

# PROJECT PROFILES ON MICRO AND SMALL ENTERPRISES



**NORTH EASTERN DEVELOPMENT FINANCE CORPORATION LIMITED**  
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# EXECUTIVE SUMMARY

## TITLE OF THE STUDY

### ARUNACHAL PRADESH STATE INDUSTRIAL PROFILE

#### 1. INTRODUCTION:

Arunachal Pradesh (Arun means *Sun*, *Achal* for rays) is aptly named as the land of the rising sun. The dawn breaks here every day by 4.30 am. Arunachal Pradesh also referred as the “land of the dawn-lit mountains” was known as the North East Frontier Agency (NEFA) till 1972. On 20<sup>th</sup> January 1972, the area was renamed as “Arunachal Pradesh”. In the same year it was declared as a full-fledged union territory. Arunachal attained its statehood on 20<sup>th</sup> February 1987. Itanagar is the capital of Arunachal Pradesh and the capital is named after Itafort meaning fort of bricks built in 14th century A.D. In terms of geographical area, Arunachal is the largest state in the north-east region.

KEY HIGHLIGHTS	
<ul style="list-style-type: none"><li>• <b>Largest among the North-Eastern States of India.</b></li><li>• <b>Longest international border in northeast India - 1,817 km.</b></li><li>• <b>Largest Hydropower Capacity in India.</b></li><li>• <b>The state is regarded as an 'Orchid Paradise', accounting for 601 species of orchids.</b></li><li>• <b>Home to India's largest and world's second largest monastery - Tawang Monastery.</b></li></ul>	
<b>Major Industry Sectors</b>	<ul style="list-style-type: none"><li>• <b>Power</b></li><li>• <b>Agriculture and Forest Based Industries</b></li><li>• <b>Textile and Handicrafts</b></li><li>• <b>Tourism</b></li></ul>

#### 2. STATE GEOGRAPHY:

The state is situated between latitudes 26.42° N - 29.30°N and longitudes 90.36°E - 97.30°E. The state is the largest among all the North- East States considering its vast area comprising of 83,743 Sq. kms. The State is having a long international border with Bhutan in the West covering 160 kms, China in the north and north-east covering 1030 K.Ms and Myanmar in the east covering 440 kms. It borders the states of Assam in the south and Nagaland in the east and southeast. Almost 60% of the state area is covered by green forests. Besides the forests, there are rivers, streams, mountains and peaks giving the state abundant variations in scenic beauty. It is endowed with wide topographical variations, vegetation and wild life. The state is vivisected by innumerable rivers and streams which originate in higher Himalayas and Arakan Ranges. They flow down to form tributaries of Bhrahmaputra. The major rivers are Kameng, Subansiri, Siang, Dibang, Lohit, Diyum and Dihing. Other main rivers are Kamla, Siyum, Noa-Dihing and Kamlang.

2.1. Climate: Due to the topographical diversity, the climate in Arunachal Pradesh ranges from sub-tropical to temperate depending upon the altitude. The regions in the lower belts of the state experience hot and humid climates, with a maximum temperature in the foothills reaching up to 40 °C (during the summer). The average temperature in this region in winter ranges from 15° to 21 °C while that during the monsoon season remains between 22° and 30 °C. The areas around the middle belt of Arunachal Pradesh are relatively cooler. The middle belt in Arunachal Pradesh experiences micro thermal climate. Moreover, Arunachal Pradesh possesses an alpine climate in the higher altitudes of the state. The higher regions of Arunachal Pradesh witness snowfall during winter. The snowfall draws large number of tourists to the state from all across the world. Arunachal Pradesh experiences heavy rainfall during May to September.

The average rainfall recorded in Arunachal Pradesh is 300 centimeters, varying between 80 centimeters and 450 centimeters.

2.2. Topography: In Arunachal Pradesh, geography states that the region is divided into six natural regions. The Western parts of Kameng District and Tirap District form the first two regions of the topography of Arunachal Pradesh. The other three distinct topographical regions of the geography at Arunachal Pradesh constitute the upper, middle and the lower belts of the state; concentrated pockets of the Arunachal Pradesh foothills form the sixth region of the topography of Arunachal Pradesh. Further, it can be said that the topography of Arunachal Pradesh is characterized by mountainous ranges and sub-mountainous terrains along the northern parts: abrasion by the mighty rivers that flows through the mountains have created broad valley, which is a major feature of the geography in Arunachal Pradesh.

### 3. THE ADVANTAGES OF THE STATE

The advantages of the Arunachal Pradesh state are as follows;

**3.1. Opportunity for Border Trade:** Arunachal Pradesh shares international boundaries with Bhutan, Myanmar and China. This provides an unique advantage of developing cross-border trade. Central Govt. had already approved opening up of a Border Haat at Pangsau Pass along the Indo-Myanmar border in Changlang in March 2013 to boost border trade with South East Asia in tune to its Look East Policy.

**3.2. Suitable Climate for Agriculture:** The agro climatic condition of Arunachal Pradesh is very suitable for agricultural crops. Heterogeneous climate and soil conditions of the state are an advantage. There is a vast area suitable for temperate fruits of both high and low chilling requirements. But the major areas of the state are fit for tropical and subtropical fruits. Apple is a major fruit of temperate areas which is a unique aspect of Arunachal among the north eastern states. On the other hand, mandarin, sweet orange and pineapple among others grow abundantly in the mid and foothill areas. The outstanding strength of the state is that its varied agro ecological zones and the farming system approach (FSA) supports growth of a large variety of crops in every season.

**3.3. Rich Natural Resource:** Arunachal Pradesh is endowed with rich natural resources. It is a land of deep river valleys and beautiful plateaus. Due to rich biodiversity of flora and fauna, Arunachal Pradesh has a vast market potential for the cultivation of orchids and a variety of medicinal plants. Abundant forest cover, minerals and hydel power resources of the state can be utilized for setting up industrial units in the state. Major mineral deposits in the State are limestone, dolomite, quartzite, graphite, coal, marble, oil, natural gas, kyanite, mica, iron and copper.

**3.4. Tourism Potentiality:** Arunachal Pradesh is known for its biodiversity, unmatched beauty and rich cultural heritage. The state has tremendous scope for development of various types of tourism activities like cultural tourism, adventure tourism, historical tourism, wildlife tourism, nature based tourism and eco-tourism.

**3.5. Huge Hydropower Potential:** Arunachal Pradesh is considered power house of India for having hydro power potential with installed capacity of about 58,000MW which is 1/3rd of Hydro potential in India and 4/5th of Hydropower potential in NER.

**3.6. Promotional Govt. Policies:** The State Government has been encouraging the establishment of industrial undertakings in the private and cooperative sectors for the sustainable development of the state. The Government of Arunachal Pradesh has made several policy announcements in order to set up the right kind of business climate into the State. They also envisage the investment incentives and schemes for the investors.

**3.7. Infrastructure Support:** The Government has been undertaking several infrastructural projects in order to attract investment and ensure overall welfare of the State. Presently, the State has good

infrastructure facilities with favourable power situation, upgraded road network and improved telecommunications network.

#### 4. AVAILABLE RESOURCES:

**4.1. Agriculture and Horticulture Resource:** Agriculture is the mainstay of the economy of Arunachal Pradesh. It is mainly dependent on shifting or jhum cultivation. The major crops are Rice, Maize, Wheat, Pulses, Oilseeds, Potato, Ginger, Turmeric, Chillies etc. People also cultivate vegetables like Cabbage, Brinjal, Carrot, Cauliflower, Bean, Potato, Peas, Radish and Tomato. The prevalent agricultural practices in Arunachal Pradesh include both shifting cultivation (jhum) and sedentary agriculture. Jhum cultivation is the predominant agricultural practice in the state and is more widespread in the upland areas. The crops cultivated in jhum lands include food grains, vegetables, root crops and fruit species. Settled agriculture is mainly found in lowland river banks and in the Apatani settlements in Ziro plateau. The latter is particularly well known for integrated wet-rice cultivation and pisciculture.

Horticulture sector has promising future in Arunachal Pradesh. The state produces a wide variety of fruits, vegetable, flowers, spices and medicinal plants suitable for temperate and tropical climate. High valued crops such as Apple, Citrus, Pineapple, Kiwi, Walnut, Banana, Ginger, Large Cardamom and Black Pepper have not only attained status as a popular enterprise among the new generation of growers on commercial lines but have also proved to be a boon for the farmers of the state.

#### CULTIVATION AREAS OF MAJOR AGRICULTURAL CROPS IN THE STATE

Sl. No.	Crop	Areas of availability
1.	Rice	Districts of East Siang, Tawang, Dibang Valley, Lohit, Changlang, East Kameng, West Siang, Papum Pare, West Kameng, Lower Subansiri, Upper Siang, Tirap and Upper Subansiri.
2.	Wheat	Districts of Changlang, West Siang, East Siang, Lohit and Lower Dibang Valley.
3.	Maize	Districts of Changlang, West Siang, East Siang, Lohit and Lower Dibang Valley.
4.	Millet	Districts of Changlang, West Siang, East Siang, Lohit and Lower Dibang Valley.
5.	Pulses	Districts of Changlang, West Siang, East Siang, Lohit and Lower Dibang Valley.
6.	Potato	Districts of Lohit, East Siang, Lower Subansiri, Tawang and Lower Dibang Valley.
7.	Chilli	Districts of Changlang, Upper Subansiri, Lower Subansiri, Anjaw and West Siang.
8.	Oilseeds	Districts of Lohit, Lower Dibang Valley, East Siang, Changlang and West Siang.
9.	Sugarcane	Districts of East Siang, Changlang, Papum Pare, West Siang and Lower Subansiri.

#### CULTIVATION AREAS OF MAJOR HORTICULTURE CROPS IN THE STATE

Sl. No.	Crop	AREAS OF AVAILABILITY
<b>A.</b>	<b>FRUIT CROPS</b>	
1.	Apple	Districts of West Kameng, Tawang, Lower Subansiri, West Siang and East Kameng.
2.	Citrus	Districts of West Kameng, Tawang, Lower Subansiri, West Siang and East

		Kameng.
3.	Pineapple	Districts of West Kameng, Tawang, Lower Subansiri, West Siang and East Kameng.
4.	Banana	Districts of West Kameng, Tawang, Lower Subansiri, West Siang and East Kameng.
5.	Walnut	Districts of West Kameng, Tawang, Lower Subansiri, West Siang and East Kameng.
6.	Kiwi	Districts of Papum Pare, West Kameng, Tawang and Lower Subansiri.
<b>B.</b>	<b>VEGETABLE CROPS</b>	
1.	Winter Vegetables	Available throughout all the districts of the state.
2.	Summer Vegetables	Available throughout all the districts of the state.
<b>C.</b>	<b>SPICES CROPS</b>	
1.	Large Cardamom	Available throughout all the districts of the state.

**4.2. Forest Resource:** Nature has endowed Arunachal Pradesh with diverse forests and wildlife. The important forests types found in the state are Tropical evergreen, semi evergreen, deciduous, Pine, Temperate, Alpine and grassland etc. Forests are the mainstay for the people of Arunachal Pradesh and are the richest biogeographical province in eastern Himalayan zone. The State has 20% species of country's fauna, 4500 species of flowering plants, 400 species of pteridophytes, 23 species of conifers, 35 species of bamboos, 20 species of canes, 52 Rhododendron species & more than 500 species of orchids and is considered as one of the 12 mega diversity "Hot Spots" in the world. Forests generate the largest employment and are the single largest source of revenue for the State.

#### MAJOR NON-TIMBER FOREST PRODUCTS (NTFPs) IN THE STATE

Sl. No.	NTFPs	AREAS OF AVAILABILITY
1.	Bamboo	Abundantly available in forest areas throughout the state.
2.	Cane	Abundantly available in forest areas throughout the state.
3.	Broom Grass	Abundantly available in forest areas throughout the state.
4.	Honey	Abundantly available in forest areas throughout the state.
5.	Mushroom	Abundantly available in forest areas throughout the state.
6.	Bay Leaf	Abundantly available in forest areas throughout the state.
7.	Packing Leaf	Abundantly available in forest areas throughout the state.
8.	Medicinal and Aromatic Plants	Abundantly available in forest areas throughout the state.

Bamboos are seen throughout Arunachal Pradesh. Bamboos appear in areas abandoned after shifting cultivation. Bamboos of Arunachal Pradesh are Bambusatulda, Pseudostachyumpolymorphum, Cephalostachyum that occur in higher elevation between 1000m-2000m. Grasslands are found in plains and at higher elevations. It is maintained through recurring annual fires at higher elevation and excessive grazing at lower elevations. In lower elevation Saccharumspontaneum, Neyraudiareynaudiana, Chrysopogonaciculatus are the common grasslands that are visible.

**4.3. Mineral Resource:** The important mineral resource of the State is petroleum & natural gas and its chief occurrence is reported in Ningru and Dam Duma areas. These hydrocarbon deposits are located in the Assam Arakan Fold Belt (AAFB) and Upper Assam basin in the State. The State also reports resources of coal in Namchick Namphuk and Miaobum Coalfields; Dolomite in West Kameng district, Fuller's earth in Tirap district, Graphite in Lohit, Upper Siang and Upper Subansiri districts, Limestone in Dibang Valley, Lohit, Upper Siang and Upper Subansiri districts and Quartzite in West Kameng district

## MAJOR MINERALS AND AREAS OF THEIR AVAILABILITY IN THE STATE

Sl. No.	MINERALS	AREAS OF AVAILABILITY
1.	Coal	West Kameng, East Kameng, Lower Subansiri, West Siang and Changlang
2.	Limestone	Upper Subansiri, West Siang, East Siang, Lohit and Dibang Valley.
3.	Dolomite	Rupa & Jamiri (Dedga) in West Kameng District.
4.	Graphite	Lower Subansiri, Upper Subansiri, West Siang, Dibang Valley and Lohit.
5.	Marble	Tezu and Dora in Lohit District, Hunli and Pyuli in Dibang Valley District.
6.	Ferro-Silicon Quartzite	Kalaktang in West Kameng District.
7.	Oil & Gas	Kunchai, Diyun and Kharsang in Changlang District.
8.	Lead & Zinc	Shergaon and Amritganga in West Kameng District.

### 5. INFRASTRUCTURE FACILITIES:

Arunachal Pradesh being a hilly terrain, requires adequate and efficient provision of well connected roadways, railways and airways network. Such infrastructural services are indispensable for integrating the State with the rest of the nation; facilitating trade and commerce; as well as improving the quality of life of the people. Besides, a sound telecom and power infrastructure is essential for socio-economic development of the State. As a result, the State Government has undertaken several infrastructural projects in order to attract significant investment into the State.

**5.1. Power:** As of June 2016, Arunachal Pradesh had a total installed power generation capacity of 257.86 MW. Out of these central utilities contributed 152.98 MW, private utilities contributed 0.27 MW and 104.61 MW under state utilities. Arunachal Pradesh ranks first in the country in terms of hydroelectric power potential. North Eastern Electric Power Corporation and Brahmaputra Board has taken up several steps for setting up some mega hydropower projects in Arunachal Pradesh.

**5.2. Road Transport:** Itanagar, the capital of Arunachal Pradesh, is connected by a network of roads with all important cities and towns of the neighbouring States as well as with major States/ cities of the country. The State Transport buses are operating on daily basis or on every alternative days from Itanagar to some of the District Headquarters, where tourist centers are located, such as Guwahati (381 km), Shillong (Meghalaya), etc. Also, several private bus and taxi services to different routes/places are also available.

**5.3. Railways:** Naharlagun railway station is the rail head located in Papum Pare district of Arunachal Pradesh. It is about 15 kilometres to the state capital Itanagar. Railways planned to cover the length and breadth of Arunachal by railway network. The three proposed lines Bhalukpong-Tenga-Tawang (378 km), North Lakhimpur-Bame-Aalo-Silapathar (247.85 km) and Pasighat-Tezu-ParsuramKund-Rupai (227 km) will improve connectivity to northern and eastern frontiers of Arunachal Pradesh. They will also help from the security point of view besides accelerating socio-economic development of the people

**5.4. Aviation:** The nearest airport is Tezpur in Assam, 216 km from Naharlagun and 226 km from Itanagar. Naharlagun is also connected by Helicopter service from Mohanbari (Dibrugarh) and Guwahati (Assam). However, air services are available from Delhi and Kolkata to Guwahati and Mohanbari. Remote areas of State like Tawang and Anini are also linked by helicopter services from Guwahati. Other places connected by air services are Pasighat, Roing, Khonsa, Changlang, Namsai, Ziro, Daporijo, Along and Yingkiong. In order to further develop the airways network in the State, efforts are being made for the construction of new helipads and landing grounds as well as for extension, renovation and maintenance of existing ones.

**5.5. Communication:** Itanagar and all the District Headquarters are connected with the rest of the country and the world through telephone, STD, ISD, Telex and fax facilities. The government has asked the BSNL to beef up telecom connectivity in the far flung corners of Arunachal Pradesh on priority basis. BSNL is expected to use digital satellite phone terminals in the region to boost telecom facilities. A total of 321 and 6,673 towers will be installed to provide coverage to the highways and villages in the region respectively. Out of the total of 321 towers, nearly 149 would be installed to provide highway coverage and 2,886 villages will be brought under the mobile loop in Arunachal Pradesh. As on June 2014, the state had 295 post offices.

## **6. THE BUSINESS ENVIRONMENT:**

Arunachal Pradesh, in spite of its hilly terrain, provides enough business opportunities for the investors from all over the world. It is well endowed with abundant forest cover, minerals and hydel power resources which can be utilized for setting up industrial units in the state. Accordingly, the Government of Arunachal Pradesh has been making several efforts to attract investment into the various sectors of the State. The investors can set up industrial units by optimally utilizing the numerous resources as well as the incentives and schemes available in the state. Arunachal Pradesh has a planned economic set up and small-scale industries, village industries and unorganized, traditional industries make a vital part of this set up. These industrial domains have played a predominant role in the fulfillment of some major socio economic objectives, reversal of unemployment issues, reversal of issues pertaining to improper exploitation of the available resources and so on.

Arunachal Pradesh has a rich heritage of arts & crafts, weaving, cane & bamboo works. Therefore, it has been the consensus policy of the state to preserve and promote this heritage by encouraging cottage & village industries and setting up of craft centres. The basic policy has been to sustain the rich handicrafts and textile tradition to generate self-employment and augmentation of income among rural masses. There exists 88 nos. of Craft Centres in the state, imparting training to local youths in different trades. There are 15 nos. of emporia, 3 nos. of mini sales emporia and 5 nos. of show rooms functioning through which marketing of handloom & handicrafts products are carried out thereby providing marketing facilities to local artisans. The state government has set up District Industries Centres (DICs) across districts. These DICs play a vital role in industrial development by providing services to entrepreneurs that include identification of suitable schemes; preparation of project reports; arrangement for providing required plant, machinery and raw-materials; assistance in availing incentives and facilities provided by both central and state governments; and liaison with all development departments and financial institutions to provide assistance to prospective entrepreneurs. In addition, as of April 2015, there were 6 industrial training institutes (ITIs) in Arunachal Pradesh. Out of these, five are run by the Government and one ITI is privately controlled.

## **7. INDUSTRIAL INFRASTRUCTURE:**

Arunachal Pradesh has 19 industrial estates located across districts spread over a total area of 51.8 hectares. These industrial estates have been developed in land-areas ranging from 4,540 to 2,02,342.8 square metres, with the primary objective of growth and development of small scale industries. Under centrally sponsored scheme Government of India approved for establishment of one Growth Centre at Niglok-Ngorlong within an estimated cost of Rs. 10.71 crores. The Government of India also approved for establishment of four (4) Industrial Infrastructure Development Centre (IIDC) at Bame, Dirang, Balukpong and Miao. Moreover, in order to attract more investments, investors who set up food processing units, cold storages and tissue culture labs in the state would be provided power dues refund at a rate of 10 per cent per year.

The central government has launched "Look East Policy" which has helped in the development of infrastructure for industries and trade. The North East Industrial Investment Promotion Policy-2007 (NEIIPP-2007) was formulated by the Centre for the speedy industrialisation of the North-East region including Arunachal Pradesh. The Industrial Policy 2008 of Arunachal Pradesh has been formulated to



create an investment-friendly environment in the state for industrial growth in the private/joint venture and cooperative sectors for sustainable economic development of Arunachal Pradesh.

## 8. THRUST AREAS UNDER STATE INDUSTRIAL POLICY:

The following are the thrust sectors for industrial development under Arunachal Pradesh State Industrial Policy- 2008;

Sl. No.	Thrust Sectors
1.	Industries based on agricultural, horticultural and plantation produce.
2.	Industries based on non-timber forest produce: bamboo, cane (rattan), medicinal plants / herbs, aromatic grass, tea, coffee etc.
3.	Industries based on locally available raw materials except timber.
4.	Textiles (handlooms and power looms), Handicrafts and Sericulture
5.	Electronics and IT based Enterprises.
6.	Mineral Based Industries (eg. Ferro-alloys, Cement Plant etc.).
7.	Facilitation and Development of Industrial Infrastructure including Power, Communications etc. under Public Private Partnership (PPP).
8.	Food Processing Industries.
9.	Engineering and Allied Industries (Rolling Mill, Steel etc.).
10.	Tourism (tourism infrastructure including resorts, hotels, restaurants etc.).

## 9. POTENTIAL SECTORS IN THE STATE:

**9.1. Border Trade:** The geographic location of the state provides immense opportunities for international trade with South Asian countries such as Myanmar, Bhutan and China with a total international boundary of 1628 km. These border areas offers huge potentiality to explore the international market for the resources of the state. From time immemorial, informal trade has been taking place through different passes. The products that the state has export potential are coffee, floriculture products, fresh fruits, vegetables, spices, tea and handicraft products.

**9.2. Agriculture and Food Processing based industries:** The economy of Arunachal Pradesh is primarily agrarian giving good scope for agro based and allied activities. Arunachal Pradesh is an “Orchid Paradise”, accounting for 601 species of orchids, or 52% of the species known in India. Various orchid centres are situated in Itanagar, Tipi, Sessa, Dirang, Jengging, Roing, which have a good germ-plasm collection of nearly 400 species of orchids as well as hybrids. An orchid research centre has been established at Tipi to promote orchid conservation, research and development. Horticulture is the backbone of the rural economy in Arunachal Pradesh. It has a vast potential for food processing industry due to availability of fruits like apples, oranges, pineapples, vegetables, spices, mushrooms, aromatic and medicinal plants etc.

- There is scope for Rice & Oil Mills in major towns like Tezu, Namsai and Itanagar.
- There is scope for fruit processing and cold storage units at Bomdilla of West Kameng district.
- Tawang, Bomdilla, Pasighat and Ziro have good scope for floriculture.
- There is good scope for setting up tea processing units near tea garden areas of Lohit, East Kameng, Changlang and Papumpare districts.

**9.3. Forest based industries:** Most of the land of the state is covered with dense and rich forest. Forest resources such as timber, firewood, bamboo, cane, aromatic & medicinal plants are available for exploration in the state. The non-timber forest products (NTFPs) possess imperative part of the traditional life style in Arunachal Pradesh and utilisation of these products has been contributing much to the local livelihood. NTFPs such as fuelwood, house building materials, wild edible vegetables and medicinal



plants are mostly collected from natural habit. There is great scope for development of forest-based industries.

- There is scope for Medicinal and Aromatic Plants Processing units at Seppa of East Kameng, Tezu and Itanagar.

**9.4. Handloom and Handicrafts based industries:** Weaving is a major industry in Arunachal Pradesh and is an industry predominated by the women folk who exhibit a striking sense of color and color combinations. The designs on woven cloths generally show geometric shape and vary in style from simple formal lines or band of lines to more complex and elaborate designs consisting of intricate patterns such as lozenges and diamonds. The beauty of these designs is further enhanced through internal decorations. The major kinds of woven products that enjoy great reputation in the market are Apatani jackets, Adi skirts, Sherdukpen shawls, Mishmi shawls, Wancho bags etc.

Arunachal Pradesh has carved a distinct niche for itself with its very unique cane and bamboo craft and industry. Various products such as hats, belts, vessels, mugs, baskets, ornaments, brassier are made out of cane and bamboo. Wood carving is another important industry in Arunachal Pradesh and is rather a kind of tradition with many of the Arunachal tribes. The monpas, khamtis and wanchos for instance, excel in the wood carving art. Beautiful wooden fruit bowls, dishes, cups and magnificent wooden ceremonial dance masks are the specialty of the wood carvers of Monpa tribe. The Khamti wood carvers excel in the art of carving out amazing toys, figurines of religious dancers etc from wood. The Wanchos of the Tirap region are actually the main wood carvers of Arunachal Pradesh and the region where they live makes the nerve centre of Arunachal's wood carving industry.

Ornament making is another craft widely practiced in Arunachal Pradesh. Besides beads of various colors and sizes blue-feathered wings of birds and green wings of beetles are also used in decoration. The Akas make bamboo bangles and ear ornaments, which are sometimes decorated with pokerwork designs. Most of the ornaments are made of beads, as the tribes are very fond of it.

While some people just hang strings of beads round their neck, others such as the Noctes and Wanchos weave them into very attractive patterns. The Wancho girls particularly are very expert in beadwork. The designs and color combination are superb. Besides beadwork, the Wanchos make ear ornaments from glass beads, wild seeds, cane, bamboo and reed. Various ornaments of coloured glass beads hold a special fascination for the people of Arunachal Pradesh. Silver ornaments are a specialty of the Mishmis. The Idu Mishmi women wear silver fillet necklaces with lockets and beautiful earring. The Sherdukpens and the Khamtis at one time were also renowned for silver work.

**9.5. Carpet Weaving:** 'Carpet Making' is one of the most important and special occupation of this state. The carpets of Arunachal Pradesh have been acclaimed to be of national and international repute on the basis of the quality of carpet weaved in the state. Carpets are woven in varied colors, designs and shapes. The other main products of the industry are wall hangings, cushion pads, telephone pads and floor coverings. With the increase in demand, carpets have become a major item of trade as well as a major occupation for the women population of the state.

**9.6. Animal Husbandry based industries:** Although agriculture is the prime source of livelihood for a majority of rural population state, dependence on livestock as an alternative source of income is significant. Responding to the burgeoning demand for livestock products in a sustainable manner is a big challenge. The widening gap between the demand and supply of livestock products can be met through bringing out changes in the production structure. Therefore, animal husbandry has a huge potential as most of the people of Arunachal are non-vegetarian.

**9.7. Mineral based industries:** The mineral wealth of the State is quite impressive with a large number of metallic and non metallic mineral occurrences. The mineral wealth includes limestone, dolomite, graphite, pyrite, lead, zinc and coaletc. In view of high cost of transportation and considering socio-

economic upliftment of the local inhabitants, it would be worthwhile to set up mineral-based industries/plants in the nearby vicinity of availability.

**9.8. Tourism based industries:** Arunachal Pradesh has tremendous scope for the development of varied tourism ventures such as Cultural tourism, Adventure tourism, Historical tourism, Wildlife tourism and nature based tourism and Eco-tourism. There are a large number of tourists on pilgrimage, who would like to visit Tawang monastery along with similar places of interests in Eastern Bhutan, which may be ideal for pilgrim tourism for the Buddhists. For that a massive investment in infrastructure and manpower planning will be required. Arunachal possesses fantastically breadth taking natural beauty and scenery within its limits, which very few States in India command. Tawang in particular and former Kameng district in general commands famous Buddhist sites, which have an instant international attraction to the potential tourists. Similarly, the Tsango- Brahmaputra river system does not only have the possibility of generating only electricity and providing irrigation water to the parched agricultural fields, but also will lead to adventure tourism across the boundary in the region. Incidentally, this is also the region, where bird and wild life sanctuaries are located.

The Department of Tourism, has taken up various developmental programmes to boost up tourism activities in the state. Some of the achievement made during this period in infrastructural sector are: – Construction of tourist lodges at Dirang, Darak, Zemithang and Ziro, construction of cafeteria at Itanagar and Dirang, construction of coffee house -cum-guest House at Mayudia, construction of Hawa Garh at Itanagar and Yazali, construction of viewpoint at Namdang and Darkang, electrification at Ganga lake, development around Malinithan has been completed.

**9.9. Hydropower:** The mountainous region of Arunachal Pradesh has the highest hydropower potential among all the states in India. Arunachal Pradesh is considered power house of India for having hydro power potential with installed capacity of about 58,000MW which is 1/3rd of Hydro potential in India and 4/5<sup>th</sup> of Hydropower potential in NER.

**9.10. Electronics and Information Technology (IT) based industries:** Considering the market demand and availability of skilled workforce in the state, there is potentiality of knowledge-based sectors like electronics and information technology industry.

# EXECUTIVE SUMMARY

## TITLE OF THE STUDY ASSAM STATE INDUSTRIAL PROFILE

### 1. INTRODUCTION:

The State of Assam, popularly known as the land of the red river and blue hills is the gateway to the North East India. The state of Assam derived its name from the word 'Asom' which means unequal or unrivalled. With the partition of India in 1947, Assam became a constituent state of India. The government of India, which has the unilateral powers to change the borders of a state, divided Assam into several states beginning in 1970 within the borders of what was then Assam. Dispur, a locality of Guwahati, became the capital of Assam in 1973. This was after Shillong, the erstwhile capital, became the capital of the state of Meghalaya that was carved out of Assam. Assam is known for Assam tea and Assam silk. The first oil well in Asia was drilled in Assam. The Assam economy is aided by wildlife tourism to Kaziranga National Park and Manas National Park, which are World Heritage Sites. True to the meaning of its name, the state is unrivalled in terms of its natural beauty and the simplicity of the people. The only male river of India, the mighty Brahmaputra flows through the heart of state. It is also the state of the Goddess Kamakhya.

KEY HIGHLIGHTS	
<ul style="list-style-type: none"><li>• <b>World's largest tea producing region and contributes 50% to tea production in India.</b></li><li>• <b>India's oldest operating oil refinery at Digboi</b></li><li>• <b>Highest recoverable reserves of crude oil and natural gas in India.</b></li><li>• <b>Assam accounts for almost 15% of India's total crude oil output.</b></li><li>• <b>Assam is the largest producer of gold silk (Muga).</b></li></ul>	
<b>Major Industry Sectors</b>	<ul style="list-style-type: none"><li>• <b>Pharmaceuticals and Medical Equipment's.</b></li><li>• <b>Plastic and Petrochemicals.</b></li><li>• <b>Power.</b></li><li>• <b>River Transport and Port Township.</b></li><li>• <b>Information Technology.</b></li><li>• <b>Textile, Handloom and Handicraft.</b></li><li>• <b>Tourism, Hospitality and Wellness.</b></li><li>• <b>Agro-Horticulture, Food Processing, Organic Cultivation and Bamboo</b></li></ul>

### 2. GEOGRAPHY:

Geographically the state extends from 22°19' to 28°16' North Latitude and 89°42' to 96°30' East Longitude between the foot hills of the Eastern Himalayas and the Patkai and Naga Hill Ranges. Assam with its capital at Dispur, in the eastern part of Guwahati city. Located south of the eastern Himalayas, Assam comprises the Brahmaputra and the Barak river valleys and the KarbiAnglong and the North Cachar Hills with an area of 78,438 square kilometre. The state is bordered in the North by Bhutan and in the East by Arunachal Pradesh. Along the south lie Nagaland, Manipur and Mizoram. Meghalaya lies to the South-West, West Bengal and Bangladesh to the West.

2.1. Climate: The climate of the State is of humid sub-tropical in nature with warm and humid summer and cool and dry winter. The average temperature in the state varies from 4°C to 19°C during the winter and 26°C to 37°C during the summer accompanied by high humidity. Assam is situated in the high rainfall zone. The monsoons are Assam's life line as the agricultural activity is predominantly depended on it. The southwest monsoon brought shower for which the State receives average annual rainfall of 2580 mm on the Brahmaputra valley and its surrounding region. The State normally receives 2 percent

rainfall in Winter Season (January – February), 25 percent in Summer Season (March – May), 65 percent in Monsoon Season (June – September) and 7 percent in Post-monsoon Season (October – December).

2.2. Topography: With an area of 78,438 square kilometres, the state can be broadly divided into 3 physiographic domains viz. Brahmaputra valley, Central Assam Hills comprising of Mikir Hill in KarbiAnglong and North Cachar Hill districts and Barak valley covering the Cachar and Karimganj districts in the Barak valley

Brahmaputra valley: The vast alluvial plains of Brahmaputra valley occupy most of the North Assam covering Goalpara, Kokrajhar, Dhubri, Kamrup, Nalbari, Barpeta, Nagaon, Darrang, Sonitpur, Sibsagar, Jorhat, Golaghat, Lakhimpur and Dibrugarh districts. The Brahmaputra valley is bounded by Arunachal Himalaya in the north and northeast, Patkai – Naga - Lushai range of Nagaland and the Shillong Plateau in the south and southeast. The Brahmaputra valley with an average elevation from 50 to 120 m above m.s.l. represents an unique landscape comprising of a 800 km long and 130 km wide valley delimited by the low-lying valley to its south and the KarbiAnglong hills and Barail range comprising the North Cachar hills in the central part.

Central Assam Hills: The Central Assam which essentially is a hilly terrain comprised of Mikir Hill in KarbiAnglong and North Cachar Hill districts.

Barak valley: The hilly and alluvial terrain in the south covering the Cachar and Karimganj districts in the Barak valley.

### 3. THE ADVANTAGES OF THE STATE

The advantages of the Assam state are as follows;

**3.1. Locational Advantage:** Assam has the unique locational advantage of being situated close to South East Asian countries. It has the potential to emerge as a strategic base for foreign and domestic investors to tap the vast potential of contiguous markets of Myanmar, China, Malaysia, Thailand, Philippines, Cambodia, Indonesia and other East as well as South East Asian countries, which alone gives investors access to one fifth of the world population.

**3.2. Largest economy of the North East:** Assam is the largest economy of the North East India and is rapidly making strides towards employment generation and inclusive growth by a balanced pattern of industrial investment.

**3.3. Favourable Demography:** Guwahati, the major city of the Region is well connected with all metro cities of the country by Road, Air and rail.State within the region is well connected with State and National Highways.River Brahmaputra declared as 2nd National Waterways and River Barak as the 6th National Waterways. River Brahmaputra connect to West Bengal via Bangladesh under River Protocol No-1 and River Brahmaputra is connected with River Barak via Bangladesh under River Protocol No-3. River Ports area located along the River Brahmaputra & Barak.

**3.4. Natural Resource:** Assam is rich in important natural resources that attract the attention of many investors to set up their production and manufacturing units in the state. Petroleum (crude) is the principal mineral produced in the State. Other mineral resources available in the state are Coal, Limestone, Iron Ore, Granite, Fireclay, Lithomarge, Fuller's Earth, Sillimanite and Glass Sand. Blessed with plentiful rainfall, the forests are a reserve of such commercially useful produce like timber, bamboo, stone, cane etc.About 300 types of medicinal herbs and plants are known to exist in abundance in the state with the Brahmaputra valley itself having 150 varieties of herbs and plants of commercial value.

**3.5. Tourism Potentiality:** Assam is popularly known as the 'Land of the Blue Hills and Red Rivers' occupying a strategic position, it is the gateway to the North-Eastern states and has been aptly described as the sentinel of northeast India. The state recorded arrival of 5.7 mn tourists in 2016, registering an annual growth of 16.1%. More than 75% tourists coming to northeast visit Assam. Tourism sector

contributes 5.5% to the state GDP and provides approximately 10.5% of the total employment in the state. There are five national parks and 18 wildlife sanctuaries, of which, Kaziranga National Park and Manas Wildlife Sanctuary have been accorded as world heritage sites by UNESCO. Such wealth of tourism resources endows Assam with comparative advantage over many other states.

**3.6. Encouraging Govt. Policies:** Ease of doing business in Assam aims to create a platform for providing best support towards the prospective and existing business community in the state and drives forward the state's vision of prosperity for all - by employing technology, innovation, inclusivity and sustainability as key factors for development. To synergize its efforts in creating favourable investment climate, the State Government of Assam also offers attractive investment incentives and also subsidies on power consumption through its industrial policy.

**3.7. Availability of Manpower:** Assam has numerous educational institutions with a substantial portion of the population in the 15 to 25 age group in the major towns being computer literate. The state has a large skilled workforce.

#### 4. AVAILABLE RESOURCES:

**4.1. Agriculture and Horticulture Resource:** Assam's economy is fundamentally based on agriculture. Over 70 percent of the state's population relies on agriculture as farmers, as agricultural laborers, or both for their livelihood. Assam produces both food and cash crops. The principal food crops produced in the state are rice (paddy), maize (corn), pulses, potato, wheat, etc., while the principal cash crops are tea, jute, oilseeds, sugarcane, cotton, and tobacco. Although rice is the most important and staple crop of Assam, its productivity over the years has not increased while other crops have seen a slight rise in both productivity and land acreage. Horticultural crops occupy about 15 percent of the gross cultivated area of Assam and annually produce more than 67 lakh MT of various horticultural produces besides nut crops, flowers and medicinal & aromatic plants thus contributing significantly towards food and nutritional security of the State.

Tea is the most important cash crop in Assam and the state is well known world-wide for its tea. Assam is known to be the single largest tea producing region globally and contributes over 50% of India's total tea production. Assam accounts for about 1/6th of the tea produced in the world. Around 80 million kgs of tea are exported annually from Assam. Assam tea is famous for its distinct quality, especially for its strong liquor, rich taste and colour.

#### CULTIVATION AREAS OF MAJOR AGRICULTURAL CROPS IN THE STATE

Sl. No.	Crop	AREAS OF AVAILABILITY
1.	Paddy (Autumn)	Districts of Udalguri, Sonitpur, Kokrajhar and Chirang.
2.	Paddy (Summer)	Districts of Barpeta, Dhubri, Nagaon and Morigaon.
3.	Wheat	Districts of Kamrup, Goalpara, Nalbari, Kokrajhar, Barpeta, Bongaigaon, Morigaon and Dhubri.
4.	Rape & Mustard	Districts of Nagaon, Morigaon, Tinsukia, Dibrugarh, Jorhat, Sivasagar, Golaghat, Dhemaji, Sonitpur, Darrang, Kamrup, Goalpara, Dhubri, Bongaigaon, Nalbari, Lakhimpur, Kokrajhar, Karbi-Anglong and Barpeta.
5.	Maize	Districts of Karbi-Anglong and Dima Hasao.
6.	Pulses	Districts of Nagaon, Morigaon, Kamrup, Goalpara, Dhubri, Kokrajhar, Bongaigaon, Barpeta and Nalbari.
7.	Sugarcane	Districts of Cachar, Hailakandi, Kamrimganj, Dhemaji, Lakhimpur, Darrang, Tinsukia, Dibrugarh, Jorhat, Sivasagar, Golaghat, Karbi-Anglong, Nagaon, Sonitpur and Dima Hasao.

8.	Jute	Districts of Kamrup, Goalpara, Kokrajhar, Bongaigaon, Nagaon, Dhubri, Morigaon, Nalbari and Lakhimpur.
9.	Potato	Districts of Cachar, Hailakandi, Kamringanj, Kamrup, Goalpara, Kokrajhar, Bongaigaon, Nalbari, Lakhimpur, Barpeta, Sonitpur, Udalguri and Dhubri.
10.	Matikalai	Districts of Dhubri, Jorhat and Sonitpur.
11.	Masur	Districts of Nalbari, Barpeta, Kamrup (Rural), Darrang and Chirang.
12.	Tea	Districts of Cachar, Dibrugarh, Tinsukia, Sivasagar, Jorhat, Golaghat, Darrang and Sonitpur.

The agro-climatic conditions favors cultivation of wide range of horticultural crops including plantation crops and various fruits and vegetables, flowers, spices, medicinal & aromatic plants, nut crops and tuber crops. Most horticulture products are organic as the use of Chemical Fertilizers is very low with the majority of the farmers still sticking to traditional organic farming methods. Assam has over 600 varieties of Orchids. Around 200 varieties are unique to this region of which 60% are ornamental in nature. Assam also has a vast array of aromatic plants. At present most of the oils extracted are sold in crude form. Some of the plants are Citronella, Lemon Grass, Patchouli and Agar etc.

#### CULTIVATION AREAS OF MAJOR HORTICULTURE CROPS IN THE STATE

Sl. No.	Crop	AREAS OF AVAILABILITY
<b>A.</b>	<b>FRUIT CROP</b>	
1.	Pineapple	Districts of NC Hills, Nagaon, Karbi-Anglong, Cachar, Hailakandi, Kamrup, Sonitpur, Udalguri, Karbi-Anglong and Dima Hasao.
2.	Banana	Districts of Barpeta, Nagaon, Nalbari, Sivasagar, Tinsukia, Sonitpur, Goalpara, Kamrup, Lakhimpur, Jorhat, Golaghat and Cachar.
3.	Coconut	Districts of Nagaon, Morigaon, Barpeta, Sonitpur, Nalbari, Kamrup (R), Baksa, Karimganj, Bongaigaon, Dhubri, Dhemaji, Darrang, Goalpara and Hojai.
4.	Jackfruit	Districts of Goalpara, Kamrup, Darrang, Lakhimpur and Cachar.
5.	Orange	Districts of Chirang, Kamrup, Kamrup Metro, Udalguri and Tinsukia
6.	Papaya	Districts of Nagaon, Darrang, Kamrup, Karbi-Anglong, North Cachar, Nalbari, Barpeta, Sonitpur and Dhubri.
7.	Mango	All districts of Assam.
8.	Assam Lemon	All districts of Assam.
9.	Guava	All districts of Assam.
10.	Arecanut	All districts of Assam.
11.	Sweet Potato	Districts of Dhubri and Kamrup.
12.	Tapioca	Districts of Kokrajhar, Nalbari, Darrang, Karbi-Anglong and Goalpara.
<b>B.</b>	<b>VEGETABLE CROP</b>	
1.	Cabbage	Districts of Dhubri, Kokrajhar, Nalbari, Barpeta, Nagaon, Jorhat, Golaghat, Lakhimpur, Tinsukia and Cachar.
2.	Cauliflower	Districts of Dhubri, Kamrup, Barpeta, Nagaon and Golaghat.
3.	Tomato	Districts of Dhubri, Nagaon and Cachar.
4.	Brinjal	All districts of Assam.
5.	Onion	All districts of Assam.
6.	Other vegetables	All districts of Assam.
<b>C.</b>	<b>SPICES CROP</b>	

1.	Chilli	Districts of Dhubri, Barpeta, Darrang and Nagaon.
2.	Turmeric	Districts of Kamrup, Darrang, Nagaon, Barpeta, Sonitpur, Nalbari and Bongaigaon.
3.	Ginger	Districts of Dima Hasao, Cachar, Karbi-Anglong, Kamrup, Barpeta, Sonitpur and Nagaon.
4.	Coriander	Districts of Dhubri, Kamrup, Barpeta, Sonitpur, Nagaon, Morigaon, Darrang and Goalpara.
5.	Garlic	District of Dhubri, Kamrup, Barpeta, Nagaon, Lakhimpur, Goalpara and Darrang.
6.	Black Pepper	Districts of Jorhat, Sivasagar, Kamrup, Nagaon, Golaghat, Dibrugarh, Cachar and Barpeta.

**4.2. Forest Resource:** Assam has a rich forest cover encompassing nearly a quarter of its land mass, out of which roughly half of the forest is reserved forest. The recorded forest area of Assam is 26,832 sq. Km accounting for 34.21 percent of the total geographical area of the State and shares 3.48 percent of total forest area of the country as per India State Forest Report, 2013. Out of the total recorded forest area Reserved Forests constitute 17864 sq.km [or 66.58 percent] and un-classed Forests 8968 sq.km or 33.42 percent. Blessed with plentiful rainfall, the forests are a reserve of commercially useful produces. The forest products of the State mainly comprises of industrial wood, fuel wood, bamboo, stone, sand, gravel and thatch etc. As an extensive bamboo growing State, Assam has ample scope for Bamboo based industry. The extent of bamboo bearing area in the forests of the State is 7,238 sq. km. The State Government from its various forest produces earns a good amount of revenue.

#### MAJOR NON-TIMBER FOREST PRODUCTS (NTFPs) IN THE STATE

Sl. No.	NTFPs	AREAS OF AVAILABILITY
1.	Bamboo	Abundantly available throughout the state. Major areas includes forests of Dima Hasao, Karbi-Anglong, Nagaon and North Lakhimpur districts.
2.	Cane	Found in abundance almost throughout the state. Major areas includes Cachar, Mikir, North Cachar Hills, Nagaon and Lakhimpur districts.
3.	Broom Grass	Karbi-Anglong district which is the largest producer of broom grass in the state.
4.	Honey	Jorhat district and Kamrup districts.
5.	Mushroom	Kamrup and Barpeta districts.
6.	Bay Leaf	Barpeta, Jorhat, Sivasagar, Dibrugarh, Karimganj, Dhubri, Chirang, Golaghat, Lakhimpur and Karbi-Anglong districts, etc.
7.	Arecanut Leaf	Arecanut leaves are abundantly available throughout the plain areas of the state.
8.	Medicinal and Aromatic Plants	Richly available throughout the state in the hills & valleys; especially at the Brahmaputra river banks; Karbi-Anglong, Kamrup districts, etc.

**4.5. Mineral Resource:** Assam is a house of natural and precious mineral resources. Coal, petroleum and natural gas, limestone and minor minerals are in abundance in Assam. Tertiary coal occurs in Dima Hasao, Sivasagar and Lakhimpur districts. Assam coal is friable in nature and has a high sulphur content. It is mainly utilised by local railways, steamers, and hydro power stations. Low moisture, low volatile cooking coal has been discovered in Hallidayganj Singrimari area. Deposits of banded magnetic quartzite occurs in Kamrup and Goalpara districts, Limestone occurs in Lakhimpur, Dima Hasao, Karbi-Anglong, Nagaon and Sivasagar districts.

Kaolin is found in Karbi-Anglong and Lakhimpur district. The Digboi oil fields in Lakhimpur district and Moran and Rudrasagar oil fields in Sivasagar district are the major source of oil and gas. Hydrocarbons were struck in Borsilla, Changmaigaon, Kurgaon and Rajgarh in the past. Sillimanite bearing rocks occur



in KarbiAnglong district. Assam continued to be the 3rd largest producer of Petroleum (crude) and natural gas in the country accounting for 16 % and 8% respectively of the total production of this mineral in the country.

#### MAJOR MINERALS AND AREAS OF THEIR AVAILABILITY IN THE STATE

Sl. No.	Minerals	AREAS OF AVAILABILITY
1.	Natural Gas	Digboi in Tinsukia District, Duliajan in Dibrugarh District and Sivasagar in Sivasagar District.
2.	Coal	Karbi-Anglong; Dima Hasao, Tinsukia; and Sivasagar Districts.
3.	Limestone	Dima Hasao; and Karbi-Anglong Districts.
4.	China Clay	Deopani, Sheelvata and Chilonijan in Karbi-Anglong District.
5.	Feldspar	Rangsali in Goalpara District; Hahim in Kamrup District; and Koilajan in Karbi-Anglong District.
6.	Granite	Dhubri; Bongaigaon; Kokrajhar; Kamrup; Nagaon; Morigaon; and Karbi-Anglong Districts.
7.	Sillimanite	Chippinala and Chipriangso in Karbi Anglong Districts.
8.	Quartzite	Jiajuri, Thansjuri Hills, Borhola and Chapanala in Nagaon District.
9.	White Clay (Fuller's Earth)	Subankhata and Bhutan Khuti in Baksa District.

#### 5. INFRASTRUCTURE FACILITIES:

Assam, being the gateway to other States of the North-Eastern region of the country, requires adequate and sound infrastructure facilities for speedy socio-economic development of the region. Accordingly, the Government of Assam has been undertaking several infrastructural projects in order to attract significant investments into the State. The major modes of transportation in Assam are roadways, railways, airways and inland waterways. Besides, an efficient telecom and power infrastructure is necessary to improve the quality of life of the people. Guwahati is one of the communication and transportation hub for the North-Eastern region.

**5.1. Power:** The Assam Power Generation Corporation Ltd. (APGCL) was constituted to look after power generation in the State Sector. The installed capacity of generating plants at present in the State is 376.7 MW which include Coal, Hydel and Gas plants of the State. Assam has a huge potential for development of infrastructure for generation, transmission and distribution of electricity. It is blessed with abundant reserves of natural gas and has the potential for generating cheap and eco-friendly power from small hydro electric stations. The major power stations in the State are Chandrapur Thermal Project, Namrup Thermal Project and a few Mobile Gas Turbine Units along with a mini hydro-electric project. Revitalising the Thermal Power Station of Bongaigaon and completing the Karbi-Langpi Project will boost the power supply in the State. Further, approval has been received for Tipaimukh Dam Project.

**5.2. Roadways:** The road network in Assam comprises of total 55435 Km. of roads consisting of 3069.22 Km. National Highways, 3134 Km. State Highways, 4413 Km. Major District roads, 2496 Km. Urban roads, 36544 Km. Rural Roads and the rest are Panchayats & Other Non PWD Roads. Such a road network connects all-important places of Assam. Also, the construction of 160 km of barbed wire fencing and 27 km of the border road along the Indo-Bangladesh International have been completed. All the towns of the State are well connected by the Assam State Transport Corporation and other tourist bus services, run by private operators. These buses also ply to the capitals of the neighbouring States. Besides, there are fleet of luxury buses and vehicles available for hire at affordable prices.

**5.3. Railways:** Assam has total railway route length 2458.93 Km. at present. This 2458.93 Km. comprising of 1470.06 Km. under Broad Gauge and 988.87 Km. Meter Gauge. The proportion of Board Gauge railway route length in the State, although, is 59.78 percent, it shares only 2.63 percent of the country's total broad gauge railway route length. Taking into account of total railway route length 65000

Kms. Assam is well connected with rest of the country by railway network. There are train services from Kolkata, New Delhi, Mumbai, Chennai, Bangalore, Cochin and Trivandrum. Within the State, all the major towns like Dibrugarh, Tinsukia, Jorhat, Nagaon, Guwahati, Tezpur, Barpeta, Bongaigaon, etc. are linked by railways.

**5.4. Aviation:** Assam is well connected with the rest of the country through Air Transport. The State has the highest numbers of operational civil airports and they are Lokopriya Gopinath Bordoloi Airport (Guwahati); Salonibari (Tezpur); Mohanbari (Dibrugarh); Kumbhirgram (Silchar); Rawriah (Jorhat) and Lilabari (North Lakhimpur). In addition, one more civil airport located at Dhubri (Rupshi) district of Assam is lying non-functional for long time. All major airlines including private commercial airlines viz., Indian Airlines, JetLite, Go-air etc. are operating their flights to and from Guwahati and intra-state air services regularly. In addition to these civil airports, some small and remote airstrips are being operated under private operators like tea gardens and PSUs.

**5.5. Water Transport:** Assam is endowed with extensive navigable waterways. The major rivers are the Brahmaputra and Barak and their numerous tributaries. The riverine system's length is 4065 kms, out of which 2194 kms area navigable throughout the year and the rest during the monsoon season only. The river Brahmaputra from Dhubri to Sadiya has been declared as National Waterway No-2 by the Government of India. The - Bhanga stretch of 121 Km. of the Barak River is also declared by the Union Govt. as the 6th National Waterway in January 2013 for unified development of the waterways for shipping and navigation and transportation of cargo to the North Eastern Region particularly in the states of Assam, Nagaland, Mizoram, Manipur, Tripura and Arunachal Pradesh. Govt. operate water transport services on the river Brahmaputra and Barak on commercial basis. These services are used for the transportation of passengers and goods alike across the state and to neighbouring West Bengal through Bangladesh. There is a good scope of utilization of this river route for economic development of the state.

**5.3. Communication:** The Assam Postal Circle has a network of 4014 Post Offices [as on March 2014] out of which 3726 post offices are located in rural areas. On an average, each Post Office serves a population of 7774 persons and covers 19.54 Sq.Km. areas. There are 3 Night Post Offices also functioning in the State located at Guwahati GPO, Dibrugarh HO and Silchar HO for convenience of the people. In addition, there are 353 modernised post offices and 634 computerised post offices in the State. Apart from the above, there are 4 National Speed Post Centre and 16 Speed Post Centre in the State and Postal Mail Conveyance covers 4428 railway kilo metre.

The Telecommunication network is one of the fastest growing sectors in the state. Assam Telecom Circle of Bharat Sanchar Nigam Limited (BSNL) is the largest telecom operator in Assam which was formed in 1987, providing comprehensive range of telecom services in the State. BSNL, Assam Circle is the only service provider, making focused efforts and planned initiative to bridge the rural-urban Digital Divider ICT sector. BSNL is reaching the nook and corner of Assam with focused development thrust. At present 584 telephone exchanges are functioning in the State (as on March 2014). Individuals and industries alike face no problems in procuring telephone and other telecommunications facilities. The penetration of landlines as well as cellphone telephony is high and is steadily increasing. Broadband and Wireless Broadband are available in the capital city of Guwahati and all major towns of the state. Major cellular phone operators also provide GPRS, 3G, 4G etc. to cellphone users in the state.

**6. THE BUSINESS ENVIRONMENT:** The State is renowned for its arts and crafts, associated with the cottage industries. Cottage industries include handloom, sericulture, cane and bamboo articles, carpentry, brass and bell-metal crafts. Assam produces varieties of silk like Eri, Muga, Tassar etc. The registered factories include Major, Medium and Small units in Central Public Sector, State Public Sector and Private & Joint sector. The Industrial Relations scenario in the state is peaceful. There is a low incidence of labour related disputes. Direct collective bargaining of negotiations between employers and employees is widely practiced.

The Government of Assam emphasizes on adoption of Eco-friendly investment strategy for sustainable development of the state. Today the State embarks on the new charter in the path of development, laying

emphasis on new capital formation through the creation of ecologically compliant assets in a sustainable manner. The focus of the growing investment climate today is to build the economy on the core strengths of this region so that the resources can be managed efficiently.

The recognized core strengths of the State today are its nature, water, agriculture, human resources and geographical location. The State inspires the new decade with encouraging atmosphere of Industrialization. It lays emphasis on "Clean Development Mechanism" as an investment proposition. Assam intends to attract maximum investment in all available potential sectors by the entrepreneurs of the country and Foreign Direct Investment (FDI). The State Government has constituted a separate cell – The Industrial Investment Secretariat Cell (IISC) to facilitate investment – and a High Level Committee to accord fast track clearance for investment proposals. The Cell will function as a single point of contact for all inquiries from investors including supplying of information pertaining to permissions/ procedures/ guidelines. Ease of doing business in Assam aims to create a platform for providing best support towards the prospective and existing business community in the state and drives forward the state's vision of prosperity for all - by employing technology, innovation, inclusivity and sustainability as key factors for development. It provides objective measures of business regulations.

Ease of Doing Business in Assam encourages economies to compete towards more efficient regulation; it looks at domestic small and medium-size companies and measures the regulations applying to them through their life cycle. Government of Assam is there to guide and help you set up your Industry in the State of Assam. To synergize its efforts with the above mentioned policy, the State Government of Assam also offers attractive investment incentives and also subsidies on power consumption through its industrial policy.

The State Government is projecting an alternative approach to economic development by fostering interdependence between nature and economics for which the concept of 'Green Accounting (valuing nature assets)' is sought to be introduced to supplement the State's Gross State Domestic Product. The Green Accounting statistics are necessary for measuring the sustainability of Assam's economy in quantitative and monetary terms.

The vast water resources of the state could be leveraged for harnessing Hydro Power, development of Pisciculture / Aquaculture and transportation links. The strategy also encompasses reinvention of Tea industry, revolution in Organic cultivation, Eco-tourism, Eco-infrastructure driven investment in rural and urban township. Referring to improvement of shipping and waterways in the state for trade and business, it is said that the dredging of the Brahmaputra River would open up huge opportunities in shipping which would give a boost to business activities in the state.

**7. INDUSTRIAL INFRASTRUCTURE:** The industrial scenario of the State is confined within the growth of employment oriented SSI, MSME Sector, which comprises of manufacturing and processing industries. Assam is still making desperate efforts for gearing up industrial activities by harnessing the un-tapped resources available in the State by introducing growth-inducing factors and by removing the infrastructure inadequacies primarily in the power sector. Creation of environment for industrialization by setting up Industrial infrastructure in the perspective of industrial development and attract investment through proper planning is the prime objective before the State Government.

The State has 64 (Sixty four) nos of Commercial Estate for the Micro units and 50 (fifty) nos of Industrial Estate/Area spread across all the districts of Assam. The State has 3 (three) Industrial Growth Centres (IGC) located at Balipara (Sonitpur district), Matia (Goalpara district) and Chaygaon-Patgaon-Jambari (Kamrup district). In addition, 11 nos. of Industrial Infrastructure Development (IID) Centre in 11 different districts and 3 numbers of Industrial Growth Centre and one Food Park at Chaygaon in Kamrup District. One Export Promotion Industrial Park (EPIP) has also been established with world-class infrastructure at Amingaon in Kamrup district where 58 numbers of industrial units are producing some export quality product of various kinds.

Some of the industrial infrastructure available in the state are as follows;

7.1 Software Technology Park: A Software Technology Park is under operation adjacent to the LGB International Airport in Guwahati and another Software Technology Park is under construction at Azara in Kamrup (M) district.

7.2 Bio-Technology park: A Bio-Technology Park is operating from the campus of Indian Institute of Technology (IIT), North Guwahati.

7.3 Export Promotion Industrial Park: There is an Export Promotion Industrial Park (EPIP) at Amingaon covering 68.10 acres of land and occupied by 58 units. The EPIP is developed to provide infrastructural facilities of high standard for export oriented units. The EPIP supports industries in diverse areas like Engineering, Herbal products, Cosmetics, Cane & Bamboo, Pharmaceuticals, Food Processing and Plastic processing.

7.4 North East Mega Food Park, Tihu : With the objective of providing adequate infrastructure for the Food Processing industry of the region along with value chain from farm to the market, a North East Mega Food Park is under implementation at Tihu, Nalbari. The Park is being developed in PPP model with assistance from the Ministry of Food Processing, Government of India in an area of 50 acres. The total project cost is Rs.75.97 Cr and it is located on NH-31 at a distance of 90 Km from Guwahati.

7.5 Food Processing Park: A Food Processing Park at Chaygaon with the financial assistance from Ministry of Food Processing Industries (MOFPI), Government of India is functioning at Chaygaon, which is about 60 km from Guwahati.

7.6 Bamboo Park: The Bamboo Park is under construction at Chaygaon, in Kamrup District (about 60 Kms from Guwahati). The Park is being developed in PPP model with the assistance from Government of India and the total investment in the Park is Rs.61.28 Cr. The objective of the park is to create integrated infrastructure for promotion of Bamboo based industrial and commercial activities.

7.7 Plastic Park: To facilitate the growth of downstream industries of the Gas Cracker unit coming up at Lepetkata, Dibrugarh, Government of Assam has taken steps for implementation of a Plastic Park at Gellapukhuri, Tinsukia. The Park is developed in two phases by AIDC, with the assistance from the Ministry of Chemical and Fertilizers, Department of Chemicals and Petrochemicals, Government of India. AIDC has started construction of Plastic Park with an estimated cost of Rs.90 Cr in an area covering 167 Acres (500 bigha).

7.8 Tea Park: To provide adequate facilities for blending, storage and transshipment of Assam Tea in the World market, a Tea Park is being set up at Chaygaon by AIDC in Kamrup District in an area of approximately 100 acres of land.

7.9 Jute Park: Assam is one of the leading producers of Jute next to West Bengal. It produces high quality of Jute since introduction of this crop in the state. To facilitate Jute industries with modern technology and also to create facilities for processing of jute fiber in the state, Industries & Commerce Department is taken steps to set up a Jute Park at Dhing in Nagaon district. Land for the project has already been acquired.

7.10 Pharmaceutical Park: To create employment opportunities to the rural youth and also to encourage the pharmaceutical industries in the State, Industries & Commerce Department has taken step to set up a Pharmaceutical Park in Kamrup district in a proposed area of 100 acres.

7.11 Air Cargo Complex at Borjhar: To facilitate export of perishable products from the state like Orchids, Fruits and Vegetables etc. AIDC in collaboration with Airport Authority of India is taking steps to set up an 10 Air Cargo Complex nearby LGBI Airport Borjhar. A suitable land has been already allotted by Airport Authority of India and the project is funded by Department of Commerce, Government of India under ASIDE scheme.

7.12 Marketing Infrastructure for Agro Food Processing: To promote the Food Processing sector in Assam and also to provide storage facilities to the farmers, Marketing Infrastructure for Agro Food processing is being created at 5 locations , viz. Silapathar (Dhemaji), Dalgaon ( Darrang), Raniganj ( Dhubri), Samaguri ( Nagaon) and Pawoi (Tinsukia).

7.13 Border Trade Centre & Trade Facilitation Centre: For development of International trade, it is proposed to create infrastructure at the Land Custom Stations (LCSs) bordering Bangladesh & Bhutan. The Border Trade Centre at Sutarkandi(inKarimganj district) and Mankachar ( in Dhubri district) have already been completed. Border Trade Centre at Golokganj(inDhubri district ) , Darranga (in Baska district ) and Trade Facilitation Centre at Jagun ( in Tinsukia district) are under construction.

## 8. THRUST AREAS UNDER STATE INDUSTRIAL POLICY:

The following are the thrust areas for industrial development under the Industrial & Investment Policy of Assam, 2014;

Sl. No.	Thrust Areas
1.	Food Processing and Agro based Industries
2.	Mineral based industries
3.	Bamboo based industries
4.	Extraction and Value addition of Herbal, Medicinal and Aromatic Plants
5.	Biotechnology Sector
6.	Information Technology related activities
7.	Hospitality Industry and Tourism etc.

## 9. POTENTIAL SECTORS IN THE STATE:

**9.1. Agro based and Food Processing based Industries:** Agriculture is the primary sector in the state's economy. The agro-climatic conditions of the state favour growing of a variety of fruits, vegetables/ spices like coconut, banana, pineapple, orange, ginger, turmeric, chillies, pepper etc. Mechanized and scientific cultivation of Agriculture and Horticultural produces are being adopted in the state. Until recently, horticulture was practiced as a largely non-commercial activity. With better quality planting material, organic farming, adequate research support and better know-how, the state could easily cause a major boom in horticulture and food processing sector. The sector has the potential to grow at a rapid pace in Assam with the increasing demand for processed food. The wastage of perishables due to non-availability of adequate processing infrastructure. With the favourable agro climatic conditions that are conducive for a wide range of products, opportunities in the sector abound in processing, sourcing, inclusive farming, logistics and cold chains. Promotion of food processing industries in the small scale sector will not only check the wastage of these valuable resources and add value to them, but will also encourage the growers to grow more fruits.

**9.2. Tea based Industries:** The Tea Industry of Assam plays a vital role in the State as well as in the national economy. The tea industry of Assam also possesses a significant reputation in the global economy. Assam alone produces more than half of India's tea production and about 1/6<sup>th</sup> of the tea produced in the world. The total area under Tea Gardens in the State is 322 thousand Hectares. Assam tea is famous for its distinct quality, especially for its strong liquor, rich taste and colour. Tea is grown both in the Brahmaputra and Barak plains. Some of the districts where tea gardens are mostly found in Assam are Tinsukia, Dibrugarh, Sibsagar, Jorhat, Golaghat, Nagaon and Sonitpur. Tea industry in Assam engages about 17% of the workers in the state. Assam is home to one of the world's oldest and largest Tea Research Centres at Toklai in Jorhat.

**9.3. Bamboo based industries:** The extent of bamboo bearing area in the forests of the State is 7,238 sq. km. Assam has the maximum concentration of bamboo in the entire North east region. The natural climatic condition makes it possible for the healthy growth of bamboo plantation in the state. Bamboo is utilised mainly for traditional purpose, such as handicrafts and papermaking. Opportunities exist in the areas of re-inventing bamboo in plywood units, paper mills, micro-propagation & production, shoot processing, industrial products, machinery & equipment and skill up-gradation & training. A Bamboo Technology Park at Chaygaon is established with its state of art technology to help promote bamboo based units in the region.

**9.4. Medicinal & Aromatic Plants based industries:** Assam is a forerunner in the production of medicinal and aromatic plants. The state has a very favourable environment for the growth and development of allied industries as the state is one of the richest repositories of medicinal and aromatic plants (MAP) in the world. There are more than 300 species of commercially important medicinal plants produced in the state. However the state needs a scientific approach for the exploration, conservation and value addition in the field of Medicinal and Aromatic Plants (MAP) industries. This offers a huge business opportunity for investors.

**9.5. Sericulture and Handloom based industries:** Sericulture in Assam offers vast business opportunities. The state is home to the production of four unique varieties of silk worms, such as Eri, Muga, Oak Tassar and Mulberry. Sericulture has a lot of potential in Assam and offers one of the highly profitable business sectors as the state offers tremendous potential for the development of large scale industries based on silk. Assam state government has established a number of silk processing and spinning units in the state. The state also provides a host of other infrastructure services necessary for sericulture industry. Assamese women can weave dream on their looms-handloom weaving is basically a leisure time activity of the women folk of Assam. Handloom weaving is the oldest and widespread industry in the state time immemorial. The traditional handloom silks hold a prominent position in the world markets and score over factory-made silks in the richness of their textures and designs, in their individuality, character and classic beauty. The number of looms in the State represents around 16 per cent of the looms in the entire country. Cotton, muga, paat (mulberry silk) and endi are the basic raw materials for hand-woven fabrics in Assam.

**9.6. Brass and Bell-metal based industries:** Assam is famous for its wide range of cottage industries. Brass and Bell-metal work is a traditional cottage industry of Assam. In case of brass and bell metal sector, Assam is famous worldwide for strength, beauty and utility of the sector's products. Brass-work is an important traditional handicraft of Assam. Brass articles are produced not only for day-to-day use, but also for interior decoration. The principal items of brass are the kalah (water pot), sarai (a platter or tray mounted on a base), kahi (dish), bati (bowl), lota (water pot with a long neck) and tal (cymbals). Bell-metal work is a traditional cottage industry of Assam. The normal products of bell-metal are the traditional plates, cups, tumblers, pitchers, bowls, sarais, dwarf pitchers, pots, hookahs and musical instruments. Gold, silver and copper also form a part of traditional metalcraft in Assam.

**9.7. Animal Husbandry based industries:** Animal Husbandry is potentially one of the most important sectors for rapid socio-economic development of the State. Livestock is basically a component of production system and is contributing to sustainable agricultural system. Fast growth is essential not only to achieve higher productivity levels in livestock products but also for income generation of rural households of the State. Livestock in the State is thus highly livelihood oriented and is generally owned by small and marginal farmers and landless agricultural labourers.

**9.8. Mineral based industries:** Assam is endowed with vast mineral resources. Coal, petroleum and natural gas, limestone and minor minerals are in abundance in Assam. Tertiary coal occurs in Dima Haso, Sivasagar and Lakhimpur districts. Assam coal has a high sulphur content. It is mainly utilised by local railways, steamers, and hydro power stations. Low moisture, low volatile cooking coal has been discovered in Hallidayganj Singrimari area. Deposits of magnetic quartzite occur in Kamrup and Goalpara districts. Limestone occurs in Lakhimpur, Dima Hasao, Karbi Anglong, Nagaon and Sivasagar districts. China Clay or Kaolin of Karbi Anglong and Lakhimpur district is a vital input for the Ceramic industries. The Digboi oil fields in Lakhimpur district, Moran and Rudrasagar oil fields in Sivasagar district are the

major source of oil and gas. Hydrocarbons were struck in Borsilla, Changmaigaon, Kurgaon and Rajgarh in the past. Sillimanite bearing rocks occur in Karbi Anglong district. Assam continued to be the 3rd largest producer of Petroleum (crude) and natural gas in the country accounting for 16 % and 8% respectively of the total production of this mineral in the country. Deposits of stone like Granite, estimated to be more than a billion Cubic Meters are available in various shades and colours and have a huge domestic as well as Export market.

**9.9. Tourism based industries:** Assam is regarded as a virtual paradise for numerous tourists and travelers coming from various parts of the globe. Assam has great diversity of wildlife, like the Indian one-horned rhinoceros. Apart from the internationally known Kaziranga National Park and the Manas National Park, both of which are World National Heritage sites as well as Tiger Reserves. The many other national parks and wildlife sanctuaries such as Pobitara, Orang, Nameri, Barail, Panidihing and Dibru Saikhowa have their individual beauty and charm. The mighty Brahmaputra river and its many tributaries, and many beels (lakes) have immense potential for tourism development like river cruises connecting the tourism destinations and water sports, white water rafting and kayaking. River tourism along with water based adventure tourism integrated into other tourism developments like rural and wildlife tourism will be a major thrust of tourism promotion. Assam tea is world reknown and is a brand ambassador for Assam. The tea gardens rolling out green carpets for miles are ideal to meet the pursuit of romantic and exotic experience of modern tourists. Many tea gardens have 18-hole golf courses- another major attraction for modern tourists. Assam in the 19th and 20<sup>th</sup> centuries had been a busy area for exploration of tea, oil and forests. Assam has many old pilgrim places of great significances, foremost being the most venerable Kamakhya temple. Hajo is another center where people from three religions Hindu, Muslim and Buddhism come for pilgrimage. The rich cultural heritage of Assam, like the mythological Agni Garh in Tezpur, ancient Madan Kamdev temple, the unique secular traditions of Hajo, the unique Phat Bihu of Dhakuakhana, the rich and unique heritage of vaishnavite culture in Bkordowa , Barpeta , Majuli and the royal remains of the Ahom rule in upper Assam provide great opportunities for promotion of cultural tourism.

The whole tourism potentialities of the state can be grouped together under the following categories: (a) Wildlife, (b) Nature Tourism, (c) Tea tourism (d) Eco Tourism, (e) Cultural Tourism (f) Pilgrim Tourism (g) Golf Tourism and ( h) Adventure Tourism (i) Others.

**9.10. Service based industries:** Service-based industries are now playing an important role in the overall economic activity. The important servicing units of Assam consists of automobile repairing workshops, battery charging, electrical goods repairing, electronics items assembling repairing, Photostat, lamination etc. There is good potential of service based industries in the districts of Assam.

**9.11. Plastic based industries:** Daily utility plastic/polymer products like consumer/ household products such as buckets, trays, mugs, jugs, baskets, blow molded containers, tiffin boxes, soap boxes, brushes and brooms, tooth brushes, water tanks, bottles, stands, molded luggage, furniture, thermo ware, toys, footwear etc are very much in demand in the market. Due to establishment of Brahmaputra Cracker & Polymer Limited (BCPL) in Assamas a major supplier of raw-material for plastic item manufacturing units, there is huge potentiality of plastic based industries in the state.

**9.12. Engineering based industries:** Engineering industries like steel fabrication, aluminium door-window fabrication, small manufacturing units has good prospect in the state considering ever rising local demand.

**9.13. Information Technology based industries:** Assam has a large manpower base that is highly skilled in Information Technology. As such, opportunities exist for IT enabled services like software development, call centres, back office operations, data entry and conversion, transcription and translation, content development, animation, engineering and design, market research, consultancy and management. The state government is planning to develop an IT Park in Bangora, Guwahati over an area of 40 ha. An estimated amount of more than USD 700 mn is planned to be invested in this park. About 14 ha of land is



sought to be developed for the ESDM sector. Under the Assam Fibre net project, the state government is planning to provide broadband connectivity to each household of the state.

**9.14. River Transport and Port Township:** 15 of the declared 111 national waterways, including NW-2 of the Brahmaputra river pass through Assam. The state government is planning to increase inland waterways transportation's share of cargo traffic from 3% to 10%, making it 35 metric tonnes per annum. There is also a plan to introduce ferry services, which will provide safe, efficient and economical service to 18 mn passengers per annum.

**9.15. Petrochemicals:** Assam accounts for almost 15% of India's total crude oil output. The crude oil produced in the northeast is treated in four refineries in Assam, the oldest being Digboi. With reserves of 1.3 bn tonnes of crude oil and 156 bn cubic metre of natural gas, and the same being available at attractive prices, the state is an ideal destination for energy, oil and gas based industries. Assam accounts for 50% of India's onshore production of natural gas. Almost all the petroleum producing areas of the upper Brahmaputra contain 'associated natural gas'. Barak Valley, on the other hand, contains 'free natural gas' in the Adamtila structure.

**9.16. Pharmaceuticals and Medical Equipment's:** During 2016-17, about 10 pharmaceutical units have started their production in the state, with a cumulative investment of USD 142 mn. The state is blessed with more than 952 species of plants used in medical practices. Key industrial infrastructure in Assam include Pharmaceutical Hub at Balipara, Guwahati Biotech Park and proposed Pharmaceutical Park at Chaygaon.

**9.17. Border Trade:** Assam is sharing international border with Bangladesh, Bhutan and Myanmar and thus has ample scope to enhance trade with these countries. To facilitate foreign trade with various neighbouring Countries bordering North-East India, Government of India has taken a new initiative to create all infrastructure facilities for the exporter of the region for development of Trade & Commerce. The State Government has approved for setting up of five numbers of Border Trade Centres- one at Sutarkandi in Karimganj district, at Mankachar and Golokganj in Dhuburi district, Darranga in Baksa district and Jagun in Tinsukia district to facilitate border trade with neighbouring countries like Bangladesh, Bhutan etc.

# EXECUTIVE SUMMARY

## TITLE OF THE STUDY MANIPUR STATE INDUSTRIAL PROFILE

### 1. INTRODUCTION :

The word Manipur means “a jeweled land” and the state was described as the “Jewel of India” by the late Prime Minister Pandit Jawaharlal Nehru nestled deep within a lush green corner of North East India. After independence of India in 1947, the Princely State of Manipur merged with the Indian Union on October 15, 1949. Manipur had been a union territory from 1956 and attained full statehood on 21<sup>st</sup> January 1972. In terms of area, Manipur ranks twenty third among the states of India and fourth in the north eastern states. The altitude of the State above the mean sea level varies from 790 metres to 2020 metres. Imphal is the capital city of Manipur. About 48 kms. away from Imphal towards south-east lies the Loktak Lake, the largest fresh water lake in the North-Eastern Region of India. This lake which covers an area of 216 sq.kms. is the largest natural source of fish supply which is one of the important food items of the people of the state. Manipur acts as India's "Gateway to the East" through Moreh and Tamu towns, the land route for trade between India and Burma and other Southeast Asian countries. Manipur has the highest number of handicrafts units and the highest number of craftsmen in the northeastern region of India. The state has 51 towns (28 statutory towns and 23 census towns) and 2,582 villages (2515 Habited and 67 Un-inhabited) as per 2011 census.

KEY HIGHLIGHTS	
<ul style="list-style-type: none"><li>• <b>Moreh in Manipur is the gateway to South East Asia.</b></li><li>• <b>Largest producer of Oak Tasar variety of silk in India.</b></li><li>• <b>One of the largest bamboo producing states in India.</b></li><li>• <b>Manipur is the largest producer of Passion Fruit in India.</b></li><li>• <b>Manipur celebrates Kachai lemon festival each year to promote cultivation and investments in the geographical indication (GI) crop.</b></li></ul>	
<b>Major Industry Sectors</b>	<ul style="list-style-type: none"><li>• <b>Agriculture and Allied Sector</b></li><li>• <b>Horticulture</b></li><li>• <b>Sericulture</b></li><li>• <b>Bamboo Based Industries</b></li></ul>

### 2. STATE GEOGRAPHY:

Manipur lies between 23.50° N to 25.42° N latitude and 92.58° E to 94.45° E longitudes. The State has 352 km long international border with Myanmar (Burma) to the south-east and 502 km long border with the adjacent states of Nagaland on the north, Assam on the west and Mizoram on the south and the south-west. The state has a geographical area of 22,327 square kilometres (8,621 sq mi) which is 0.7 percent of the total land surface of India. 20,089 sq.km. (90% of the total geographical area) of the state is covered by hills, the remaining area is a small valley covering only 2,238 sq.km. and accounting for only one-tenth of the total area of the state.

2.1. Climate: Manipur, typically, observes moderate climate throughout the year. Depending upon the altitude, the climate ranges from tropical to temperate. Though the state enjoys all the three seasons of summers, winters, and monsoons; precipitation dominates the valley for most of the year. Summers prevail from the month of March till May, when temperature reaches to the max of 32°C. It is never too hot in Manipur. Monsoons formally arrive in the month of June and drench the state with heavy rain showers up to September. Manipur receives an annual rainfall of 1500mm. The months of October and November more or less, remain dry. The winter season extends from December to February, when the temperature usually drops down to 0°C. Here heavy woollens are required to beat the cold winds in winters. To sum up, Manipur enjoys salubrious climate round the year.

2.2. Topography: Major portion of the state is covered by hill ranges. Topographically the state is divided into three major regions: a) Hills, b) Imphal Valley and c). Barak Basin. The Imphal valley which is around 48.3 km in length and 32.2 km in breadth lies in the centre of the state. Physiographically, Manipur may be characterised in two distinct physical regions - an outlying area of rugged hills and narrow valleys and the inner area represents the features of flat plain topography with all associated land forms. Eeril and Thobal are the main rivers that originate from the hills and flow down into the valley. The biggest natural lake in the state is Loktak. Enclosed by nine hill ranges, Manipur is apparent in a quaint valley at the center. At an elevation of 12,557 ft, Surameti peak is the highest peak in the state. The entire hilly area is covered with thick, dense forests, which depict the abundance of forest resources in Manipur.

### 3. THE ADVANTAGES OF THE STATE

The advantages of the Manipur state are as follows;

**3.1. Opportunity for Border Trade:** Manipur has the advantage of acting as India's Gateway to the East through Moreh town, which is the most feasible land route for trade between India and Myanmar and other South East Asian Countries. It shares 398 km long international border with Myanmar. A Land Custom Station (LCS) already exists at Moreh for the existing traffic volume of trade.

**3.2. Suitable Climate for Agriculture:** The agro-climatic condition of this State makes it suitable for growing almost all kinds of agricultural and horticultural crops and for setting up of food processing industries. Manipur produces sizeable quantity of paddy, wheat, maize, pulses, oilseeds (like mustard, groundnut, soya beans and sunflower), fruits (like pineapple, lime, lemon, banana and orange), and vegetables (like cauliflower, cabbage, tomato and peas).

**3.3. Abundant Natural Resources:** Manipur has abundant natural resources that offer potential for the development of many resource based industries in the state. Due to its wealth of flora and fauna, Manipur is described as a "flower on lofty heights". With about 3,268 sq. km of area covered by bamboo forests, Manipur is one of India's largest bamboo producing states. Major Mineral resources of Manipur includes limestone, copper, lignite, nickel, chromite etc. Many non timber forest products like bamboo, broomgrass, honey, aromatic and medicinal plants are the source of livelihood for rural people.

**3.4. Tourism Potentiality:** Manipur with vast cultural and religious heritage and varied natural attractions has immense potential for growth in the tourism sector. Manipur is blessed with the majestic Loktak Lake, the strategic location of Moreh town, the uniqueness of the floating Keibul-Lamjao National Park & the Sangai Deer, the beauty of the & Dzukou Lilies, along with the naturally formed limestone caves, pristine green hills and valleys, meandering rivers, cascading rapids, exotic flora & fauna complimented by a rich arts & culture, folklore, myths & legends, indigenous games and artistic handloom & handicrafts. These make Manipur a little paradise on earth and an enticing destination for a tourist to explore.

**3.5. Infrastructure Support:** The Government of Manipur has undertaken several infrastructural projects in the State to attract investors. Imphal the State Capital, has the second largest airport in the NE region. It is well connected by air with Delhi, Calcutta and Guwahati. The national highways in the State link it with the rest of the country. Almost all the villages of the State are connected by all-weather roads.

**3.6. Promotional Govt. Policies:** The Government of Manipur has made several policy announcements for attracting investments into the State and thus contributing to the development of its economy. These policy documents have been framed with the aim of removing the various road blocks which hamper investment and progress; providing the right kind of business climate in the State and bolstering the industrial climate of the State.

**3.7. Available Skilled Workforce:** The literacy rate of Manipur is 76.94 percent as per 2011 census. Manipur offers a largely educated workforce. Knowledge of English is an added advantage for the

Manipuri workforce. Thus, the high literacy rate and large base of skilled workforce makes the state an ideal destination for knowledge based industries and services sectors.

#### 4. AVAILABLE RESOURCES:

**4.1. Agriculture and Horticulture Resource:** Agriculture sector has a vital place in the economy of the state. It contributes a major share to the State Domestic Product. 52.81 % of the workers in Manipur are engaged as cultivators and Agricultural labourers. However, the performance of agriculture in the state mainly depends on timely rainfall and weather conditions. Permanent cultivation is generally practised in the valley districts while terrace cultivation is practised in some pockets of the hills where jhuming or shifting cultivation is widely adopted in most of the hills. Rice is the staple food and is grown in hill and plain areas of Manipur. The development of commercial crops like cotton, kabrangchak, oilseeds and sugarcane is very essential for enhancing the growth of agro-based industries in the State of Manipur.

##### CULTIVATION AREAS OF MAJOR AGRICULTURAL CROPS IN THE STATE

Sl. No.	Crop	AREAS OF AVAILABILITY
1.	Paddy	Available extensively in the hills & plains of the state. Major areas include districts of East Imphal, West Imphal & Tamenglong.
2.	Wheat	All districts of Manipur.
3.	Pulses	All districts of Manipur.
4.	Maize	All districts of Manipur.
5.	Potato	All districts of Manipur.
6.	Sugarcane	All districts of Manipur.

Gifted with suitable agro-climatic conditions, Manipur is home to various food and cash crops, fruits and vegetables. The soil is fertile and suited more particularly in the hills for growing of different fruits and vegetables. Organic farming is the most sought-after practice in the hill areas.

Pineapple, passion fruit and mushroom naturally grow. They are also commercially cultivated. Bamboo shoot and ginger are available in plenty. Manipur has vast potentials for commercial plantation of fruits like lemon, lime, orange, pineapple, banana, passion fruit, amla, olive, figs, mandarin etc.). The quality of pineapple (both Queen and Kew varieties) is distinct with unique taste and flavour. So far, identified potential area for cultivation is estimated at 2,77,064 Hectares. Out of this, about 70,499 Hectares is covered under different crops.

##### CULTIVATION AREAS OF MAJOR HORTICULTURE CROPS IN THE STATE

Sl. No.	Crop	AREAS OF AVAILABILITY
<b>A.</b>	<b>FRUIT CROP</b>	
1.	Passion Fruit	Districts of Senapati, Churachandpur, Chandel and Ukhrul.
2.	Banana	Districts of Tamenglong and Jiribam.
3.	Oranges	Districts of Tamenglong, Churachandpur and Jiribam.
4.	Lime Lemon	Districts of Ukhrul, Tamenglong, Churachandpur and Senapati.
5.	Pineapple	Districts of Churachandpur and Thoubal.
6.	Citrus	Districts of Chandel and Jiribam.
7.	Tapioca	Districts of Ukhrul, Chandel, Churachandpur, Tamenglong and Senapati.
8.	Cashewnut	Districts of Tamenglong and Jiribam.
9.	Coconut	District of Jiribam.
10.	Plum	Districts of Senapati and Ukhrul.
11.	Pear	Districts of Senapati and Ukhrul.

12.	Peach	Districts of Senapati and Ukhrul.
<b>B.</b>	<b>VEGETABLE CROP</b>	
1.	Cauliflower	Districts of Imphal West, Imphal East, Bishnupur and Thoubal.
2.	Cabbage	Districts of Imphal West, Imphal East, Bishnupur, Thoubal, Ukhrul, Churachandpur and Senapati.
3.	Tomato	Districts of Imphal West, Imphal East, Thoubal, Senapati and Churachandpur.
4.	Pea	Districts of Imphal West, Bishnupur, Ukhrul, Chandel, Churachandpur, Tamenglong and Senapati.
6.	French Bean	Districts of Imphal West, Imphal East, Bishnupur, Ukhrul, Chandel, Churachandpur and Senapati.
7.	Lady's Finger	Districts of Imphal West, Imphal East, Bishnupur, Thoubal, Chandel, Churachandpur and Tamenglong.
8.	Brinjal	Districts of Chandel, Churachandpur and Tamenglong.
<b>C.</b>	<b>SPICES CROP</b>	
1.	Chilli	Districts of Imphal West, Imphal East, Bishnupur, Thoubal, Ukhrul, Churachandpur, Tamenglong and Senapati.
2.	Ginger	Districts of Ukhrul, Chandel, Churachandpur, Tamenglong and Senapati.
3.	Turmeric	Districts of Ukhrul, Chandel, Churachandpur and Tamenglong.

**4.2. Forest Resource:** The recorded forest area is 17,418 km<sup>2</sup>, which is 78.01 % of the geographical area of the State. By legal status, Reserved Forests constitute 8.42 %, Protected Forests, 23.95 % and Unclassed Forest, 67.63 %. Major forest types occurring in the State are Tropical Semi-Evergreen, Subtropical Pine, and Montane Wet Temperature Forests. The forest area of the State is made up of four distinct zones: viz. (i) Burma Border Forests (ii) Ukhrul Pine Forests (iii) Forest overlooking the valley and (iv) Barak Drainage Forests. The Burma Border Forests lie along the Indo-Burma Border. The Kabaw Valley marks the eastern boundary of these forests. The Ukhrul pine forests are scattered almost all over the hills surrounding the valley area. The Barak Drainage forests area situated in the hills of the west of valley area along the cost of the Barak River and its tributaries viz. Jiri, Tuivai, Leimatak and Makru.

Manipur has one National Park and one Wildlife Sanctuary covering an area of 22,440 ha and making up 1.01 % of State's geographic area. For a hilly State like Manipur, forest products are the most important natural resources for environmental protection and maintaining ecological balance. The forest area of the state falls into four distinct zones. The main timber species available in Manipur are Teak, Uningthou, Khasi-pine, Dipterocarpes species (Yangou and Khangra), Michelia Champa (Leihao), Terminalia species (Tolhao), Cedrela Toona (Tairen), Schima Walliechii (Usoi) etc. The quality of timber available in Manipur is very suitable for furniture and construction purposes.

#### MAJOR NON-TIMBER FOREST PRODUCTS (NTFPs) IN THE STATE

Sl. No.	NTFPs	AREAS OF AVAILABILITY
1.	Bamboo	Major areas include Jiribam in Tamenglong District & Tipaimukh in Churachandpur District. Other areas are Senapati, Ukhrul, Chandel, Thoubal, Bishnupur and Imphal districts.
2.	Cane	Available mostly in Tamenglong and Churachandpur districts.
3.	Broom Grass	Available mainly in hilly areas of the state.
4.	Honey	All districts of Manipur.
5.	Mushroom	All districts of Manipur.
6.	Bay Leaf	Available mainly in forest areas of the state.
7.	Medicinal and Aromatic Plants	Wildly available in the hills and foothills throughout the state.

**4.3. Mineral Resource:** The Geological Survey of India (GSI) has undertaken systematic survey in the three districts of Manipur viz. Ukhrul, Churachandpur and Chandel and discovered considerable quantities of valuable mineral deposits like limestone, copper, lignite, nickel, chromite, asbestos, salt etc. Some of the important mineral resources are given below.

**Limestone:** Limestone is an important material for manufacturing of cement. It is mainly available in different parts of Ukhrul District viz. Hundung, Mata, Khangoi, Sokpao, Lambui and Kasom. It is also available between 32/4 and 32/6 milestone on Imphal Moreh Road in Chandel District. Only in Ukhrul District, the total inferred deposit of limestone has been estimated to 6.35 million tonnes and 5.76 million tonnes at Phungyar and Meiring respectively.

**Asbestos:** The veins and veinlets of antigorite and chrysotile asbestos have been found in the massive serpentine bearing rocks near Moreh, Nepali Basti and Kwatha but none of these occurrences seem to be of economic importance. A small quantity of asbestos is also available in the eastern part of Ukhrul District.

**Chromite:** Deposits of chromite containing metallurgical grade have been located near the Shiroi hill of the Ukhrul District and hinted the possibility of large deposits in future. Besides, quantity of chromite is also available near the Nepali Basti of Chandel District covering an area of about 90 sq. km. and having maximum thickness of 0.3 metre.

**Copper:** The Geological Survey of India (GSI) has found copper in the Chandel District and Nickel containing copper sulphate, chalcopryrite, chalcocite and metals at Nungau and kongal Thana. A small quantity of copper is also available at Ningthi & Kwatha of the Chandel District and Humie of the Ukhrul District.

**Nickel:** Nickel associated with the serpentinite rock has been located at Nampesh and Kwatha areas of the Chandel District. The GSI in their geochemical and other methods has found metallic nickel dispersed in the soil in fairly high concentration of nickel varying upto 0.9 percent. Soil samples in the Moreh area containing weathered serpentinite rock also show the availability of nickel varying from 0.24 to 0.9 percent.

**Lignite:** The GSI has found deposits of lignite in Kangvai village of Turenloo valley of Churachandpur District. The total quantity of lignite has been estimated at 12,262 tonnes which can be used in manufacturing cement in the cement plant in Ukhrul district.

**Salt:** Salt is mainly available in Waikhong, Sikhong, Chandrakhong and Keithel Manbi. Most of the salt springs are being tapped by driving one metre diameter lined wells for manufacture of salt in a small-scale.

#### MAJOR MINERALS AND AREAS OF THEIR AVAILABILITY IN THE STATE

Sl. No.	Minerals	AREAS OF AVAILABILITY
1.	Limestone	Hundung, Phungyar, Meiring Mata, Khangoi, Shokvao, Lambui, Kasom, Paorei, Phungcham, Kazing Malung, Shokpau, Yongphu, Shingda, Marao, Singkap, Shangshak, Koshu, Nungou, Mawai, Shongphel, Sirarukhong, Cretland, Chingsou, Humine, Makan, in Ukhrul District; & Toupokpi, Chakpikarong, Pallel, Nungphura, Nungpal, Sajiktampak, and Haikot in Chandel District.
2.	Asbestos	Nepali Basti, Kwatha and Moreh in Chandel District.
3.	Chromite	Lunghar, Phangrai, Sirohi, Gamnom, Pushing, Khangkhui, Yentem, Nungbi, Hangkau, Apong, Chingai, Poi, Pinghang, Nampisha, Kangpat, Chattrick Khunou in Ukhrul District; and Kwatha, Sibong, Khudengthabi, Minou-Mangkang in Chandel District.

4.	Copper	Ningthi, Kwatha in Chandel District and Nampisha, Humie in Ukhrul District.
5.	Nickel	Gamnon, Ninthi, Pushing, Hangkau, Apong of Ukhrul District; and Nambashi, Kwatha, Khudengthabi, Moreh in Chandel District.
6.	Lignite	Kangbai village of Turenloo valley in Churachandpur District.
7.	Salt	Waikhong, Sikhong, and Chandrakhong in Thoubal District; Keithel Manbi in Senapati District.
8.	Serpentinites	Moreh in Chandel District; and Tushom in Ukhrul District
9.	Idocrase / Rhodonite	Kwatha, Khudengthabi of Chandel District; and Gamnom, Pushing, Nampisha in Ukhrul District.

## 5. INFRASTRUCTURE FACILITIES:

Manipur being a hilly terrain, it requires such an infrastructural set up which provides physical accessibility to all parts of the State. Adequate and efficient provision of a well connected road, rail, and aviation network is an important pre-condition for the social and economic development of the State. Besides, a sound telecom and power infrastructure is necessary to improve the quality of life. Infrastructure set up in the State includes, transportation (railways, roadways and aviation); telecommunication; and power etc.

**5.1. Power:** As on August 2016, Manipur had a total installed power generation capacity of 209.74 MW. The state has a potential to generate hydropower equivalent to about 2,200 MW. Of the total installed power generation capacity, 80.98 MW was contributed by hydropower, 123.31 MW by thermal power and renewable power contributed 5.45 MW of capacity. The power supply of the State depends upon the Central Sector Generating Stations located in the North Eastern Region. They include:- Loktak Hydro Electric Project (NHPC); Kopili HE Project; Khandong HE Project; Doyang HE Project; Rangnadi HE Project, etc. The Loktak Hydro Electric Project is the main source of power supply in the State. Thus, Manipur depends mainly on the power available from the Loktak hydro station and the power purchased from central generating stations. Besides, there are a large number of perennial streams and rivers in the State, which can be explored for generating power through mini/small/major hydel projects.

**5.2. Road Network:** The main artery of communication is the National High-way No.39 connecting Imphal with Dimapur in the neighboring state of Nagaland. It runs through Mao in the extreme north of Manipur to the International border town of Moreh in the south-east. Dimapur is the railhead for road traffic to the state and in fact, this road is for so long her life line. The road passes through the hilly area of Senapati District and part of Nagaland Hill touching Kohima in between. Another road of considerable economic importance is the 225 kms. long National Highway No. 53 viz. New Cachar Road, connecting Imphal with Jirighat in Manipur Assam border. It passes through dense forests and difficult terrains of Tamenglong District which remained, by far, the most inaccessible district in the state. The opening of this road brings the District closer to other parts, helps in exploring untapped resources of the district and give incentives for more production and general development besides being a second life-line for the state.

**5.3. Railways:** The nearest rail-head is Dimapur, which is 215 km from Imphal. In May 2016, the Jiribam to Silchar broad gauge passenger train was flagged off.

**5.4. Aviation:** The state has a domestic airport at Imphal – the Tulihal Airport, which is located about 8 km from the heart of the city. Imphal Airport is the 2 nd largest airport in the northeastern region with postal air cargo services for 6 days a week. The airport underwent expansion to increase parking space for more aircrafts & to make it an international standard airport. At peak hours, the integrated passenger terminal has the capacity to handle 950 travelers. A new terminal building with cold-storage facilities is in the pipeline.



**5.5. Communication Network:** Telecommunication infrastructure in the state includes - independent satellite link with Delhi & Shillong; micro-wave link with Kohima & beyond; 40 digital exchanges; & internet C-II net working at Imphal with 810 connections to all district headquarters. As of October 2016, the northeastern states of India had about 11.90 million wireless subscribers & 122,270 wire-line subscribers. As of October 2016, the northeast region had 122,550 wireline subscribers for BSNL & 1,621,407 BSNL wireless subscribers.

## **6. THE BUSINESS ENVIRONMENT:**

The gateway to the South and South East Asian countries, Manipur fits the bill in India's Act East Policy. Given its potential in agriculture, horticulture, healthcare, handloom & handicraft, and also proximity to South ASEAN countries, Manipur's growth prospects are quite bright. Manipur's economy is mainly driven by agriculture, forest product, industries, mining and tourism sectors. Trading in the border towns of Moreh and Tamu along the Myanmar border is quite flourishing, and it is expected that trading activities will extend to a few other neighbouring countries such as Thailand, Laos, China along the old Burma Road and the proposed Trans-Asia Highway and Railway.

The Government of Manipur aims at driving industrial growth by attracting private investments and provide an investment climate with better regulation by removing barriers to competition and growth. The investment climate is central to growth and outcomes for betterment of the society. The State Government has been introducing several policy measures with various components being offered such as incentives, improved infrastructure facilities, supply of quality power, and credit flow from Bank and Financial institutions, better market linkages and to boost investor confidence. It has been the endeavour of the state govt. to create an investor friendly environment for rapid industrial development in Manipur, to generate more employment opportunities and to have significant increase in the State Domestic Product, to explore and enhance the resource base of the State.

The DICs were established in all the District Headquarters with 2 (two) sub centres at Jiribam and Kangpokpi subdivision of Manipur. Its emphasis is laid on dispersal of industries in the district headquarters, small towns and rural areas. The intention of the policy makers is to make the DICs to work as catalysts for promotion of cottage and small industries. It provides all the resources with its facilities required by the entrepreneurs including identification of suitable schemes, preparation of feasibility reports, arrangements for supply of machinery and equipments, provision of raw-materials and facilities for marketing and extension services. Various schemes like Seed/Margin Money, Self-Employment for Educated Unemployed Youths and Prime Minister's Employment Generation Programme were instrumental in the growth of industries in the state.

## **7. INDUSTRIAL INFRASTRUCTURE:**

The Government of Manipur has so far created the following infrastructures in order to facilitate the Industrial growth in the State.

<b>Sl. No.</b>	<b>Name of the Industrial Infrastructure</b>
1.	Takyel Industrial Estate and Tera Urak Industrial Estate
2.	Nilakuthi Food Park: The food park is constructed on a land area of about 30 acres at Nilakuthi. The Manipur Food Industries Corporation Ltd. is the implementing agency. The park will host 49 food-processing units for which common facilities will be provided.
3.	Integrated Infrastructural Development Project (IID): The Government of India has sanctioned the IID project at Moreh. As of June 2015, about 75% of the work has been completed.
4.	Export Promotion Industrial Park (EPIP): The Government of India has approved the EPIP project at Khunuta Chingjin in the Kakching subdivision of Thoubal district.
5.	Trade Centres: The Government of India had sanctioned for construction of 2 trade centres, 1 at Moreh & another at Imphal. Construction of both the trade centres is complete.

6.	Industrial Growth Centre: The Government of India has approved 1 industrial growth centre project at Lamlai-Napet. The government has invited an expression of interest from the entrepreneurs/units/organisations who are planning/willing to set up industrial units within the proposed centre.
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**7.1. Manipur Industrial Development Corporation Ltd (MANIDCO):** Manipur Industrial Development Corporation Limited (MANIDCO){ Formerly Manipur Small Industries Corporation Limited (MSIC)} was incorporated in the year 1969 under the Companies Act.1956 (No. 1 of 1956).The authorized share capital of the company is Rs 16.00 crore. The paid up share capital is Rs. 12.24 crore of which state Government contributed Rs 8.03 crore and IDBI contributed Rs. 4.21 crore. The corporation is multi-functional company which act as (i)State Financial Corporation (SFC), (ii)State Industrial Development Corporation (SIDC) and (iii)State Infrastructure Development Corporation. It is the only financial institute of the state. The company has to cater long term credit requirement of industries.

## 8. THRUST AREAS UNDER STATE INDUSTRIAL POLICY:

The following are the thrust areas for industrial development under the industrial and investment policy of Manipur 2017;

Sl. No.	Thrust Areas
1.	Agro, Horti and Floriculture based industries
2.	Medicinal and Aromatic Plants industries
3.	Bamboo & Bamboo Products Processing
4.	Coffee, Tea and Rubber Plantation
5.	Spices
6.	Dairy and Allied Products
7.	Meat Processing
8.	Mushroom
9.	Honey
10.	Minor Forest Produces
11.	Animal Feed and Poultry Industries
12.	Packaging industries
13.	Breweries
14.	Skill Development and Training
15.	Cash Crops

Sl. No.	Thrust Areas
16.	Mineral based industries
17.	Textiles, Handloom and Handicraft industries
18.	Trade and Commerce under Export Import mechanisms
19.	Information Technology and IT enabled services
20.	Tourism and Hospitality Industry
21.	Health Tourism
22.	Sports Infrastructure and Accessories Industry
23.	Entertainment and Music Industries

8.1. Agro, Horti and Floriculture based Industries: Keeping in view the edge the state has in agro and horti food processing sector, State Government will continue to give priority to agro and horti based industries, which will not only strengthen the agricultural base of the state but also will enhance employment opportunities. Units utilizing locally available raw materials from organic farming in the state will be encouraged. The state is endowed with salubrious climate making it conducive for flowers of various varieties to bloom throughout the season. Units to harness floriculture activities in the state will be encouraged.

8.2. Medicinal and Aromatic Plants Industries: The state is rich in numerous medicinal plants. Drugs and pharmaceuticals units based on medicinal plants enjoying biotechnological tools will be encouraged. It has potential in widespread plantation of aromatic plants like lemon grass (*Cymbopogon citratus*), sangbrei (*Pogostemon Purpurascens*), laibakngou (Indian worm wood-Angiosperm), fresh bamboo leaves, lotus leaf etc. for Cosmetics Industries and Pharmacological Industries. The sub-tropical climate, soil and rainfall condition are ideal for lemon grass cultivation. Distillation of oils from aromatic plants and value addition for production of aromatic and natural dyes will be encouraged.

8.3. Bamboo & Bamboo Products Processing: Manipur is a predominantly bamboo growing state with more than 20 different varieties, with some exotic varieties growing in abundance. Building materials and furniture manufactured from bamboo give classy look and are more resistant to rain. Therefore, demand for such products has been increasing. Bamboo Park for industrial production of building materials and furniture with bamboo as raw material shall be set up and units will be encouraged to manufacture building materials with bamboo. Varied bamboo products including extraction of ethanol is planned and being explored in collaboration with oil companies. Besides, units for processing of bamboo shoots, a processed food which is sought after not only in Manipur but in the entire South Asian countries, will be encouraged.

8.4. Coffee, Tea and Rubber Plantation: Tea is grown, through in unsystematic manner by the farmers, in various parts of the state more particularly in Tamenglong, Jiribam, Churachandpur and Ukhrul Districts. The locally grown tea are known to have good taste, aromatic flavour and liquor strength which make them good potential for commercial investments. Further, the State has a huge potential for growing a number of plants for processing herbal tea where a few units have already been doing very well even exporting to outside the State. Likewise, the soil and climatic condition of almost the entire State of Manipur is suitable for growing coffee. As such, the potential for growing them can profitably be exploited and units opting for their processing will be encouraged. Also keeping in view the climate suitable for rubber plantation in some parts of the State like Jiribam where Government plans to take up rubber plantation in a focus manner, rubber processing and its allied industries will be encouraged.

8.5. Spices: Given the salubrious climatic conditions and fertility of land especially for spices like ginger, turmeric, cardamom, cinnamon, dal-chini, capsicum and the famous U-Morok which is renowned as the hottest chilly in the world, and other spices in the State, their cultivation and processing will be taken up in a big way by way of availing the various supports from the Spices Board and other agencies of the Government. The ginger and turmeric produced in the Hills of Manipur are preferred for their taste, flavour and colour. The ready market outside the State will be targeted with our good products of spices to enhance the economic viability of the growers in the State.

8.6. Dairy and Allied Products: There is large demand-supply gap of milk and allied dairy products in the State. With the traditional rearing of cattle being a common practice in most villages, this sector has tremendous potentials. Commercial production of milk and industrial activities for processing of milk and milk products shall be encouraged.

8.7. Meat Processing: There is a growing consumption of meat and meat products in the State as well as the neighboring states which offers ready market within the State itself. Given the traditional practice of rearing cattle and other animals for the purpose of consumption of meat in most parts of the State, especially in the Hills, meat production need to be taken up in commercial scales using modern technological interventions. Value addition of processing meat in industrial units will be encouraged.

8.8. Mushroom: Mushroom has become an attractive food item and given the fact that it can be cultivated almost throughout the year in Manipur, its production need to be promoted. Since mushroom preserved and sold through canning is gaining ground, this offers a good investment opportunity as it can be taken up domestically by many households, especially in the rural areas.

8.9. Honey: Honey production is an economic activity that needs to be taken up in much larger scales and by more people particularly in the rural areas as honey is very good market both in the State and outside. Considering the medicinal value of honey and its multiple health benefits, honey production need to be supported in a major way. The focus need to be on pure and organic honey which has a ready niche market as the existing market is populated by mostly adulterated honey that has been added with syrups of jiggery etc. The climate and the topography of the State is considered highly suitable for bee rearing which is key for honey production. The Department has initiated the process to diversify farmers of the State into bee rearing to produce large quantity of honey in the State under the Manipur Bee Keeping and Honey Mission. The bees found in Manipur produce less amount of honey but it is of the best qualities. Wax production is also an important area in this regard as the demand for wax is much higher than honey.

8.10. Minor Forest Produces: Minor forest products include all products obtainable from the forests other than wood and thus comprise products of vegetable and animal origin. Some of the important forest products of minor nature are- grasses, bamboos and cane, tans and dye, oils, gums and resins, fibers and flosses, leaves, drugs, spices and poisons, edible products and animal products. Some grasses are used for cordage, matting and as raw material manufacturing paper. Cane grows abundantly in the moist forests of Manipur which is very suitable for growth of cane. It is mainly used for making strings, ropes, mats, bags, baskets, furniture, walking sticks, umbrella handles, sports goods etc. Many trees which grow in Manipur forests contain several types of oils which are used to manufacture soaps, cosmetics, confectionary, pharmaceutical preparations and many more things. Commercially important oils are those obtained from sandalwood, lemon grass and euclyptus globulus. Some resins are produced in Manipur also. Resin is an important raw material for several industries of which paper, paint, varnish, soap, rubber, water proofing, linoleum, oils, greases, adhesive tape, phenyl, plastic etc are important. Many drugs are obtained from fruits, flowers, roots, stems and leaves of different types of trees, plants and herbs. Quinine is the most important drug obtained from the Indian forests. Given the huge forest area in the State, the State Government shall encourage industries that can use the raw materials available from minor forest produces.

8.11. Animal Feed and Poultry Industries: To ensure sufficient supply of meat and meat products, the State Government shall encourage setting up of industries dealing in agro based food including animal feed and poultry feed.

8.12. Packaging Industries: Packaging industries using eco-friendly materials shall be encouraged to tap the available market for packaging of local products and to establish opportunities for generating employment while keeping in mind the necessity for conserving the environments.

8.13. Breweries: The potentials of Sekmai rice-bowled liquor and good availability of various fruits offer the State excellent opportunities for setting up breweries and wine industries specifically focus on the export markets. The sample products of pure Sekmai rice-brewed liquor has been tasted and liked by many liquor connoisseurs and can find niche market of its own while the wine products, given the high juice contents of our local fruits, will have its own economic viability that can productively and optimally exploit our available resources and enhance the socio-economic conditions of the growers in the State.

8.14. Skill Development and Training: The State Government recognizes the technical, managerial and entrepreneurial skill among the people of the State is a vital factor in the process of industrialization and the imperatives to promote the same. Establishment of skill development centres and business incubators, both at the State level as well as at all the Districts level, will be promoted under the policy.

8.15. Cash Crops: The feasibility for large scale cash crop plantations will be given priority focus by establishing synergies with concerned line Departments and agencies of the Government. The agrarian backbone of the State economy will be explored for upgradation by bringing in new cash crops that are economically viable and suitable to the State's soil and climatic conditions.

8.16. Mineral based Industries: Manipur is rich in minerals especially chromite and limestone. Establishment of mineral based industries for cement and chromites extraction units have good prospect in the State. A separate Manipur Mineral Policy has been framed to encourage this sector.

8.17. Textiles, Handloom and Handicraft Industries: Manipur is known for its rich tradition of handloom and handicraft products which is as varied as the varied communities inhabiting the state. The State has the second largest number of handloom clusters in the country. A separate Manipur Textile and Handloom Policy has been framed to encourage this sector.

8.18. Trade and Commerce under Export Import mechanisms: Manipur, being India's Gateway to South-East Asia, is located in an advantageous location for trade and commerce with the South-East Asian countries. This is envisioned to throw up huge and unique potential for the State in an hitherto unseen scale in the very near future. The State Government is gearing up to tap the new openings this will bring about so as to avail maximum benefit for its people. In view of advantages available, Research & Development in marketing, infrastructure development and related areas will be promoted under the Policy.

8.19. Information Technology and IT enabled services: The State has advantage in IT and IT –enabled services because of the good availability of English speaking and technically trained youths. Firms in IT sector will be encouraged. Some of the institutes imparting IT and allied subjects are Manipur University, Manipur Institute of Technology; NIELIT, NIT, Polytechnics, it is, Institute of Co-operative Management and numerous private institutions. The Government will continue to promote them particularly in the context of tapping the State's potentials for the IT and IT enabled industries.

8.20. Tourism and Hospitality Industry: There is immense tourism potential in the State which has remained unexploited to its potential. 'Loktak' the biggest fresh water lake in the North-East and 'Keibul Lamjao' the only floating National Park in the country are known world-wide and the home of Sangai, the rare brow-antlered deer that is reportedly found only in these floating islands. In addition, there are plenty of opportunities particularly for Eco-Village Tourism, Adventure Tourism, battlefield Tourism, Urban Tourism (Hospitality Industry) which will be encouraged.

8.21. Health Tourism: The unique strength of Manipur in medical sector with its huge medical professionals and its famous nursing care coupled with new and modern state-of-the-art medical facilities has opened up a new horizon in health Tourism, especially from the neighbouring States as well as the neighbouring country of Myanmar. The State run RIMS, JNIMS and other medical facilities alongwith private Hospitals like Shija Hospitals, City Hospital, Advanced Hospitals, Raj Polycity, Sky Hospital, Imphal Hospital, Maipakpi Child & maternity, mkothercare Hospital, Horizon Hospital, Jeevan Hospital etc have created good potential for the State in this regard. The State will continue to support this sector.

8.22. Sports Infrastructure and Accessories Industry: Considering the fact that Manipur is renown as the sports powerhouse of the country and given the immense talents of the State in the field of games and sports, talent-hunt centers to help develop sports infrastructure in every district to identify and groom prospective sportspersons will be encouraged. In addition units involved in manufacturing of sports accessories will be entitled to avail benefits under this policy. The State already has a separate Sports Policy.

8.23. Entertainment and Music Industries: The State is well known for its huge talents in music, performing arts and theatre including dance forms. To boost the youth's participation and preservation of the State's unique culture, the State Government shall encourage industries associated with entertainment, music and film industries in the form of infrastructure and skill development. The State already has a separate Film Industry Policy.

## 9. POTENTIAL SECTORS IN THE STATE:

**9.1. Border Trade:** Moreh is 110 kms from the capital city Imphal of Manipur on the National Highway 39. The cross-border trade, through Moreh of Manipur, became operational in April 1995. The opening of the Border Trade along the Tamu (Myanmar)-Moreh (Manipur) sector is quite significant as this would act as an economic bridge between industrially developed India and the blooming economies of South East Asian countries. Along this sector besides the Border trade (within 40 km. of the international border based on barter mechanism) the normal export-import as per the existing policy of Government of India is possible. A developed trade across this border will be of advantage mainly in reduced cost while assessing the market of South East and even far-east Asian countries. India's "Look East" Policy and several new measures taken by both the Central and State Governments to promote and enhanced trade link with SE Asia, provide Manipur with a competitive advantage.

**9.2. Agro based industry:** Agriculture plays a vital role as it is the main backbone of the State economy. The agriculture is mainly dependent on monsoon however around 28.49% of area under cultivation is irrigated by Canals. Moreover with a range of natural conditions and varied soil and topography, the state produces sizeable quantity of Paddy, Wheat, Maize, Pulses, Oilseeds such as Mustard, groundnut, Soyabeans, Sunflower, Ginger, Turmeric and Fruits like Pineapple, Lime/Lemon, Banana, Orange, Papaya, Plum and vegetables like, Cauliflower, Cabbage, Tomato, Pea, Squash, Carrot, Pumpkin, etc. The existing area under fruits and vegetable crop is about 1.08% of the total geographical area and with such suitable agro-climatic conditions, the state still has lots of potential areas on the foot hills, mild hill slopes and along the river banks. The State Government has given special impetus to farming for pineapple, passion fruit, mushroom, etc. on a massive scale. Many agri-horticultural crops of the State, when processed, has potential for export. On this count, various preparations of pineapple, passion fruit, bamboo shoot, mushroom and ginger have attracted wide markets outside the State. Processing for extracts of spices, medicinal and herbal plants is another area of focus for agro-based industry.

**9.3. Food Processing based industries:** The agro-climatic condition of this State makes it suitable for growing almost all kinds of agricultural and horticultural crops and setting up of food processing industries. Manipur produces sizeable quantity of paddy, wheat, maize, pulses, oilseeds (like mustard, groundnut, soya beans and sunflower), fruits (like pineapple, lime, lemon, banana and orange), and vegetables (like cauliflower, cabbage, tomato and peas). As a result, the food processing sector plays a significant role in diversification and commercialization of agriculture, horticulture, fisheries, poultry, animal husbandry and forestry. In view of the importance of the industry, the State Government has established a 'Food Processing Training Centre' and 'Food Processing Training Hall' at Imphal. A food Park is also being set up in the same place.

**9.4. Sericulture based industries:** Sericulture plays a vital role in the improvement of economic conditions of the artisans of the Manipur state. Manipur has four varieties of silk: mulberry, eri, muga and oak-tussar. It is an important labour-intensive and agro-based industry generating employment opportunities for the rural people with lowest investment cost. Sericulture has a long tradition and has been practised by the farmers from time immemorial.

**9.5. Forest based industries:** Cane and Bamboo which are available in plenty in the hilly region of the state, provide scope for development of industries related to these products. Manipur is one of India's largest bamboo producing states, and a major contributor to the country's bamboo industry. Manipur accounts for about 25% of the total growing stock of bamboo of the North Eastern Region of India and 14% of the country. Besides, resin, lac, medicinal plants, fruits etc. are said to be abundantly found in the forest of the state.

**9.6. Animal Husbandry based industries:** The main categories of livestock reared in Manipur are cattle, buffalo, sheep, goat, dog, pig, etc. Cattles and buffaloes provide motive power in wet cultivation. Rearing of pigs and poultry are found to be very important sources of income generating activities.

**9.7. Handloom and Handicrafts based industries:** Handloom industry is flourishing since time immemorial as the largest cottage industry of this State. It is providing maximum employment opportunities in the state, particularly to women. The main handloom products of Manipur are sarees, bed sheets, curtains, fashion garments, scarves and pillow covers. Fabrics and Shawls of Manipur are also in great demand in the national as well as international market. The handicraft industry of Manipur occupies a unique place amongst various crafts of the country and consists of cane and bamboo products as well as the pottery culture. The pottery culture of the state is very old and due to the abundant availability of cane and bamboo, basketry has been a popular occupation of the people of Manipur. Besides, fishing equipment are also made of cane and bamboo. All such products are in great demand from both domestic as well as the international buyers.

**9.8. Mineral based industries:** The Geological Survey of India (GSI) has undertaken systematic survey in the three districts of Manipur viz. Ukhrul, Churachandpur and Chandel and discovered considerable quantities of valuable mineral deposits like limestone, copper, lignite, nickel, chromite, asbestos, salt etc. There are good potentiality of developing mineral-based industries in the state.

**9.9. Tourism based industries:** Manipur, due to its wealth of flora and fauna is also known as a 'flower on lofty heights'. Its breathtaking scenic beauty makes it a tourist's paradise. The enchanting landscape includes rare species of flora and fauna, virgin forests, cascading rivers, hilly green landscape, and meandering streams. As an addition to these, various other tourist attractions offer excellent opportunities for developing different types of tourism in the state.

**9.10. Information Technology based industries:** The Government of Manipur has recognized the vast potential of the IT industry in the State and has accorded high priority to the Electronics and Information Technology sectors as a major thrust area of development. Also, the state has a vibrant manpower potential and qualitative work force which is ideally suited for such industries.

**9.11. Hydropower:** Manipur has hydro power potential of about 2000 MW which is sufficient not only to meet the local requirement for domestic and industrial uses but leave surplus for marketing outside. The State Government has chosen this sector as a thrust area for development. The Government has given top priority in generation sector to develop hydro power potential as one of the major industries. Substantial numbers of skilled unemployed manpower is also available in the State. Road communication, although hilly, is readily available for the most of the project sites.

**9.12. Service based industries:** Service-based industries are now playing an important role in the overall economic activity. The important servicing units consists of automobile repairing workshops, battery charging, electrical goods repairing, electronics items assembling repairing, Photostat, lamination etc. There is good potential of service based industries in the districts of Manipur.

# EXECUTIVE SUMMARY

## TITLE OF THE STUDY MEGHALAYA STATE INDUSTRIAL PROFILE

### 1. INTRODUCTION:

Endowed with incredible natural beauty, Meghalaya is one of the most beautiful states in Northeast India. Known as 'the abode of clouds' in Sanskrit (Megh- Cloud; Alay- Home), Meghalaya is a hilly state landlocked between Assam and Bangladesh. Meghalaya was previously part of Assam but attained its full-fledged statehood on 21<sup>st</sup> January 1972 after the approval of "The North Eastern Reorganisation Act, 1971" in Parliament. Shillong the capital of Meghalaya, known as the "Scotland of the East" is located at an altitude of 1496 metres above sea level. Meghalaya is the homeland mainly of the Khasis, the Jaintias and the Garos. The Garos inhabit in western Meghalaya, the Khasis in central Meghalaya, and the Jaintias in eastern Meghalaya. English is the official language of Meghalaya. The other principal languages spoken include Khasi, Pnar and Garo.

KEY HIGHLIGHTS	
<ul style="list-style-type: none"><li>• <b>Meghalaya receives the highest rainfall in India – 12 m annually.</b></li><li>• <b>Largest producer of Coal and Limestone in North East India.</b></li><li>• <b>Meghalaya's the Lakadong variety turmeric (grown in Jaintia Hills), is considered best in the world.</b></li><li>• <b>One of the highest producers of strawberry in India</b></li><li>• <b>Shillong, 'Rock capital of India' has received visits from world famous rock bands.</b></li></ul>	
<b>Major Industry Sectors</b>	<ul style="list-style-type: none"><li>• <b>Hydroelectric Power</b></li><li>• <b>Agriculture and Horticulture</b></li><li>• <b>Mineral Industry</b></li><li>• <b>Tourism and Hospitality</b></li></ul>

### 2. STATE GEOGRAPHY:

Meghalaya is spread over an area of 22,429 square kilometers and lies between 20.1° N and 26.5° N latitude and 85.49 °E and 92.52 °E longitude. It is bounded on the north and east by the Indian state of Assam and on the south and west by Bangladesh. Meghalaya is geographically termed as the Shillong Plateau or the Meghalaya Plateau. Meghalaya represents the extension of peninsular India towards the north-east. It consists of rocks, which are rich in valuable minerals like coal, limestone, silimanite and uranium. The central part of the plateau consisting of the Khasi hills has the highest elevations. There are many rivers and beautiful waterfalls in Meghalaya. The highest point in Meghalaya is the Shillong-Peak which overlooks the city of Shillong. It has an altitude of 1961 m. The highest point in the Garo hills is the Nokrek Peak with an altitude of 1515 m.

**2.1. Climate:** The height and physical features greatly influence its climate, a major aspect of Meghalaya geography. The four major seasons of the state of Meghalaya are: the winter season (December - February), the rainy season (May - early October), the summer season (March - April) and again the cold season (early October - November). The Meghalaya sky seldom remains free of clouds making it the wettest state in India. The average annual rainfall is about 2600 mm over western Meghalaya, between 2500 to 3000 mm over northern Meghalaya and about 4000 mm over south-eastern Meghalaya. There is a great variation of rainfall over central and southern Meghalaya. At Sohra (Cherrapunji), the average annual rainfall is as high as 12000 millimetres, but Shillong located at a distance of about fifty kilometres from Sohra receives an average of 2200 mm of rainfall annually. Though the climate remains moderate in all seasons, humidity is high in the interiors of Garo hills. The places where the altitude is high such as Shillong, the climate is cool and soothing.

**2.2. Topography:** The topography of Meghalaya comprises of landscapes that have a blend of mountain and plateau regions and this is why it is also known as Meghalaya plateaus. The altitude of these plateaus



range from 150 meters to 1961 meters. Meghalaya is already known for its beautiful landscape and green vegetation. These elements of the topography of Meghalaya add charm to the picturesque state. Forests, which are an integral part of the topography in Meghalaya, cover around 8514 square kilometers of the whole area of Meghalaya. Rivers such as Manda, Janjiram, Simsang, Ganol, Khri, Umkhem, Kynshi, UmiamMawphlang, Myngot, Myntdu etc. that flow across the terrain. It is due to these seasonal rivers that Meghalaya gets water for its dense vegetation.

### **3. THE ADVANTAGES OF THE STATE**

The advantages of the Meghalaya state are as follows;

**3.1. Store house of Natural Resources:** Meghalaya is a land of abundant natural resources. It is a storehouse of many important minerals of economic significance including limestone, coal, clay, glass sand kaolin, quartz, iron stone and granite. Deposits of limestone and coal have been well explored in the state and sizeable reserves have been established for kaolin clay and silimanite. Forest resources include varieties of timber, bamboo, bay leaves, cinnamon, citronella, honey, wax and lax. Meghalaya is also home to an amazing variety of aromatic and medicinal plants.

**3.2. Suitable Climate for Agriculture:** The State has a vast potential for developing horticulture due to agro-climatic variations, which offer much scope for cultivation of temperate, sub-tropical and tropical fruits and vegetables. Besides the major food crop of rice and maize, Meghalaya is renowned for its oranges (Khasi Mandarin), pineapple, banana, jackfruits, temperate fruits like plum, pears and peaches etc. Cash crops popularly and traditionally cultivated include potato, turmeric, ginger, black pepper, arecanut, betelvine, tapioca, short staple cotton, jute and mesta, mustard and rapeseed. Special emphasis is presently laid on the non-traditional crops, like oilseeds (groundnut, soyabean and sunflower), cashewnut, tea and coffee mushroom, medicinal plants, orchids and commercial flowers.

**3.3. Tourist Destination:** Meghalaya is one of the most picturesque states of India, which serves as an ideal gateway for visiting tourists. The panoramic landscapes, foggy hills, cascading waterfalls, serpentine rivers and terraced slopes soothe the minds of weary travellers. Meghalaya is blessed with rich wildlife. The dense forests of Meghalaya are inhabited by many rare species of birds and animal including Elephants, Tigers, Golden Cats, Binturongs, Slow Loris, Monkeys and birds like Hornbills, Partridges, Teals, Snipes and Quails. Meghalaya is dotted with numerous tourist spots. Shillong, the capital city of Meghalaya has many beautiful sites such as Lady Hydari Park, Elephant falls, Ward's lake, Shillong peak, and the golf course which is one of the best in the country.

**3.4. Adequate Infrastructure Facilities:** Infrastructure set up in the State includes a well-connected road network, power, transportation, communication, banking, medical facilities, education etc. The Government of Meghalaya has proposed to undertake major infrastructure projects in the State in order to attract investors for the overall development of the State.

**3.5. Promotional Govt. Policy with Single Window Clearance Facility:** Meghalaya Government has always endeavoured to set up the right kind of business climate to motivate investments in the State. The Meghalaya Industrial and Investment Promotion Policy 2012, was announced with a view to take advantage of the liberalised economic scenario in the country and also to keep pace with development in the national industrial sector. A single window facility is also introduced with an aim to expedite the issues of various clearances for new Industrial Projects.

**3.6. Available Manpower Resource:** Meghalaya has a large pool of skilled, semi-skilled and unskilled labour. Shillong has some of the best colleges in the whole of North East. These colleges have been producing graduates who have very strong English speaking capability. A fair number of manpower possesses qualifications from recognised professional institutions and universities of India.

### **4. AVAILABLE RESOURCES:**

**4.1. Agriculture and Horticulture Resource:** Agriculture in Meghalaya is the main contributor to the economy. Around 80% of the total population of Meghalaya depends upon agriculture for their living. Hence agriculture in Meghalaya is the main occupation of its people. Some place have tropical vegetation while some have temperate vegetation. In the recent times, the use of high yielding seeds of various varieties have given successful results thereby enhancing the agriculture in the state. The main food crops that are an essential part of agriculture around Meghalaya are rice and maize. Among the horticultural crops, pineapple, banana, lemon, Litchi, Jack fruits, plum, peach, Guava, Pear, etc, are the most important. The cash crops that have added value to agriculture of Meghalaya are Tezpatta, Jute, Rapseed, Black Pepper, Potato, Mustard, Short Staple Cotton, Arecanut, Ginger etc. Among the non-traditional crops, mushroom, cashewnut, wheat, tea, oilseeds etc. contributes mainly to the agricultural revenues of the state. Cashew nuts are extensively grown in West and South Garo Hills areas of the state.

#### CULTIVATION AREAS OF MAJOR AGRICULTURAL CROPS IN THE STATE

Sl. No.	Crop	AREAS OF AVAILABILITY
1.	Rice	Districts of West Garo Hills, East Garo Hills and West Jaintia Hills.
2.	Maize	Districts of West Garo Hills & West Khasi Hills.
3.	Wheat	Plain areas of Garo Hills districts.
4.	Rape-seed and Mustard	Garo Hills districts.
5.	Soyabean	Districts of Ri-Bhoi, East Khasi Hills, West Khasi Hills and Jaintia Hills.
6.	Jute	Garo Hills districts.
7.	Cashew Nuts	Extensively grown in West Garo Hills and South Garo Hills.
8.	Potato	Districts of East Khasi Hills & West Khasi Hills.
9.	Tapioca	Districts of Garo Hills and Ri-Bhoi.
10.	Sweet Potato	All districts of Meghalaya.
11.	Arecanut	Districts of West Garo Hills, East Garo Hills, Ri-Bhoi and West Jaintia Hills.

But almost the entire state is influenced by age-old practice of slash and burn agriculture, except some pockets of valley bottomlands. This practice destroys the protective and productive vegetation in preference to a very brief period of immediate crop production. Because of the hilly terrain, settled cultivation is practiced only in a small portion of the total cultivated land, mostly confined to the valleys. In view of the high labour cost and energy input involved and in absence of other viable alternatives, the majority of the population of the state continues to depend on shifting cultivation for their subsistence livelihood. To bring more improvement in the Meghalaya agriculture, the state government is planning to lay importance on cash crops, oilseeds and pulses. The government has set up an autonomous board to encourage cultivation of tea in the tea gardens and increasing new plantations of crops so that more and more area can be brought under agricultural activities.

#### CULTIVATION AREAS OF MAJOR HORTICULTURE CROPS IN THE STATE

Sl. No.	Crop	AREAS OF AVAILABILITY
<b>A.</b>	<b>FRUIT CROP</b>	
1.	Orange	Districts of East Khasi Hills, West Khasi Hills, Ri-Bhoi, West Jaintia Hills, West Garo Hills and East Garo Hills.
2.	Pineapple	Districts of Ri-Bhoi, East Khasi Hills and Garo Hills.
3.	Lemon	
4.	Banana	Districts of West Garo Hills, East Garo Hills and Ri-Bhoi
5.	Litchi	Districts of West Garo Hills, East Garo Hills and Ri-Bhoi.
6.	Jackfruit	Districts of West Garo Hills and Ri-Bhoi.
7.	Passion Fruit	Districts of West Garo Hills and Ri-Bhoi.
8.	Strawberry	Ri-Bhoi district.

<b>B.</b>	<b>VEGETABLE CROP</b>	
1.	Tomato	Umnsing-Nongpoh Belt of Ri-Bhoi district, East Khasi Hills and West Jaintia Hills.
2.	Cabbage	Districts of East Khasi Hills and West Khasi Hills.
3.	Cauliflower	Districts of East Khasi Hills and West Khasi Hills.
4.	French Beans	Districts of East Khasi Hills and West Khasi Hills.
5.	Green Peas	Districts of East Khasi Hills and West Khasi Hills.
6.	Mustard	Districts of East Khasi Hills and West Khasi Hills.
7.	Carrot	Districts of East Khasi Hills and West Khasi Hills.
<b>C.</b>	<b>SPICES CROP</b>	
1.	Ginger	Districts of East Garo Hills, West Garo Hills and Ri-Bhoi.
2.	Turmeric	Nongbah-Shangpung Belt of West Jaintia Hills district.
3.	Black Pepper	Districts of Khasi Hills and Garo Hills.
4.	Chilli	All districts of Meghalaya.

**4.2. Forest Resource:** Meghalaya is richly endowed with the forest resources. About 75% of the state's total geographical area is under forest cover. The forests are contributing a considerable amount to the economy of the state by providing subsistence livelihood to a vast section of population. This can be in the form of labour in extraction and processing of timber, charcoal making, collection and marketing of Non-Timber Forest Products (NTFP), Medicinal and Aromatic Plants (MAPs). On the basis of ownership, the forests of the state can be broadly grouped into two categories: (i) state government managed forests and (ii) autonomous district council forests. The state managed forests comprise reserve forests, national parks and wildlife sanctuaries, which are controlled and managed by and subject to Indian union or state laws. The total forest area controlled and managed by the state government is 1112 square kilometre or 12% of recorded forest area. According to official records, the remaining 88% of forest in the state (8372 square kilometre) is autonomous district council forest. In practice, the authority over and management of these forests rest with the concerned owners and the communities. While official records indicate these as autonomous district council forests, they are in fact community forests, managed and controlled either by the clans, individuals, groups or traditional institutions according to the prevailing customary laws and practices.

Besides timber, a number of non-timber forest produce including cane, bamboos, broom-grass, mushrooms, orchids, commercially important grass species, and oil yielding trees, honey and wax are extracted from the forests every year in large quantities. Important medicinal plants such as *Taxusbaccata*, *Tinosporacordifolia*, *Vincarosea*, *Strychnosnux-vomica*, *Dichorafefrifuga*, *Hodgsoniahiteroclitia*, *Scutellaria discolour*, *Smilax sp.*, *Solanumkhasianum*, *Dioscoreadeltoides*, *Dioscoreaprazera*, *Dioscoreabulbifera*, *Holarrhenaantidysenterica* etc. are found in the forests. Gums, resins, edible wild fruits, tubers and cinnamomum, large cardamom are other important non-timber forest resources of the state.

#### MAJOR NON-TIMBER FOREST PRODUCTS (NTFPs) IN THE STATE

<b>Sl. No.</b>	<b>NTFPs</b>	<b>AREAS OF AVAILABILITY</b>
1.	Bamboo	Diverse species of bamboo are richly available throughout the state. It is highest in Khasi Hills district and followed by Garo Hills and Jaintia Hills.
2.	Cane	Abundantly available in the South Garo Hills district & plentiful in the other districts of Khasi, Jaintia and Garo Hills.
3.	Broom Grass	Available extensively throughout the state with Ri-Bhoi and Khasi Hills districts as the highest production followed by Jaintia Hills and Garo Hills which is the lowest.
4.	Honey	East Khasi Hills, Ri-Bhoi and some parts of Garo Hills districts.
5.	Mushroom	Widely available all over the state as wild edibles.
6.	Bay Leaf	Abundantly grown in some parts in the Khasi Hills district or

		are either found available naturally in other districts.
7.	Packing Leaf	North Western part of Ri-Bhoi district, Ri-War areas of East Khasi Hills district and War-Jaintia areas of Jaintia Hills district.
8.	Medicinal and Aromatic Plants	Widely available throughout the state.

**4.3. Mineral Resource:** The State of Meghalaya is a store house of economic minerals. Meghalaya is endowed with sizeable deposits of a number of valuable minerals. Coal, limestone, uranium, granite, kaolin, clay and glass sand are the principal minerals. A brief account of mineral resources is as follows:

**a) Coal** – Meghalaya coal, which is tertiary coal, is generally sub-bituminous in composition. The prominent coalfields of the State are West Darrangiri, Siju, Pendengru-Balpakram in the South Garo Hills district; BorsoraLangrin and Shallang in the West Khasi Hills district; East Darrangiri partly in West Khasi Hills and partly in East Garo Hills; Mawlong-Shella and Sohra-Cherrapunjee in the East Khasi Hills district and Bapung-Sutnga in the Jaintia Hills district.

**b) Limestone-** An extensive bed of limestone occurs in the Southern part of the State from Jaintia Hills in the East and Garo Hills in the West. The main deposits are found around Cherrapunjee, Mawlong, Ichamati, Shella, Komorrah in the East Khasi Hills district; Borsora and Bagli in the West Khasi Hills district; Lakadong, Lumshnong and Nongkhlieh in the Jaintia Hills district; and Darrang Era-aning, Siju, Chokpot in the South Garo Hills district in the Northern part of the State. Feldspar and iron ore are reported in the Ri-Bhoi and West Khasi Hills Districts; and bauxite and rock phosphate are found in the Jaintia Hills District.

#### MAJOR MINERALS AND AREAS OF THEIR AVAILABILITY IN THE STATE

Sl. No.	Minerals	AREAS OF AVAILABILITY
1.	Limestone	Cherrapunjee, Mawlong, Ichamati, Shella, Komorrah in East Khasi Hills District; Borsora, Bagli in West Khasi Hills District; Lakadong in West Jaintia Hills District; Lumshnong, Nongkhlieh in East Jaintia Hills District; Darrang Era-aning, Siju, Chokpot in South Garo Hills.
2.	Coal	Langrin, Borsora, Shallang in West Khasi Hills District; West Darrangiri, Siju, Pendengru-Balpakram in South Garo Hills District; Mawlong, Shella, Cherrapunjee in East Khasi Hills District; Bapung Sutnga in East Jaintia Hills District.
3.	Granite	Nongpoh in Ri-Bhoi District; Myllem in East Khasi Hills District; Mawkyrwat in South West Khasi Hills; Nongstoin in West Khasi Hills; Mendipathar in North Garo Hills; Songsak, Ronjeng in East Garo Hills.
4.	Clay (Lithomargic)	Cherrapunjee, Mahadek in East Khasi Hills District; Tongseng in East Jaintia Hills District; Nangwalbibra in West Garo Hills District; Rongrenggiri in East Garo Hills District.
5.	Kaolin	Mawphlang, Smit, Laitlyngkot in East Khasi Hills District; Thadlaskein, Mulieh, Shangpung, Mynsgat in West Jaintia Hills District; Darugiri in East Garo Hills District.
6.	Iron Ore	West Khasi Hills and East Garo Hills District.
7.	Glass Sand	Laitryngew, Unstew, Kreit in East Khasi Hills District; Tura in West Garo Hills District.
8.	Sillimanite	Mawthengkut Block at Sonapahar, Nongstoin, Mawpomblang in West Khasi Hills District; Dapsi-Thologiri in South Garo Hills District.

9.	Uranium	Domiasiat and Porkut-Nongjri around Wah-Kynshi Area in West Khasi Hills District.
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**c) Uranium** - Significant occurrence of uranium deposit is found in and around Domiasiat and Porkut-Nongjri around Wahkynshi area in the West Khasi Hills/South-West Khasi Hills District.

**d) Granite**– Deposits of multi-coloured granite have been located around Nongpoh in the Ri-Bhoi District; Myllem in the East Khasi Hills District; Mawkyrwat in the South West Khasi Hills and Nongstoin in the West Khasi Hills District; and Mendipathar and Songsak in the East Garo Hills District.

**e) Kaolin** - Good quality Kaolin (China Clay) occurs around Mawphlang, Smit and Laitlyngkot in the East Khasi Hills. District; Thandlaskein, Shangpung, Mulieh and Mynsngat in the Jaintia Hills District; and Darugiri in the East Garo Hills District.

**f) White Clay**- Sedimentary white clay is found around Cherrapunjee and Mahadek in the East Khasi Hills; Nangalbibra in the South Garo Hills and Rongrengre in the East Garo Hills District.

**g) Glass Sand**- Glass sand is found to occur at Laitryngew, Umstew and Kreit in the East Khasi Hills and Tura in the West Garo Hills.

**h) Sillimanite**– Sillimanite is found in some parts of Mawthengkut Block at Sonapahar of the West Khasi Hills District. 3.9 Other minerals -Quartz occurs almost in all districts

## 5. INFRASTRUCTURE FACILITIES:

Infrastructure set up in the State includes Power, Transportation network, Communication, banking, medical facilities, education, etc. To obviate the problems of prospective entrepreneurs in acquiring and developing sites for industrial purposes, industrial estates, export promotion industrial parks and growth centres have been created and more are likely to come up in the near future. The Government of Meghalaya has proposed to undertake major infrastructure projects in the State in order to attract investors for the overall development of the State.

**5.1. Power:** Presently the generation, transmission, transformation and distribution of electricity is undertaken by Meghalaya Energy Corporation Limited (MeECL). The generation of power in the state is all hydro. There are seven power stations with a total installed capacity of 228.7 Megawatt (MW).

The state has just sufficient power. However, rapid industrialisation and an improvement in standard of living should see the electricity consumption rise substantially in the state. Further an ambitious electrification programme seeks to bring power to more areas of the state and this should translate into a greater demand per capita. Availability of power in the North-East is barely 94 kilowatt per hour as against the national average of 330 kilowatt per hour. As of now, the Northeast's total installed capacity of room power from all sources (hydro, coal and gas) stands at 1400 MW as against the all-India total of 85,000 MW. This reflects that the power sector can be a boon in this region. The Government of Meghalaya has already announced Power Policy, 2007 and the objective of this is to make the State power potential in the region. The National & International Players can play the role of investor. The government is committed to support and facilitate the promotion of Power sector.

**5.2. Road Network:** In the absence of rail and air links, roads are the only conduit for transporting people and goods in the state of Meghalaya. Six national highways pass through Meghalaya. The state's lifeline is National Highway 40 — an all-weather road connecting Shillong with Guwahati, through which it is connected to major cities and states in the rest of the country. Other national highways in Meghalaya are NH44 from Nongstoin-Shillong to the Assam border (277 km), NH51 from the Assam border-Bajengdoda-Tura-Dalu (127 km) and the NH62 from Damra-Dambu-Baghmara-Dalu (190 km). The State has 7,328 km of both surfaced and unsurfaced roads.

**5.3. Aviation:** Given the scarcity of flat land, Meghalaya has limited scope for air transport. It currently has two airports, one at Umroi, 40 km from Shillong, and a partially operational one at Baljek. However, the Umroi airport has neither cargo handling facilities nor excise and customs clearance facilities, and is merely for the transport of people. The state's closest air link to the rest of the country is through Guwahati airport (124 Km from Shillong), and there is a helicopter service between Guwahati, Tura and Shillong. The central government is helping with land acquisition and the building of facilities to expand the Umroi airport. The setting up of a cold chain comprising storage and warehousing facilities at the airport would help in transportation of horticultural and floricultural produce from the state.

**5.4. Railways:** Meghalaya has no railway links. Guwahati (103 km from Shillong) is the nearest railway station connecting the Northeast region with the rest of the country through a broad gauge track network. There is a plan for extending the rail link from Guwahati to Byrnihat (20 km From Guwahati) within Meghalaya. Recently rail link work to Mendipathar in Meghalaya is completed.

**5.5. Communication Network:** Bharat Sanchar Nigam Limited offers the latest services in the state that telecommunication technology can offer. Access Very Small Aperture Terminal (SCPC DAMA VSAT) was installed in the National Informatics Centre (NIC) State Centre for accessing internet services and Video Conferencing. Another SCPC VSAT was setup in North Eastern Council (NEC), Shillong for Video Conferencing facilities. This enables Shillong to be connected with the rest of the country through Video Conferencing.

## **6. THE BUSINESS ENVIRONMENT:**

Meghalaya Government has always endeavoured to set up the right kind of business climate to motivate investments in the State. In order to attract investment to the various sectors and thus contribute to the development of the economy as a whole, the Government of Meghalaya has made several policy announcements. These policies have unveiled a roadmap and graphed a trajectory for bolstering the industrial climate of the State through a package of investment incentives and schemes for the investors.

The major being the industrial policy, which had been announced with a view to take advantage of the liberalised economic scenario in the country and also to keep pace with development in the national industrial sector. Another important policy is the information technology policy, which aims to make information technology a tool for attaining all round development in the State and to fully participate in the IT revolution to bring prosperity to the people. In order to actualise the vision and mission, the Government's thrust is to make information technology the vehicle for productive growth in the State

The land is protected under the sixth schedule. It is only the industrial area where they can be provided on lease. But there is an exception that land can be purchased if the project is cleared by the single window committee headed by Chief Minister. The single-window system in Meghalaya is being implemented for trade facilitation. It will enable the individuals to set up their enterprise by submitting regulatory documents at a single location and/or single entity. The idea is to create a suitable environment for entrepreneurs to set up their units in a cost effective and time saving manner without any hassle with government authorities for obtaining the relevant clearance and permit(s). In a traditional pre-single-window environment, individuals had to visit and deal with multiple government agencies in multiple locations to obtain the necessary papers, permits, and clearances.

There are industrial areas in almost every district in Meghalaya. Most of the units are micro and cottage industries in nature. The micro and cottage industries use traditional skills passed from generation to generation hence they do not feel the requirement of technology. The manufactured articles of the state are being absorbed in the nearby markets. Exports of items are quite negligible in the state. Meghalaya is largely dependent on wood and wood-based industries. The mining sector also contributes significantly to the state's income and private entrepreneurs are involved in this process.

In the absence of downstream industries in Meghalaya, little value addition takes place under limited number of medium and large-scale industries. Important medium scale industries are the manufacturing of cement, lime, mini steel plants, light engineering, granite cutting and polishing etc. Small scale industries

include tailoring, wooden furniture making, cane and bamboo works, flour and rice mills, weaving and baking. The micro level enterprises are mainly engaged in food processing, wood furniture, non-metallic products, are printing presses, deal in repairs and services.

## 7. INDUSTRIAL INFRASTRUCTURE:

The state government is of the view that the State needs infrastructure led growth and therefore stressing more for the development of infrastructure in the State. The Department has so far created the following infrastructures in order to facilitate the Industrial growth in the State.

Sl. No.	Name of the Industrial Infrastructure
1.	Shillong Industrial Estate
2.	Mendipathar Industrial Estate
3.	Tura Industrial Estate
4.	Jowai Industrial Estate
5.	Willimanagar Industrial Estate
6.	Nongstoin Industrial Estate
7.	Barapani Industrial Area, Umiam
8.	Export Promotion Industrial Park, Byrnihat
9.	Industrial Growth Centre, William Nagar

**7.1. Meghalaya Industrial Development Corporation Ltd (MIDC):** Meghalaya Industrial Development Corporation has been set up primarily as a financial institution for wider industrial development and to create infrastructure necessary for such development to take place. The main mission/vision of MIDC is to assist, promote, establish and execute industrial projects or enterprises directly or indirectly to advance the industrial development of Meghalaya. Meghalaya Industrial Development Corporation has developed industrial infrastructure facilities to enable prospective entrepreneurs to set up their industries in the State. The Corporation also renders technical assistance to the entrepreneurs in the formulation of the project reports and project reports and provides common facilities in the industrial estates.

**7.2. Land Customs Check Posts:** Meghalaya shares almost 450 km long border along its southern and western boundary with Bangladesh. Given its proximity to Bangladesh the state govt. has been promoting greater trade and cooperation with Bangladesh. At present the state has eight functioning land customs stations (LCSs) — at Borsora (West Khasi Hills), Dawki (Jaintia Hills), Gasuapara and Baghmara (South Garo Hills), Shella Bazar and Bholaganj (East Khasi Hills), Dalu and Mahendraganj (West Garo Hills) — exporting goods to Bangladesh. Two non-functional LCSs exist at Balat and Rynghu in the East Khasi Hills. There is a proposal to open three more at Kuliang (Jaintia Hills), Maheshkhola (South Garo Hills), and Lew Thymmai (East Khasi Hills).

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

## 8. THRUST AREAS UNDER STATE INDUSTRIAL POLICY:

The following are the thrust areas for industrial development under Meghalaya Industrial and Investment Promotion Policy-2012;

Sl. No.	Thrust Areas
1.	Agro & Horticulture Processing Unit
2.	Processing of Plantation Crops
3.	Development of Traditional Handloom & Handicraft
4.	Tissue Culture and Bio-Technology
5.	Spices Oleoresin and other Essential Oils Units
6.	Animal Husbandry and meat Processing Industries
7.	Development of Mineral based Industries
8.	Electronics & Information Technology
9.	Bamboo/Reclaimed Wood based & Products
10.	Hotel/Nursing Homes/Captive Power Generation

8.1. Agro & Horticulture Processing Unit: Thrust on the post harvest management is given in view of the conducive Agro climatic condition and surplus Agro-Horticultural products in the State.

8.2. Processing of Plantation Crops: Processing of tea, rubber, including medicinal plant (into herbal medicine): Government will provide necessary support for development in these areas.

8.3. Development of Traditional Handloom & Handicraft.

8.4. Tissue Culture and Bio-Technology : Export oriented Orchid cultivation (Tissue Culture) is given the status of an industry in the State in view of a high value realisation in the international markets. Encouragement will be given to large-scale commercial exploitation in a systematic and scientific manner through tissue culture. Export oriented Floriculture will also be encouraged on a similar basis.

8.5. Spices Oleoresin and other Essential Oils Units: Export oriented unit on spice oils, oleoresin and other essential oils will be encouraged.

8.6. Animal Husbandry and Meat Processing Industries: Government encourages dairy products including hygienic and scientific processing of poultry, piggery and other meat products.

8.7. Development of Mineral based Industries: The following mineral based industries will be encouraged.

- Cement
- Lime and hydrated Lime (coal fired)
- Precipitated and Activated Calcium Carbonate
- Calcium Carbide
- Coal briquette and high temperature Carbonization Plant
- Low Ash Metallurgical Coke/Coke Breeze.
- Wall/Floor tiles
- Earthen-wares (crocery, novelties etc)
- Stone wares (sanitary wares etc.)
- Fire bricks

8.8. Electronics & Information Technology: The State government will encourage setting up of electronic/IT based industries and complexes in private sector as well as in PPP mode.



8.9. Bamboo/Reclaimed Wood based & Products : The State government will encourage setting up of Bamboo/Reclaimed Wood based Industries in rural areas to encourage local entrepreneurs at the village level.

8.10. Hotel/Nursing Homes/Captive Power Generation: The State government will encourage/facilitate setting up Hotels/Nursing Homes/Power Generation units in private sector or in PPP model. Such Power Generation units including captive generation upto 10 MW will be eligible.

## **9. POTENTIAL SECTORS IN THE STATE:**

**9.1. Agriculture and Food Processing based industries:** The state produces a variety of fruit, vegetables, and other agro-based products that can be processed, packaged, and transported in various forms to other parts of the country. Fruits grown in the region include oranges, peaches, pineapples, pears, guavas, plums, and bananas, which can be prepared into jams, squashes, pulp, facial scrubs, and various other edibles and non-edibles for sale in markets away from the growing areas. Vegetables suitable for processing are jackfruit, tapioca, and so on. Turmeric of the best quality and a variety of medicinal herbs and plants are other items which flourish in the state and can be processed into herbal and health-based products. Considering the huge production of horticulture crops, there exists good potential for food processing as well as cold storage at strategic locations.

**9.2. Floriculture based industries:** The climate of the State, particularly the areas near Shillong in East Khasi Hills District, is well suited for cut flower production. Meghalaya represents a wide variety in the collection of its orchids. It exhibits a superb diversity in its different colorful orchids which not only adds beauty to the nature of Meghalaya but also works as a big revenue resource for the state. The whole cosmos has a collection of 17,000 species of orchids among which 1,250 types could be seen in India. Meghalaya orchids include as many as 300 different species that are precious to the place. Cherrapunji is the motherland of different Meghalaya orchids. The largest number of species could be found in the forests of Cherrapunji. Mawsmai and Mawmluh which have majestic collection of orchids and both hold highest positions in the collection of orchids in Meghalaya. The Sohrarim Forest which is on the way to Cherrapunji reflects a vivacious collection of orchids.

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

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

**9.4. Mineral based Industries:** Endowed with rich natural resource base of coal, limestone, uranium and granite, the state offers immense investment opportunities in this sector. The state also has sizeable deposits of radioactive minerals such as amounting to an estimated 13.5 million tonnes. In fact, uranium found in the West Khasi hills is of a higher grade than some of the best grade uranium being mined elsewhere in the country.

Coal deposits are available in all districts and particularly in the southern slopes of the state. The total estimated reserve of coal in the region is 640 million tones. The coal is mainly of sub-bituminous type and can be utilized in varied industries ranging from power, fertilizer, cement and textile to paper, rubber,

brick burning and also pottery based industries. The coal that is found in Meghalaya can also be converted into coke to recover value added chemicals like light, medium and heavy oil, phenol and producer gas.

Limestone is another mineral that occurs in an extensive belt along the Southern boarder of Meghalaya. The quality of limestone there varies from cement grade to chemical grade. Total inferred reserve of limestone within the State is about 5,000 million tones which can be of use in steel, fertilizer and chemical industries. Granite of excellent quality is at present being mined in the East and West districts of Khasi hills where sizeable deposits are estimated and can be found in various shades and colours. Clay of various types such as Kaolin (China clay), White clay, and Fire clay are also found in various parts of the states which are suitable for ceramic, paper, rubber and refractory industries. It has been estimated that there are a few hundred million tones of clay reserved in the state of Meghalaya.

Beside the above, other economically viable minerals like gypsum, phosphorite, glass-sand, base metal, quartz and feldspar can be located in various parts of Meghalaya. The State is also attributed with one of the most valuable sillimanite deposits in the world.

**9.5. Tourism based industries:** Meghalaya has great tourism potential, which is still untapped and unexplored. Meghalaya Tourism Department has formulated many plans and tourism policies, to attract more domestic and international tourists, which would lead to the economic development and generation of ample employment opportunities in the state. Meghalaya tourism is focused on developing infrastructure and public facilities at all tourist spots, along with the development of various areas of tourism in the state such as Nature based tourism, Cultural tourism, Health resort tourism, and Art and Craft tourism. Meghalaya tourism is also emphasizing on adventure tourism in Meghalaya that include trekking, caving, and water sports. Rock climbing and Hand gliding

**9.6. Forest based industries:** With around half of its land area under forest area, Meghalaya has high potential for the development of forest-based enterprises. The timber is the main resource from the forests bamboo, fire-wood, spices, cane, honey etc. are the other minor products from the forests. Important forest based industries at present are furniture works, wood carving and structuring, timber and card board products and Khasi herbal medicines etc.

Meghalaya is richly endowed with the bamboo forests. Its abundance and multiple uses have led bamboo to play a pivotal role in the socio-economic and cultural life of the tribal people of the state. It finds varied uses like construction material, in making of diverse implements for agriculture, fishing and cattle rearing and the simple household items like utensils small furniture etc. Livelihood of significant population in the state is dependent on the handicrafts made of bamboo.

**9.7. Animal Husbandry based industries:** Meghalaya has a high percentage of meat consuming population and the climate is also congenial for animal husbandry like rearing of cattle, pigs, goat and poultry.

**9.8. Health Care based industries:** Shillong which is the capital of Meghalaya with a population of around 2.2 lakhs, is the focal point of development activities of the state. It is a well-known centre of education in the country and the headquarter of various Armed Forces and Central Government departments. However, the existing health facilities are inadequate in meeting the needs of the patients in the city, not to mention the state as a whole. Therefore, there is immense scope for new and upcoming units in the health sector to develop the health and welfare industry of Meghalaya.

**9.9. Hydropower:** In North East India, Meghalaya has the largest hydro-electricity potential, second only to Arunachal Pradesh. The generation transmission, transformation and distribution of electricity is entrusted to the Meghalaya State Electricity Board. Understanding the importance of power as a prime mover for the development of the State, the Government has initiated a number of measures to develop the power sector to its fullest potential for the prosperity of the people. The river basin of Meghalaya has a potential of about 3,000 Megawatt of hydropower. The state of Meghalaya is directly influenced by the south-west Monsoon. The average annual rainfall is 12,000mm. All the rivers of Meghalaya are monsoon-fed. The rain water flows down the rugged slopes and narrow valleys and descends rapidly to

the plains of Assam and Bangladesh creating extremely favourable conditions for harnessing the hydroelectric power. The State is therefore in the process of identifying agencies that can invest in the development of Meghalaya's considerable hydro power potential. The Investors in Power Sector will find a favourable atmosphere in the State of Meghalaya.

**9.10. Information Technology based industries:** Meghalaya has many advantages and an edge over other North Eastern States of India in the field of Information Technology. The strategic location of Meghalaya for IT business in South East Asia, the favourable weather conditions throughout the year, the surplus power generation and its being the English speaking state in the country are contributing to the stance of the State Government that a thrust for development of Information and Communication Technology should be provided.

# EXECUTIVE SUMMARY

## TITLE OF THE STUDY MIZORAM STATE INDUSTRIAL PROFILE

### 1. INTRODUCTION

Mizoram (or the land of the Mizos) is a new name of the hilly area formerly known as Lushai Hills districts and then Mizo district. It was one of the districts of Assam till 1972. Subsequently this district became a Union Territory, Mizoram by name on 21<sup>st</sup> January 1972. Mizoram attained its statehood on 20<sup>th</sup> February 1987 to become the 23<sup>rd</sup> state of the Indian Union. Aizawl is the capital of the state of Mizoram in India. Aizawl is the largest city in the state. It is also the centre of administration containing all the important government offices, state assembly house and civil secretariat. Mizoram is one of the most sparsely populated states of India.

KEY HIGHLIGHTS	
<ul style="list-style-type: none"><li>• Mizoram shares 722 km of international border with Myanmar and Bangladesh.</li><li>• Bamboo cultivation covers 31% of the state geographical area and is the second largest producer of bamboo in northeast India</li><li>• Largest producer of flowers (loose) in Northeast India</li><li>• Largest producer of turmeric in Northeast India.</li><li>• Second highest literacy rate in India.</li></ul>	
Major Industry Sectors	<ul style="list-style-type: none"><li>• Bamboo Based Industries</li><li>• Textile and Handloom</li><li>• Fisheries</li></ul>

### 2. GEOGRAPHY

The state of Mizoram lies between 21°95'N - 24°39'N latitudes and 92°15'E - 93°40'E longitudes is flanked by Bangladesh on the west and Myanmar on the east and south. Mizoram has a geographical area of 21,087 Sq. Km. the length of the state from north to south is about 277 Kms and width from east to west is about 121 Kms. Mizoram shares its geographical boundaries with Assam, Manipur and Tripura that extends over 123 kms, 95 kms and 66 kms respectively. Mizoram has an international border of 510 Kms with Myanmar and 318 Kms with Bangladesh.

2.1. Climate: Mizoram has a pleasant climate. The upper part of the hills are predictably cold, cool during the summer, while the lower reaches are relatively warm and humid. Storms break out during March-April, just before or around the summer. During winter, the temperature varies from 11°C to 21°C and in the summer it varies between 20°C to 29°C. The entire area is under the direct influence of the South West monsoon. It rains heavily from May to September and the average rainfall in Aizawl is 208 cm. The entire Mizoram receives an annual rainfall of 2455.9 mm, more or less evenly distributed excepting the South-Western parts that generally receive slightly higher amount of rainfall. The rainy season normally starts from May and last up to October as it rains heavily during this period.

2.2. Topography: The topography of Mizoram is composed of steep slopes and deep gorges. Mizoram is a land of rolling hills, rivers and lakes with mainly clayey loam soil mixed with broke angular shale of varying size. The Mizo Hills, which dominate the state's topography, rise to more than 6560 ft near the Myanmar border. There are as many as 21 major hills ranges or peaks of different heights run through the length and breadth of the state with the highest peak 'Phawngpui (Blue Mountain) towering 2,065 metres above the sea level. The terrain has, perhaps, the most variegated topography among all hilly areas in this part of the country. The hills are extremely rugged and leaving some plains scattered occasionally here and there.

Although many rivers and streamlets drain the hill ranges the most important and useful rivers are the Tlawng (also known as Dhaleswari or Katakhal), Tut (Gutur), Tuirial (Sonai) and Tuivawl which flow through the northern territory and eventually join river Barak in Cachar. Rivers are of monsoon-fed and dries up during winter season. But during summer, rain bearing monsoon wind shower heavy rainfall from May to September and then rivers swell up rapidly causing havoc to farmers who cultivate a small flat lands along the narrow valleys and often block passes from one side of a river to the other side. Lakes are scattered all over the state. But the most important of them are Palak, Tamdil, Rungdil, and Rengdil. The Palak Lake is situated in Chhimtuipui District in southern Mizoram and covers an area of 30 Ha. It is believed the lake was created as a result of an earthquake or a flood. The Tamdil lake is a natural lake situated 110/85 kms from Aizawl.

### 3. THE ADVANTAGES OF THE STATE

The advantages of the Mizoram state are as follows;

**3.1. Investor Friendly Environment:** Mizoram is one of the most peaceful states in the country heading for a steady progress of development. Sound law and order system makes the state as preferred investment destination. The State Government is committed towards creating a progressive business environment.

**3.2. Opportunity for Border Trade:** Mizoram has an international border of 510 Kms with Myanmar and 318 Kms with Bangladesh. Four locations have been identified along the Mizoram-Bangladesh border where 'haats' are to be developed. These are at Marpara and Tuipuibari in Mamit District, Sillsury and Nunsuri in Lunglei District. At Myanmar border, Zokhawthar Border Trade Point is made fully operational. For Mizoram, border 'haats' will boost exports of agricultural, horticultural, sericulture items, floricultural items and forest-based products. This provides it a unique and distinct advantage of developing international trade with the two asian countries.

**3.3. Suitable Climate for Agriculture:** The geo-climatic situation of Mizoram offers an excellent scope for growing different agriculture and Horticulture crops including fruits, vegetables, spices, plantation crops etc. The State Govt. has also laid emphasis on the development and expansion of a high market potential fruits like passion fruit, orange, Hatkora, banana, etc. The major vegetables grown in Mizoram are tomato, brinjal, beans, peas, squash, mustard, cabbage, etc. Among tuber crops, potato, sweet potato and colocasia are major ones grown.

**3.4. Rich Forest Resources:** Mizoram is covered by thick forest. Almost all tropical plants are found. Bamboos of different kinds grow abundantly everywhere. More than 400 medicinal plants and 22 species of Bamboo have been reported to exist. The abundant availability of bamboo and a variety of non-timber forest products can be a source of numerous advantages for the investors.

**3.5. Tourism Potentiality:** Mizoram is a mountainous state with interesting topography. Natural beauty in various forms is the major asset of Mizoram. The unique geographical location sharing international boundary with Myanmar and Bangladesh could be another tourist feature. It is quite clear that Mizoram has tremendous and unique tourism potential. This could be tapped mainly through the concept of eco-tourism, nature/wildlife tourism, adventure tourism, cultural/heritage tourism, leisure tourism, international border tourism etc.

**3.6. Infrastructure Support:** The Government of Mizoram has undertaken several infrastructural projects in the State to attract investment and for industrial development in the State.

**3.7. Promotional Govt. Policies:** The Government of Mizoram has made several endeavours in the form of policy announcements for attracting investments into the State. These policy measures underline a roadmap, which guide the investors about the various opportunities in the State. They also provide several incentives and schemes for creating a conducive business climate.

**3.8.Available Skilled Workforce:** The literacy rate of Mizoram is 91.58 percent as per 2011 census. Majority of the population in the state speaks English that is an added advantage for the state.

#### 4. AVAILABLE RESOURCES:

**4.1. Agriculture and Horticulture Resource:** Agricultural occupies a very important place in the economy of Mizoram. Majority of the population, more than 60% of the total population in Mizoram depends on the Agricultural sector as it is the biggest source of livelihood for rural areas. Various kinds of crops grown in Mizoram are Rice, maize, pulses, and Oilseeds. Paddy continues to remain the principal food crop and the staple food of the Mizoram people. Themajor fruits are Mandarin Orange, Banana, Pineapple, Papaya, Grape and Passion Fruit etc.

#### CULTIVATION AREAS OF MAJOR AGRICULTURAL CROPS IN THE STATE

Sl. No.	Crop	AREAS OF AVAILABILITY
1.	Rice	Districts of Champhai, Kolasib and Lawngtlai.
2.	Maize	Districts of Champhai and Serchhip.
3.	Pulses	Aizawl district.
4.	Oilseeds	All districts of Mizoram.
5.	Sugarcane	All districts of Mizoram.
6.	Potato	Districts of Lunglei, Kolasib and Mamit.
7.	Arecanut	All districts of Mizoram.
8.	Tea	Biате in Serchhip district; Ngopa, Pawlrang and Khawdungsei in Champhai district; NE Bualpui and Tlungvel in Aizawl district.

The major vegetables grown are Squash, Potato, Cabbage, Brinjal, Tomato, French Bean, Lady's Finger, Iskut (Chow chow), Pumpkin, French Mustard and Bitter gourd etc. Spices crops like Turmeric, Chillies, Ginger are chillies are also grown of which Ginger is the most dominant. The mild climate of the hills in Mizoram has the unique advantage of growing almost all type of flowers round the year. Flowers like Anthurium, Roses, Bird of Paradise, Gladiolus, Chrysanthemum etc. are grown successfully round the year.

#### CULTIVATION AREAS OF MAJOR HORTICULTURE CROPS IN THE STATE

Sl. No.	Crop	AREAS OF AVAILABILITY
<b>A.</b>	<b>FRUIT CROP</b>	
1.	Orange	Districts of Champhai, Aizawl and Lunglei.
2.	Banana	Districts of Aizawl and Saiha
3.	Passion Fruit	Aizawl district.
4.	Pineapple	Districts of Aizawl and Lunglei.
5.	Hatkora	Districts of Aizawl and Mamit.
<b>B.</b>	<b>VEGETABLE CROP</b>	
1.	Cabbage	Districts of Aizawl, Kolasib, Champhai, Lunglei, Lawngtlai and Saiha.
2.	Tomato	Districts of Aizawl, Kolasib, Champhai, Lunglei, Lawngtlai and Saiha.
3.	French Bean	Districts of Aizawl, Kolasib, Champhai, Lunglei, Lawngtlai and Saiha.
4.	Peas	Districts of Aizawl, Kolasib, Champhai, Lunglei, Lawngtlai

		and Saiha.
5.	Squash	Districts of Aizawl and Kolasib,
6.	Tomato	Districts of Aizawl, Kolasib, Champhai, Lunglei, Lawngtlai and Saiha.
7.	Brinjal	Districts of Aizawl, Kolasib, Champhai, Lunglei, Lawngtlai and Saiha.
<b>C.</b>	<b>SPICES CROP</b>	
1.	Ginger	All districts of Mizoram.
2.	Turmeric	All districts of Mizoram.
3.	Mizo Chilli	All districts of Mizoram.

**4.2. Forest Resource:** Based on ‘India State of Forest Report-2015’ published by Forest Survey of India, Dehradun the state has 12,752 Sq.km open forests and about 91.47% of the State’s total geographical area is covered under forests & Tree cover. The present notified forests (reserved/ protected forests) constitute about 38% of the geographical area and even most of these are open, degraded and subject to pressure of shifting cultivation, encroachments, fire, illicit felling etc.

#### MAJOR NON-TIMBER FOREST PRODUCTS (NTFPs) IN THE STATE

Sl. No.	NTFPs	AREAS OF AVAILABILITY
1.	Bamboo	Districts of Aizawl, Champhai, Kolasib, Lawngtlai, Lunglei, Mamit, Saiha&Serchhip.
2.	Cane	Districts of Aizawl, Champhai, Kolasib, Lawngtlai, Lunglei, Mamit, Saiha&Serchhip.
3.	Broom Grass	Widely available in the hill regions of the state.
4.	Honey	All districts of Mizoram.
5.	Mushroom	Available only in particular months & are collected from the forests of the state by the locals.
6.	Medicinal and Aromatic Plants	Richly available in the natural forests of the state

Forest in Mizoram support variety of Flora and Fauna. More than 400 medicinal plants and 22 species of Bamboo have been reported to exist. The socio-economic life of the rural people depends on their local vegetation from where they derive all their material requirements – timber, food, fuel wood, medicinal plants etc. The state has 8 national parks and Sanctuaries i.e. Dampa Tiger Reserve, Murlen National Park, Blue Mountain National Park, Ngenpui Wildlife Sanctuary, Khawnglung Wildlife Sanctuary, Tawi Wildlife Sanctuary, Lengteng Wildlife Sanctuary and Thorangtlang Wildlife Sanctuary which includes different types of species Tiger, Elephant, Sambar, Barking deer, Hoolock gibbon, Humes bar-tailed pheasant, Serrow, Ghoral, Leopard, Himalayan blackbear, Tragopan, Barking deer, Sloth Bear and variety of birds.

**4.3. Mineral Resource:** No major deposits of economic importance have so far been established in the state. Occurrences of Shell limestone, coloured sandstone/silistone, sand (balu), clay/shale, coal have however been reported.

Coloured Sandstone/Silistone: Occurrences reported from North Vanlaiphah (greenish grey, 5 to 50 metre thickness), in between Tuipang and Sistla. These may be drw market in future as sources of product for road side paving, household decoration etc.

Sand (Balu): Occurrences of good quality sand are reported from Sairang, Saihapui, medium, TuiriniTiau, Kawlchaw, Chawngte and Mawhre.

Clay/Shale: occurrences reported from the bank of rivers such as Tut, Tuirial, tuirini, ChawngteLui and near Morai, Lokicherra and Phura.

#### MAJOR MINERALS AND AREAS OF THEIR AVAILABILITY IN THE STATE

Sl. No.	Minerals	AREAS OF AVAILABILITY
1.	Coal	Chubel and Ngopa in Champhai District.
2.	Limestone	Muthi in Aizawl District; Sesawang village at Dam Lui in Lunglei District; ChanmariLui, NghrumLui, LaipuiTlang and Reickin Aizawl District.
3.	Hard Rock	New Vervek and Lungsum in Aizawl District; Hnathial, Thingfal and Darzo in Lunglei District; Saikah and Rulkual in Lawngtlai District..
4.	Gas & Oil	Central and Western part of Mizoram
5.	Clay	Phura in Saiha District.

#### 5. INFRASTRUCTURE FACILITIES:

The Government of Mizoram has undertaken several infrastructural projects in the State to attract investment and for the overall development of the State. Infrastructure set up in the State includes, transportation (railways, roadways and aviation); telecommunication; and power etc. All such services are necessary for integrating the State with the rest of the nation and improving the quality of life of the people.

**5.1. Power:** In Mizoram – Generation, Procurement, Transmission and Distribution of Power is carried out by Power & Electricity Department. The present peak demand is 102MW but the department can generate only about 15MW from the installed capacity of 29.35MW as the generating stations are rain fed run-off the river hydro electric project. The rest of the requirement has to be imported from various sources like Loktak, Ranganadi, etc from Central Sector Utilities like NEEPCO, NHPC, NTPC etc. Mizoram has sizeable scope towards increase of its revenue by harnessing its rich hydro potential which is estimated around 4500MW, reduction of losses by implanting accountability to various levels and trading of excess power received from N.E. grid during monsoon season and in off-peak hours.

**5.2. Road Network:** In Mizoram, road transport is the only means of transport. The total length of all types of roads in Mizoram is 7688.864 km having a road density of about 36.463 km/100 sq km which is much below the national average of 129 km/100 sq km. Out of the total road network, National Highways covers 1302 km, BRO Roads covers 1046 km and State Roads covers 4731 km which were constructed by the State government by investing huge amount of fund for the State Roads. NH - 54 connects Aizawl with the rest of the country through Silchar. Buses and taxis are available from Silchar to Aizawl. Aizawl is also accessible by road from Shillong and Guwahati.

**5.3. Railways:** Rail link in the State has been established at Bairabi, which is about 110 Kms from the state capital and near to Kolasib. The State is also accessible by train via Silchar (Assam), which is about 180 Kms from Aizawl.

**5.4. Aviation:** Mizoram finds its place in the aviation map with the opening of Lengpui Airport (near Aizawl). The State is also accessible from Kolkata via Silchar Airport, which is about 200 Kms. from the state capital. Aizawl is connected to Kolkata, (1 hr 45 min), Guwahati (40 min) and Imphal (30 min). There are flights from Lengpui airport everyday.

**5.5. Communication Network:** Telephone facilities are available in all the district headquarters and the Capital town is served with an electronic telephone exchange with STD facilities. Intelligent Network services like India Telephone Card (ITC) facility, Internet facility & ISDN have also been provided in the State. Bharat Sanchar Nigam Limited is the largest Telecommunication Services provider within the state



of Mizoram. In terms of mobile phone connection, Airtel has the largest number of subscribers followed by Aircel.

## 6. THE BUSINESS ENVIRONMENT:

The Department of Industries & Commerce is endeavouring to promote industrialization in the state through various policy announcements, industrial and commercial activities including service sector in the State. These policy measures unveil a roadmap for the overall development of the State by removing the hurdles in the investment process. These policies are aimed at fully utilising the available resources, generating gainful employment as well as improving the quality of life of the people of the State. To promote Industrial Activity in the State, the Government of Nagaland has adopted a policy of providing incentive in the form of Manpower Subsidy, Power Subsidy, reimbursement of Cost of Power Line etc. to the entrepreneur in the state.

The natural resources, climatic conditions and policy incentives in the state support investments in bamboo, sericulture, tourism, agro-products and agro-processing sectors. Industrial units in the state primarily comprise of small scale industries. Mizoram is setting up a special economic zone (SEZ) in the Northeast with assistance from the North East Council. The SEZ will be located at Khawnuam village in Champhai. Bamboo based industries would play a major role in the proposed SEZ. Doing business in Mizoram has no major industry. But they do have several small scale sectors in handloom, handicraft, rice oil, bamboo, and sericulture. In an effort to catch Mizoram up with its neighbours the government has actively promoted Zoram Industrial Development Corporation (ZIDCO), Mizoram Khadi and Village Industry Board (MKVIB), Zoram Handloom and Handicraft Corporation Limited (ZOHANCO), Mizoram Food and Allied Industries Corporation Limited (MIFCO) and Zoram Electronics Development Corporation (ZENICS).

The Govt. will develop synergies among various departments involved in building up of general infrastructure towards having developed Industrial Infrastructure. The Govt. will take primary role for building infrastructure as the capital base of entrepreneurs in the state. However, guidelines and roadmap for development of Industrial Infrastructure will be formulated to encourage more participation of private sector. Land for Industrial Area will be identified in different locations taking into account the industrial potential of the hinterland. Land survey and blue print of the Area will be prepared and properly demarcated. It will be the responsibility of the Govt. and or the PSUs to provide basic infrastructure requirement like road, power supply, water supply, plot demarcation, etc. Private entrepreneurs will be encouraged in plot development and construction of work shed/ factory building in PPP model. A comprehensive proposal for availing possible grant from the Govt. of India will be initiated. More involvement of PSU for Construction and management of Industrial Area will be encouraged.

## 7. INDUSTRIAL INFRASTRUCTURE:

The State Government earmarked and developed industrial areas with basic infrastructure. These industrial areas, will solve the problem of industrial land for entrepreneurs desirous of starting Industrial unit to a great extent. Allotment of industrial plots in various industrial areas has been made as per the Mizoram Industrial Areas (Management, Regulation and Control) Act.-2008. Upgradation of EPIP Lengteis being executed under the funding from NEC. The following table show different industrial areas and their respective status:

Sl. No.	Name of the Industrial Infrastructure	Total Area (In Bighas)
1.	Industrial Estate at Zuangtui, Aizawl, Aizawl District	314.70
2.	Industrial Growth Centre at Luangmual, Aizawl District.	940.78
3.	Industrial Estate at Bairabi, Kolasib District.	26.20
4.	Industrial Estate, Kolasib	32.33
5.	Integrated Industrial Development Centre at Pukpui, Lunglei District	76.68

6.	Industrial Estate, Hmunhmeltha, Champhai District.	104.40
7.	Export Promotion Industrial Park at Lengte, Mamit District	1390.22
8.	Bamboo Technology Park at Sairang, Aizawl District.	148.20
9.	Integrated Industrial Development Centre at Zote, Champhai District	--

**7.1. Zoram Industrial Development Corporation Ltd (ZIDCO):** Zoram Industrial Development Corporation Ltd. (ZIDCO) was originally named Mizoram Small Industries Development Corporation. It was incorporated on 27th February, 1978 and was registered as per Companies Act, 1956. After obtaining approval of the Registrar of Companies, on 13th September 1985, the name was changed to Zoram Industrial Development Corporation Ltd. It was registered with an Authorized Capital of Rs. 10 crores divided into 10 lakhs equity shares of RS. 100 each, with power to issue any of the shares in the capital, original or increased, with or subject to preferential, special or qualified rights or conditions, as regards dividend voting or otherwise, provided that the company may alter conditions of its Memorandum so as to increase its share capital by such amount as it thinks expedient by issuing new shares in the manner prescribed in Section 94 of the Act.

Some of the objectives of ZIDCO are;

- To aid, counsel, assist, finance, protect and promote the interest of industries in the State of Mizoram, whether owned or run by Government, statutory body, company, firm or individuals and to provide them with capital, credit, means, resources and technical and managerial assistance for the prosecution of their work and business, to enable them to develop and improve their methods of manufacture, management and marketing and their technique of production.
- To establish and maintain export house(s) to promote export trade and participate in the export trade for the benefit of industries.
- To undertake and provide marketing facilities to the industries of Mizoram.
- To seek and secure openings for the employment of Capital in Mizoram and elsewhere and with a view thereto to prospect, inquire, examine, explore and test, and to dispatch and employ expeditions commissioners, experts and other agents.

## **8. THRUST AREAS UNDER STATE INDUSTRIAL POLICY:**

The following are the thrust areas for industrial development under The Mizoram Industrial Policy-2012 of Mizoram State;

<b>Sl. No.</b>	<b>Thrust Areas</b>
1.	Forest-based Industries
2.	Food Processing Industries
3.	Handloom Industries
4.	Handicraft Industries
5.	Plantain fibre and hill brooms
6.	Tea, Rubber, Coffee and plantation based Industries
7.	Textile related Industries
8.	Animal feed and Poultry Feed Industries
9.	Entertainment/Music Industries
10.	Packaging Industries
11.	Any other industry to be notified by the Government in this regards from time to time.

8.1. Forest-based Industries: The vast bamboo and other forest resources of Mizoram will be optimally harvested for setting up of Industry for manufacturing of various high value bamboo and other forest

based products. The process of value addition for maximum utility of Forest resources will be encouraged while restricting the out flow of forest resources without value addition. Entrepreneurs will be encouraged to utilize waste materials of bamboo in paper/pulp industry and also as feedstock (pulverized bricket) in biomass *gasifier* for power generation.

8.2. Food Processing Industries: Primary production of various food items, whether agricultural based, horticultural or livestock based will be linked with processing Industries. Contract farming or management participation route will be encouraged to ensure proper supply chain management. As far as practicable on economic consideration, primary processing activities, such as, cleaning, grading, waxing and cold storage will be encouraged at the vicinity of the growing areas. From the primary processing unit, food items will flow to local market and secondary processing unit. Secondary processing unit will be encouraged at the strategic location of the State. Considering high cost of transportation, giving priority and favourable treatment to processing with high value content is a crucial element of food processing policy.

In addition, private participation in *Public Private Partnership* (PPP) mode or otherwise will be encouraged in food processing Industries. Providing or setting up Food Testing Laboratory and Certification of products will also be a new focused area basically to facilitate gaining foothold in international markets. The Govt. will ensure land at the right place for setting up of primary processing unit. Proper linkage of this sector with agro-horticulture and livestock sectors will be ensured and a separate guidelines and road map for food processing Industries will be notified taking into account the initiative of the Govt. under agro-horticulture and livestock sectors.

8.3. Handloom Industries: Handloom sector will continue to receive serious attention of the Govt. Utmost importance will be given for improving quality product by introducing improved design, packaging, branding. Acquisition of modern technology will be encouraged and insisted for gaining competitive advantage in marketing the products. Presence of innate designing skill of womenfolk in rural areas will be utilized for enriching the industry. Branding of product will be encouraged for sustainable merchandising the product. The Govt. will ensure that Weavers in the State enjoy maximum benefit from the schemes of Central Govt.

8.4. Handicraft Industries: The traditional skill of Mizo people will be upgraded and diversified for market competitiveness of handicraft products. Market promotion scheme will be systematically designed and utilized under which the products of various craftsmen could be marketed under the same brand name may be considered.

8.5. Plantain Fibre and Hill Brooms: The Govt. will encourage value addition of hill-brooms. The flow of raw and unprocessed broom outside the state will be discouraged by giving attention towards value addition to help local industry. Proper branding will be encouraged to secure advantage in marketing the products outside the state. Cultivation of broom grass will be properly linked with the processing Industries so that the farmers will reap maximum benefit. Existence of large quantity of plantain gives ample scope towards development of fibre materials for different application.

8.6. Tea, Rubber, Palm and Coffee Industry: The climate and soil condition of Mizoram is favourable for tea plantation. Commercial and scientific tea plantation linked with tea processing Industry will receive attention of the Govt. The Govt. will formulate separate roadmap and scheme for the development of this sector and ensure that the planters of Mizoram enjoy maximum benefit out of the incentive schemes of Tea Board of India. Fiscal incentive to supplement the Tea Board Scheme and linkage of this sector with other schemes of the government will also be considered. Rubber, Coffee and Palm based Industry will also receive due attention of the Govt.

8.7. Textile Related Industries: Bulk production of readymade garments will be encouraged as this sector is having good potential for market outside the state and export. Introduction of modern machines and design improvement will find consideration of the Govt. Procurement of raw materials and accessories will be arranged through marketing efforts and eventually by way of development of local industries.

8.8. Animal Feed and Poultry Feed Industries: The Government is giving thrust towards having sufficient meat and meat products for which farming has been encouraged. This in turn requires sufficient supply of animal feeds and poultry feeds. The government will encourage production sufficient quantity of animal and poultry feeds.

## **9. POTENTIAL SECTORS IN THE STATE:**

**9.1. Agriculture and Food Processing based industries:** Agriculture is the mainstay of the people of Mizoram with about 80% of the total population being engaged in it. The main pattern of agriculture followed in the state is 'jhum' or 'shifting cultivation'. The climatic condition of the state and its location in the tropic and temperate zone has contributed to the occurrence of a wide variety of rich and assorted flora and fauna. It offers opportunities for growing a variety of horticultural crops – fruit crops like Mandarin Orange, Banana, Passion Fruit, Pineapple and Papaya, spices like Ginger, Turmeric, Black Pepper and Bird's eye Chillies. Ginger is an important FOREX earner for India. Despite low yields, a ginger surplus state like Mizoram has potential to develop processing industries for ginger which can be used in confectionary, medicinal extracts or beverages. High ginger consumption in China and South East Asia offers another avenue to be explored. Mizoram also produces grapes mainly in the off-season, which has higher productivity than the national average as well as that of Maharashtra, which is the main grape production belt. Presently, the natives have started extensive cultivation of oil palm, medicinal and aromatic plants. Mizoram has also seen a growth in investments in oil palm-based industries, with offered state incentives and 101,000 ha of available land for oil palm cultivation. All agri-horticultural output of Mizoram is of very high value in national as well as the international markets.

There exists immense potential for the production of Food products like squash, jam, jelly, fruit bars, fruit pulp and dried fruit. Vegetable products like dried vegetable canned vegetable, mixed pickle, tapioca, potato chips, sago and starch and spice products like spice oils and spice oleoresin.

The tea produced in Mizoram has a distinct touch of quality and flavor similar to teas grown in high altitudes like the Nilgiris and Darjeeling. Biate has the largest area under tea, followed by Ngopa, Khawdungsei, NE Bualpui, Pawlrang, and Thungvei. There is a scope of setting up a mini tea processing plant at Biate in collaboration with the local cooperatives.

Coffee plantation can play an important role in the state of Mizoram. A very low gestation period of two years and the simple on farm processing of the produce are the favorable factors for large-scale cultivation in the state. Since coffee based cropping system promises higher economic return for the farmers on a permanent basis, the government of Mizoram has proposed to establish coffee plantations in an area of 10,000 hectares over a period of 10 years.

**9.2. Floriculture based industries:** Mizoram grows 11% of India's flowers. Aizawl, Lunglei and Kolasib are flower belts particularly well suited to heavily promote Rose, Anthurium, Gladiolus – all three fetch good premiums in both domestic and export markets. Floriculture which was traditionally been a hobby has been taken up on a commercial scale with the help of Technology Mission which was introduced recently. Considerable plot of land has been put under cultivation of high value of exotic flowers such as anthurium, bird of paradise, leather leaf fern, orchids and roses etc. Mizoram has a wide spectrum of orchids growing from the lower elevations to the high hills. The Orchids grown in the high hills fetch a good price in the market at Delhi and Calcutta. More than 200 varieties of Orchids have been identified in Mizoram till now. In view of the right agro-climatic conditions prevailing in Mizoram, there is an immense potential growing Orchids for large-scale commercial purposes.

**9.3. Sericulture based industries:** Mizoram state is one of the most promising states for development of Sericulture in North East India where all four varieties of silk producing food plants are grown and silkworms are reared for silk production. Identification of sericulture potential with remote sensing and geographical information system in six of the eight districts in Mizoram has found that 1439 Sq. km are suitable for mulberry cultivation. The state government is working towards bringing maximum families under sericulture farming and silkworm rearing. The government of Mizoram has opened one research & training institute at Aizawl (Zemabawk) which provides training & certification courses in sericulture.

**9.4. Bamboo and Medicinal & Aromatic Plants based industries:** Mizoram has abundant natural bamboo resources which covers around 31% (about 6446 Sq.km) of its geographical area with a yield of 3.2 mn tonnes per year. As many as 35 species of bamboo have been identified in the state of which *Melocannabaccifera* (mautak) contributes about 77% of the total bamboo coverage. The extend of bamboo bearing area in the forests of the state is 9,245 sq. km. As such, promoting forest / bamboo based industry and manufacturing activities would definitely provide comparative advantage in the State. There exists huge potential of earning revenue through exports of bamboo products. The Mizoram government invites private investors and FDI for setting up industrial units for making bamboo chips, bamboo mat ply, toothpicks, bamboo blinds, chopsticks, incense sticks, either in joint venture with the Mizoram Bamboo Development Agency or with the local entrepreneurs. A separate bamboo policy has been announced for the development of bamboo sector.

A host of high value medicinal plants are available in Mizoram. In fact the socio-economic life of the rural people of Mizoram depends on their ambient vegetation from where they derive their entire material requirement, including herbal medicines. Development of herbal and medicinal plants for setting up processing units in Mizoram will be a very tenable investment.

**9.5. Animal Husbandry and Meat Processing based industries:** Animal husbandry occupies an important place in the state economy. Mizos being a meat consuming community, there exists ample scope for activities like goat rearing, piggery and poultry on commercial scale. Further, huge cultivation of maize and oil seeds offer good scope for setting up of animal feed units.

**9.6. Handloom and Handicrafts based industries:** Handloom and handicrafts are the most important and popular industrial activities in Mizoram. Mizoram has highly gifted skilled handloom and handicraft artisans. Mizoram has not dwindled into trite imitations nor lost their traditional splendence, is now all set to carve a niche for itself in the international markets in handloom and handicrafts. Cane and bamboo are remarkable natural materials found abundantly in the state. Its popularity is due to special features such as pliability and linear strength which have been used to advantage by craftsmen in many creative ways. The original garment of the Mizos known as puan. The Mizos have certain unique patterns and motifs that have come down through the ages.

**9.7. Mineral based industries:** A number of minerals like shell limestone, coloured hard sandstone, clay mineral, coal seam, oil and natural gas are available in the state. Mineral Resources based Industries have tremendous potential in the State. The government will give special attention to units based on indigenous and imported gems and gemstone.

**9.8. Tourism:** Mizoram with its abundant scenic beauty and pleasant climate has a tremendous scope for developing tourism related industries. Mizoram is a storehouse of natural beauty with an endless variety of landscape, hilly terrains, meandering streams, deep gorges as well as rich wealth of flora and fauna. The rivers, peaks, plains and the lakes are the treasures of Mizoram. With its abundant scenic beauty and a soothing climate, the state has tremendous scope for developing tourism related industries. There are various development avenues in tourism and related sectors such as Cultural, adventure and wildlife, eco-tourism, amusement parks, other leisure & entertainment units (including sports), health farms, Hotels & Lodges, travel Agencies, tour operators, and tourist transport services, convention/ seminar Centers.

**9.9. Hydropower:** Mizoram has been blessed with vast hydroelectric potential. Major rivers flowing through Mizoram, such as Tlawng and Tiau, provide hydroelectric power potential of 4,500 MW that is

sufficient to meet energy requirements of the state. In spite of the huge hydro-electric power potential available in the State (4500.0MW approx), only 0.66% of its potential has so far been harnessed, through Small & Mini Hydel Projects.

As per the 18th Power Survey of India, the bulk power requirement of Mizoram is 201MW and the allocated share is 103.09MW (real time power availability is normally 60MW). There is acute power shortage as the power generated is only about 15MW from the installed capacity of 29.35MW while the present peak demand is 102MW. The rest of the requirement has to be imported from various sources like Loktak, Ranganadi, etc from Central Sector Utilities like NEEPCO, NHPC, NTPC, etc.

**9.10. Electronics and Information Technology:** Electronics and information technology is going to be the industry of the new millenium. The pollution free atmosphere of the state is congenial for the development of this sector. High literacy rate prevalent in the state facilitates the IT industry. Mizoram has recognized IT as the fastest and the most advanced vehicle of change for all round progress and development of the state. A separate IT policy has been announced to encourage investment in this sector. Accordingly, the government is promoting widespread propagation of IT in the state through a well-defined policy framework for encouraging IT in the fields of e-governance, empowerment of the people and the society, education, industry, health, rural development, agriculture and tourism. Therefore, the government of Mizoram endeavor to established Call Centre, Medical Transcription, Website Services, and Back-office operations. The Government of Mizoram is endeavor to establish 'Software Technology Park' in the premises of hi-tech complex with the objective of promoting export of computer software from Mizoram. It mainly aims at the development and export of Software and Software Services through Technology assessments, market analysis, marketing segmentation, marketing support etc. This STP may be established with a joint effort of the Government of Mizoram and Department of IT, Government of India.

# EXECUTIVE SUMMARY

## TITLE OF THE STUDY

### NAGALAND STATE INDUSTRIAL PROFILE

#### 1. INTRODUCTION:

Naga means “Hillmen”. Thus, Nagaland is a “land of the Hillmen”. Home to a number of tribes, the state of Nagaland is located in the Northeastern Region of India. After independence, this territory was made a centrally administered area in 1957 administered by the Governor of Assam. It was known as the Naga Hills Tuensang Area. Nagaland attained statehood on December 1, 1963 and became the 16<sup>th</sup> State of the Indian union. 16 different tribes inhabit the state of Nagaland. The tradition of the tribal inhabitants is revealed through the different customs, dialect, attires and habits. The capital of the state is Kohima which is located at an elevated altitude of 1444.12 meters above sea level. Dimapur is the commercial hub of Nagaland.

KEY HIGHLIGHTS	
<ul style="list-style-type: none"><li>• <b>Naga Chilli, one of the world’s spiciest chillies, is grown in the state.</b></li><li>• <b>Rich resources of Minerals, Petroleum and Hydropower.</b></li><li>• <b>3rd highest producer of cobalt in India.</b></li><li>• <b>600 mn MT of crude oil capacity.</b></li><li>• <b>Naga tree tomato and Chakhesang shawl are registered geographical indications of Nagaland.</b></li><li>• <b>Among all the resources, forest resource such as medicinal plants and timber contribute maximum to the state’s economy.</b></li><li>• <b>Hornbill festival of Nagaland, celebrated each year to promote cultural heritage of Nagaland, attracts a flock of domestic and foreign tourists.</b></li></ul>	
<b>Major Industry Sectors</b>	<ul style="list-style-type: none"><li>• <b>Agriculture and Allied Activities</b></li><li>• <b>Apiculture</b></li><li>• <b>Mining</b></li><li>• <b>Sericulture</b></li></ul>

#### 2. GEOGRAPHY:

The state of Nagaland encompasses the geographical coordinates of 25 degrees 6 minutes North to 27 degrees 4 minutes North latitude and 93 degrees 20 minutes East to 95 degrees 15 minutes East longitude. The state has an area of 16,579 square kilometres. It is bounded by Assam in the west and north and in the north-east by the Tirap district of Arunachal Pradesh. The southern boundary is shared with the state of Manipur, while the eastern limits of the state are on the international boundary between India and Myanmar.

2.1. Climate: Nagaland has a largely monsoon climate with high humidity levels. The salubrious mountain climate of Nagaland is responsible for the health and well being of the citizens of the state. Various factors like the altitude, geographical coordinates, distance from the sea and the wind direction influence the climate in Nagaland. The hilly terrains of the Northeastern State of Nagaland is instrumental in shaping the cool and pleasant climatic conditions. Summer is the shortest season in the state that lasts for only a few months. The torrential monsoon downpours continues nonstop during the months of June, July, August and September. Heavy rainfall occurs between the months of May and August. September and October months influence occasional showers. Annual rainfall averages around 70–100 inches (1,800–2,500 mm), concentrated in the months of May to September. Temperatures range from 70°F (21°C) to 104°F (40°C). In winter, temperatures do not generally drop below 39°F (4°C), but frost is common at high elevations. The state enjoys a salubrious climate. Summer is the shortest season in the state that lasts for only a few months. The temperature during the summer season remains between 16 °C (61°F) to 31°C (88°F). Winter makes an early arrival and bitter cold and dry weather strikes certain regions of the state. The maximum average temperature recorded in the winter season is 24°C (75°F). Strong northwest winds blow across the state during the months of February and March.

2.2. Topography: The topography is very rugged, full of hilly ranges which break into a wide chaos of spurs and ridges. The altitudes vary between 914 metres and 3,048 metres above the sea level. The average height of this mountainous state is approximately 2000 metres and the highest peak of Nagaland, Mt. Saramati, situated in the extreme southeast of Nagaland bordering Myanmar on its east, is at an altitude of 3841 metres. The hill range in the state runs in a north-south direction and is flanked with deep river valleys such as the Zungki River on its south, Likimro River on its west and Chindwin River on its east (in Myanmar). The state has only a few hundred square km. of plains along the foothills in the Western part. It falls under the Mid-Tropical Hill Zone category of Agro-climatic Zonal Classification. The three distinct geographical regions are: (i) High Hill areas with lateritic soils and non-laterised red soils; (ii) Lower Hill ranges of brown forest soils and podzolic soils and (iii) Foothills/Valleys with recent alluvium, old alluvium and mountain soils. The annual rainfall varies from 1500 to 2500 mm and temperature varies from 40C in winter to 35C during summer.

### 3. THE ADVANTAGES OF THE STATE

The advantages of the Nagaland state are as follows;

**3.1. Suitable Climate for Agriculture:** The agro-climatic conditions are favourable for growing various agriculture and horticultural crops in Nagaland. The state has a comparative advantage in the availability of fruits such as Pineapple, Plum, Pears, Bananas, Passion fruit, Orange and other exotic spices. There is immense potential for food processing industries.

**3.2. Rich Natural Resources:** The important natural resources of the state of Nagaland are in the form of its rivers, forests and its mineral resources. Nagaland is endowed with rich forest resources including various types of flora and fauna. Bamboo is found extensively all over Nagaland. It is found in pure patches as well as mixed with deciduous and evergreen tree species. The growing stock of bamboo has been estimated to be around 8.96 million hectares/90 million tons in the country, out of which about 5% of the growing stock is assessed to be available in Nagaland. Presently, about 46 different bamboo species are known to exist in the State. It is evident that there is vast potential for utilization and development of bamboo resources in the state. Coal, limestone, nickel, cobalt, chromium, magnetite, copper, zinc, platinum, petroleum and natural gas are the major minerals available in Nagaland.

**3.3. Tourism Potentiality:** Nagaland with its rich historical, cultural and panoramic landscape is a traveler's paradise. Lush green vegetation having interesting flora and fauna, deep valleys with clean rivers, natural lakes, hill agriculture and pleasant climate throughout the year are unique natural features of Nagaland. Nagaland also has its own unique identities reflected through mystic culture, ethnic traditions, hospitable people, fast social evolution of the urban Naga society, high literacy rate, interesting and indigenous architecture, class / caste less and self-sufficient society and beggar free urban areas. The unique geographical location and long international boundary with Myanmar could be another tourist feature. Over the years with the promotion and up-scaling of the activity of the Hornbill Festival in December, it has become a mega tourism event in the State. It not only generates employment but also serves to preserve and protect the cultural heritage of the State.

**3.4. Infrastructure Support:** The Government of Nagaland has recognised that adequate and sound infrastructural services are necessary for integrating the State with the rest of the nation and improving the quality of life of the people. Accordingly, it has undertaken several infrastructural projects in the State to attract investors. Existing infrastructure is also upgraded from time to time to suit the ever-increasing demands of the industrial sector.

**3.5. Promotional Govt. Policies:** As envisaged in the Industrial Policy 2004, the Nagaland Government has taken various measures like development of industrial infrastructure, promotion of export and trade, provision of training for development and improvement in entrepreneurial and technical skills. The Government also provides incentives to promote industrial activity. The incentive scheme package includes-(a) Power subsidy (b) Drawal power line (c) Manpower subsidy (d) Subsidy for quality control measures (e) Special incentive for 100 per cent export oriented units etc.



**3.6. Available Skilled Workforce:** The literacy rate of Nagaland is 79.55 percent as per 2011 census. Majority of the population in the state speaks English, which is the official language of the state. The state offers technical and medical education. Thus, the high literacy rate and large base of skilled workforce makes the state an ideal destination for knowledge based industries and services sectors.

#### 4. AVAILABLE RESOURCES:

**4.1. Agriculture and Horticulture Resource:** Agriculture in Nagaland is considered a prime source of revenue for the state. Economy of Nagaland gets a major boost through the agricultural activities of the state. Terrace and jhum cultivation are widely practiced by the tribal communities of Nagaland. The crops that have a high yield in the state of Nagaland include rice, tobacco, oilseeds, pulses, fibers, potato and sugarcane. The local people of Nagaland earn their living by growing a number of crops in their fields.

One of the major reasons behind the flourishing agricultural economy of Nagaland is the developed state of irrigation in the place. Apart from major crops the farmers of Nagaland also produce plantation crops like coffee, tea and cardamom. Potato and sugarcane are the two prime cash crops that generate revenue for the Nagaland economy. Then there are many vegetables that are grown by the peasants of Nagaland like that of carrots, chillies, onion, melon, spinach leaf, cucumber, brinjal, tomatoes and mustard. Sugarcane, maize, yams, potato, millet and arums are considered as the principal crops of Nagaland state. The farmers of Nagaland grow their crops on the basis of the rain conditions in the place. Having an agri-climatic condition Nagaland is known to have high yield.

#### CULTIVATION AREAS OF MAJOR AGRICULTURAL CROPS IN THE STATE

Sl. No.	Crop	AREAS OF AVAILABILITY
1.	Rice	Districts of Phek, Kohima, Mokokchung, Tuensang, Wokha, Zunheboto and Mon.
2.	Millet	Districts of Kohima and Wokha.
3.	Maize	Districts of Tuensang and Zunheboto.
4.	Pulses	Tuensang district.
5.	Oilseeds	Districts of Dimapur and Zunheboto.
6.	Potato	Districts of Kohima and Phek.
7.	Sugarcane	Dimapur district.
8.	Coffee	Districts of Mokokchung, Kohima, Wokha, Zunheboto, Phek and Mon.
9.	Arecanut	Districts of Mokokchung, Mon, Dimapur and Peren.
10.	Cashewnut	Districts of Kohima, Wokha, Mokokchung, Mon, Dimapur, Longleng and Peren.
11.	Coconut	Districts of Kohima, Wokha, Mokokchung, Mon, Dimapur, Longleng and Peren.

Horticulture has emerged as a potential agricultural enterprise in the State's economy in recent times. In Nagaland, the sector has evolved from kitchen gardens, nurseries and small farms to engaging in activities of prominent horticultural crops like Orange, Pineapple, Banana, Flower, Large Cardamom, Naga Mircha, Naga Cucumber, Ginger and Turmeric. With varied agro climatic zones, the State has the advantage of having congenial conditions for cultivation of various horticultural crops. While urbanization, awareness and change in food habits farmers have also realized its potential as a profitable undertaking and many have undergone a shift towards horticultural crops. Although relatively new, the concept of floriculture as a source of livelihood has gained momentum especially in the urban and semi urban areas in the last few years. The demand for cut flowers both within and outside the State has gone up due to high quality of flowers. To promote floriculture the State Horticulture Department installed hi-tech structures for the commercial cultivation of flowers, provides quality planting materials and conducts trainings on cultivation practices, post-harvest handling and flower arrangements. Farmer's exposure tours are also organized to equip the growers with up-to-date technologies and practices.

#### CULTIVATION AREAS OF MAJOR HORTICULTURE CROPS IN THE STATE

Sl. No.	Crop	AREAS OF AVAILABILITY
<b>A.</b>	<b>FRUIT CROP</b>	
1.	Pineapple	Districts of Mokokchung, Peren and Dimapur.
2.	Oranges	Districts of Kohima, Wokha, Mokokchung and Tuensang.
3.	Passion Fruit	Districts of Kohima, Wokha and Mokokchung.
4.	Banana	Districts of Kohima, Wokha and Mokokchung.
5.	Lemon	Districts of Dimapur, Wokha and Mokokchung.
6.	Papaya	Districts of Kohima and Wokha.
7.	Pomelo	Districts of Kohima and Wokha.
<b>B.</b>	<b>VEGETABLE CROP</b>	
1.	Cabbage	Phek district.
2.	Cauliflower	Dimapur district.
3.	Colocassia	Districts of Kohima and Wokha.
4.	Bean	Tuensang district.
5.	Chow Chow	Districts of Kohima, Wokha and Mokokchung.
6.	Tomato	Kohima district.
7.	Tapioca	Mokokchung district.
8.	Cucumber	Mokokchung district.
9.	Leafy Vegetable	Districts of Kohima, Wokha, Mokokchung, Zunheboto, Tuensang, Phek, Mon and Peren.
<b>C.</b>	<b>SPICES CROP</b>	
1.	Naga King Chilli	Districts of Kohima, Dimapur and Mon.
2.	Cardamom	Districts of Kohima and Phek.
3.	Black Pepper	Districts of Kohima, Wokha, Mokokchung, Mon, Dimapur, Longleng and Peren.
4.	Ginger	Districts of Mon and Peren.
5.	Turmeric	Districts of Dimapur and Peren.
6.	Betel Vine	Districts of Wokha, Mokokchung, Mon, Dimapur and Longleng.

**4.2. Forest Resource:** Forest is an integral part of the economy of the State. As per Indian State of Forest Report 2015, the total forest cover in the State is around 12,966sq.km which account for 78.20 per cent of the total geographical area of the State and constitutes 52 per cent of the total area reported for different land utilization in the State. Forest cover of the State is classified into very Dense Forest (VDF), moderately Dense Forest (MDF) and Open Forest (OF). The tree cover of the State is estimated to be 381sq.km which is 2.29 per cent of the geographical area. Recorded forest of Nagaland is classified into Reserve Forest, Protected Forest and Un-classed Forest. As per records available, Recorded Forest in the State covers 52.04 per cent of State's geographical area. Out of the total recorded forest area of 8629 sq.km. Reserved Forest in the State constitutes 0.72 per cent, Protected Forests 5.98 per cent and Un-classed Forest constitutes 93.56 per cent.

To increase the area under forest cover, various programmes are undertaken by the Forest Department viz. National Afforestation Programme and distribution of seedlings from State nurseries to local communities. Under the national Afforestation programme all centrally sponsored schemes are clubbed and implemented through Forest Development Agency (FDA) by forming Village Forest Committees (VFC/JFMC) which allows greater participation of local community. During 2016-17, a total of 2130 hectares was afforested.

#### MAJOR NON-TIMBER FOREST PRODUCTS (NTFPs) IN THE STATE

Sl. No.	NTFPs	AREAS OF AVAILABILITY
1.	Bamboo	Major areas include districts of Mokokchung, Wokha, Longleng, Mon, Dimapur and Peren.
2.	Cane	Available extensively all over the state.
3.	Broom Grass	
4.	Honey	Widely available throughout the state.

5.	Mushroom	Major areas include districts of Mon, Kohima, Peren, Wokha, Longleng, Zhuneboto and Dimapur. It is also available in natural forests all over the state.
6.	Bay Leaf	Available in the natural forested regions of the state.
7.	Packing Leaf	Traditional packaging using leaf is practiced.
8.	Medicinal and Aromatic Plants	Abundantly available in the hilly regions of the state.

**4.3. Mineral Resource:** Nagaland has rich mineral resources. Nagaland State Mineral Development Corporation Ltd (NSMDC) which is a fully Government owned Corporation is engaged in the commercial exploitation and promoting mineral based industries in the State. At present NSMDC operates two Dimensional and Decorative Stone Plants at Chumukedima and Wazehoand also a Mini Cement Plant. The Mini Cement Plant Wazeho is upgraded from 50 TPD to 150 TPD. Coal is a major mineral found in Tuensang, Mon, Wokha, Longleng and Mokokchung districts. The estimated potential reserve of coal in Nagaland is 317 million tonnes. To regulate and manage the mining of coal in the State, the State Government formulated its own Coal Policy and Rules in the year 2006 which was subsequently amended in 2014. The main established mineral reserves in the State are as follows;

- (a) Petroleum & Natural Gas (prognosticated reserve of 600 million tonnes) in the Northwest along Nagaland–Assam border
- (b) Coal (with inferred reserve of 317 million tonnes)
- (c) Limestone and marble (with inferred reserve of 1000 million tonnes)
- (d) Magnetite with Nickel, Cobalt and Chromium (5 million tonnes of proven reserve)
- (e) Rich deposits of varieties of decorative and dimensional stones
- (f) Other associated metals like Zinc, Molybdenum &
- (g) Other possible precious metals such as Gold and Platinum groups in Phek, Kiphire and Tuensang districts of south-east Nagaland.

#### MAJOR MINERALS AND AREAS OF THEIR AVAILABILITY IN THE STATE

Sl. No.	Minerals	AREAS OF AVAILABILITY
1.	Coal	Borjan&Tiru in Mon District; Konya in Tuensang District; Changki-Chongliyimsen, Lakhuni, Jhanji-Desai in Mokokchung District; Leo Longidang area in Wokha District.
2.	Limestone	Satus, Mollen, Wazeho&Satuza in Phek District; Nimi, Khonga, Kamku, Salumi, New Basti, Pang &WuiChokla in Tuensang District.
3.	Nickel-Cobalt bearing Magnetite	Ziphu, Washello, Reguri, Molhe&Phor in Phek District; Phokpur&Nimi in Tuensang District.
4.	Dimension Stones	Parts of Phek&Tuensang Districts
5.	Magnetite	Phokphur in Tuensang District.
6.	Oil & Gas	Changpang area in Wokha District.

#### 5. INFRASTRUCTURE FACILITIES:

The Government of Nagaland has recognised that adequate and sound infrastructural services are necessary for integrating the State with the rest of the nation and improving the quality of life of the people. Accordingly, it has undertaken several infrastructural projects in the State to attract investors the world over. Infrastructure set up in the State includes, transportation (railways, roadways and aviation); telecommunication; and power; etc.

**5.1. Power:** Nagaland has achieved 100 percent village electrification reaching even the remotest village of the State. Altogether 1271 villages have been electrified, as on December 2004. Nagaland is located in hilly and mountainous region and is endowed with good rainfall at the rate of 200 cm

(average) per year, thus it has tremendous potential of developing hydro power, that is production of electricity by means of running water in rivers and streams.

The State is fully dependent on its share of power allocation from the Central Public Sector Undertaking such as NEEPCO, NHPC and NTPC. The percentage share allocation based on installed capacity project-wise is given in the table. The peak power demand at present stands at 156 MW out of which only 142.67 MW is available from State's own generation and Central Sector allocation.

The State owned power generation are from hydro power sectors Likimro (24MW), Lang (1MW), Tehok (1MW), Duilomroi-I (0.54 MW) and DuilomroiII (0.20 MW). So far, a total of 26.74 MW stand harnessed under various sectors. The State entered into a PPP mode for development of Dikhu - 186 MW. Preliminary activities for Lower Tizu- 40 MW and Upper Zungki – 24 MW have also been initiated to meet the future demand. The State has entered into a PPP mode for development of Dikhu -186 MW. While preliminary activities for Lower Tizu- 40 MW and Upper Zungki – 24 MW have been initiated to meet the future demand, the State should be prepared to enter into / medium / long term Power Purchase Planning from UMPP (Ultra Mega Power Projects) belonging to both IPP (Independent Power Producers) and upcoming Central Sector projects. State should also encourage private developers to invest and develop the identified State hydro potentials.

The State has 3 (three) load centres for transmitting power across the State for 132KV and 66KV level at Dimapur, Kohima and Mokokchung. The intra State transmission capacities level are 226.5MVA and 230MVA respectively with capability of handling 205 MW power demand. In order to meet the deficient power supply, initiatives undertaken through State Plan and the World Bank funded NERPSIP scheme are as given in the table below. The transmission capacity at 132 KV is projected to be increased to 750.5MVA by 2020-2021. However, an addition of 500MVA at 132KV to Dimapur and Kohima is required in these areas as there is potential of industrialization and massive commercial/ economic activity.

**5.2. Road Network:** The major mode of transportation in Nagaland is by road. Nagaland has a reliable road network, which connects it to the rest of the country. The total length of the roads in the State is 9,860 km which includes National Highways, State Highways, District and Village roads. Around 1000 villages in the State have been linked by roads. A number of taxis and buses connect Nagaland (Dimapur and Kohima) from Guwahati (Assam) and Shillong (Meghalaya).The total road length of the State during 2016-17 excluding the National Highways is 12079.8 Km. Due to changes in classification and up-gradation of roads from Other District Road (ODR) to Major District Road(MDR) or to State Highway the road length in various categories under purview of the PWD decreased from the earlier level of 13031.83 Km.The total length of National Highway within the State of Nagaland is 1546.70Km, out of which 1123.68 Km is under Nagaland PWD and 424.3 Km under BRO. The National Highway Wing of the State Public Work Department takes the responsibility of supervising and monitoring construction and maintenance of the road.

**5.3. Aviation:** Nagaland has only one airport in Dimapur. Direct flights connect the airport to Guwahati and Kolkota. However, efforts are being tomade to connect it to the major airports in India. Dimapur Airport is being made fit and suitable for Airbus 320 A category aircraft operation in all weather conditions, 24 hours of the day.The Nagaland State Transport Department liaises and coordinates with Civil Aviation Ministry on matters of air transport. Construction of airstrips for landing of small aircraft and establishment of international standard airport in the State proposal are being pursued. Besides, State Helicopter Service is operated on weekly basis connecting all the major district headquarters. Chartered sorties are also undertaken for lifting VVIP/VIP and patients from remote and rural areas falling under identified/ permissible coordinates.

**5.4. Railways:** Dimapur is the only rail-head in the State from where train services are available. It has a railway station on the main line of the North-East Frontier Railway. It is well connected to Guwahati, with a number of trains that shuttle between the two stations every day. Guwahati, on the other hand, has direct train lines with most of the major Indian cities/ States. The passenger reservation system available at Kohima has been upgraded as well as on-line reservation service from Kohima has been made available. The foundation stone for construction of the Dimapur-Zubza railway line was laid by the union minister of Railway in August 2016. Although declared a national project in 2010 work could not start as stipulated due to land issues. A committee has now been

constituted to oversee the construction of Dimapur-Zubza connecting Kohima, the State capital (90.54 Km). Survey for rail link in the foot hills of the State from Dimapur – Tizit (246.25 Km) has been completed. Construction of the railway up to Kohima will not only ease transportation of goods and passenger but will also boost tourism and other facilities.

**5.5. Inland waterways Transport:** An inland Water Transport Wing in the Transport Department has been set up to liaise and coordinate on matters pertaining to inland waterways and to identify potential inland waterways and to undertake feasibility studies. The Ministry of Shipping through M/s. Rites Ltd. has identified three water ways in Nagaland, viz. Tizu River with 42 Km from Avangkhu in Phek district for Indo-Myanmar interconnectivity, Dhansiri River with 110 Km and Dikhu River with 52 Km for interState transport with Assam.

**5.6. Communication Network:** The telecommunication network in the State is growing at a rapid rate. With the up-gradation of the Dimapur Telecom District to that of a Telecom Circle, the telecommunication services in the State is expected to improve further. The advent of Internet service has also linked this remote State with the global information highway. The postal and communication facilities in the State has been growing steadily in recent years. During 2014-15 there were 328 number of Post-offices operating in the State with its Head office located at Kohima. Dimapur district with 55 Post Offices has the highest number, followed by Mokokchung district with 52 and Kohima district with 49.

## **6. THE BUSINESS ENVIRONMENT:**

The Department of Industries & Commerce is endeavouring to promote industrialization in the state through various policy announcements, industrial and commercial activities including service sector in the State. These policy measures unveil a roadmap for the overall development of the State by removing the hurdles in the investment process. These policies are aimed at fully utilising the available resources, generating gainful employment as well as improving the quality of life of the people of the State. To promote Industrial Activity in the State, the Government of Nagaland has adopted a policy of providing incentive in the form of Manpower Subsidy, Power Subsidy, reimbursement of Cost of Power Line etc. to the entrepreneur in the state.

The Department of Industries and Commerce has been implementing many developmental schemes in order to create more self-employment avenues in the small scale and tiny and cottage industries sector. It also explores and formulates technically feasible and economically viable industrial projects. These project profiles/Schemes are given to prospective entrepreneurs in the headquarter as well as the district. The main task of the department is to be the facilitator to the prospective entrepreneurs to set up and run an industrial venture successfully. To promote Industrial Activity in the State, the Government of Nagaland has adopted a policy of providing incentive in the form of Manpower Subsidy, Power Subsidy, reimbursement of Cost of Power Line etc. to the entrepreneur in the state.

Another major policy is the Information Technology (IT) Policy, which has been announced in order to position the State as an attractive location for development and growth of the information technology (IT) industry and related services. The Government is to play the role of a facilitator, by defining standards and providing adequate infrastructural support for the purpose.

Peace is a pre-requisite for creating congenial atmosphere for any developmental process. Therefore, it has always been the priority for the government of Nagaland to create a congenial atmosphere in the state for sustained growth by maintaining sound law order situation. The state government is also considering provision of a dedicated state force for industrial activity.

## **7. INDUSTRIAL INFRASTRUCTURE:**

The Government of Nagaland and the Industries & Commerce Department is of the view that the State needs infrastructure led growth and therefore stressing more for the development of infrastructure structure in the State. The Department has so far created the following infrastructures in order to facilitate the Industrial growth in the State.

Sl. No.	Name of the Industrial Infrastructure
1.	Industrial Growth Centre (IGC) at Ganeshnagar, Dimapur.
2.	Export Promotion Industrial Park which is now being up graded to Product Specific Special Economic Zone (SEZ) at Dimapur.
3.	Nagaland Tool Room & Training Centre (NTTC) Dimapur aimed with Human Resource Deployment in the Industrial Sector.
4.	Industrial Infrastructure Development Centre (IIDC) at Kiruphema.

The following areas in the State has been identified as Industrial Zones where industrial units set up will be eligible for the package of incentives provided under the industrial policy:

1. Bhandari Sub-division
2. Dimapur Sub-division
3. Ghathashi area
4. Industrial Growth Centre, Longleng
5. Industrial Growth Centre, Noklak
6. Mini Industrial Growth Centre, Viswema
7. New Industrial Growth Centre, Ganeshnagar
8. Tizit Sub-division
9. Wazeho Area
10. Tuli area
11. Kiphire sub-division
12. Longnak/Longtho area

Besides the above, the Government will endeavor to notify identify similar zones in other potential areas such as Naginimara-Tiru&Jalukie valley for a balanced industrial development of the State. The Government will also set up IID Centres Food Parks, IT Parks and chain of Cold storages etc. in the State to provide all necessary industrial infrastructures to facilitate prospective investors/entrepreneurs to set up industries in the State.

**7.1. Nagalnd Industrial Development Corporation Ltd (NIDC):** Nagaland Industrial Development Corporation Ltd (NIDC) was established with the objective of promoting, developing and assisting industries in the State. It was incorporated under the Companies Act, 1956 on 26th of March 1970. Besides funding long-term needs of industrial ventures by way of loans and capital infusion, NIDC is instrumental in development of infrastructure, providing technical and commercial know-how to entrepreneurs.

NIDC is open to partnerships in the development and growth of industries in the state and invite participation of investors and entrepreneurs in such sectors like infrastructure development, power, transport & communication, healthcare, warehousing, housing development, information technology, fruits & vegetable processing, meat processing, tourism development, floriculture, horticulture and a host of agro-based industries.

**7.2. Border Trade and Commerce:** For trade purposes, four-border trade centres have been be set up by the state government along the Indo-Myanmar border for the promotion of trade between the two countries and other ASEAN countries. Out of the four border trade centers, infrastructural development for 3 (three) Pangsha, Longwa and Avankhu have been taken up. They are as follows;

- i) Longwa in Mon District
- (ii) Pangsha in Tuensang District
- (iii) Avankhu in Phek and
- (iv) Moleh in Phek District.

**7.3. Nagaland Khadi& Village Industries Board (NKVIB):** The Nagaland Khadi& Village Industries Board is a statutory body constituted by the Government of Nagaland under the Act of Nagaland Legislative Assembly. Implementation of programmes under NKVIB are in accordance with the Khadi& Village Industries Commission (KVIC) pattern. It provides marginal grant to the

beneficiaries/units financed by the Banking agencies under Prime Minister Employment Generation Programme (PMEGP) Scheme to promote Khadi & Village Industries activities in the State.

**7.4. Act East Policy-Initiatives of the State:** With economic opportunities emerging from the Act East Policy of the Central Government, the State Government has upscaled its industrial infrastructure development and institutional policy framework to tap into the economic benefits. Five Border Trade Centres have been identified along the Indo-Myanmar border where necessary infrastructure development works have been initiated. The Government is also working on a revised State Investment and Industrialization Policy with provisions to stimulate rapid industrialization and investment in the State.

**7.5. Ease of Doing Business:** In terms of 'Ease of Doing Business' amongst the 32 States/ UTs, the State's ranking has improved significantly. The Government has initiated various business reforms to ensure the ease of doing business in the State. In 2016 assessment of States implementation of Business Reform, released by the Ministry of Commerce and Industry and the World Bank, Nagaland has risen from a dismal low of 31 rank to 26th in the Country.

## 8. THRUST AREAS UNDER STATE INDUSTRIAL POLICY:

The following are the thrust areas for industrial development under State Industrial Policy-2000 (Revised-2004) of Nagaland State;

Sl. No.	Thrust Areas
1.	Food Processing Industries
2.	Tourism Industries
3.	Agro-based Industries
4.	Mineral based Industries
5.	Handloom and Handicrafts
6.	Sericulture
7.	Floriculture
8.	Electronics and IT
9.	Pharmaceuticals
10.	Petrochemicals
11.	Bio-tech Industries
12.	Cane & Bamboo Processing/Manufacturing Industries
13.	Distillation of oils from Medicinal & Aromatic Plants including value added products
14.	Processing/manufacturing of indigenous Herbs & Natural Dyes
15.	Micro and Small Scale Service & Business Enterprises

## 9. POTENTIAL SECTORS IN THE STATE:

**9.1. Agriculture and Food Processing based industries:** Nagaland has potential for promotion of agriculture and horticulture because of the favorable agro-climatic condition. The types of farming system practiced in Nagaland are the traditional Jhum, Terrace Rice Cultivation (TRC) and Wet Rice Cultivation (WRC). Rice is the staple food which is cultivated in about 52.34 per cent of the Net Area Sown with rice production of 478210 MT during 2015-16. Multiple crops are grown in Nagaland viz, Rice, Maize, Millet, Gram, Mustard, Bean, Sugarcane, Rubber, Tea, Lemon, Potato, Sweet potato, Tapioca, Tomato, Pea, Chilly, Ginger, Garlic, Cardamom etc.

The state has a comparative advantage in the availability of fruits such as Pineapple, Plum, Pears, Bananas, Passion fruit, Orange and other exotic spices. Since use of chemical fertilizers is practically unknown to Nagas, proper marketing of organic food can reap a high return. Presently most of the produce is marketed in the local markets leading to huge volume of surplus and wastage. There is immense potential for food processing industries.

**9.2. Floriculture based industries:** Favourable climatic and geographical conditions in the state offer tremendous scope for floriculture. Many species of orchids are available in Nagaland, which has tremendous commercial potential. There is scope to grow exotic and new varieties of orchids through

tissue. The state govt. began promoting floriculture a few years back across four districts, which has currently spread to other districts. This has promoted cultivation of flowers by various educated Naga women under the Horticulture Technology Mission (HTM). Exotic and hybrid varieties of flowers are also being developed in Nagaland. The state is also home to the tallest Rhododendron tree in the world. Floriculture can be taken up as a viable industry in the State. Based on accessibility and agro-climatic conditions, Kohima, Mokokchung, Wokha and Dimapur districts have commercial potential for floriculture.

**9.3. Sericulture based industries:** The agro-climatic condition is very favorable for the development of Sericulture in the State. Mulberry, Muga, Eri, Oak-tussar and silk are widely cultivated in Nagaland. The department of Sericulture, Govt. of Nagaland has set up district sericulture offices and sericulture demonstration farms as well as spinning units in all the 11 districts of the State to popularize sericulture in rural areas, generates employment opportunities, introduce and impart latest technologies on sericulture, support marketing of sericulture products and promote silk exports from Nagaland.

**9.4. Forest Based industries:** Nagaland is rich in forest produces such as timber, cane and bamboo, flora and fauna. Bamboo is found extensively all over Nagaland. It occurs as a predominant plant in portions of the districts of Dimapur, Peren, Mon and Mokokchung; while, it is readily found mixed with other forest species in all other districts of the state. The Nagaland Bamboo Development Agency (NBDA) is the nodal agency to undertake bamboo development in Nagaland both as a resource and as an enterprise. The state has identified 650 indigenous medicinal plants that could be cultivated and processed in Nagaland. To conserve and promote medicinal plants in the state, the government has set up herbal gardens at Dimapur, Wokha, Mon, Mokokchung and Kohima. The agro-climatic conditions of Dimapur, Mokokchung, Phek and Tuensang districts are suitable for growth and cultivation of medicinal and aromatic plants.

Nagaland has immense potential to produce organic honey and pollen due to its rich biodiversity, traditional knowledge, practice of beekeeping and numerous honeybee species. Nagaland Beekeeping and Honey Mission (NBHM) was established in 2007 to promote honey production in the state. NBHM has set up a honey processing unit at Dimapur and established 17 common facility centres in the state. Moreover, it has been involved in training, survey studies and marketing of honey.

**9.5. Animal Husbandry based industries:** The Livestock sector supplements the farmers income, provide self-employment opportunities and nutritious food at affordable prices. The growth of the sector positively impacts the rural economy. Per capita meat (beef, pork, poultry, and mutton) consumption rate among the Nagas is perhaps the highest in the country and yet 80% of the live stock for meat is imported from outside the State. Animal Husbandry and Meat Processing have a huge potential as people of Nagaland are mostly non-vegetarian.

The State has high potential for processing of hides and skins under leather Industry. At present, scientific processing of Poultry/Piggery and other meat products is lacking in the State. Therefore, there is potential for setting up modern abattoir and other processing units in the State. Komul brand of dairy products have received a good market response in and outside the State. There is huge scope for production and marketing of other value added dairy products. Rearing of Angora rabbits for “Angora wool” is also a potential which can be exploited.

**9.6. Handloom and Handicrafts based industries:** Handloom and handicraft being a traditional activity has potential for employment generation and to provide livelihood to rural masses. Handloom and handicraft products from the state are renowned for their beauty and intricate design. Nagas are excellent woodcarvers and are famous worldwide for their art of woodcarving. Since, cane and bamboo grow abundantly in the forests and hills of the State and are readily available, Nagas have become expert basket makers. Besides basketry, artisans of the State have also started making furniture and a wide variety of decorative items. To promote and develop the vibrant traditional handloom and handicraft products the Nagaland Handloom & Handicraft Development Corporation Ltd.(NHHDC) was set up in the year 1979. NHHDC engages in the production, promotion and marketing of handloom and handicraft products.

**9.7. Mineral based Industries:** Nagaland has rich mineral resources. The main established mineral reserves in the State comprises of (a) Petroleum & Natural Gas (prognosticated reserve of 600 million



tonnes) in the Northwest along Nagaland–Assam border (b) Coal (with inferred reserve of 317 million tonnes) (c) Limestone and marble (with inferred reserve of 1000 million tonnes) (d) Magnetite with Nickel, Cobalt and Chromium (5 million tonnes of proven reserve) (e) Rich deposits of varieties of decorative and dimensional stones (f) Other associated metals like Zinc, Molybdenum & other possible precious metals such as Gold and Platinum groups in Phek, Kiphire and Tuensang districts of south-east Nagaland.

The huge reserves of more than 1000 million tons of high chemical grade limestone in the eastern Nagaland is a major prospect for setting up of industries such as; Cement, Calcium carbide, Bleaching powder and Hydrated Lime. Further the high grade limestone can be exported for foundry, blast furnace and other metallurgical and chemical industries. Some other industries that could be set up in this sector are White & green marble mining and polishing, Ceramic Glazed tile, Ceramic crockery, Ceramic insulators and Slate for building materials etc. Mineral Resources based Industries have tremendous potential in the State.

**9.8. Tourism based industries:** Nagaland with its rich historical, cultural and panoramic landscape is a traveler's paradise. Over the years with the promotion and up-scaling of the activity of the Hornbill Festival in December, it has become a mega tourism event in the State. It not only generates employment but also serves to preserve and protect the cultural heritage of the State. Pleasant climate, green hills, criss-crossing rivers, interspersed lakes, vibrant culture, colourful handicrafts and weavings and numerous festivals make Nagaland a popular tourist destination. Ministry of Tourism, Government of India has included 12 villages in Nagaland under the rural tourism scheme in order to promote traditional rural art, craft, textile and culture. The preferred tourist destinations in the state are Kohima, Dimapur, Mokokchung, Longleng, Wokha, Kiphire, Zunheboto, Phek, Peren, Mon and Tuensang. Creation of tourist complexes, eco-tourism, adventure tourism, ethnic culture tourism, health farms, hotels, convention centres, tourist travel services etc are various avenues for investment in the sector.

**9.9. Hydropower:** It is estimated that Nagaland has a potential for 1,574 MW of hydropower generation, but the installed hydropower generation capacity in the state was 53.32 MW as of May 2014. In order to capitalize on the immense potential; the state government is encouraging investments in this area. Under the central government's initiative of installing 50,000 MW hydropower in India, the Central Electricity Authority has prepared a pre-feasibility report of three hydropower projects in Nagaland. IL&FS Infrastructure Development Corporation has been mandated for setting up of two hydropower plants - Dikhu Hydropower Project (120 MW) and Dzuza Hydropower Project (8 MN). To exploit the huge potential of hydropower generation in the villages, the New and Renewable Energy Department of the Government of Nagaland has identified 21 feasible sites for hydro projects at the micro and mini levels. The state government aims to commission 50 hydro projects at the MSME scale by 2022. Under the 12th Five-Year Plan, the Ministry of Power has identified more than 90 new sites with an estimated potential of 196.98 MW to set up hydro electricity plants in the state.

**9.10. Information Technology based industries:** Nagaland's IT policy aims to increase the use of IT in the industrial and government sectors. With a high literacy rate, affordable cost, strong English-speaking population, improved telecommunications connectivity and favourable climate, Nagaland is well poised to serve the IT industry. In order to develop skilled manpower in IT, Department of Electronics Accreditation of Computer Courses (DOEACC) and Indira Gandhi National Open University (IGNOU) provide full-time as well as certificate courses through Community Information Centres (CICs).

The IT policy also provides various incentives and concessions for investments in IT. The Department of Information Technology & Communications of the Nagaland Government promotes and manages information technology in the state. The department is undertaking development, operation and maintenance of the Nagaland IT park project through public-private partnership (PPP). Recently, the Government of Nagaland has signed an MOU with Software Technology Park of India (STPI) for setting up of Software Technology Park of India (STPI) centre at Kohima and has earmarked an area of 18,137 sq.ft of built-up space at the new building of the Directorate of Information Technology & Communication, Kohima. This centre will cater to the needs of entrepreneurs and software industries in the State.

# EXECUTIVE SUMMARY

## TITLE OF THE STUDY SIKKIM STATE INDUSTRIAL PROFILE

### 1. INTRODUCTION:

Sikkim is the least populous and second smallest among the Indian states after Goa. Till 1975, Sikkim along with Nepal and Bhutan was known as the Himalayan Kingdom. Its earliest known settlers, the Lepchas termed it as Neliang (the country of caverns which gave them shelter). Bhutias the Tibetan Migrants called it Iho'mon (the land of southern Himalayan slope). Being a major rice belt, it was called valley of rice. After Passing of 38th Constitutional Amendment Bill on April 26<sup>th</sup>, 1975 Sikkim declared as the 22<sup>nd</sup> State of Indian Union. On 16<sup>th</sup> May 1975, Sikkim officially became the 22<sup>nd</sup> state of the Indian Union. Sikkim's capital and largest city is Gangtok. The nearest airport is Bagdogra in North Bengal (120 Km) and the nearest railway head is New Jalpaiguri (110 Km).

KEY HIGHLIGHTS	
<ul style="list-style-type: none"><li>• <b>India's first fully Organic State.</b></li><li>• <b>Sikkim enjoys a strategic locational advantage, sharing its boundary with Bhutan, China and Nepal.</b></li><li>• <b>Largest producer of large cardamom in India.</b></li><li>• <b>The state is home to 315 glacier lakes and world's highest mountain peak, Mt. Kanchenjunga.</b></li><li>• <b>Highest per capita income among north-eastern states in India</b></li></ul>	
<b>Major Industry Sectors</b>	<ul style="list-style-type: none"><li>• <b>Agro and Food Processing</b></li><li>• <b>Floriculture</b></li><li>• <b>Hydropower</b></li><li>• <b>Tourism</b></li></ul>

### 2. GEOGRAPHY:

Sikkim lies between 27° 04' to 28° 07' N (North) latitudes and 88° 00' to 88° 55' E (East) longitudes. Sikkim is located in the Eastern Himalaya extending approximately 114 km from North to South and 64 km from East to West, with a total geographical area of 7096 sq. km. It is surrounded by vast stretches of Tibetan plateau of the People's Republic of China in the North, Bhutan and Chumbi Valley of the People's Republic of China in the East, Darjeeling district of West Bengal in the South and Nepal in the West.

2.1. Climate: Sikkim's climate ranges from sub-tropical in the south to tundra in the north. Summers are extremely humid though not necessarily hot as temperatures vary according to altitude. In the lower and middle hills (Gangtok, Darjeeling, Kalimpong) the maximum temperatures range between 25 and 28° C. Down in the deep river valleys it can get stuffy but is never unbearably hot. Winters are relatively cold at night but pleasant during the day. In the lower and middle hills (Gangtok, Darjeeling, Kalimpong), night temperatures average 5° C, and day temperatures hover around 15° C. The alpine region of course becomes very chilly, and temperatures remain well below freezing except during moments when sunlight can seep in through the clouds. The Monsoon winds strike Sikkim between late May and early June, and there is incessant rain all across the state till late September. Gangtok has an annual rainfall of 325 cm. Sikkim is one of the rainiest zones in India. Because of the proximity of Sikkim to the Bay of Bengal and the fact that the mountains of the state come directly in the path of the monsoon cloud, most parts of Sikkim experience torrential rains during the summer. It is only during the month of October to March the weather remains more or less clear. The State receives an annual Rainfall of 2000mm to 4000mm. Rainfall however varies considerably from place to place because of the hill features.

2.2. Topography: The physical landscape of Sikkim is characterized by great variations in elevation. The northern limits which reach out to the Tibetan Plateau is straddled by the Donkia Range while the eastern flank is bounded by the Chola Range. The average steepness is about 45 degrees. Sikkim

encompasses the Lesser Himalaya, Central Himalaya, and the Tethys Himalaya. Although the trend of Great Himalaya is to run across in an east-west direction, the two ridges demarcating Sikkim's eastern and western sides, the Chola and the Singalila, follow a north-south pattern. Across the middle, another north-south ridge of lesser elevation separates the Rangeet Valley from the Teesta Valley. The major mountain peaks of Sikkim are; Khangchendzonga-8,846 m, Jonsang-7,444 m, Talung-7,351 m, Kabru-7,338 m, Siniolchu-6,887 m, Pandim-6,691 m, Rathong-6,680 m, Kaktang-6,148 m, and Simvo-6,811 m. Sikkim's two major rivers are the Teesta and the Rangeet. The source of Teesta is at the Chho Lhamu lake. The gentler Rangeet has its source at the Rathong Glacier south of the Khangchendzonga massif. It meets with the Teesta at the valley dividing Sikkim and Bengal. There are numerous perennial lakes in Sikkim among which, Khechiperi, Gurudongmar, Chho Lhamu, Changu and Menmetsho are some of the more scenic.

### **3. THE ADVANTAGES OF THE STATE**

The advantages of the Sikkim state are as follows;

**3.1. Investor Friendly Environment:** Sikkim is one of the most peaceful states in the country with a very high degree of political stability and unparalleled socio-communal harmony. Sound law and order system makes the state as preferred investment destination. Sikkim is also adjudged as one of the cleanest states. The State Government is committed towards creating a progressive business environment.

**3.2. Suitable Climate for Agriculture:** Sikkim has a suitable climate for agricultural and horticultural products. Sikkim produces 80 percent of India's large cardamom. Sikkim has gained a lot of international recognition through Floriculture. Sikkim has been designated as the official agriculture export zone with a big emphasis on production and mass scale export of cherry pepper, cardamom and ginger. Honey and tea are other agro-based products that have high potential.

**3.3. Organic Hub:** Sikkim has become India's first fully organic state in the year 2016. Around 75,000 hectares of agricultural land has been gradually converted to certified organic land by implementing organic practices and principles as per guidelines laid down in National Program for Organic Production. Thus, in pursuit of environmentally sustainable farming practices, organic farming has been adopted widely in the state of Sikkim.

**3.4. Rich Forest Resource:** Sikkim is rich in forest resources. Nature has been particularly generous in her gift of sylvan treasures to the state of Sikkim. The State has discovered 144 species / sub-species of Mammals more than 552 species of Birds, Butterflies, Reptiles frogs, Medicinal / Restricted / Protected trees and plants

**3.5. Tourist Destination:** Sikkim turned into a major tourist destination in the country lately. Because of prevailing peace and tranquility in the state in the one hand and the presence of naturally beautiful peaks, valleys, lakes, gardens, flora and fauna on the other, Sikkim has emerged as one of most sought after tourist destinations in the country. Changu lake, Baba Mandir, Nathula Pass, Gangtok Town and Gangtok Ropeway, Rumtek Monastery, Yumthang Valley, Gurudongmar Lake, Pelling Pemayangtse monastery etc. are the major places of tourist interest in the state.

**3.6. Promotional Govt. Policies:** The basic objective of Department of Commerce & Industries, Govt of Sikkim is to bring about rapid industrialization in the state so as to lure national and international companies to the small state of Sikkim by way of providing various incentives and subsidies so that they could invest and play an active role in the economic development of the state. Single Window Clearance System has been introduced in the state and therefore it is considered as one of the best place for investment. This would in turn help to overcome the growing problem of unemployment and also to compete with the other states of the Indian Union towards economic prosperity.

**3.7. Infrastructure Support:** The Government has been undertaking several infrastructural projects in order to attract investment and ensure overall welfare of the State. Presently, the State has good infrastructure facilities with favourable power situation, upgraded road network and improved telecommunications network.

**3.8. Available Skilled Workforce:** The literacy rate of Sikkim is 82.20% as per 2011 census. With the establishment of Universities and several technical as well as non-technical educational institutions, the quality of employable graduates improved considerably. Thus, the high literacy rate and large base of skilled workforce makes the state an ideal destination for investment.

#### 4. AVAILABLE RESOURCES:

**4.1. Agriculture and Horticulture Resource:** The agriculture systems practiced in Sikkim are integrated in natures that have evolved through years of experimentation by the farmers. Lately, marginal improvement in the lifestyle of farmers has been witnessed with adoption of modern technologies. Sikkim state has some inherent strengths that largely supports organic farming. After launching of Sikkim Organic Mission in the year 2010, various programmes of organic farming are implemented on mission mode and now Sikkim is well known as a total organic state and a pioneer in organic farming in the country as well.

The principal crops of the state are maize, paddy, wheat, millet, buckwheat, pulses and oilseeds. Large cardamom, ginger and orange are the most important commercial potential crops of Sikkim. Potato, radish, brinjal, tomato, beans, ,peas, mustard, pea, , cucumber, gourds , cauliflower, cabbage etc. are the important vegetables crops grown in the State. Wide range of fruit crops are grown successfully in the State. The important fruit grown in the state are mandarin orange, banana, guava, papaya, mango peach, plum pears, apple, avocado etc. The state is also rich in genetic diversity of minor or wild fruits. Presently mandarin orange is an important commercial fruit crop of Sikkim.

#### CULTIVATION AREAS OF MAJOR AGRICULTURAL CROPS IN THE STATE

Sl. No.	Crop	AREAS OF AVAILABILITY
1.	Rice	Districts of East Sikkim and West Sikkim.
2.	Maize	Districts of South Sikkim and West Sikkim.
3.	Finger Millet	All districts of Sikkim.
4.	Pulses	All districts of Sikkim.
5.	Buckwheat	East Sikkim district.
6.	Wheat	All districts of Sikkim.
7.	Barley	All districts of Sikkim.
8..	Rape & Mustard	All districts of Sikkim.
9.	Soyabean	Districts of East Sikkim, South Sikkim and West Sikkim.

Sikkim also has a large variety of exotic and beautiful flowers, which can earn substantial price in the national and international market. In particular, 550 species of orchids are found which are most beautiful in the world. The climate in some parts of the state is ideal for cultivation of mushrooms and mulberry trees for rearing of silk worm and hence the establishment of a sericulture industry. Honey and tea are other agro-based products that have high potential.

#### CULTIVATION AREAS OF MAJOR HORTICULTURE CROPS IN THE STATE

Sl. No.	Crop	AREAS OF AVAILABILITY
<b>A.</b>	<b>FRUIT CROP</b>	
1.	Sikkim Orange	Teesta and Rangit river valleys in East Sikkim & South Sikkim districts repectively; Tashiding, Gyalshing, Omchung, Tikjyak, Lingchom, Bermiok, Barthang, Rinchenpong, Chingthang, Chakung, Zoom, Timberbong and Karthok in West Sikkim district; Kewzing, Lingmoo, Sangmoo, Yangang, Payong, Rateypani, Namthang, Tarku, Tokal- Bermiok, Turuk and Sumbuk in South Sikkim district; Nazitam, Sang, Simik Lingzey, Khamdong, Sirwani and Samdong in East Sikkim district; and Dikchu & Hee-Gyathang in North Sikkim district.
2.	Apple	Lachung and Lachen in North Sikkim district.
3.	Guava	All districts of Sikkim.

4.	Banana	All districts of Sikkim.
5.	Kiwi	West Sikkim district.
6.	Litchi	Districts of East Sikkim, West Sikkim and South Sikkim.
<b>B.</b>	<b>VEGETABLE CROP</b>	
1.	Tomato	Districts of South Sikkim and West Sikkim.
2.	Cabbage	Districts of South Sikkim and West Sikkim.
3.	Cauliflower	Districts of South Sikkim and West Sikkim.
4.	Peas	All districts of Sikkim.
5.	Beans	All districts of Sikkim.
6.	Chayote (Prickly Squash)	South Sikkim district.
<b>C.</b>	<b>SPICES CROP</b>	
1.	Ginger	Mangalbaria, Chakung, Tharpu, Gyalshing, Zoom in West Sikkim district; Turuk, Sumbuk, Rateypani, Namthang, Mellidara, Maniram, Namchi and Temi-Tarku in South Sikkim district; Rhenock, Rongli, Pakyong, Rorathang, Khamdong, Pendam, Sirwani Rangpo in East Sikkim district and in small pockets of North Sikkim district.
2.	Turmeric	All districts of Sikkim.
3.	Large Cardamom	Extensively cultivated all over the state.

**4.2. Forest Resource:** Forest is one of the richest natural resources of Sikkim. The composition ranges from tropical dry deciduous forests with *sal* and its associates in the valley of Teesta and Rangit to the Alpine Scrub and Grasslands in high altitudes. The total area under the Administrative Control of Forest, Environment & Wild life Department is 5,841.00 Square Kilometer which accounts for 82.31 % of the total geographical area of the State. Forest is an important source of livelihood for the people of Sikkim. Apart from the extraction of Timber, forest is, also the source of herbs and plants that have been traditionally used as medicine. Besides these, the State has discovered 144 species / sub-species of Mammals more than 552 species of Birds, Butterflies, Reptiles frogs, Medicinal / Restricted / Protected trees and plants.

#### MAJOR NON-TIMBER FOREST PRODUCTS (NTFPs) IN THE STATE

Sl. No.	NTFPs	AREAS OF AVAILABILITY
1.	Bamboo	Available widely throughout the state.
2.	Cane	Available in limited areas of the state.
4.	Honey	Major area includes South Sikkim district. It is also popular all over the state.
5.	Mushroom	Large number of species which are edible and having medicinal values are available in the wild as well as grown by farmers all over the state.
8.	Medicinal and Aromatic Plants	Widely available in forests and grown by the farmers in their farmlands all over the state.

**4.3. Mineral Resource:** The important mineral resources of the state are copper-lead-zinc and silver reported in Bhotang, Rangpo and Dikchu in East Sikkim district. Occurrences of other minerals like dolomite, quartzite and steatite are reported in West Sikkim district. Limestone in North Sikkim district and Marble in East Sikkim and North Sikkim districts.

#### Other Minerals:

**Dolomite :** Both high grade massive and low grade flaggy type of dolomites have been located in Rishi area west of the Jorehtang Legship State highway. On the either banks of Rishi Khola. Four blocks of dolomite has been located and in one block a reserve of more than 1.10m down to a depth of 30 m has been estimated by GSI.

**Limestone:** Grey limestone interbanded with green phyllitic has been located in Rishi Khola south of Namgaon. At places the band is about 38m thick.

**Graphite:** Graphite, lumpy and flaky type with graphite schist, marble and limonitised pegmatite of Chungthang Formation of Darjeeling group has been located at Chitre and Dareli of West District.

**Marble:** Greyish white to creamy white coarse-grained marble bands is reported from 2 Km. Chungthang Formation at Chungthang, Lachung and Tsango.

**Coal:** Regional Geological exploration by GSI in and around Namchi area of South District has established a reserve of 1.4 lakh tones of bituminous to semi-anthracite coal, analyzing 40 to 60% fixed carbon, 4% to 22% ash, 8 to 13 % Volatile matter and 3% moisture. Thin coal seams (1m to 5m) are found to occur on the road linking Legship with Nayabazar and to the south of Put Khola.

#### MAJOR MINERALS AND AREAS OF THEIR AVAILABILITY IN THE STATE

Sl. No.	Minerals	AREAS OF AVAILABILITY
1.	Coal	Reshi, Sikkip, Nandugaon and Namchi in South Sikkim District.
2.	Quartzite	Ranikhola-Mansari area of West Sikkim District. & some parts of East and South Sikkim District.
3.	Talc	Ranikhola-Mansari area of West Sikkim District.
4.	Dolomite & Limestone	Rangit, Bhanjyang, Maniram, Wok, Phalidary in South Sikkim District; Phalidary, Legship and Magalbaria in West Sikkim District.
5.	Marble	Chungthang in North Sikkim District; Tsongo in East Sikkim District; Tolung and Lachung in North Sikkim District.
6.	Copper-Lead-Zinc	Bhotang, Rorathang, Dikchu, Rangpo in East Sikkim District.
7.	Graphite	Chitre-Dariely & Dentam-Uttarey area in West Sikkim District
8.	Thermal Springs	Phurtsachu, Borong & Polot in South Sikkim District; Yumthan, Tarum & Tolung in North Sikkim District.
9.	Kyanite	Kabi & Phodong in North Sikkim District.
10.	Sillimanite	Parts of West Sikkim District.
11.	Garnet	Kabi, Phodong in North Sikkim District and Lingdok in East Sikkim District.

#### 5. INFRASTRUCTURE FACILITIES:

The State has good infrastructure facilities with favourable power situation, upgraded road network and improved telecommunications network. The state government of Sikkim has been undertaking several infrastructural projects in order to attract investment and ensure overall welfare of the State.

**5.1. Power:** The total installed capacity of power in the state is 36 MW that is hydro based with transformation capacity of 123 MW. Rangeet hydel project has installed capacity of 560 MW. Sikkim receives most of its electricity from 19 hydroelectric power stations. Power is also obtained from the National Thermal Power Corporation (NTPC) and Power Grid Corporation of India. By 2006, the state had achieved 100% rural electrification.

**5.2. Road Transport:** In the absence of rail or air services, roads are the only means of transporting people and goods in Sikkim. Sikkim has a wide network of roads. The National Highway 31A links Siliguri to Gangtok through an all-weather metalled road running parallel to river Teesta. Almost all the districts and industrial hubs of the State are well connected by roads and they are nearer to Siliguri than to other parts of Sikkim. Besides, a branch of the highway from Melli connects western Sikkim. Towns in southern and western Sikkim are connected to the northern West Bengal hill stations of Kalimpong and Darjeeling. The four wheel drives are the most popular means of transport in the State, as they can navigate rocky slopes. Also, there are mini-buses linking smaller towns to the State and district headquarters.

**5.3. Railways:** Presently, there is no rail facility in the State. The closest railway stations are Siliguri (113 km) and New Jalpaiguri (125 Km) connecting Kolkata, Delhi, Guwahati, Lucknow and other important cities. Computerised passenger reservation facility is operational in Gangtok, Singtam, Jorethang and Mangan. However, construction work of rail link like between Rangpo in Sikkim to Siliguri in west Bengal is yet to be completed joining Sikkim to the rest of the national railway network.

**5.4. Aviation:** The nearest airport is Bagdogra in North Bengal, which is approximately 4 hours drive from Gangtok. Also there is a regular 5-seater helicopter service from Gangtok to Bagdogra air port, which is 130 kms. Pakyong airport is under construction near Gangtok, the state capital of Sikkim. The airport spread over 400 ha is located at Pakyong village about 35 km south of Gangtok. The State has also initiated construction of a number of helipads to connect the district and sub-divisional headquarters and important tourist places.

**5.5. Communication:** The people of Sikkim live in a modern world where landlines phones have been replaced by the mobiles. BSNL in Sikkim has taken appreciable efforts in making Sikkim as a model telecom state having the highest tele-density, widest coverage of telecom facilities, providing indirect employment to the youth through cyber cafe and STD/ISD booth, providing telecom facilities in remote corner of the State laying optical fiber cable in the most difficult terrain of the country against the minimum telecom facilities some years back. In addition to landlines BSNL has also provided mobile and WLL services. The communication system in the State has gained in a rapid pace for the last few years.

The postal services have special facilities of speed post, multi-purpose counter machines etc. Head Post Office, Gangtok has a VSAT for quick transmission and payment of Money orders and electronic mail facilities of Western Union Money Transfer for international Money Payments.

## **6. THE BUSINESS ENVIRONMENT:**

The Government of Sikkim has been making efforts to set up a conducive business climate in order to attract investors into the State. The most important step in this direction is the formulation of policies for the various sectors of the economy. The Department of Industries in Sikkim is instrumental in bringing about a rapid growth in the industries of Sikkim in order to contain the growing unemployment and for economic development. For convenience of the entrepreneurs and to bring the concept of industrialization nearer to the people, District Industries Center have been set up one at Jorethang for south and West Districts and the other at Gangtok for East and North districts. The State of Sikkim has been balancing both industrialisation and environment.

Sikkim has attracted considerable investments from pharmaceutical companies over the last few years. Today, Sikkim is home to as many as 22 pharma companies, out of which 16 are big firms, one is medium and five are small scale firms. These include well know companies of the Indian pharma sector such as Cipla, Sun, Zydus Cadila, Alembic, IPCA, Alkem, Intas, Torrent, Unichem and Micro Labs. Sincere efforts are made to promote small scale and medium scale industries based on agriculture and forest products. Simultaneously, Government is also making efforts to promote traditional arts and crafts such as wood carving, cane bamboo work carpet weaving, thanka painting and traditional handlooms.

## **7. INDUSTRIAL INFRASTRUCTURE:**

Identified locations for notification as industrial belt areas under the new industrial Policy for the State of Sikkim are as follows;

### **A. EAST DISTRICT:**

- Gangtok Sub-Division in East District,
- Rangpo-Mazitar-Bardang-Singtam-Topachani-Martam-32 Mile-West Namli (Radong)-Samluk-Marchak-Ranipool-Tadong-Deorali-Gangtok-Burtuk- Bhojogari-Panthang-Pen long-Adam Pool-Rumatek,
- Pakyong Sub-Division in East District,
- Ranipool-Saramsa-Aho-Chota Singtam-Namchey Boong-Lal Turning- Pakyong.

## B. SOUTH DISTRICT:

- Namchi Sub-Division in South District,
- Melli-Lower Kitam-Manpur-Mazitar-Jorethang-(Along the state Highway) Jorethand-Karfektar-Chisopant-Nandugaon-Namchi-Boomtar-Mamring.

## C. WEST DISTRICT:

- Soreng Sub-Division in west District,
- Rohtak-Piplay-Baiguney-Reshi-Legship-Naya Bazar-Cudang-Soreng.

## D. NORTH DISTRICT:

- Mangan Sub-Division in North District,
- Chungthang,
- Chungthang Sub-Division in North District,
- Lachen-Lachung

Industrial Growth Centres at Samlik- Marchak and Namli in East Sikkim are established with both the State and the Central Government contributing towards it development. The growth centre area has been divided into plots and has been allotted to various agencies for establishment of industrial units.

**7.1. SIDICO:** Sikkim Industrial Development and Investment Corporation Ltd., (SIDICO) set up in the year 1977 is a State level principal financial institution engaged in promotion, financing and development of industries in tiny, cottage, small and medium sector in the State of Sikkim. Besides, the Corporation has also been providing soft loan / seed capital assistance and has been engaged in activities like procuring and distributing raw materials for selective industries/ activities.

**7.2. SIMFED:** Sikkim State Cooperative Supply and Marketing Federation Ltd. (SIMFED) was established in the year 1983 with the main intension to undertake wholesale supply of consumer goods requirements and to arrange for bulk marketing of farm surplus including important cash crops in the state.

## 8. THRUST AREAS UNDER STATE INDUSTRIAL POLICY:

The following are the thrust sectors for industrial development under The Sikkim Industrial Promotion and Incentive Act (Amendment) Act 2003;

Sl. No.	Thrust Sectors
1.	Agro-based industries- Floriculture & Horticulture
2.	Animal Husbandry and Dairy Products
3.	Minor Forest Based Produce
4.	Handloom, Handicrafts and Village Products
5.	Tourism/ Hospitality
6.	Precision oriented, high value, low volume products
7.	Hydel Power
8.	Tea
9.	Education
10.	Pharma Products
11.	Biotechnology

## 9. POTENTIAL SECTORS IN THE STATE:

**9.1. Agro-based Industries:** The state is certified as the first fully organic state in India by the Central Ministry of Agriculture and Farmers' Welfare. More than 64% of the state population depends on agriculture for their livelihoods. Out of total area of 709600 ha about 1,10,000 is under operational holdings and the net cultivated area is estimated to be around 79,000 hectare (11.13 %) of the geographical area. Tea is exported to abroad. Maize, Rice, wheat, potato, large cardamom, ginger and



turmeric are the principal crops. Mandarin orange, guava, mango, banana and so on are the principal fruits grown in the state. Even the medicinal and aromatic herbs are facing an ever-expanding market both nationally and internationally.

Sikkim is the largest producer of large cardamom and boasts to utilize largest area for its cultivation. Sikkim is also a paradise for flowers. The state is home to an amazing 450 species of exotic orchids alone. There is immense potential for developing floriculture on a commercial basis here and the department of Horticulture is making concerted efforts to turn this sector into an export-oriented industry. Due to the availability of all the necessary raw materials, there is an enormous untapped potential for setting up of various agro-based industries in the State.

- Gyalshing, Namchi, Jorethang, Rangpo, Pakyong, Chungthang and Soreng have good scope to establish food-processing units.
- Namchi, Jorethang and Rabangla have good scope for floriculture.

Rich in its biodiversity, Sikkim has a repository of about 527 orchid species, 4458 flowering plants, over 100 primulas and rhododendrons and 40% of India's pteridophytes. The state government announced a technical collaboration with floriculturists from the Netherlands and Thailand to develop the state's potential in floriculture and cut flowers market.

**9.2. Animal Husbandry based industries:** Through Animal Husbandry sector provides a secondary source of income to the local people of Sikkim. In a predominantly rural economy such as Sikkim, animal husbandry activities form an extremely important element in the effort to bring about substantial improvements in living standards. Adequate number of livestock like cattle, buffaloes, pigs, sheep's, goats, yaks and few other are reared in Sikkim. Yaks are reared in north eastern ranges bordering Tibet, Bhutan and western region bordering Nepal.

There are good prospects for setting up diary and animal husbandry units on a commercial basis. Milk production offers opportunities for developing processed food products like cheese butter etc. The population being predominantly non-vegetarian, meat processing and packaging units appears promising in the state.

**9.3. Minor Forest Based industries:** Forest is one of the richest natural resources of Sikkim. The total area under the Administrative Control of Forest, Environment & Wild life Department is 5841.00 Square Kilometer which accounts for 82.31 % of the total geographical area of the State. Sikkim has a unique Bio-Diversity.

There is a good market for the minor forest produce of the state. The varied altitude is ideal for the cultivation of a variety of herbs which can be used in the manufacture of medicine, cosmetics and aromatic products. The climate is ideal for the development of mulberry trees and hence will help promote sericulture industry. Sikkim has 11 oak varieties, 28 bamboo varieties, 16 conifer species, 362 types of ferns, 9 tree ferns and over 424 medicinal plants & herbs.

**9.4. Handloom, Handicrafts and Sericulture based industries:** The traditional handicrafts and handloom products of the State are of high quality and enjoy huge demand, both nationally and internationally. These include carpet weaving, cane and bamboo crafts, spinning wool, handmade paper, thanka paintings, lepcha hat-making and angora shawl-weaving etc. which are famous the world over. The industry has a great potential to generate income and employment in the State. Hence, in order to give a boost to the sector, the Government of Sikkim has been making several efforts, which include providing training to upgrade the quality and designs of the products; bringing expertise and professionals for their marketing and supply etc. Directorate of Handloom and Handicrafts, Govt of Sikkim promotes and preserves the rich art and crafts of the state.

The sericulture directorate is responsible for development of sericulture in Sikkim. Mulberry, Muga, Eri, Oak-Tussar silk are cultivated in Sikkim. The agro-climatic condition of the state is highly favourable for extensive growth of Sericulture. Sericulture is an important occupation in the state and provides a vast self-employment at negligible investment with assured income. Setting up of silk units is expected to boost sericulture in the state and generate employment opportunities.

**9.5. Tourism based industries:** Tourism is considered as the backbone of Sikkim's economy. It has brought economic prosperity in Sikkim. Promotion of village tourism, homestay, cultural tourism, trekking tourism, ecotourism, wellness tourism, flori-tourism and adventure tourism has given boost to the tourism industry in the state where a large number of people are engaged under different employment opportunities. Sikkim's Tourism Mission 2015 aims to promote tourism in the state and create employment opportunities for 75,000 people. The Central Government in 2016 approved Swadesh Darshan projects under which Sikkim was allotted USD 14.6 mn for tourism development, including the base camp for mountaineering and meditation hall, eco-log huts, cultural centres, paragliding centres and craft bazaars.

Sikkim Ecotourism policy has also been framed during 2011. The vision of the policy is to establish Sikkim as an ultimate and unique eco-tourism destination, offering memorable and high quality learning experience to the visitors including contribution towards poverty alleviation as well as promoting natural conservation. Simultaneously, the State has promoted ecotourism assets—natural and cultural features that attract visitors—such as landscapes, endemic or rare flora and fauna, local agricultural products, local culture and festivals, local folktales, history, historical monuments and heritage sights. Sikkim's Tourism Mission 2015 seeks to make tourism, the main livelihood of the people of Sikkim and each and every household and individual, a skilled force for the tourism Industry.

The Government of Sikkim is encouraging private participation in the developmental and commercial activities of the tourism sector. Creation of tourist complexes, ecotourism, adventure tourism, ethnic-culture tourism, health farms, hotels, convention centres, entertainment outlets, tourist travel services etc. are various avenues for investment in the tourism sector.

**9.6. Hydro Power:** Hydropower sector is one of the potential areas for generating revenue to improve the socio-economic conditions of the people. Hydropower is considered a cleaner and greener source of energy when compared to other sources. The State Government has set up the Sikkim Power Development Corporation (SDPC) to tap into the state's hydropower potential, which is estimated to be around 8,000 MW. Independent power producers (IPPs) have approved 29 hydroelectric power (HEP) plants for development. These projects are at various stages of construction and would have an installed capacity of close to 5,350 MW when completed. Due to this amazing terrain Sikkim houses some of the most turbulent and swiftest rivulets in the world that is best suited for harnessing hydel power potential. Sikkim is poised to gain in a big way and is looking forward to earn significant revenue by exploring its huge potential.

**9.7. Mineral based industries:** The important mineral resources of the State are copper-lead-zinc and silver, reported in Bhotang, Rangpo and Dikchu in East Sikkim districts. Occurrences of other minerals reported in the State include: dolomite, quartzite and talc/steatite/soapstone in West Sikkim district; limestone in North Sikkim district and marble in East Sikkim and North Sikkim districts. Availability of these minerals can be utilised for setting up mineral based industries in the State.

**9.8. Tea based industries:** Tea grown in the Temi region of south Sikkim is famous by its brand name Temi Tea. The tea has its unique flavor. Major buyers of Temi Tea are Germany, UK, US and Japan. Moreover, the state is trying to diversify the product range by redesigning packaging and value addition due to growing demand for green teas. Efforts are underway to source direct buyers in foreign markets for Sikkim's tea and the field is open for investors interested in increasing Sikkim's tea production capabilities.

**9.9. Pharmaceutical based industries:** Sikkim has attracted considerable investments from pharmaceutical companies over the last few years. Today, Sikkim is home to as many as 22 pharma companies, out of which 16 are big firms, one is medium and five are small scale firms. These include well know companies of the Indian pharma sector such as Cipla, Sun, Zydus Cadila, Alembic, IPCA, Alkem, Intas, Torrent, Unichem and Micro Labs. Pharmaceutical is an emerging industry in Sikkim due to tax incentives offered by the state government as well as low manufacturing and labour costs.

**9.10. Electronics and Information Technology (IT) based industries:** The State has already made great strides in the knowledge-based industries such as information technology. The Government of

Sikkim has placed IT high on its agenda and framed an “IT Policy”. Sikkim’s IT policy aims to increase the use to IT in the industrial and government sectors. With a high literacy rate, affordable cost, strong English-speaking population, improved telecommunications connectivity and favourable climate, Sikkim is well poised to serve the IT industry. The Department of Electronics and Information Technology has also been set up for preparing extensive projects, particularly aiming at e-governance; promoting IT enabled services like medical transcription, telemedicine, computerized Braille etc. 40 Community Information Centres (CIC) have been set up across the remotest of regions in Sikkim to bring Information Technology to the grass root level. The IT policy provides several incentives and concessions for investment in the IT sector.

**9.11. Border Trade through Nathula:** The border trade via the Old Silk Route at Nathula reopened on the 6th of July, 2006 amidst huge expectations of improving the relation between the two upcoming superpowers of the world, India and China. It was also expected to help in achieving economic prosperity in the areas surrounding the Nathula Pass in both the countries. The Border Trade remains officially open for about six months every year from May to November. The State Government also requested for change/ revision in the list of export/ import items for Nathula Border Trade. The consolidated items in the list as per the revised Public Notice No:110/2009-2014(RE-2010), dt:7th May,2012 are:

- A. **Items of import:** 1.Wool 2.Goat Cashmere (Pasham) 3.Goat Skins 4.Sheep Skins 5.Yak Tails 6.Goats 7.Sheep 8.Yak Hair 9.Horses 10.Salt 11.Borax 12.Szaibelyita 13.China Clay 14.Butter 15.Silk 16.Ready made garments 17.Shoes 18.Quilt/Blankets 19.Carpets and 20.Local Herbal Medicine.
- B. **Items of Export:** 1.Agricultural Implements 2. Blankets 3.copper products 4.Clothes 5.Textiles 6.Cycles 7.Coffee 8.Tea 9.Barley 10.Rice 11.Flour 12.Dry Fruit 13.Dry and Fresh Vegetables 14.Vegetable Oil 15.Gur and Misri 16.Tobacco 17.Snuff 18.Cigarettes 19.Canned Foods 20.Agro Chemical 21.Local Herbs 22.Dyes 23.Spices 24.Watches 25.Shoes 26.Kerosene Oil 27.Stationery 28.Utensils 29.Wheat (Ua & Buck) 30. Processed Food Items 31.Flowers 32.Fruits and Spices 33.Religious Products such as beads, prayer wheels ,incense sticks and butter oil, lamps 34.Readymade garments 35.Handicraft and Handloom Products 36.Local Herbal Medicine.