are quite different from each other in various respects. South Garo Hills is the smallest district having an area of 1887 sq km as against the biggest district, West Khasi Hills which has an area of 5247 sq km (Table 1).

Population: As per 2011 Census, the state has a population of 29.67 lakhs, which is about 3.0 per cent of the total population of North East India and 0.1 per cent of the total population of the country. Population has been increasing at a higher rate in the state as compared to all India situations mainly due to migration from different parts of the country including illegal migration from Bangladesh. For an example, 18,951 illegal migrants from Bangladesh were detected in Meghalaya during a period of 5 years from 2008 to September 2013 (Shillong Times, Oct., 18, 2013). During the last five decades the decadal growth of population has been varying nearly from 27 per cent to 33 per cent as against a variation of 18 per cent to 25 per cent in India. Out of 29.67 lakh population in the state, 49.72 per cent are females. About 20 per cent of the

population lives in urban areas. The state has a population density of 132 persons per sq km as against 382 per sq km in the country. The sex ratio of the state is 982 as against 940 in the country.

Seven Districts in Meghalaya are different from each other in various respects (Table 1). Population-wise South Garo Hills is the smallest district in the state having a total population of only 1.42 lakhs as against the biggest district, East Khasi Hills, which has 8.26 lakhs of population. Similarly, when the state has a density of population of 132 persons per sq km, the highest and lowest density of population are observed in the districts of East Khasi Hills and South Garo Hills respectively. Decadal growth of population has been observed to be highest in South Garo Hills (40.95%) as against the lowest variation in West Garo Hills (24.09%). Sex ratio also varies from the lowest figure of 945 in South Garo Hills to the highest figure of 1013 in Jaintia Hills.

When we compare the state of Meghalaya with other north eastern states and the country as a whole a wide variation is observed in respect of area, population, density, sex ratio and literacy rate (Table 2). Meghalaya is the third largest state in the region in terms of geographical area, population and density. In terms of sex ratio the state is much ahead of the country and it is one the best state in the region having sex ratio as high as 986 against 940 at the national level.

Education: Education, in the present day context, is perhaps the single most important means for individuals to improve personal endowments, build capability levels, overcome constraints and, in the process, enlarge their available set of opportunities and choices for a sustained improvement in well being. It is not only a means to enhance human capital and productivity but also equally important to enable the process of acquisition, assimilation and communication of information and knowledge, all of which augment a person's quality of life. Education is important not merely as means to other ends, but it is an attribute that is valued in it, by most individuals. More importantly, it is a critical invasive instrument for bringing about social, economic and political inclusion and a durable integration of people, particularly those excluded from the mainstream of any society. The process of education and attainments thereof has an impact on all aspects of life. It captures capability of acquiring knowledge, communication, and participation in community life. It alters an individual's and even community's collective perceptions, aspirations, goals as well as the ability and the means to attain them. The level and spread of education has not only been an important precondition for sustained economic growth but it has also played a critical facilitative role in the demographic, social and political transition of these societies. Creation, application and adaptation of new technologies; lower

fertility, infant and child mortality rates; better nutritional, hygiene and health status of children, reproductive health and empowerment of women; social mobility and political freedom, all have visible linkages with educational attainments of people. Thus, it is in this regard there is a special need for examining the status of education in Meghalaya. In the absence of adequate comparable state wise data on education we have analyzed the data on literacy and average years of schooling as proxy variables for education.

As regards literacy, Meghalaya relatively depicts a gloomy picture. Although literacy rate increased in the state from 62.56 per cent in 2001 to 75.48 in 2011, its rank remained at 5 in the region (Table 2). However, urban-rural gap in literacy was substantially reduced from 30.01 per cent to 20.18 per cent during same period unlike in other states in the region. East and West Khasi Hills in the state are ahead of national literacy figure. East Khasi Hills has the highest literacy of 84.15 per cent as against Jaintia Hills which has only 61.64 per cent. In terms of average years of education the state also lags behind the country and progress over time is not satisfactory (Table 3). In contrast, the corresponding figures for three NE states, namely, Nagaland, Mizoram and Manipur are much ahead of national average. The gap between male and female in Meghalaya in average years of education is of course minimum in the region.

Shelter, Sanitation, Drinking Water and Electricity: There are two aspects of quality of shelter namely, living space and the quality of construction of the residence. The former refers to availability of number of rooms in a residence whereas the later refers to whether a house is *pucca* or *kutcha.* Due to non-availability of data, analysis on living space of households is not done in the present paper. The Census report provides data on quality of houses based on the material used for construction of walls and roof separately. If both the walls and roof are made of *pucca* material, a house is classified as *pucca*. If wall and roof are made of *kutcha* material the house is classified as *kutcha*. In all other cases the house is classified as *semi pucca*. A wall is considered *kutcha* if the material used includes grass, leaves, reeds, bamboo, mud, un-burnt brick or wood. It is *pucca* when the material used in is burnt brick, G.I sheets or other metal sheets, stone or cement concrete. Similarly, a roof is considered *kutcha* if the material used is grass, reeds, bamboo, thatch, mud, un-burnt brick or wood. It is *pucca* when the material used includes, tiles, slate, shingle, corrugated iron, zinc or other metal sheets, asbestos, cement sheets, bricks, lime and stone or RBC/RCC concrete. Data reveal that about 12 per cent households in Meghalaya do not have pucca houses as against 8 per cent in India (Table 4). It is the third best state in the region after Sikkim and Mizoram whereas Manipur is the worst state in terms of having pucca houses.

A majority of India's population does not have access to sanitation facilities in their dwellings and lacks sanitation facilities for the disposal of wastewater. Apart from the availability of safe drinking water, lack of sanitation, particularly sewage and disposal of solid waste including 'night soil' has been observed as among the main reasons for prevailing ill health and morbidity levels in the country. As per the 2011 Census, 62.91 per cent of the households have toilet facility within the premises of their residence in Meghalaya whereas the corresponding figure is only 46.92 per cent in the country (Table 4). Though the progress made by the state over the last decade has been commendable, relatively it is a laggard state in the region and only comparable to the performance of Arunachal Pradesh. There are significant inter-state variations in access to toilet facilities in the region. While nearly 92 per cent of households are having sanitation facilities in Mizoram, the corresponding figure is less than 62 per cent in Arunachal Pradesh.

As per Census of India, if a household has access to drinking water supplied from a tap or a hand pump/tube well situated within or outside the premises, it is considered as having access to safe drinking water. Millions of people in the country suffer from water borne diseases on account of lack of access to safe drinking water. It is the poor who suffer from higher prevalence of disease as compared to the rich. Studies undertaken in many metropolitan cities show a higher rate of diseases and longer duration per illness due to poor quality of drinking water supply in the slum areas. In 2008-09, as low as 60 per cent of households in Meghalaya was having access to safe drinking water in rural areas as compared to 84.8 per cent in India (Table 5). At least four states in the northeast were ahead of Meghalaya. But the increase in percentage of households having safe drinking water from 1993 to 2008-09 has been exemplary in the state as compared to other states in the region. If you look at the figures for urban areas the situation is just the opposite. When 96.3 per cent of households in Meghalaya had access to safe drinking water in urban areas the corresponding figures for the country was only 91.8 per cent. There was also wide variation in achievements across the states in the region. When Nagaland could supply drinking water to only 28.3 per cent of households the corresponding figure was as high as 98.2 per cent in Sikkim.

Access to electricity is a basic amenity and an index of industrialization. Successive five-year plans have laid specific targets for extending the coverage of electricity to households in India. As per the NSSO Report, 69.8 per cent of households in rural Meghalaya had access to electricity in their homes as against 66 per cent in India (Table 6). The progress during the period from 1993 to 2008-09 has been also highly satisfactory for the state as compared to other NE states. There is also state wise widespread variation in electricity connection to rural households in the region. Excepting Arunachal Pradesh, all other states in the region including Meghalaya have

done a good job in providing electricity to urban households. The rural-urban gap in access to electricity is quite striking. When 69.8 per cent of households had electricity connection in their houses in rural areas of Meghalaya it was as high as 99.3 per cent in urban areas. Similarly at the national level more than 96 per cent of the urban households had access to electricity, whereas only 66 per cent of those living in rural areas.

Income and Expenditure: Although Meghalaya is predominantly an agricultural economy with nearly 63 per cent of her work force engaged in this activity, the contribution of agriculture to NSDP is only 33 per cent as against 55 percent by the tertiary sector. In spite of having a vast natural resources and English speaking educated youths it is lagging behind in income generation. The economic backwardness of the state is evident from her low per capita income. When per capita monthly income (Net State Domestic Product) of Meghalaya was Rs. 574.42 in 1993-94 the corresponding figure at the national level was Rs. 640.83 (Table 7). Meghalaya was also lagging behind at least four states in the region. The situation however improved a lot over time. Per capita monthly income increased from Rs. 574.42 in 1993-94 to Rs. 1196.25 in 1999-2000 and further to Rs. 1982.75 in 2004-05. Though the state is almost in competition with the nation, four states in the region are performing better than her.

Per capita monthly consumption expenditure (PCMCE) is considered to be a better measure of economic well being of people than that of per capita monthly income measure for many obvious reasons. Firstly, consumption data allows for smoothening of income fluctuations. This is important when an overwhelming proportion of the workforce is engaged in the agriculture sector or in the informal sector, where income levels may fluctuate almost on a daily/seasonal basis. Secondly it allows inclusion of non-magnetized transactions, which may have a significant weightage in the economies of poor and backward rural areas. Thirdly consumption data covers, to some extent, the influence of social and public provisioning on an individual's availability of resources and economic attainments. Besides, given large-scale under-reporting of income data, use of consumption data may capture an individual's command over resources more accurately. Keeping these points in view the per capita monthly consumption expenditure data were analyzed. Although Meghalaya did not witness substantial improvement in per capita monthly income over time, she did not lag behind India in respect of per capita monthly consumption expenditure. When PCMCE increased from Rs. 390.00 in 1993-94 to Rs. 762.26 in 2004-05 in Meghalaya, it increased from Rs. 328.10 to Rs. 700.33 in India. Though PCMCE in Meghalaya was better than that of the nation she lagged behind three NE states. Nagaland witnessed highest PCMCE as against lowest in Tripura.

Personal Wellbeing and Human Development: For most individuals the choice to live a healthy life— free from illness and ailments and a reasonable life span, are crucial attributes in the notion of personal well-being. Similarly, for a society, a transition from high incidence of morbidity and mortality to a state where people generally enjoy long and disease free lives is considered a desirable and valued social change. It is only natural, then, that indicators on health and longevity, as well as indicators that variously capture demographic concerns of a society are important constituents in the framework for evaluating the development process under the human development approach. Good health and a long life is a valued attainment in itself, but living a long and a healthy life may not be the only objective in life. Yet, for most people, the realization of other goals and ambitions would very much depend on having a reasonable life span and robust health. It would provide opportunity to develop abilities and use the innate potential in pursuit of personal goals. Being healthy and being able to live long also brings some indirect benefits to individuals or to the society as a whole. It enables release of resources that, otherwise, would be spent on treatment of ill health and ailments, at least, at household level and, perhaps, also at the level of public provisioning for some health care services. In the process, it influences distribution of resources and equity in well being among people. Apart from the possibility of deploying such resources to meet other personal needs and pursuing development in other areas at a collective level, being healthy gives a head start to a person's well being. Individuals suffering from ill health or ailments may have to devote a part of their resources to mitigate their suffering and only then may have well being levels that can be compared with attainments and well-being of healthy persons. Better health, also contributes directly to economic growth as it reduces production losses on account of illness of workers or, potentially, also in terms of higher work productivity for healthy workers. Thus, besides its intrinsic value, a healthy and long life has an instrumental value in attainment of other valued goals in enhancing personal and social well-being. Infant mortality rate (IMR) and life expectancy (LE) are considered to be good indicators of good health and healthy life. Since data on life expectancy are not available for the state of Meghalaya analysis on health is based on data on infant mortality rates (Table 8).

The lower the infant mortality rate the better is the health of the individuals in the society. In 1994 the state had relatively a low infant mortality rate at 47.3 per cent as compared to India which had as high as 74 per cent. But the situation changed over time. Infant mortality rate in Meghalaya went down from 47.3 in 1994 to 43 in 2004 and again went up to 59 in 2009 as against a constant reduction of IMR from 74 to 58 and then to 50 in India during the same period. The state occupied the 7^{th} rank in the region as against best performing state Manipur

which had IMR as low as 16. Similar type of situations prevailed in rural areas too. In contrast to rural areas, there had been a constant increase in IMR in the urban areas of Meghalaya. In 2009 the state remained as the worst performing state in the region having 8th rank. While urban IMR was as high as 40 in Meghalaya, it was as low as 11 in Manipur and 34 at the national level.

Now let us focus our attention on some statistics on human development. HDI as a measure of human of development is considered to be a better measure of development than per capita income measure. It takes care of three dimensions of development such as income, health and education. The oldest data on human development index for the state of Meghalaya is available for the years 1981 and 1991 in the National Human Development Report (NHDR) (Govt. of India, 2002). According to NHDR, there has been an improvement of HDI both in rural and urban areas in Meghalaya and nation as a whole (Table 9). Though the rural-urban gap in the level of human development continued to be significant, it declined during the period. The decline was found to be more prominent in urban Meghalaya than in rural Meghalaya. Meghalaya had occupied 21st rank in the country in 1981 which was deteriorated to 24th rank in 1991. In contrast to this, three other NE states improved their ranks and all others either retained their ranks or deteriorated. The performance of Nagaland in the region was the best during the period by improving her rank from 20 to 11. According to the Meghalaya Human Development Report, the rank of Meghalaya was further reduced to 26 in 2005 (Govt. of Meghalaya, 2008). As regards the value of HDI, it was as low as 0.317 in 1981 which were marginally improved to 0.365 in 1991 and further to 0.585 in 2005. In contrast to the poor ranking of Meghalaya at the national level in 2005, three other NE states, namely, Mizoram, Nagaland and Manipur performed very well and secured 4th, 7th and 11th rank respectively at the national level. However, there were wide variations in human development achievements across districts in Meghalaya. East Khasi Hills, the best performer district, had HDI value as high as 0.676 as against 0.396 in East Garo Hills (Govt. of Meghalaya, 2008). Another report on human development that provides data for all the NE states was published by Ministry of DONER (Govt. of India, 2011). According to this report, in 1993-94, only two NE states, namely, Nagaland and Mizoram had achieved medium level of human development, i.e., HDI ranging from 0.5 to 0.8 (Table 17). By 2004-05, two more states, Manipur and Sikkim, joined with them. The rest four states in the region still fell in the category of low human development, i.e., HDI below 0.5. Particularly Assam having a HDI value of 0.364 was the lowest in the region.

Poverty: Poverty is a state of deprivation. In absolute terms it reflects the inability of an individual to satisfy certain basic minimum needs for a sustained, healthy and a reasonably productive living. The proportion of population not able to attain the specified level of expenditure is segregated as poor. Although poverty estimates are available for various years for the state of Meghalaya these are not comparable because of changes brought out in the definition and measurement of poverty. According to National Human Development Report, Meghalaya was in better off situation as compared to nation as a whole in terms of poverty in 1983 (Govt. of India, 2002). When 38.8 per cent of people in Meghalaya were poor, the corresponding figure was as high as 44.5 per cent in India. Relative rank of Meghalaya deteriorated from 14th position in 1983 to 22nd position in 1993-94 and further to 27th position in 1999-2000. As regards rural poverty, the situation was no different but it was quite different in urban Meghalaya. Consistently urban Meghalaya fared better than that of urban India over time. The latest data available on poverty for the state of Meghalaya is for the year 2009-10 (Table 10). Data reveals that Meghalaya had 17.1 per cent poor people as against 29.8 per cent in the country. There were significant variations in poverty figures across states in the Region. In North East, Sikkim had as low as 13.1 per cent poor people as against 47.1 per cent in Manipur.

Transport and Communication: There is no railway connectivity in Meghalaya. Guwahati, 103 km from the capital town Shillong, is the nearest railway station connecting the state Meghalaya with the rest of the country. Umroi which is 35 km from Shillong is the only airport in the state having landing facility for smaller aircrafts and is having flight connected with Kolkata, Aizawl and Silchar. There is also a helicopter service connecting Shillong to Guwahati and Tura. There are four National Highways in the State having a total length of 706.56 km. The public transport services have a sufficiently wide coverage linking the important places within the State and with places in neighboring states. The State had a road length of 11984 km by 2011 out of which 59 per cent were surfaced.

A good road connectivity of habitations, particularly of rural areas, with sub-divisional towns and district headquarters, is often the primary means of supplementing the public effort directed at providing basic health and educational services, as well as infrastructural support for production, trade and commerce at the village level. In many cases, particularly in sparsely populated areas and towns with large hinterland, good road connectivity may altogether obviate the need for public provisioning of some of these services in each and every village and, at the same time; help forge durable economic linkages of such habitations with rest of the economy. Road connectivity is, therefore, a useful indicator of development process and, perhaps, reaches of the market as well. It is particularly relevant in the Indian context and more

so in the context of Meghalaya where over 80 per cent of the population continues to live in rural areas and where over 55 per cent of villages with population of less than 1000 are yet to be connected by roads and virtually there has been no initiative in this regard to connect these villages by road. The Planning Commission has been gathering data on State level coverage of roads. The coverage of all categories of roads, both surfaced and non-surfaced including, National Highways, State Highways, District and rural roads has been improving in terms of area as well as population serviced, at a faster pace in the last decade than during nineties. The road length increased from 6241 km in 2004-05 to 7072 km in 2010-11 in the state as against an increase from 10587 to 15470 in Nagaland (Table 11). Though the increase in road length is not very significant in the state there has been an alarming increase of number of vehicles from 22661 to 48290 which has created a lot of traffic congestion in the state, particularly in Shillong.

Bharat Sanchar Nigam Limited (BSNL), Airtel, Aircel, Reliance and Vodafone offer the latest services in the state that telecommunication technology can offer. The state has an extensive postal network, which includes one GPO, one Head Post Office and 495 other Post Offices evenly distributed across the districts. They offer additional services like hybrid mail services, satellite money orders, point-to-point speed post (courier) etc. There is one Post Office for every 3570 persons.

State of the art computer and communication network are also established in all the District Headquarters, linking through VSAT the District Headquarters with the State Capital and also with various states in the country and Central Ministries at Delhi through National Informatics Centre (NIC). A SCPC DAMA VSAT was installed in the NIC State Centre for accessing Internet services and Video Conferencing. Another SCPC VSAT was set up in NEC, Shillong for Video Conferencing facilities. This enables Shillong to be connected with the rest of the country through Video Conferencing. A wireless link (RF link) has been installed in the three Secretariat buildings, NIC State Centre and also North Eastern Council. Fifteen sites RF connectivity was recently installed. This enables to extend a Local Area Network (LAN) from the Main Secretariat building to the other two Secretariat buildings and NEC building for accessing email and internet facilities. All the District Headquarters are providing Internet facilities using a direct PC VSAT.

Agriculture and Industry: Meghalaya is basically an agricultural state. About 80 percent of its population depends directly or indirectly on agriculture for their livelihood. The total cropped area in the state increased by about 42 per cent during the last three decades. Food grain production covers an area of over 60 per cent of the total cropped area. With the introduction of different crops of high yielding varieties in the mid-seventies, remarkable increase in food

grain production has been made. A major breakthrough was achieved when High Yielding Varieties of paddy such as Masuri, Pankaj IR 8 and other improved varieties series especially IR 36 which is suitable for Rabi season, fitting in the multi-cropping system have been widely cultivated all over the feasible areas of the state. A spectacular achievement was made when Megha II and I that are cold tolerant rice varieties developed by the ICAR, at Umroi near Shillong was released in 1991-92 for the higher altitude regions where there was no High Yielding Rice varieties at all earlier. Today the state can claim that about 42 per cent area under paddy have been covered with HYV with the average productivity of 2300 kg/ha. So also is the case with Maize and Wheat where the productivity have increased tremendously with the introduction of HYV from 534 kg/ha during 1971-72 to 1218 kg/ha of Maize and from 611 kg/ha to 1508 kg/ha of Wheat.

Besides the major food crops of Rice and Maize, the state is also renowned for its Horticultural crops like Orange, Lemon, Pineapple, Guava, Litchi, Banana, Jack Fruits and Temperate fruits such as Plum, Pear, and Peach. Potato, Ginger, Turmeric, Black Pepper, Arecanut, Tezpatta, Betelvine, Short-staple Cotton, Jute, Mesta, Mustard and Rapeseed etc. are some of the important cash crops in the State. Apart from the above the state has achieved signal success in the cultivation of non-traditional crops like Tea, Cashew nut, Oilseeds, Tomato, and Mushroom.

The practice of shifting cultivation is also prevalent in Meghalaya. It is a kind of forest farming variously termed as shifting agriculture, slash and burn agriculture, rotational bush fallow agriculture and locally known as *Jhum.* Nearly 22 per cent of the rural farmers in the State still practice it. In order to meet their food requirements, sustenance and for earning a livelihood, the *Jhum* farmers sow a variety mix of crops such as cotton, ginger, chilli, gourds, melon and other cucurbits, vegetables, yams etc along with paddy. Shifting cultivation as a cycle has cropping period of 1-2 years followed by a fallow period of 4-5 years in the State. The steps followed in such cultivation process, as for an example in Garo Hills districts, begins with the site selection, which is usually done in November-December. Cutting the vegetation mainly during January to March follows this. Drying and burning the vegetation takes place mainly during early March to April. Demarcation of plots and construction of field houses or watchtower atop tree together with land preparation is done in March and April to facilitate sowing with reference to crops and sequences during March-April and some in May. Weeding is done two to three times during April to August. Protection of crops against pests and wildlife depredation, harvesting and storing of crops is done in August-November. The shifting cultivation along with logging and fuel-wood-harvesting as practiced by the people in the State though accrue many benefits are now a cause of great concern due to environmental degradation.

The extent of industrialization is very low in the state. There are two mini industrial estates, one at Shillong and the other at Mendipathar. At Williamnagar, Nongstoin, Jowai and Tura, mini industrial estates are being set up. Byrnihat has been declared an Industrial Area in order to promote industrial development in the state. Entrepreneurship training programs are conducted to encourage local youths to set up their own trades under self-employment generating programs.

Amongst the forest-based industries, Meghalaya Plywood Factory is one of the biggest Plywood factories in Eastern India. Meghalaya Phyto-Chemicals Ltd. produces essential oils like Citronella Oil and aromatic chemicals while Meghalaya Essential Oils and Chemicals Ltd. Produces Cinnamon Leaf Oil. Associated Beverage Co. located at Byrnihat produces popular drinks like "Gold Spot" and "Limca". Meghalaya Industrial Development Corporation (MIDC) has signed a Memorandum of Understanding with Mine Engineering of Yugoslavia and Goetze (India) Ltd. covering identification of suitable processing unit in Meghalaya for storing, processing and preservation of locally available fruits and vegetables like oranges, pineapples, etc. There are two small-scale fruit preservations units run departmentally, located at Shillong and Dainadubi. Among the other agro-based industries, The Meghalaya Jute Manufacturing Company produces jute goods. Meghalaya Steel & Concrete Products (P) Ltd. produces steel structures, PSC Power Transmission poles and fabrication works. Shillong Surgical Cotton Industries located at Byrnihat produces absorbent Cotton Wool, etc. For assembling watches with finished products from Hindustan Machine Tools Ltd., a unit has been functioning in Shillong. The temperate climate of the state is conducive for setting up precision instrumentation and electronics industries. There is a Tantalum Capacitor Project with collaboration of Firadex (France) at the Industrial Area at Barapani in East Khasi Hills.

In the small sector there are a number of small industries viz. bakeries, breweries, saw mills, metal works, rice and flour mills, furniture making, iron and steel fabrication, and candle making. In addition, there are cottage industries like weaving, cotton ginning, spice making, bamboo and cane works, tailoring and knitting. There are about 5497 registered Small Scale Industrial Units in the state. This number is gradually on the rise, providing employment opportunities, particularly to the educated unemployed youths in the state.

In North East India, Meghalaya has the largest hydro-electricity potential, second only to Arunachal Pradesh. The NE Region possesses a hydro-electricity potential of about 30,000 MW which is almost one-third of the total potential of the country. Out of this, Meghalaya has a potential of nearly 1,200 MW. The proposed Garo Hills Thermal Project at Nangwalbibra is

expected to generate an additional 30 MW of power. In the Jaintia Hills District sector of the Assam-Meghalaya border, the North Eastern Electric Power Corporation Limited has commissioned the Kupli Hydro-Electric Project with a capacity of 150 MW. At present there are five hydel power stations and one mini hydel with a total installed capacity of 186.71 MW.

Concluding Remarks: The study reveals that in terms of sex ratio the state is much ahead of the country and two of its districts are having more number of females than that of males. Although the state is marginally ahead of the country in terms of literacy her relative position in the region is poor. However, it has been able to substantially reduce the urban-rural gap in literacy and male-female gap in average years of schooling. In terms of sanitation facilities it is a laggard state in the region but it has achieved a tremendous success in supplying drinking water and electricity connection to urban households at the cost of neglecting households in rural areas. The economic backwardness of the state is evident from her low per capita income. However, the state does not lag behind the country in respect of per capita monthly consumption expenditure. Infant mortality rate in the state is highest in the region. Human development is quite poor in the state compared to other states in the region and country. Relatively it is in better off position in terms of poverty reduction. Although there is no railway network in the state, road network and telephone connectivity are satisfactory but traffic congestion is quite high because of excess number of vehicles. The state is lagging behind in terms of agriculture and industrial development. There is widespread prevalence of shifting cultivation in the state.

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Table 1: District wise Area, Population and Density and Sex Ratio in Meghalaya						
District/State/ Country	Area (sq km)	Population (in lakh)	Density (per sq km)	Decadal Growth (%)	Sex Ratio	Literacy (%)
East Khasi Hills	2748	8.26	301	24.96	1011	84.15
West Garo Hills	3677	6.43	175	24.09	984	67.58
Jaintia Hills	3819	3.95	103	32.10	1013	61.64
West Khasi Hills	5247	3.84	73	29.53	980	77.87
East Garo Hills	2603	3.18	122	26.87	972	73.95
Ri-Bhoi	2448	2.59	106	34.26	953	75.67
South Garo Hills	1887	1.42	75	40.95	945	71.72
Meghalaya	22429	29.67	132	27.95	989	74.43
INDIA	3287240	12101.93	382	17.64	940	75.48
Source: Census of India 2011.						

Table 2: State wise Area, Population and Literacy in North East India								
State/ Country	Area (Sq. Km.)	Population (lakh)	Density	Sex Ratio	Total Literacy in		Urban-Rural Literacy Gap	
					2001	2011	2001	2011
Ar. Pradesh	83743	13.837	17	920	54.34	66.95	30.43	22.98
Assam	78438	312.056	398	954	63.25	73.18	25.61	18.44
Manipur	22327	25.704	115	987	69.93	79.85	12.54	08.83
Meghalaya	22429	29.669	132	986	62.56	75.48	30.01	20.18
Mizoram	21081	10.972	52	975	88.80	91.58	14.86	13.79
Nagaland	16579	19.785	119	931	66.59	80.11	21.95	14.35
Sikkim	7096	6.106	86	889	68.81	82.20	17.09	09.44
Tripura	10486	36.739	350	961	73.19	87.75	19.49	08.03
INDIA	3287240	12105.696	382	940	64.83	74.04	21.18	16.07
Sources: (1) Census of India 2001 & 2011; (2) Govt. of India (2011): *Human Development Report of North East States,* p.21. (literacy data)								

Table 3: State wise Average Years of Education in North East India						
State/Country	1993-94			2004-05		
	Male	Female	Total	Male	Female	Total
Arunachal Pradesh	2.9	1.5	2.3	4.9	3.3	4.2
Assam	4.9	3.1	4.1	5.4	3.7	4.6
Manipur	7.0	4.3	5.6	7.4	5.2	6.3
Meghalaya	3.9	2.8	3.4	4.9	4.3	4.6
Mizoram	6.4	5.2	5.8	7.3	6.3	6.8
Nagaland	7.4	5.1	6.4	7.9	6.3	7.1
Sikkim	4.8	3.1	4.0	4.9	3.9	4.4
Tripura	5.0	3.3	4.2	5.3	3.8	4.6
INDIA	4.6	2.5	3.6	5.7	3.6	4.7
***Source**:* Govt. of India (2009) *Gendering Human Development Indices.*						

Table 4: State wise Percentage of Households having Different Types of Houses and Sanitation Facilities in North East India					
State/Country	Houses in 2008-09			Sanitation Facilities	
	Pucca	Semi-Pucca	Kutcha	2001	2011
Ar. Pradesh	62.0	17.2	20.8	47.34	61.97
Assam	75.5	22.1	2.4	59.57	64.89
Manipur	29.1	64.3	6.6	77.50	89.30
Meghalaya	88.3	11.0	0.7	40.10	62.91
Mizoram	92.1	7.0	0.9	79.74	91.91
Nagaland	72.7	24.7	2.6	64.64	76.52
Sikkim	99.9	0.1	NA	59.35	87.20
Tripura	57.6	40.9	1.5	77.93	86.04
INDIA	91.7	6.2	2.1	**21.92**	46.92
Source: Govt. of India (2008-09) *Housing Condition and Amenities in India* (65th Round, NSSO Report No. 535).					

Table 5: State wise Percentage of Households by Sources of Drinking Water in North East India

State/ Country	Rural				Urban			
	Tap and Tube well		Others		Tap and Tube well		Others	
	1993	2008-09	1993	2008-09	1993	2008-09	1993	2008-09
Ar. Pradesh	70.1	91.0	29.9	9.0	100.0	91.0	0.0	9.0
Assam	55.0	71.7	45.0	28.3	83.4	77.7	16.6	22.3
Manipur	46.1	35.1	53.9	64.9	75.8	73.0	24.2	27.0
Meghalaya	27.5	60.0	72.5	40.0	35.1	96.3	64.9	3.7
Mizoram	29.7	19.4	70.3	80.6	85.6	72.1	14.4	27.9
Nagaland	92.8	33.8	07.2	66.2	91.0	28.3	9.0	71.7
Sikkim	77.0	67.4	23.0	32.6	97.7	98.2	2.3	1.8
Tripura	57.0	71.1	43.0	28.9	85.1	94.3	14.9	5.7
INDIA	63.4	84.8	36.6	15.2	88.9	91.8	11.1	8.2

Source: Govt. of India (2008 & 1993) *Housing Condition and Amenities in India,* 65th & 49th Round NSSO Report Nos. 535 & 429 (July 2008 - June 2009 & Jan – June 1993).

Table 6: State wise Percentage of Households having Electricity in North East India

State/ Country	Rural		Urban	
	1993	2008-09	1993	2008-09
Ar. Pradesh	27.3	77.9	87.3	98.5
Assam	15.6	40.2	74.0	94.6
Manipur	58.1	86.8	92.6	99.5
Meghalaya	27.2	69.8	89.8	99.3
Mizoram	61.4	81.9	91.3	99.8
Nagaland	68.4	99.0	94.0	100.0
Sikkim	65.3	95.8	91.9	99.4
Tripura	30.2	66.1	83.5	95.3
INDIA	36.5	66.0	80.9	96.1

Source: Govt. of India (2008 & 1993) *Housing Condition and Amenities in India,* 65th & 49th Round NSSO Report Nos. 535 & 429 (July 2008 - June 2009 & Jan – June 1993).

Table 7: State wise Per Capita Monthly Income and Expenditure in North East India
(Figures in rupees)

State/Country	Income[1]			Consumption Expenditure[2]		
	1993-94	1999-00	2004-05	1993-94	1999-00	2004-05
Ar. Pradesh	727.75	1165.83	2272.58	343.75	672.31	798.76
Assam	476.25	1023.50	1398.50	280.42	473.42	613.67
Manipur	487.17	1105.00	1543.92	305.59	596.36	643.62
Meghalaya	574.42	1196.25	1982.75	390.00	639.13	762.26
Mizoram	693.25	1370.25	2055.17	472.59	935.53	993.72
Nagaland	760.75	1175.58	1686.17	454.48	1005.99	1094.88
Sikkim	700.17	1240.83	2224.42	321.12	559.97	738.52
Tripura	461.17	1176.58	2032.83	367.43	589.50	578.91
INDIA (per capita NNP)	640.83	1319.92	2011.92*	328.18	590.98	700.33

Source: 1. CSO, State Domestic Product, Ministry of Statistics & Programme Implementation.
2. NSS 38th, 50th, 55th & 61st Round on Household Consumption Expenditure.
* The figure pertains to Net National Income (NNI).

Table 8: State wise Infant Mortality Rates in North East India

State/Country	IMR (Total)			IMR (Rural)			IMR (Urban)		
	1994	2004	2009	1994	2004	2009	1994	2004	2009
Ar. Pradesh	40.1	42.0	32.0	41.0	44.0	35.0	29.6	27.0	14.0
Assam	78.0	66.0	61.0	78.0	69.0	64.0	76.0	38.0	37.0
Manipur	23.8	13.0	16.0	24.2	11.0	18.0	22.2	17.0	11.0
Meghalaya	47.3	43.0	59.0	50.2	43.0	61.0	19.0	37.0	40.0
Mizoram	-	27.0	36.0	-	36.0	45.0	-	11.0	19.0
Nagaland	NA	17.0	26.0	NA	17.0	27.0	NA	18.0	23.0
Sikkim	26.8	30.0	34.0	27.0	32.0	36.0	18.6	12.0	21.0
Tripura	39.1	30.0	31.0	37.8	31.0	33.0	47.7	23.0	20.0
INDIA	74.0	58.0	50.0	80.0	64.0	55.0	52.0	40.0	34.0

Source*:* Govt. of India (2011) *Human Development Report of North East States,* p.40.

Table 9: State wise Human Development Index in North East India

State/Country	National HDR				Meghalaya HDR		HDR of NE States	
	HDI		Rank		HDI	Rank	HDI	
	1981	1991	1981	1991	2005	2005	1993-94	2004-05
Ar. Pradesh	0.242	0.328	23	29	0.617	22	0.287	0.427
Assam	0.272	0.348	26	26	0.534	29	0.239	0.364
Manipur	0.461	0.536	4	9	0.707	11	0.426	0.521
Meghalaya	0.317	0.365	21	24	0.585	26	0.335	0.455
Mizoram	0.411	0.548	8	7	0.790	4	0.550	0.584
Nagaland	0.328	0.486	20	11	0.770	7	0.553	0.570
Sikkim	0.342	0.425	18	18	0.684	13	0.408	0.509
Tripura	0.287	0.389	24	22	0.608	23	0.327	0.447
INDIA	0.302	0.381	-	-	0.575	-	-	-

Sources: (1) Govt. of India (2002) *National Human Development Report*;
(2) Govt. of Meghalaya (2008) *Meghalaya Human Development Report*;
(3) Govt. of India (2011) *Human Development Report of North East States*.

Table 10: State wise Poverty in North East India, 2009-10

State/Country	Rural	Urban	Total
Ar. Pradesh	26.16	24.9	25.9
Assam	39.87	26.1	37.9
Manipur	47.42	46.4	47.1
Meghalaya	15.34	24.1	17.1
Mizoram	31.12	11.5	21.1
Nagaland	19.32	25.0	20.9
Sikkim	15.51	5.0	13.1
Tripura	19.84	10.0	17.4
INDIA	**33.8**	**20.9**	**29.8**

Source: www.indiastat.com

Table 11: State wise Transport Networks in Meghalaya
(Length of Railways and Roads in km)

State/Country	Railways		Surfaced Roads		No. of Vehicles	
	2004-05	2010-11	2004-05	2010-11	2002	2010
Ar. Pradesh	1	1	10325	14336	5272	5430
Assam	2506	2434	24366	37816	129628	245737
Manipur	1	1	6682	8140	11409	22140
Meghalaya	0	0	6241	7072	22661	48290
Mizoram	2	2	3215	7001	8135	17230
Nagaland	13	13	10587	15470	58437	106946
Sikkim	0	0	1654	4119	5111	12102
Tripura	64	151	12180	14203	17036	37773
INDIA	63465	64460	1596450	2341480	6058863	13071720

Source: http://www.indiastat.com