CHAPTER I
CHAPTER – I

SOCIO ECONOMIC PROFILE OF MEGHALAYA

Introductory

Meghalaya, one of the seven states in the North-Eastern Region of India, was born twenty five years after the country secured Independence. It is one of the youngest states being the 21st State of the Indian Union. The term ‘Meghalaya’ is derived from two Sanskrit words ‘Megha’ and ‘laya’ meaning the abode of clouds. Meghalaya was first carved out of Assam in 1970 as an autonomous State consisting of two hill districts: the United Khasi Jaintia Hills district and the Garo Hills district. However, other changes soon took place. With the re-organisation of the North-East Region in the early 1970's, the State of Meghalaya was made a full-fledged State which was formally inaugurated on the 21st January, 1972. On the 22nd February, 1972, the new Jaintia Hills District was created and in October 1976, two more districts - the West Khasi Hills district and the East Garo Hills district - came into existence. At present, there are seven districts with the creation of the Ri-Bhoi and the South Garo Hills districts in 1992. Under the seven districts in the State, there are thirty two Community Development Blocks and more than five thousand villages. There are six small towns and the Shillong Urban Agglomeration with a population of 2,23,366 lakhs is the only class-I city in the State.
Meghalaya has an area of 22,429 Sqm Kms. It lies between 25° 5" and 26° 10" North Latitudes and 98° 47" and 97° 47" East longitudes. Meghalaya spreads along the northern boundary of Bangladesh which lies in the south. The State is surrounded by the Kamrup, Goalpara and Nagoan districts of Assam on the north, by the Goalpara district of Assam and Bangladesh on the west, and by the Karbi Anglong and the North Cachar Hills districts on the east. The road access to the State is through Assam. The road link between the Brahmaputra and the Barak Valley of Assam passes through Meghalaya. The land surface of the State consists mostly of mountainous terrain with narrow valleys. The hills rise gradually from the Brahmaputra Valley in the north. In the south the hills rise immediately from the plains to a height of 4000 feet above sea level forming a wall along the north of the Surma Valley. The State consists of a wide plateau of the same name and lying between 4000 and 6000 feet above sea level of which the Shillong peak is the highest point at 6450 feet. The plateau like character of this area is well marked over the east, west and south of Shillong, the capital of the State. Meghalaya is blessed with beautiful rivers like the Kupli, Umiam Khwan, and Umkhen flowing towards the north; Lubha, Kynshi and their tributaries to the south, and Myntang and Mynriang flowing towards the east.

Meghalaya is blessed with rich forest, mineral and power resources. Unfortunately, however, these resources are not
fully and properly exploited.

The State also witnesses low agricultural productivity. A variety of crops like paddy, maize, potatoes, tapioca and ginger and fruits like oranges, bananas, pineapples and lemons cannot be produced in surplus and exported to other states because of the lack of credit facilities. Likewise, a number of small-scale industries like backsmithy, lime-making, weaving and cane-and-bamboo works cannot flourish because of the insufficiency of capital funds. The vast forest resources like sal, pine, teak and bamboo, and minerals like coal, limestone and clay are not properly tapped.

Meghalaya is a state where banks and financial institutions can play a greater role in economic development if only the state government could evolve suitable policies for its agricultural and industrial development. The State however, should also have a promotional and motivational policy to enable local entrepreneurship to emerge for the proper exploitation and utilisation of the state's natural, agricultural and human resources.

While we can stress that all economic infrastructural facilities are required to be built up simultaneously, we however believe that the setting up of a strong banking sector should be given the priority because it is of primary importance in providing the necessary capital support and
investment. We hold that the health of the other infrastructural facilities both economic and non-economic actually depends on the success or failure of the banking industry.

Based on the above assertion, we will first look into the resource endowment as well as the economic and social infrastructural facilities of the state. This will form the background to our study.

Climate

The climatic conditions in the state of Meghalaya vary from place to place because of differences in elevation from sea-level. The climate ranges from the sub-tropical to the semi-temperate. In the foothills of the southern and northern slopes, the climate is somewhat humid and warm. The temperature during April-June is fairly high. The cold season extends normally from November to February. In the months of December and January, frost forms in the Shillong plateau but snow is unknown in Meghalaya. The climate in the north of the Khasi hills adjoining the border of the Kamrup district is hot. The uplands of the Khasi and Jaintia Hills are characterised by warm summers and cold winters. In 1997, the temperature of Shillong stood the highest at 33.4°C during the month of June and was the lowest at 4.8°C during the month of January.
The monsoon period normally covers the period from the months of May to September. The Khasi Hills has the highest rainfall in the world. But most of the heavy rainfall occurs in the southern part of the region especially above cliffs and mountains in the "War" area. Meghalaya enjoys the distinction of having two of the wettest places on earth, Cherrapunjee and Mawsynram. The amount of rainfall over Cherrapunjee ranges from 11,995 mm to 14,189 mm and over Mawsynram it is 10,689 mm to 13,802 mm. The Mawsynram-Cherrapunjee-Pynursla belt in Khasi Hills along the southern border records rainfall varying from 10,000 to 15,000 mm per year. In recent years there has been heavy depletion of forests. This has exposed the hills to rains and other natural vagaries which have caused large scale erosion of the top soil and the washing away of huge amount of soil every year. That is why the soil of the border areas tends to be stony and sandy.

Agriculture

Agriculture is the backbone of the Indian economy, so also of the economy of Meghalaya. Nearly 80% of the people of Meghalaya depends on agriculture for their livelihood. Surprisingly only 2,47,413 hectares of land were cultivated constituting 11.03% of the total geographical area of the state in 1995-96. Unfortunately, the techniques of production practised by the hill dwellers of Meghalaya are still primitive and simple and the method of cultivation primarily adopted is jhumming or shifting cultivation. A variety of crops are grown
on the jhum field. Some of the important crops grown in Meghalaya are paddy, maize, potatoes, local beans, tapioca, cotton, sesame and ginger.

The Nature in its generous abundance, has bestowed Meghalaya a unique array of fruits. The State is also known as a land of fruits. The fruits which are in high demand are oranges, bananas, plums, pears, pineapples, lemons, peaches and apricots. Some varieties of bananas are produced in Meghalaya, particularly in the Khasi Hills which have better quality and taste. For instance, 'Kaitjrong' is assumed to be the best quality of local bananas not to be found elsewhere and 'Kaitkhun' is another which has been used to feed the babies. The pineapples grown in Meghalaya and Tripura are considered to be the best in India. In the Khasi Hills a major chunk of the pineapples comes from the Ri-Bhoi district. These can even be exported but because of lack of transport facilities they cannot even reach the market and most of them are wasted. Meghalaya is also known for the good quality of oranges which are grown mainly in the Shella area in Khasi Hills. Oranges coming from Cherrapunjee and Jirang too are known for their superior quality and flavour. There is an extensive scope in the State to grow other types of fruits if proper measures are taken.

At present, the State is trying its best to assist the farmers and cultivators in the State. The total cropped area in
the State increased by about 42% during the last twenty five years. The food-grain production covering an area of over 60% of the total cropped area was not sufficient to meet the total State requirement. After the introduction of HYV seeds, fertilizers, chemicals, and other tools, the production of food-grains has increased considerably. A spectacular achievement was obtained when Megha I and Megha II which are cold tolerant rice varieties developed by ICAR North Eastern Region at Umroi near Shillong, was introduced in 1991-92 for the higher altitude regions where there was no High Yielding Rice Varieties at all earlier.

The production of principal crops has increased during the last five years. The production of rice has increased from 117,786 tonnes during 1993-94 to 150,097 tonnes during 1997-98. This also applies to maize and wheat where production has increased from 20,086 tonnes to 24,858 tonnes in the case of maize and from 6,636 tonnes to 6,894 tonnes in the case of wheat during the same period. However, in the state itself the contribution of agriculture and allied activities to state income remained higher at 50%. In spite of this, the per capita output of major crops is only 51.6% of the national average (1991) and the per capita food grains production is only 43.3% of the national average (1991). Moreover, the per capita availability of food-grains in the state during 1996-97 remained at 244 gms/day as against the all India average of 512 gms/day.
An autonomous Board was set up to promote plantation crops. Pioneering work was carried on in tea cultivation, with the State having 253 small tea growers. More attention was also given to pulses, oilseeds and cash crops. The Secondary Regulated Markets were set up and rural godowns were constructed to facilitate marketing of agricultural products.

Under the Meghalaya Land Transfer Act 1971, the people of Meghalaya enjoy special benefits in which no land in Meghalaya shall be transferred by a tribal to a non-tribal or by a non-tribal to a non-tribal except with the previous sanction of the competent authority. This should not have been a hindrance to the development and performance of the banking industry in the State. Banking and other financial institutions could easily overcome this institutional safeguards for the people of the State. There is a great deal more that the banks and other financial institutions along with the State have to do in order to improve the agricultural sector of Meghalaya economy.

Livestock or Animal Husbandry

There is a great scope for the development of livestock in Meghalaya. Agriculture, which is the main occupation of the people in the State cannot meet all their requirements in life. Therefore, the people can supplement their income by rearing livestock like cattle, pigs and poultry and by the development of dairy farming. Modern and scientific methods
can be introduced in the livestock farms to increase production as it is done in the countries like Australia and New Zealand.

According to the census of 1961 the total population of cattle in Meghalaya was 4,14,737 that of buffaloes was 38,021, of sheeps 20,672, of goats 99,697, of horses and ponies 9,371, pigs 1,12,000 and poultry 9,43,023. By 1991 census, the population of cattle increased to 6,37,000, of buffaloes 34,000, of sheeps 23,000, of goats 1,96,000, of horses and ponies 2000, of pigs 2,94,000 and of poultry 18,26,000. From this illustration we can understand that there is a rapid development in livestock farming.

Meghalaya being a State with a predominantly tribal population will greatly benefit if steps are taken to improve the development of animal husbandry and dairy farming. About 80% of the land area in Meghalaya which is lying waste can be devoted to livestock farming. This will greatly increase the income of the rural poor and of the State as a whole.

**Industrial Development**

Industrialisation plays a vital role in the process of economic development and it is also a primary policy-objective in most of the less developed countries. In such countries, development of industries is regarded as an essential means to achieve high rates of economic growth to
meet the basic needs of the growing population and to create more employment opportunities and many other benefits essential for further economic development.

Industrially, Meghalaya is among the most underdeveloped regions in India. The contribution of the State to the industrial output of the country is insignificant. The percentage of industrial workers (manufacturing and household industries) to the main workers in the state during 1997-98 stood at 0.2% only as against 3.8% in the entire country. However, recently more and more small-scale industrial factories, Khadi and Village industrial units and a few joint stock companies have been set up in the State. The number of registered small-scale industries has increased from 1558 in 1990-91 to 3008 in 1997-98. The growth of joint-stock companies is also increasing in which the number has risen from 132 in 1989 to 228 in 1998. In this connection, mention has to be made of the production of cement by the Mawmluh Cherra Cement Ltd which has increased from 97,000 MT in 1987 to 1,42,000 MT in 1994. At present the production of cement by the company has declined sharply due to several reasons. During 1997, the production came down to 99,000 tonnes in the state. In spite of all the achievements in the industrial sector, the progress made is far from satisfactory. In the absence of entrepreneurial supply, industrial development cannot take place as fast as it should. The State is blessed with bountiful forest and minerals resources that
there is wide scope for setting up diversified industries in the State.

The State is doing whatever it could to provide the infrastructural facilities, financial assistance, incentives and concessions in order to increase industrial activities. The number of small-scale industrial units has increased from 21 in 1976-77 to 3008 in 1997-98 with an investment in plant and machinery having increased from Rs. 9.04 lakhs to 22,49.50 lakhs. The number of persons employed in the industrial units rose from 164 in 1976-77 to 1,72,59 in 1997-98.\(^\text{12}\)

The number of registered factories in Meghalaya stood at 65 and the number of employees stood at 2929 in 1997. The number of Khadi and village industries in the state during 1997-98 stood at 6224.\(^\text{13}\)

No doubt, the state has done a lot to improve the industrial sector. Unfortunately, the level of industrialisation of the state is very low. There is a lot more that the financial institutions and the Government have to accomplish. If the resources are properly tapped and utilised, the State will not have to depend so much on other states as it is now. Individuals are also expected to come up with different ideas and opinions in improving the performance of the existing units and in setting up of new units. No one can deny the fact that the development of the industrial sector has a great
impact on the development of the economy.

Co-operative Movement

Co-operation refers to an institutional framework to organise self-help among those who participate in it. Such an organisation consists of people with modest incomes who have organised themselves for a social or material purpose. These people come together and organise themselves into co-operation. All the members contribute their resources to this organisation. Poor or weak individuals, who are otherwise unable to contribute to society can thus be more productive. Co-operative inspired by the principle of self-help and communal effort, are of great relevance and significance for the people in India, particularly for the rural poor.

The number of co-operative societies in Meghalaya has increased from 763 in 1991-92 to 858 in 1996-97. Membership in these societies has risen from 117 to 168 in the same period. The amount of share capital stood at Rs. 2240.03 lakhs in 1991-92 and it increased to 1725.14 lakhs in 1996-97, and that of working capital from Rs.1,21,92.70 lakhs to Rs. 3,31,39.86 lakhs of rupees in the same period.¹⁴

Tourism

Tourism, is a new sector that can play a significant role in promoting economic development. It can serve as an
important source of income and can become one of the largest industry not only in the state but also in the country as a whole. It has become an important earner of foreign exchange in India.

Meghalaya has great potential for the development of tourism. The enjoyable climate, the hospitality of the people and other features make Meghalaya a centre of tourist attraction. Shillong, the capital of the State is known for its beauty. The Umiam lake and the Orchid Lake Resort along with the Shillong Peak are attractive places for sight-seeing.

There are a number of waterfalls in and around Shillong and the best known are the Spread-Eagle falls, the Bishop falls, the Elephant falls, Sweet falls and Crinoline falls. Cherrapunjee is known for its caves and falls. The well-known caves in the State are the Syndai caves, Siju caves and the caves in Cherrapunjee.

The Jaintia hills is known for its lakes and rivers. The Thadlaskein lake offers boating facilities to the tourists. The Kupli Hydel Project attracts a large number of tourists. The largest collection of Monoliths can be found at Nartiang, of which the tallest one is 24 feet high.

In the Garo hills, Tura can be compared with the Tiger hill of Darjeeling, which is known as the finest view of
sunrise. Tura on the other hand, offers the finest view of the sunset in eastern India. Siju is famous for the Dabakhol cave and the Balpakram National Park is known for its scenic beauty.

The number of Indian tourists coming to Meghalaya has increased from 2983 in 1974 to 1,15,563 in 1997 while foreign tourists increased from 186 in 1974 to 1071 in 1997. The number of tourist spots in Meghalaya has increased from 34 in 1993 to 62 in 1997.\textsuperscript{15}

The Government set up the Meghalaya Tourism Development Corporation in the year 1997. At present the Corporation has been managing the Pine Wood Hotel and the Orchid Hotel, the Restaurant cum Guest House at Mawsmai Cherrapunjee, the Orchid Lodge at Tura and the Orchid Lake Resort at Umiam lake.

Population

The Khasis, the Jaintias and the Garos are a physically short and strongly built race totally different from the neighbouring hill tribes. According to the findings, the Khasis descended from the old remote Austric Mon-Khmer nomadic tribe in Burma. The Khasis entered Assam during different periods of history. It is believed that the Khasis were one of the ancient races residing in Eastern India.
The typical Khasi people consist of the following:

a. Khynriams of the Central plateau of the Khasi hills.
b. Jaintias or Syntengs of the Jaintia hills who include Pnars, Wars and Bhois.
c. Wars or inhabitants of the War area in the south.
d. Bhois or inhabitants of the Bhoi area in the north.
e. Lyngams - an admixture of Garo-Khasi tribes in the west and north-west of the district.

The following are the non-Khasi tribes living in the Khasi and Jaintia Hills.

a. Lalungs and Hmars in the north east of Jaintia hills.
b. Mikirs or Karbis inhabiting the north east of Khasi hills and north of Jaintia hills.
c. Biates and Vaipheis in Saipung area of Jaintia hills.

Other communities residing in the district are as follows:

a. Nepalese  c. Bengalis
b. Assamese  d. Marwaris

The individuals play a crucial role in the economic development of a country. They are not only the factors of production but they are also the consumers. Therefore a detailed study of population is significant. It is important to
know the number of people living in a particular place at a particular time.

The total population of the State as per 1991 census is 17,74,778 as against 13,35,819 in 1981 indicating a rise of 31.80% of the population in 1981. The decennial growth rate of population was 31.50%, 32.04% and 32.86% in the 1971, 1981, 1991 census respectively. During 1998, the state's projected population stood at 21,65,014. The distribution of population in the State is uneven. This is because it is governed by so many factors like topography, soil, water supply and mineral resources. The population concentration in the State is confined mainly in the state capital of Shillong and in the district and sub-divisional headquarters like Tura, Jowai, Williamnagar, Nongstoin, Baghmara, Nongpoh, and Cherapunjee.

The State had a total of 5629 villages and 12 towns in 1994. According to 1991 census, the density of population in the state was 79 per Sq.Km as compared to 60 in the previous decade. During 1997-98, the density per Sq. Km stood at 96 as against the national average of 298. The population growth rate in the state for five years i.e., 1993-94 to 1997-98 stood at 12.00% as against the all India average of 8.81%. The population of Meghalaya is predominantly tribal which constitutes 89.18% of the total population during 1997-98. District-wise, the Jaintia Hills has a population of
220, 473, East Khasi Hills 537,906, Ri-Bhoi 127,312, West Khasi Hills 220,157, East Garo Hills 188,830, West Garo Hills 403,027 and South Garo Hills 77,073 making a total of 17,74,778.24

Natural Resources

Forest

Forest is an important natural and renewable resource of the State. They help in increasing water supply, increasing the production of fish, controlling floods, preserving wild life and preventing erosion of soil. Besides they have a moderating influence on the climate and they also provide varieties of raw materials for a large number of industries.

The important types of trees found in the forests of the State are sal (Shorea Robusta), pines (Pinus Kasia), teak, birch, schim, beech, nahar, agar, champa, bamboo, tita sopa, gamari, poma, makhai and other trees.

The Khasi pine is mainly found in the upper region of the Khasi and Jaintia hills in an elevation of between 3000 to 5000 ft. The main products of pine trees are resin and turpentine oil. Sal trees are mainly found in the Garo hills and preserved in the Rongnagiri Reserve Forest.
The State is also rich in orchids. There is a high demand for orchids in the State. This is because people in the present day are more interested in growing hybrids than flowers because the former are more beautiful and take a longer time to fade.

The State has many medicinal plants and herbs which are scattered in the forests. Most of the important forest materials have not yet been fully explored. The popular medicinal plants in the State are Asparagus, Kreitieng, Vallerina, Vallichi, Smilen, Ipecac, Serpentina, Chincona, Terminalia, Arjuna and Bellia offianellis.

The forest area as percentage of total area of the State during the same year stood at 41.70 as against all India average of 19.27. The area under different types of plantation such as teak, sal, plywood, pine has gone up from 70 hectares in 1987-88 to 155 hectares in 1996-97.

Every year the State has tried to take up various plantation schemes in bringing more areas under the umbrella of forest development schemes. In this connection an area of 1,943 hectares was afforested under the Social Forestry Sector during 1996-97. In addition to this, 4780 lakhs seedlings of forest-tree species were distributed free of cost to the public.
A Village Reserved Forest scheme has been introduced in the State to meet the demand for small timber, fodder and grass of the villagers. Under this scheme a network of nurseries have been created. In addition to this, the Forest Development Corporation of Meghalaya was incorporated under the Companies Act in January, 1975. The main objective behind it is to increase forest cover in the State by acquiring, purchasing or leasing of land on profit basis and growing of all kinds of forest plants. The other objective of the Corporation is to maintain, conserve and protect flora and fauna in the state. But the work and performance of the Corporation has not been satisfactory. It has not been able to check the large-scale felling of trees or timbers which have depleted the forest wealth in Meghalaya. It has not also been able to check the prevalent system of jhum cultivation which inflicts heavy losses on forest. Huge amounts of soil are washed away every year in the rain-intensive areas. The situation is worsening with the gradual increase in the demand of firewood not only for cooking purposes but also for warmth in cold weather. Charcoal is very important in Meghalaya during the winter months.

The forest losses mentioned above had led to the adoption of massive afforestation and social forestry programmes. The schemes under the afforestation programme include plywood plantation, teak wood plantation, salwood plantation and other plantations. An additional area of about
250 Sq. km. has been planted with valuable forest-tree species. Protection measures have been extended over an area of 412 Sq. km. The Forest Training School was set up at Darengiri. The Balpakram National Park has been extended and the census of elephants population was undertaken all over the State.

**Fishery Resources**

Fishery is one of the resources of the State of Meghalaya. It comprises about 5600 Kms of rivers and 1200 hectares of reservoirs 375 of beels and lakes and 2000 hectares of ponds and tanks. These resources are capable of producing 5000 metric tonnes of fish annually.

Tremendous achievement in the production of fish and fish seeds has been made in the last few years. The production of fish and fish seeds during the period from 1985 to 1997 was 22,329 MT of fish and 13,090 million of fish seed.\(^\text{28}\)

Between 1994-95 and 1995-96, 156 hectares of water area has been brought under the fishery project. This has benefited 528 fish farmers under the Integrated fish farming of fish-cum big farming, duck farming, 67,893 hectares of water area have been included benefiting 3030 fish farmers.\(^\text{29}\)
Mineral Resources

The State of Meghalaya is blessed with rich mineral resources. It is a store house of economic minerals such as Coal, Limestone, Sillimanite, Clay, Kaolin, Quartz, Feldspar, Corundum, Glass sand and Phosphates. But the exploitation and development of these mineral has been very slow. These minerals are used in many industries. Coal and Limestone are also being exported to neighbouring countries like Bangladesh, earning a good amount of foreign exchange for the country. A brief account of the estimated amount of availability of each of these minerals is given in the succeeding paragraphs:

(1) Coal

The State has a deposit of Coal of approximately 1197 million tonnes. Coal occurs in all the districts of the State. The important coal mines are located at Mawbehlakhar, Sohrarim, Shyrmang, Bapung, Jarain, Rymbai, Sutnga, Kyrdem, Tuber, Lakasein, Umte, Garampani, Kharkor, Mawsynram, Shella-Mawlong, Cherrapunjee, Laitryngew, Pynursla, Lakadong, Lumshnong, Tenglah, East Darrangiri, Langrin or the Umblei area and the Lum Rilang area.

Mining of coal is done by local people in a very crude way. This greatly affects the physical properties of Khasi coal. The ash content is much lower than that of the best
quality coal of the country and its calorific value exceeds some of the best grade coal. However it suffers badly from its excess sulphur-content. The possible uses are power generation, smoke-less coke, fertiliser industries, cement industries, paper industries, textile industries, brick-burning and pottery industries and rubber industries.

The total estimated inferred reserve of coal in Meghalaya is about 460 million tonnes and only 0.28 million tonnes was produced as on December 1998.\textsuperscript{31}

(2) **Limestone**

The State has large reserve of limestone in all its districts. The limestone deposits of East Khasi Hills contain enormously thick and inexhaustible deposits of \textit{high grade limestone} scattered all along the southern and south eastern part of the district. Between the Tharia hat and the Shella river there occur three beds of limestone with an average thickness of 200 metric tonnes.

The Sylhet limestone can be found in and around Mawmluh-Mawsmai Hills. This type of limestone is best suited for making cement. Individual limestone bands vary in thickness from 6 metres to more than 100 metres. The upper most band contains limestone of great purity and according to H.M.N. Ghosh at least 1,000 million tonnes of good quality stone are available along this length.\textsuperscript{32}
Limestone is also found in Langkyrdem, Pynursla and Nongtalang lying to the east of Cherrapunjee.

In the Jaintia Hills, the Sylhet limestone with a thickness of 200 Sq.km occurs in the area between the Prang and the Lubha rivers covering the Lakadong, the Lumshnong, the Mynher and the Kuddan areas. Limestone deposits also lie in the Syndai, Sutnga and Nongkhlieh areas.

In the Garo Hills, the upper Sylhet limestone of the Shella Formation occurs in the areas of Athabling, Siju, Dapri Garugiri. The largest deposits of limestone can be found near Siju Arteka and Siju Songmong in the Simsang valley. A few isolated deposits are also found near Rongrengiri, Jarkhare Rongthel and Darrang Era-Aning in the west Darrangiri coal fields.

According to the Geological Survey of India (GSI), the estimated reserves of limestone in the State come to 943 million tonnes. The Directorate of Mineral Resources (DMR) of the State estimated the reserves of 3100 million tonnes.

Limestone is used mainly by the cement factories. Besides it is also utilised as one of the inputs in steel, fertiliser, and chemical factories.
Clays are of different types such as china-clay (kaolin), fire-clay, ball-clay and bentonite. The different types of clays are used for different purposes. For example, china clay is used for making crockery and other earthen-wares, whereas fire clay is used as an input in refractory and fire-bricks manufacture.

White clay deposits are found to occur in various parts of the State. Large deposits of superior quality white clay are found near Mawphlang, Thadlaskein and Laitlyngkot in the Khasi and Jaintia Hills and at Nerrengiri, Simsang, Dalu, Songsak and Rewak in the Garo Hills. The Garo Hills contain the most extensive and enormous deposits of white clay which is of much economic value. Clays suitable for pottery and stone wares are found near Sohrarim on the Shillong-Cherra Road, about 21 miles from Shillong in the Khasi Hills. Such clays are also found in Sutnga and Shangpung in the Khasi Hills.

Fire clay occurs around Jowai, in Sutnga, Shangpung, Larnai, Nongryngkoh, North-East of Mynriang, South-west of Kupli-Kharkor Junction and near Laitksah.35

The inferred reserve of clay deposits is over 52 million tonnes of which fire clay stood at 9.2 million tonnes. Unfortunately, neither China clay or fire clay was produced in
(4) **Sillimanite and Corundum**

Sillimanite, the rock that can be put to use without any processing is a very important refractory raw material and a good foreign exchange earner for the country.

Meghalaya has the world largest reserve of sillimanite. One of the largest sillimanite deposits in the world is around the Sonapahar region of West Khasi Hills. According to reports by geologists, the sillimanite deposits occur in association with corundum. The proportion of corundum varies in different deposits. Some of the deposits, possessing up to 50% or more. The presence of a certain amount of corundum in sillimanite increases the quality of the latter. Sillimanite is used for making electrical and chemical porcelain spark-plugs, enamel-ware, saggers and hotel wares. Mullite a product of sillimanite, is used for making glass furnaces, furnace linings, crucibles, fire boxes and high temperature cement.

The reserves of Sillimanite in Sonapahar and Mawpomblang is estimated at 0.45 million tonnes. The Sillimanite mines in Sonapahar have been used for a long time and hence the reserves of the mineral are almost exhausted.
(5) **Dolomite**

Dolomite is a very fine-grained mineral which is compact and hard, and is suitable for use in making furnace linings and other refractory products. The best known sources of Dolomite are in the Sylhet Limestone areas of Cherrapunjee in the Khasi Hills.

(6) **Phosphorite**

Nodules of phosphorite, a fertiliser mineral, are of round or elongated shapes. Phosphate deposits exist in the Sung valley along the border of the Khasi and the Jaintia Hills Districts and in the Rewak area of Garo Hills. The nodules are brownish-yellow in the outside and dark-grey in the inside.

The rock containing phosphorite is known as Apatite Magnetite rock which has 15% to 30% of phosphate content. The reserve of phosphatic rock is about 5 million tonnes.

(7) **Glass Sand**

Glass sand or silica occurs in many places in the Khasi Hills. Glass sand is mainly found in Cherrapunjee and Laitryngew, it is mixed with mica-quartz and other minerals. This mineral is also available in the Garo Hills in Siju, Tura and Nangalbibra Glass sand found in these places is similar to that found in Laitryngew.
Glass sand containing high proportion of iron adversely affects the production of first grade glass-ware. Besides glass-ware, glass sand can also be used in the manufacture of bottles and sheet glass. The total reserve of glass sand in the State is approximately 3 million tonnes.

(8) **Gypsum**

Gypsum is made of small crystals and is particularly found lying in shale beds and in scattered patches in the shale. Gypsum is one of the raw materials in the manufacturing of cement.

Gypsum can be found near Mohendraganj in Jarapara, Garobadha, Merringjipara, and Mogapara in the Garo Hills. The proportion of gypsum in shale is 0-0.7%. The presence of gypsum in host rock is uneconomical. This has prevented access to it and hence no reserve has been estimated so far.

(9) **Base Metal**

The Geological Survey of India has carried out much work in a shear Zone from Tyrsad to Barapani in the Khasi Hills but it is has not been able to indicate any rich zones of sulphide mineralisation, instead, it has cited the existence of copper, zinc, nickel and cobalt in the Shillong group of rocks. There is a scattered presence of various sulphides, silicates and aluminates at Lumpyrtha. The average copper, zinc and
lead contents vary from 1.5 to 2.5%, 2.5% to 3.00% and 0.5% to 0.7% respectively.

Copper is used in the alloy industry and in the manufacturing of dry cell. It is also useful as the best conductor of electricity.

Lead and zinc are also used in the alloy industry.

(10) Iron Ore

Iron ore is found in the State in the form of fine sand, consisting of minute crystals of utani fexores and magnetic oxide. Various grades of iron-ore have been found in Debu and the areas near the Simsang river. The largest deposits of iron-ore are located near Mylliem, Laitlyngkot and Nongkrem. The total estimated reserve is approximately 0.087 million tonnes.

Iron smelting was an important industry among the Khasis in the previous century. The main places where smelting of iron ore was done in the past were at Nongspung to the west of Shillong, Mylliem to the south of Shillong, Umphrup near Nongkrem and Nartiang in Jowai. This art has died out because the local people could not compete with the imported iron ore.
(11) **Gold**

Gold was reported to be found near Mawphlang in the Khasi Hills. However, it cannot be extracted due to the requirement of huge investment. Traces of gold along with silver pyrites and quartz have been found near Barapani in the north and Tyrsad in the south. The gold content in the core samples is found to be at 0.8 gram/tonnes to 62 gram/tonne, which is considered uneconomical for extraction.

(12) **Quartz and Feldspar**

Quartz and feldspar are minerals used in the ceramic and pottery industries. These minerals are found to occur side by side in several localities in the Khasi and Garo Hills of Meghalaya. In the Khasi Hills, feldspar deposits are found in Halrim and Nongstoin. In the Garo Hills it is found near Tura, Angiri, Tengalgiri, Sathengiri and Chisakgiri.

Total indicated reserves of quartz and feldspar are estimated to be at 0.076 and 0.096 million tonnes respectively.

(13) **Mineral Oil**

Seepage of Crude oil along with the bubble discharge of natural gas has been found in a number of places in the tertiary rock formation in Umpyrdit river in Narpuh Reserve Forest, in Lailong and near Shella in Telcherra, Kynjah and Sdatditung in Dholai, Dharmalia and near the Someswari river.
The Oil and Natural Gas Commission of India has applied for 'prospecting licence' in exploring the hydrocarbon deposits in the southern part of Meghalaya.

**Economic Infrastructural Facilities**

**Transport and Communication**

For the smooth functioning and for the expansion of an economy in all sectors, the existence of adequate infrastructure like transport is of utmost importance. In the absence of adequate transport facilities, it is impossible for the state of Meghalaya to develop industrially. As the Khasi, Jaintia and Garo Hills are made up of hilly terrain, it is difficult for the State to be connected by water transport. It will also take time to connect Meghalaya by rail. Air transport in the state is playing a minor role. So road transport is the only means of communication in the hilly state of Meghalaya.

In the absence of any other mode of communication, road network plays a most vital role for all round development of the State. First, it is the means by which products reach the final consumer. Secondly, it helps the farmers and cultivators to bring their products to the town market. Thirdly, it facilitates production by moving raw materials, tools and machines from one place to another. Besides these, there are other contribution made by road transport to the economy of the State.
In 1972 the total road length in the State was only 2786 Km and at present it is 6707.09 Km showing an increase of over 140%. Of the 5629 villages, 2486 have been connected by roads. Measures have been taken to continue the development of road network in the rural area including those in the border areas. The number of registered vehicles in Meghalaya has been increasing from one year to another. It has increased from 37,963 in 1992-1993 to 51,247 in 1997-98. The road density of the State at present is 29.90 Km per 100 Sq.km as compared to the national average of 48.79 Km per 100 Sq.km. Hence the existing roads and bridges have to be improved and upgraded. There were proposals for the construction of Shillong By'Pass, Jowai By'Pass and Dawki bridge. Approximately, 2400 metres of permanent bridges were constructed. The longest bridge in the State is in Ranikor over the river Jadukata. A 140 metre bridge, the second longest single span bridge was under construction on River Kynshi.

The road transport services have been operated by both the State Transport Corporation and the private bus owners on the major and important routes in the State. The Corporation has been providing financial assistance to the un-employed educated youth belonging to scheduled caste and scheduled tribe communities in the State for purchasing vehicles and three wheelers under different schemes. In spite of this, the
picture of transport development in the State as it is at present is not promising. There is a great deal more that the State has to do in order to match the development with the other States. More attention should be given by the financial institutions and the state in this regard, as poor transport facilities hinder the pace of development in the other sectors and in the economy as a whole.

**Power**

Power is another essential factor in increasing the productivity of labour in agriculture, industry and other sectors. It is difficult to think about development in the absence of power. There is a direct relationship between the consumption of power and the level of per capita income. In advanced countries, the consumption of power is high, so is the per capita income. It is just the opposite in the case of under developed countries. Availability of electric power is one of the important factors for accelerating the economic growth of the State.

There are different sources of power such as wind, sun, wood, cowdung, water, oil, coal and atomic energy. The use of cowdung and wood is wasteful and uneconomical. The dependable sources of power are water, petroleum, coal and atomic energy. Hydro-electric power is a renewable source whereas coal and petroleum are non-renewable resources.
In Meghalaya the various rivers flowing to the north and south provide great potentials for both large and mini-sized hydro-electric projects. Meghalaya is also known to have the wettest place in the world. The total installed capacity of power in 1974-75 was 65.20 MW and the generation was 216.97 MKWH. The total installed capacity has increased to 188.76 MW and the generation to 595.61 MKWH in the year 1997-98. In regard to installed capacity, Umiam Hydel Project has shared 174.00 MW, Umtrew Hydel Project 11.20 MW, Tura Diesel Project 2.05 MW and Sonapani Micro Hydel (SESU) Project 1.51 MW in the year 1997-98.

The number of villages electrified has increased from 1622 in the year 1987-88 to 2510 in 1997-98. The percentage of villages electrified has increased from 31.1% in 1987-88 to 45.8 percent in 1997-98 covering 54.40% of rural population.

The sale of electricity has increased from 426.16 MKWH to 561.10 MKWH in 1993-94 and further fell down to 551.10 in 1997-98.

The revenue collection of the Meghalaya State Electricity Board has increased from Rs. 41,41 lakhs in 1995-96 to Rs. 54,78,57 lakhs in 1998-99.
Banking development is a very crucial component of economic infrastructure which should precede economic development of a country or its region. Banking industry in Meghalaya has started long before the state attained its statehood. The banks that existed in Meghalaya prior to 1972 were the State Bank of India, Bank of Baroda, Central Bank of India, Punjab National Bank, United Bank of India and United Commercial Bank. The number of scheduled commercial banks branches as on December, 1972 stood at 17. By the end of 31\textsuperscript{st} March, 1999 there were seventeen banks carrying on banking activities in the state with a total number of 216 branches. Of these, the Commercial Banks (SCBs) constituted 128, the Regional Rural Bank (RRB) 51 and the Meghalaya Co-operative Apex Bank (MCAB) 37. The 17 banks include Allahabad Bank, Bank of Baroda, Bank of India, Canara Bank, Central Bank of India, Federal Bank, Indian Overseas Bank, Indian Bank, Punjab National Bank, State Bank of India, Syndicate Bank, UCO Bank, Union Bank, United Bank of India, Vijaya Bank, Khasi Jaintia Rural Bank (RRB) and Meghalaya Co-operative Apex Bank (MCAB).

The total deposits mobilised by the SCBs in Meghalaya increased from Rs. 15.22 lakhs as on June, 1972 to Rs. 107014.43 lakhs in March, 1999. Total disbursements rose from Rs. 1.65 lakhs to Rs. 17775.24 lakhs during the same
period. Hence, the C-D ratio increased from 10.84% to 16.61% during the same period. The total deposits of MCAB jumped from Rs. 108.89 lakhs as on March, 1972 to Rs. 20509.29 lakhs in March 1999. Total advances also rose from Rs. 25.60 lakhs to Rs. 7764.86 lakhs during this period. With this quantum of deposits and advances, the C-D ratio worked out to be increased from 23.51% to 37.86%. Total deposits of RRB rose from Rs. 2395.60 lakhs in December 1992 to Rs. 8173.84 lakhs in March 1999 and that of advances from Rs. 657.95 lakhs to 2333.34 lakhs. The C-D ratio increased marginally from 27.46% to 28.54%.

Social Infrastructural Facilities

Education

The significance of the role of education in the development of the State can hardly be over-emphasized. In modern days people are realising the importance of literacy and therefore, parents today are trying their best to give education to their children. The foundation of modern education was laid by the Christian missionaries in the 19th century according to the traditional practice of the people. Society plays a vital role in setting up schools. More and more schools and colleges are being opened and run by private management. Besides the community, the State has also supported the spread of education in many ways especially by establishing new educational institutions.
To keep pace with the National Policy on Education, the Government has introduced 10+2+3 pattern. Till 1992-93, a number of 30 high schools have been selected for opening higher secondary classes including vocationalisation. In this respect, the State Council for Technical Education has been set up in the State. This will improve technical education in the State. In addition to this, the Adult Education Programme has been introduced and its special objective is to eradicate illiteracy.

There has been an increase in the number of schools, colleges and other educational institutions in Meghalaya. The number of such institutions has increased from 3101 in 1972-73 to 5655 in 1995-96 or an increase of 82.36% over the period, the overall enrolment rose by 155 %, that is, from 2,06,000 to 5,25,000.

In addition to this, there has been an increase in the number of teachers in the different educational institutions. The number of teachers has risen up from 17789 in 1992-93 to 201044 in 1995-96.

The educational administration was re-organised for decentralised administration of the educational institutions, particularly primary and middle schools. The target of additional enrolment of 0.75 lakhs children was achieved. During the Eighth Plan period, 1500 Adult Educational
Centres were set up to provide educational facilities to nearly 1,73,000 illiterate adults.

The educational programme, which is of great significance in the development of the economy has been implemented in the State. The total literacy campaign has been popularised with quality improvement being given the top priority. Three separate directorates were set up pertaining to the Elementary and Mass Education, Higher and Technical Education and Training. 1621 posts were created under operation blackboards and 434 posts of primary school teachers under other schemes. Approximately, 988 primary school buildings and 1420 additional rooms in primary schools were constructed. Building grant was given to 263 upper primary schools and 190 high schools. 1900 schools received grants for furniture and 3500 schools for purchase of text books. 45

In addition to this, financial assistance was also provided to 147 middle schools and 25 secondary schools for the construction of additional class rooms, laboratory rooms and library rooms 46 in order to meet their requirement so as to fulfil added responsibilities due to the introduction of revised syllabus and introduction of higher secondary.

More emphasis is given to the teaching of science subjects in schools, 40 posts of science teachers for secondary
schools and 30 posts of laboratory assistants were created. The District Council lower primary schools were taken over by the State Government and Higher Secondary Education was taken over by the MBOSE from the North Eastern Hill University. Total literacy campaign is in progress all over the State and mid-day meal programme for school children was also introduced.

In spite of the achievement in the field of education, it is expected of the government to change the bookish educational system in the State.

As per estimates of National Sample Survey, 1995-96, the literacy rate of Meghalaya has touched 62 percent, literacy in the urban areas stood of 84 percent and that of rural areas of 59 percent. Compared to the literacy rates of 1991 census, the percentage of literacy in rural areas has gone up from 41.05 percent to 59 percent and the percentage in urban areas has increased from 81.74 percent to 84 percent. The combined literacy rate rose to 62 percent now from 41.10 percent in 1991 census.47

**Health and Family Welfare**

Health and family welfare which has been given the highest priority, has achieved considerable progress since the inception of the State. One of the objectives of the State's Five year plan was to meet the minimum needs of the people
regarding water supply and health care. The death rate declines from 15.5 percent in 1972-73 to 8.9 percent in 1996. The birth rate fell down from 33.5 percent in 1972-73 to 30.4 percent in 1996.

The number of hospitals has increased from 8 in 1989 to 10 in 1997 and dispensaries from 3 to 38 in the same period. The number of beds in the government hospitals increased from 1005 in 1972-73 to 2377 in 1996-97, an increase of over 136%. Besides the 10 hospitals and 38 dispensaries, Meghalaya has got 78 Primary Health Centres; 10 Community Health Centres; 344 Sub-Centres; 2 Leprosy Colonies; 2 Leprosy Control Units and 25 Survey and Education Training Centres.

In 1996-97, the State had 382 doctors, 356 nurses, 71 pharmacists, 559 ANM, 46 Health visitors and 102 laboratory technicians during 1996-97. During the same year the doctor-population ratio stood at 5509 and the hospital-bed ratio stood at 238.

The achievement in health and family welfare is far from satisfactory. The state is in need of more hospitals, dispensaries, doctors, nurses and others.
State Income

The State of Meghalaya is under-developed in many aspects. There has been certainly some progress since its inception. In fact, over the period of 25 years, the improved economy is reflected in the State Domestic Product (SDP) or State income in which the net SDP at current prices rose from Rs. 8,541 lakhs in 1972-73 to Rs. 1,76,262 lakhs in 1996-97. This shows an increase of Rs. 1,67,721 lakhs. The State's income has to be increased to meet the increasing demands of the people. The Revenue, which is the main source of State's income has increased remarkably during the last 25 years. Its collection rose from Rs. 10,68,059 in 1971-72 to Rs. 25,41,338 in 1996-97.¹¹

The per capita income of the State at current prices stepped up from Rs. 598 in 1972-73 to Rs. 8474 lakhs in 1996-97, which is more than a 10 fold increase over the period. In spite of this achievement, a large chunk of the state's population is still living below poverty line. There is a great deal more that the Government has to do in order to usher economic progress in the State.

Concluding Remarks

The foregoing analysis has shown that Meghalaya is blessed with enormous comprising minerals, forests and water supply. Its climatic conditions is suitable for the cultivation
of horticultural crops like oranges, pineapples, lemons, banana, litchi, jack-fruits, plums, peaches, and vegetables. In this connection, more processing units could be set up in the State for the production of value added processed products like jams, pickles, drinks and other items. The climate in Meghalaya has also been found suitable for the cultivation of tea. Thus, many farmers in the State now take to tea cultivation in place of jhum, for better economic benefits and for winning over the jhum cultivators from this primitive and wasteful method of agriculture. Moreover, floriculture development can also be encouraged as Meghalaya has the largest and best species of orchids. The medicinal plants and herbs spread all over the State should be properly and scientifically made used of to prevent their extinction. The animal husbandry and dairy farming activities if taken up on scientific lines can create employment opportunities and hence bring prosperity to the people of the State. Poultry, goat and sheep rearing activities are economically viable as there is high demand for eggs and meat in the State. If sufficient quantities can be produced there will be no more need to spend crores of rupees in importing these products.

Tourism can be developed as an industry and like Switzerland huge revenue and foreign exchange can be earned from tourism. More and more tourist spots could be developed as Meghalaya is known for its natural beauty. Individuals should also be encouraged to set up Guest Houses/Paying
Guests Accommodation for tourists in suitable areas. Through these measures, the economy of the State can be uplifted.

The varied and myriad mineral resources should be properly exploited and utilised to bring about a rapid industrialisation and an all round economic development of the State.

Besides the utilisation of available resources, transport and communication also needs to be developed. The number of roads has to be increased. Railway transport should be introduced while air transport should also be developed. At present, the State has only a helicopter service while the only airport at Umroi is defunct.

Meghalaya's educational system is less than ideal. The condition of primary education is rather deplorable. Vocational and training schools should be increased in number. The bookish and examination-based system needs major overhauling.

The condition of health and family-welfare leaves much to be desired. The State is in need of more hospitals, dispensaries, doctors, nurses and paramedics, especially in rural areas. The enhancement of health and family-welfare will necessarily lead to the upliftment of the standard of living of the people in the state.
There are great scopes for banking and the financial institutions to play a role in developing the economy of the State which has the potentials to become one of the richest states in the country. The banking and the financial system in the State should not fail to motivate the people of the State to emerge as potential entrepreneurs.

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**Notes and Reference**

4. The Southern border region of the Khasi-Jaintia Hills which rapidly slopes down towards Bangladesh is locally called War area.
6. Data collected from Directorate of Agriculture Meghalaya, Shillong.
7. Ibid.
8. *Statistical Hand Book*, op.cit . p.135
9. Ibid. p.133.
10. Data collected from the Directorate of Industries, Meghalaya, Shillong.
11. Data collected from the Mawmluh Cherra Cement Limited, Cherrapunjee.
12. Data collected from the Directorate of Industries, Meghalaya, Shillong.
15. Data collected from the Directorate of Tourism, Meghalaya, Shillong.
19. Ibid. p.4
20. Ibid.
21. Ibid. p.132
22. Ibid. pp.132,137
23. Ibid. p.132
24. Ibid. pp.1,2
25. Ibid. p.134
26. Data collected from the office of the Principal Chief Conservation of Forests Meghalaya, Shillong.
27. Ibid.
28. Data collected from the Directorate of Fisheries, Meghalaya, Shillong.
30. The data on mineral resources are collected from the Geological Survey of India, Shillong.


33. *Data collected from the Geological Survey of India, Shillong, Meghalaya.*

34. Data collected from the Directorate of Mineral Resources, Shillong, Meghalaya.

35. *Data collected from the Geological Survey of India, Meghalaya, Shillong.*

36. Hoda S.Q. op. cit.

37. *Data collected from the Meghalaya Transport Corporation, Meghalaya, Shillong.*

38. *Data collected from the Meghalaya State Electricity Board, Lum Jingshai, Shillong.*

39. Ibid.

40. Ibid.

41. Ibid.

42. Data on banking are taken from RBI Bulletins and SLBC records.

43. *Data collected from the Directorate of Public Instruction, Meghalaya, Shillong.*

44. Ibid.

45. Ibid.

46. Ibid.

47. *Note on Meghalaya Literacy, Meghalaya, Shillong.*

49. Ibid. p.82

50. Ibid.p.82.