CHAPTER-III

INDUSTRIAL PROFILE OF ASSAM

Assam economy is rich in natural resources. It has huge development potentials to achieve the goal of rapid industrial development and it is possible through proper utilization of natural as well as human resources.

Before discussing the production behaviour, employment and income generation etc. of Bongaigaon Refinery-cum Petrochemical Complex, it will be in order to go through the Industrial profile of Assam.

The industrial sector in the State had been centralized around a few sectors like tea, petroleum, coal, jute and forests. Industries in Assam can be broadly classified into four categories -

a) Agro-based Industry  b) Mineral-based Industry

c) Forest-based Industry  d) Other Industries
Agro-based industries of Assam broadly include - Tea Industry, Sugar Industry, Grain Mill Products Industry (Rice, Oil and Flour Mill), Food Processing Industry and Textile Industry.

Mineral based industries of Assam include - Petroleum, Cement, Fertilizer and so on.

Forest based Industries of Assam include - Plywood Industry, Sawing Mill, Wooden Furniture, Paper and Paper-pulp Industry, Match Industry and other important industries of Assam are notably Engineering Industry, Steel Fabrication, Metal based, Textile, etc.

3.1 Industrial Production of some selected Industries in Assam:

The performance of manufacturing and processing sector of the State has not been much encouraging in the scenario of the State’s Economy. The contribution of this sector to the total net State domestic product (NSDP) has been estimated at 10.5% at constant (1999-2000) prices during 2005-06 (Quick Estimates). The outputs of some selected industries of the State during 2003-04 and 2005-06 have
been furnished in Table - 3.01 below:

Table 3.01

Production of Some Selected Industries in Assam

<table>
<thead>
<tr>
<th>Industry</th>
<th>Unit</th>
<th>2003-04</th>
<th>2004-05</th>
<th>2005-06</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tea</td>
<td>Thousand tonnes</td>
<td>454.1</td>
<td>443.3</td>
<td>654.7</td>
</tr>
<tr>
<td>2. Wheat Flour</td>
<td>Thousand tonnes</td>
<td>174</td>
<td>207</td>
<td>220</td>
</tr>
<tr>
<td>3. Coal</td>
<td>Thousand tonnes</td>
<td>738</td>
<td>628</td>
<td>956</td>
</tr>
<tr>
<td>4. Jute Textiles</td>
<td>Tonnes</td>
<td>7291</td>
<td>7903</td>
<td>5910</td>
</tr>
<tr>
<td>5. Petroleum Crude</td>
<td>Thousand tonnes</td>
<td>4571</td>
<td>4724</td>
<td>4429</td>
</tr>
<tr>
<td>6. Cement</td>
<td>Thousand tonnes</td>
<td>336</td>
<td>341</td>
<td>251</td>
</tr>
<tr>
<td>7. Fertilizer</td>
<td>Thousand million</td>
<td>240.6</td>
<td>203</td>
<td>222</td>
</tr>
</tbody>
</table>

Source: Directorate of Economics and Statistics, Govt. of Assam, 2006-07

The Table 3.01 reveals that there are fluctuations in the output of most of the selected industries like tea, coal, jute textiles and fertilizers. The production of tea has increased substantially during 2005-06 with increasing number of small tea growers. In 2005-06, the production of coal industry increased by 52.22% over the previous year. But the production of Jute Industry declined by 25.22% in 2005-06 over the previous year due to scarcity of raw-materials. The production of petroleum crude is stable but it cannot meet the
required demands of the refineries of this State. The production of fertilizer industry shows stable trend. In 2005-06, the production of cement industry declined. (Govt. of Assam, DES, 2006-07)

3.2 Some Important Industries in Assam:

Major Industries of Assam include Tea, Petroleum, Plywood, Paper, Fertilizer, Cement, Coal, Leather etc. The brief outlines of some important industries are furnished below:

3.2 (i) Tea Industry of Assam:

Tea Industry is playing a dominant role in the economy of Assam. The importance of tea industry can be realized from the fact that Assam alone produces more than 50 percent of country’s total tea production. Further, Assam Tea also contribute substantially to the national exchequer every year in the shape of foreign exchange earnings through its export. The total area under tea cultivation in the State was 2.69 lakh hectares during 2001 accounting for more than half of the total area (53 percent) of 5.07 lakh hectares of the country. Besides tea industry is also playing a vital role in employment
generation. The tea industry is also providing largest number of employment in the State with more than 9 lakhs part time and fulltime labourer at present. The estimated production of tea in Assam was 654.7 thousand tonnes in 2005-06 (Govt. of Assam, DES, 2006-07)

The 178 year old tea industry of Assam which is considered as main stay of the State’s economy is now facing difficult times in the face of domestic and international competition in terms of quality and price.

3.2. (ii) Petroleum Industry of Assam:

As Assam is having sufficient deposit of petroleum crude, four oil refineries, namely - Digboi Refinery, Guwahati Refinery, Bongaigaon Refinery and Numaligarh Refinery have already been established in the State.

Digboi Refinery:

Digboi Refinery was established in 1901 and had the distinction of being the oldest refinery in Asia. At present, Digboi Refinery is one of the six oil refineries operated by the Indian Oil Corporation (IOC)
and its installed capacity is 0.7 million metric tonne per annum (MMTPA).

**Guwahati Refinery:**

Guwahati Refinery is the second refinery of Assam established in 1961. Its installed capacity is 1 MMTPA. The refinery has undertaken a massive programme for modernization and expansion of its hydro-treatment plant already approved by the Indian Oil Corporation (IOC).

**Bongaigaon Refinery & Petrochemicals Limited (BRPL):**

With the increase in the production of crude in Assam Oil fields and also with the increase in the demand for petroleum products in the North-Eastern Region, the demand for the establishment of third refinery in Assam was mooted. BRPL, a Government of India undertaking, under the administrative control of the Ministry of Petroleum and Natural Gas was registered on February 20, 1974 with its headquarter at Dhaligaon under old Bongaigaon District. Refinery installed capacity of BRPL is 2.35 MMTPA.
Numaligarh Refinery:

The Government of India set up the fourth refinery in the State at Numaligarh under the Golaghat district of Assam. The volume of crude oil required for the Numaligarh Refinery has been supplied from the oil fields of Oil and Natural Gas Commission (ONGC) located in upper Assam. The total refinery installed capacity of Numaligarh Refinery limited is 3 MMTPA.

3.2. (iii) Plywood Industry of Assam:

Plywood Industry till recently was one of the important forest based industries in the State, but its production has come down substantially mainly due to the restriction imposed by the State Government on cutting of trees. In fact, plywood industry in Assam was the feeder industry mostly in the manufacture of tea chest, boxes, furniture, boards, railway compartment etc.

In 1984 there were 52 plywood factories in Assam of which 13 belongs to large and medium scale. Total production of plywood in the State gradually increased from 31 million sq. meters in 1982 to 43 million sq. meters in 1986 and then gradually declined to 30 million
sq. meters in 1996 and then subsequently declined to 15 million sq. meters in 1998 and then to 1.8 million sq. meters in 2001. In 2001, there were about 46 plywood factories in Assam which had generated employment opportunities to nearly 5,600 persons directly and nearly to one lakh persons indirectly. As mentioned above the State policy of banning falling of tree by the Government of Assam is one of the main reasons for fall in its production.

3.2.(iv) Paper Mill of Assam:

On the basis of the plenty amount of forest products like bamboo, softwood etc. Assam has a good potentiality for establishing a good number of paper and paper pulp mills. The forests of Assam are supplying raw materials to different paper and paper pulp mills within and outside of the State. During the 4th Plan period Ashok Paper Mill Ltd. was established at Jogighopa with a total investment of Rs. 15 crores. Total production capacity of this mill was 90 tonnes of paper and 120 tonnes of paper pulp. But due to various irregularities, this mill had to face huge loss and ultimately it was closed.
Considering the huge potentiality for the growth of paper industry in Assam, another two paper mills were established in the public sector. One of the mills was established at Jagiroad of Nowgaon District under the patronage of Hindustan Paper Corporation Ltd. and other paper mill was established at Panchagram in the Cachar District of Assam. The Panchagram Paper Mill is not working at present.

Recently the Government of Assam has signed a memorandum of understanding (MOU) with Sanghi Group of Industries, Hyderabad for the revival of sick Ashok Paper Mill at Jogighopa.

3.2. (v) Fertilizer Industry of Assam:

For the proper utilization of natural gas at Naharkatiya, Utilization Committee of Government of India permitted to establish one fertilizer plant at Namrup on the basis of natural gas available at Naharkatiya oil field of Assam. This is a public sector unit under the control of Hindustan Fertilizer Corporation Limited (HFCL). At present the plant is facing crisis due to scarcity of gas supply.
3.2. (vi) Jute Industry of Assam:

Assam is one of the important States of India in respect of Jute production. Every year a good quantity of raw jute is produced in the Nowgong, Goalpara, Barpeta and Darrang Districts of Assam. Previously as there was no jute mill in Assam the whole amount of raw jute produced in the State were exported to Kolkata. As there was sufficient demand for various jute products in Assam, a jute mill in the co-operative sector was established at Silghat of Nowgong District. In 1970 this mill started its commercial production. In 1971-72 this jute mill produced 729 tonnes of jute products. After that, total production of jute mill was increased to 4299 tonnes in 1979 and then to 5951 tonnes in 1981. Total production of jute products further increased to 6 thousand tonnes in 1996 and then it declined to 5 thousand tonnes in 1999 and then it again increased to 7291 tonnes in 2003-04. The production of Jute textiles declined to 5910 tonnes in 2005-06. (Govt. of Assam, DES, 2006-07)

In the meantime the Government of Assam has laid foundation stone for two mills, one at Mangaldoi and another at Barpeta area.
3.2. (vii) Sugar Mill of Assam:

Among the various districts of Assam a good amount of sugarcane farming is done at Kamrup, Jorhat and Sibsagar Districts. There was only a public sector sugar mill at Barua Bamungaon of Golaghat district established in 1958, but it was closed down mainly due to the inefficiency in management, the old-age disease of PSUs.

3.2. (viii) Cement Industry of Assam:

Assam Cement Company was established with the intention to establish and develop cement industry in Assam. The State Government contributed a good amount towards the share capital of this company. The Assam Cement Company established its first cement factory at Cherrapunjee in undivided Assam. This is the first cement project in the North East India. Now this factory is lying within the State of Meghalaya.

Cement Corporation of India has established another cement factory at Bokajan of Karbi Anglong District.
Considering the huge reserve of limestone available in the Karbi Anglong and North Cachar Hill Districts of Assam some more cement production units have been set up in Assam in recent years.

3.2. (ix) Coal Industry in Assam:

Coal is one of the major mineral resources of Assam. Coal was first discovered in Assam in 1925. A good quality of coal is available at Makum, Margherita, Ledo, Nazira, Jaipur and Namdam area of Assam. The Assam coal has a good demand for railway, water transport, tea gardens, cement plants and for domestic uses. The coal fields of Assam are under control of Coal India Limited.

3.3 Registered Factories in Assam:

As per information available from office of the Chief Inspector of Factories, Assam during the year 2001-02 a total number of 128 new factories were registered in the State stood at 2512 in 2001-02 as against 2406 in the year 2000-01. As a result, the State Inspectorate has been able to increase the revenue earning to the tune of Rs. 52.49 lakh during the year.
Number of registered factories and employment generated by the factories are shown in the table 3.02

Table 3.02

No. of Registered Factories in Assam and Employment generated by the Factories

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Factories</th>
<th>Average Number of Daily Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>2683</td>
<td>109649</td>
</tr>
<tr>
<td>1997</td>
<td>2525</td>
<td>105921</td>
</tr>
<tr>
<td>1998</td>
<td>2209</td>
<td>101114</td>
</tr>
<tr>
<td>1999</td>
<td>2307</td>
<td>98570</td>
</tr>
<tr>
<td>2000</td>
<td>2406</td>
<td>108070</td>
</tr>
<tr>
<td>2001</td>
<td>2512</td>
<td>98862</td>
</tr>
</tbody>
</table>

Source: Office of the Chief Inspector of Factories, Assam

3.4 Small Scale Industrial Units (SSI):

The small scale industries have a vital role in the process of industrialization of the State. There is ample scope for the development of small industries on the basis of the factor endowments available in the State. The development of small
industries will not only mobilize local resources but will also increase income and generate employment opportunities. Cottage and small industries have great importance in an agrarian economy like Assam. Rural agricultural families of the State are getting subsidiary occupation from the cottage industries.

At the end of December, 2002 Assam had a total of 44,229 registered small scale industrial units with an employment of approximately 185 thousand persons, some of them are non-operational due to scarcity of raw-materials, shortage of power and so on.

The village and cottage industries include handloom, weaving, rope-making, brass and bell-metal, cane & bamboo work, gold & silver work etc. These industries provide subsidiary employment to a good number of people in the rural areas. With the growth and development of these cottage and village industries, many poor families have been able to raise their income and improve their standard of living.
Cottage industries of Assam are producing different types of artistic goods. For example, Muga and Silk products have wide market throughout the country.

Khadi and village industries are playing important role in the economy of Assam. Different types of khadi and village industries are operating in the various parts of the State. As per information available by the Khadi and Village Industries, 494 oil extraction centers, 2145 pottery centers, 219 hand pounding (rice processing) centers, 15 cottage match and agarbatti factories, 188 footwear unit, 17 handmade paper unit, 772 Cane & Bamboo Centers and 44 Gobar Gas Plants are in operation in the State. There is ample scope of expansion in this sector. (Govt. of Assam, DES, 2002-03)

3.4. (i) Handloom, Sericulture and Weaving:

It is already mentioned that the State is famous for her variety of handloom products such as eri, muga and pat silk fabrics. Being a production and employment oriented industry, it can reshape the rural economy to a great extent. The State Government is taking this opportunity through the establishment of a number of eri-seed
grainages, eri-concentration centers, sericulture farms, tassar farms, muga farms, huge food plantation centers and mulberry silk farms etc. in different parts of the State.

The Sericulture Training Institute and Sericulture Research Station at Titabor are the two institutions which are imparting training and undertaking research works on sericulture in the State.

The handloom industry of Assam is well known for its quality and originality. It is estimated that there are more than 7 lakhs of handloom in the State provides part time and full time employment to nearly 8 lakhs of people.

Assam is well known for its sericulture and weaving practices. It is playing a vital role in the State economy by providing employment opportunities among the rural population. The State is well known as a lone producer of Muga silk in the world. The Central Silk Board (CSB) has already ten institutions for the development of mulberry and non-mulberry silk in Assam. The prominent among them are Regional Muga Research Station, Boko, Regional Sericulture Research Station, Titabor and a Muga Seed Development Project, Guwahati.
3.4 (ii) Bell Metal Industry:

Among the cottage industries of Assam the position of bell metal industry is next to handloom industry. Sarthebari of Barpeta is the main center of this traditional cottage industry. Khadi & Village Industries Corporation is also helping in marketing its product. The Small Industries Development Bank of India (SIDBI) has decided to boost the Bell Metal Industry at Hajo.

3.5 Performance of Manufacturing and Processing Sector:

The performance of manufacturing and processing sector of the State has not been much encouraging in the scenario of State's economy. The contribution of this sector to the total Net State Domestic Product (NSDP) has been estimated at 11.1 percent at current prices and 10.5 percent at constant (1999-2000) prices during 2005-06 (Quick Estimates). The Index of Industrial Production has been worked out at 159.10 in 2005-06. (Govt. of Assam, DES,2006-07)

3.6 Industrial Estates and Industrial Growth Centre:

There are 16 industrial estates and 10 growth centres under the Department of Industries and Commerce, Assam. The total number of
sheds constructed in the Industrial Estates are 432 and the number of sheds functioning are 280 out of 400 sheds occupied till 2005-06.

3.7 Small Scale Industrial Units (SSI) and Handicrafts Units:

The small scale industries have a vital role in the process of industrialization of the State. There are 25,741 SSI units in Assam till the year 2006 (Govt. of Assam, DES, 2006-07)

The table 3.03 shows the number of new units of various types of industries established during three years (from 2003 to 2005)

Table - 3.03

<table>
<thead>
<tr>
<th>Item</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agro based</td>
<td>328</td>
<td>327</td>
<td>317</td>
</tr>
<tr>
<td>Forest Based</td>
<td>337</td>
<td>144</td>
<td>89</td>
</tr>
<tr>
<td>Textile Based</td>
<td>645</td>
<td>626</td>
<td>671</td>
</tr>
<tr>
<td>Chemical Based</td>
<td>52</td>
<td>44</td>
<td>64</td>
</tr>
<tr>
<td>Engineering Based</td>
<td>379</td>
<td>536</td>
<td>529</td>
</tr>
<tr>
<td>Electrical Based</td>
<td>21</td>
<td>59</td>
<td>63</td>
</tr>
<tr>
<td>Mineral Based</td>
<td>105</td>
<td>111</td>
<td>111</td>
</tr>
<tr>
<td>Leather</td>
<td>N.A.</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td>Rubber / Plastic</td>
<td>N.A.</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>400</td>
<td>184</td>
<td>256</td>
</tr>
<tr>
<td>Total</td>
<td>2267</td>
<td>2061</td>
<td>2133</td>
</tr>
</tbody>
</table>

Source: Department of Industries and Commerce, Assam
Table 3.03 shows that the number of industrial units established by agro-based, textile based, chemical based, electrical based, mineral based, leather and plastic remain stable during 2003-05. But the number of forest based industries has declined by 38.19% due to State Policy of banning falling of tree by the Govt. of Assam. The number of engineering based industries has been increasing recently. It is a good sign for increasing employment opportunities in the State.

Thus industrial profile of Assam referred above indicates that the industrial production in the State has been increasing at a slow rate. The State is possessing various natural resources which could have been utilized for the diversification of industries.

The State Government also provides incentives for establishment of various industries in the private sector. Besides, the Government is also being increasing involved in undertaking many industrial ventures of its own.

The Regional Research Laboratory at Jorhat has identified a long list of projects relating to (a) Chemical Industries and Agro-chemicals (b) Inorganic and Mineral-based chemical Projects, (c) Projects for utilization of cellulosic raw materials and recycling of
waste products, (d) Projects for utilization of coal in the N.E. Region etc.

On the basis of these projects, a good number of small and medium scale industries could be developed in Assam. Already some of these projects have been selected in the private sector for its development on the basis of raw materials available in Assam.

It is expected that the proper implementation of different policies and programmes of industrial development will certainly improve the industrial profile of Assam.