CHAPTER III

BACKGROUND OF THE STUDY AREA

HISTORY

The antiquity of human civilization in Assam has been established beyond doubt by the discovery of stone cults by Neolithic people in various parts of it. These findings among others include two shouldered stone implements, one from undivided Darrang district and other from undivided Cachar district and six specimens of grooved hammer stones from Biswanath of Sonitpur district which are the rarest of numerous Neolithic stone implements recorded from Eastern Asia (Barua, 1966). These implements were locally made and were similar to ones found in Burma and Chotanagpur. The grooved hammers found in Biswanath of Sonitpur district are very common in North America (Choudhury, 1959). The Neoliths as well as the linguistics and morphological evidences prove that the Neolithic people of the Austric stock are the most ancient habitant of Assam and not the Dravidian as once supposed to be. They are now said to be represented by the Mongkhemors, Khasis and Syntengs of Assam (now Meghalaya) who were driven out to the hills by the Dravidian invaders. However, Dravidian had to face strong Mongolian thrust pouring through the north eastern region of India (Barua, 1966). The Mongolians belonging to Tibeto – Burman family of Indo – Chinese group, now represent by Khasis, Rabhas, Meches, Mikkirs, Lalungs, Garos, Kuks and Chutias. In the prehistoric times the Bongaigaon district formed a part of
Pragjyotishpura or Kamarupa which was extended up to the Bay of Bengal and its western boundary was Korotoa river (Barua 1966). According to the Yoginitantra the country lying to the Korotoa river on the west to the Dikhou on the east and from mountain Kanjagiri on the north to the confluence of the Brahmaputra and Lakhya river on the south. Thus it included roughly the Brahmaputra valley, Bhutan, Rangpur (now in Bangladesh), Kochbihar (now in West Bengal), the east Mymensingha (Bangladesh) and possibly Garo hills (now in Meghalaya). The whole Kamarupa or Pragjyotishpura was divided into four regions:

- Kamapith
- Ratnapith
- Subarnapith
- Saumarpith

The present study area is located in the Ratnpith of region of those days (Choudhury 1959). The area extends from Sankosh to Rupahi which include the old Goalpara district and part of old Kamrup district of Assam. In fact, the ancient history of old Goalpara is the history of Bongaigaon district.

Bongaigaon is the old name of the eastwhile sub-division of Goalpara District of Assam. It was declared a district on 29th September 1989 by caving out some areas of the Goalpara and Kokrajhar District with it’s headquarter located at Bongaigaon. It was the political and administrative exigencies, which has necessitated creation of this district. In fact ancient history of earlier Goalpara district is the history of present Bongaigaon district and that is the area of present study.
GEOGRAPHY

Demography:

As per 2001 census the total population in the district is 90,4835. Amongst these total population, total male population is 46,5240 and total female population is 43,9595. The census reveals that most of the people of the district are living in the rural areas. The total rural population is 79,5053 (87.867 percent) out of which the total rural male population is 40,7706 and the total rural female population is 38,7347. The total urban population in the district is 10,9782, where total urban male population is 57,535 and total urban female population is 52,248. The total schedule tribe (ST) population in the district is 11,0696 out of which 55,344 are male and 55,352 are female. Total ST population living in the rural area is 10,6618 and in urban areas are 4,078. Total Schedule caste (SC) population in the district is 92,770 out of which 48,207 are male and 44,563 are female. Total SC population living in rural area are 79,625 and in urban area are 13,145. Most of the rural peoples of the district are depend on cultivation.

The population density in Bongaigaon district is 420 per square kilometer.

The land use patterns in the study area are identified into forest area, irrigated land, un-irrigated land, cultivated land and unusable land. Data shown in the Statistical Hand Book, Assam' 2005 indicates that on creation of the district in the year 1989 from old Goalpara district, Bongaigaon has got 3,01,477 hectares of gross land of the total area with 1,13,085 hectares land for different crops. Presently, total cropped land in the district is 1,53,551 hectares and total cultivable waste land is 14,077 hectares.
District Boundary:

The study area is a part of the Brahmaputra valley in State of Assam, India. The district of Bongaigaon is situated at the latitude of 26° 15' - 26° 30' N and longitude of 90° 28' E to 90° 50' E with a geographical area of 2510 square kilometer. The district is bounded by Kokrajhar District on the North West, Dhubri District on the South West, Goalpara District on the South, Barpeta District on the East and the foot hills of Royal Kingdom of Bhutan on the North. After the formation of Bodoland Territorial Autonomous Districts (BTAD) in Assam, a part of the district has been included under Chirang District in 2004. So at present, the district Bongaigaon is bounded by district Chirang on North, Barpeta on East, the river Brahmaputra on South and district Dhubri and Kokrajhar on the West.

Topography:

The large portion of the study area is plain terrain, which is traversed by some important rivers. These rivers are meandering ones. On the eastern part of the study area, river Aie flows in southern direction to merge in the mighty river Brahmaputra. On the western side of the study area, flows the river Champamati in south eastern direction. Other important river in the study area is Manas. Both the rivers flow in south eastern direction and merged together in some distance in southern part of the district. All these rivers are major tributaries of the mighty Brahmaputra flowing towards west dividing Assam into two halves.

The Brahmaputra lies on the southern part of the area under study area. A few off-shoots of Assam range protrude towards the Brahmaputra on both of its
banks. These off-shoots stand out conspicuously as hillocks attain a height ranging from 122 meter to 212 meter above mean sea level.

**Geology:**

The area under study is a part of the Brahmaputra valley of Assam. The area has been systematically mapped by the Geological Survey of India. It has been found that inliers of Achaean metamorphic complexes with intrusive Granites and Pragmatites occur in various parts of the as isolated hillocks, surrounded by extensive Alluvium.

**Water Resources:**

Among the major rivers which flow along the southern boundary of the district is the mighty Brahmaputra. Manas is considered as the largest of the rivers to join the Brahmaputra which flows along the eastern boundary of the district. The river Manas originating from the Bhutan Hills and tumbling down rapidly along the steep north-south incline of the hills before entering the plain. The Manas River enters the district through Bagdwar of Bijni Sub-division and is most unstable and meandering in nature and changes its course very frequently. It is 52 km. from its origin. Its principal tributaries which flow through the Bongaigaon District include Dolani, Aie, Makra, Labdang, Burisuti, Darranga, Bengtol, Pakhajan, Pagladia, kuklung and Doichung. The Aie, which originates from the Bhutan Hills, first flow rapidly towards south and then southeast till it falls into the Manas and south-east of Bijni town. Thus the Aie river flows laterally through the district, which is a tributary of Manas. The principal tributaries of the Aie are the Buri Aie, Kanamiakra and Lokaijan, all joining it on the left bank. The Champamati is the another river, which flows along the western border of
Bongaigaon District. The Champamati after being fed in its upper course reaches in the foot hills of the Bhutan range by streamlets like Laopani and Dholapani and after meeting its principal tributarities, the Bhur and then the Ghorabandha, takes her name as Champamati below the North trunk Road. Till the Trunk road, it flows through thick and long grassy areas and dense forests of Chirang Reserve, but thereafter the density of forest declines. The Champamati has a total course of about 201 km. before joining the mighty Brahmaputra. The other small river or streamlets flowing through the western part of the district includes Molandubi, Kujia, Tunia etc. which meet the Champamati river to finally join the mighty Brahmaputra. Thus the Bongaigaon District is thoroughly fragmented by a good number of small rivers and streams. These small rivulets and streams remain active throughout the year.

There are more huge wetlands viz. Tamranga, Konora, Paraputa, Doloni, Maijana, Hatimutra, and small wetlands viz. Bhoamari, Choutara, Kasorni, Naodara, Koya Kujia etc. also lie in the central and southwest part of the district. Of these, Tamranga covers an average area of 409.40 hectare and Doloni is seemed to be larger than Tamrnga. (Source: National information Centre, Bongaigaon District).

Hills:

Although the major portion of the district is almost a level plain, but a few ranges of hills are scattered irregularly on the northern bank of the Brahmaputra, southern bank of the river Aie, eastern bank of the river Manas and also on the western boundary of the district and finally on the northern boundary of the district connecting Bhutan. These isolated hills rising above the alluvium are
maintaining their heights varying from 100 to around 350 metres above mean sea level (NIC, Bongaigaon District).

On the southern end of the district i.e. on the northern bank of the Brahmaputra there is a long range of hills. In Jogighopa area falling under North Salmara Sub-Division a long range of hills can be seen, with caves where hermits are believed to have dwelt in ancient times and about 3 kilometers east of this range is the Lengtia hill. Just about 2 kilometers east of Jogighopa, there lies Mahadev hill and to its north lies the Malai hill. In the south west of the Mahadev hill, there lies the highest attitude hill of the district, the Bhairabsura hill besides Sankarghola hill. Beyond Abhayapuri town there exist several ranges such as the Narikola, Bamungaon, Sonakhuli, Chipansila, Lalmi and Singimari hills which are situated in the north east side of the Abhayapuri town. On the south east of the Bonagaigaon town there are several hills, which are Bhumeswar, the Nandagiri, Khagorpur and the Nakkati hill. Kakoijana hill is located in the East of the Bonagaigaon town, the area under which is shortly declared as Wildlife Sanctuary by the Govt. of Assam. Besides these prominent hills, there are some hillocks like Sanyas, Pahartoli, Bageswari, Chaprakata scattered in the district.

Soil:

Most of the study area is covered by the Alluvium which is being deposited by the rivers, mainly Manas, Aie, Champamati and their tributaries. The soil of the study area are light gray to light brown in colour and are less compact type consisting of ground sand, silts and clays. The soil of the District is generally characterized by its acidity (Source: NIC, Bongaigaon). There is much acidity on the soil of the hills, whereas new alluvial soils representing the lands on river
banks are less acidity. These are often neutral and even alkaline. The Phosphoric content in this part of lower Brahmaputra valley is quite low. There is high proportion of nitrogen and organic matter in the soil of hilly areas of the District. Acidic alluvial soil located in the eastern part of the District. Acidic alluvial soil located in the eastern part of the District is suitable for tea cultivation. Low land area containing heavy clays and percentage of nitrogen provides a good return of rice yield. The sandy loams above inundation level give a good yield of jute and winter vegetables. Fruit trees, especially Citrus sp., Mangifera indica, Artocarpus heterophyllus and Musa sp. grow luxuriantly in and around the hill area of the district which contain heavy clays with high percentage of organic matter.

Vegetation:

The vegetation of the area mainly consists of tropical deciduous and tropical evergreen forests intercepted by grass lands. The foot hills and the eastern duars are covered with forest vegetation.

The forest in the study area have been classified into National Parks, Reserved Forests constituted under Provisions of the Assam Forest Regulation vii (1981) and state forests which are mainly waste – lands. Manas National Park and Tiger Project (now in the Buxa district of Bodo Territorial Autonomous District) falls in the northern part of the study area. Other forests in the study area are Kakoijana Wildlife Sanctuary, Bamungaon Reserve Forest, Nakkati Reserve Forest, Malegarh Reserve Forest and Bhairavsura Reserve Forest.

Twenty nine percent of the District area is under forest cover. The vegetation could be described as mixed moist deciduous, semi-evergreen, low
alluvial savannah woodlands. The forest type in the district is further divided as follows (Source: Department of Forest, Aie Valley division, Bongaibgaon)

A. Very moist sal (*Shorea robusta*) forest:
   a. East Himalayan upper bhabar sal
   b. East Himalayan lower bhabar sal
   c. Eastern terai sal
   d. Eastern hill sal forest

B. Moist plain sal forest (eastern heavy alluvial plain sal)

C. Northern secondary moist mixed deciduous forest

D. Assam Valley tropical wet evergreen forest

E. Lower alluvial savannah woodlands.

F. Eastern hill alluvial grasslands

G. Riparain fringing forest.

H. Khoir-sisoo forest.

I. Secondary moist bamboo brakes.

J. Cane brakes.

The general vegetation of the district is moist deciduous type; Sal (*Shorea robusta*) forests along with teak (*Tectona grandis*) plantations represent this vegetation. Some pockets of mixed forests with a few semi-evergreen patches are also found. The notable point of the vegetation is that it is of secondary one. This is due to biotic interference like grazing animals, destruction of forests for various
purposes are regular factors. Hill cutting for filling up the lowlands and construction of roads, construction of embankment etc., also affects the vegetation. Introduction of exotic species, such as *Tectona grandis*, *Acacia auriculiformis*, *Cassia seamaea*, *Mikania micrantha*, *Parthenium hysterophorus* etc. are another important factor to affect the normal vegetation of the area. Naturally growing *Shorea robusta* patches and their large basal remains indicates the past forest type of the area as sal forest area.

**Climate:**

The study area falls in subtropical common climate zone. Humid summer with heavy rain fall in the monsoon and moderately cold winter are the characteristics of the area. Based on the distribution of rainfall, the area is categorically classified into four seasons as winter, pre - monsoon, monsoon and retreating monsoon.

Winter season extends over the months of December to February. There is little or no rainfall occurs in this period as revealed by the Rainfall chart.

The pre-monsoon extends over the months of March, April and May. Meteorologically, the season is dominated mainly by cyclonic disturbances with thunder storms.

The monsoon begins in the early part of June and lasts up to last of September. The region is thoroughly swept by South – West Asiatic Monsoon during the month of June, July, August and September resulting heavy rainfall in the area.
The retreating monsoon generally extends over the months of October and November. Pleasantly comfortable weather and scanty occasional rain fall are the characteristic features of the season.

On the basis of microclimatic conditions of the year, it is divided into three regimes as follows:

**Thermal Regime:**

Air temperature is the most significant factor affecting and shaping the physical environment of a place. It is the outcome of the interactions of many factors. The average pattern of variation in mean monthly temperature for four years is depicted in the chart (plate A1, A2). It is clear that the maximum mean temperature in the month of July (30 °C to 32 °C) while the minimum of the same is recorded in the month of January (12 °C) in the study area.
Mean Monthly Temperature in the study Area during 2002-2003

**Mean Monthly Temperature in 2002**

- **Maximum Temperature**:
  - January: 30°C
  - February: 25°C
  - March: 20°C
  - April: 15°C
  - May: 10°C
  - June: 5°C
  - July: 0°C
  - August: 5°C
  - September: 10°C
  - October: 15°C
  - November: 20°C
  - December: 25°C

- **Minimum Temperature**:
  - January: 20°C
  - February: 15°C
  - March: 10°C
  - April: 5°C
  - May: 0°C
  - June: 5°C
  - July: 10°C
  - August: 15°C
  - September: 20°C
  - October: 25°C
  - November: 30°C
  - December: 35°C

**Mean Monthly Temperature in 2003**

- **Maximum Temperature**:
  - January: 35°C
  - February: 30°C
  - March: 25°C
  - April: 20°C
  - May: 15°C
  - June: 10°C
  - July: 5°C
  - August: 0°C
  - September: 5°C
  - October: 10°C
  - November: 15°C
  - December: 20°C

- **Minimum Temperature**:
  - January: 20°C
  - February: 15°C
  - March: 10°C
  - April: 5°C
  - May: 0°C
  - June: 5°C
  - July: 10°C
  - August: 15°C
  - September: 20°C
  - October: 25°C
  - November: 30°C
  - December: 35°C
Mean Monthly Temperature in the study Area during 2004

MEAN MONTHLY TEMPERATURE IN 2004

NAME OF MONTH

MEAN MONTHLY TEMPERATURE IN 2005

NAME OF MONTH
Chart: Mean Monthly Temperature in the Study Area

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Source: Regional Meteorological Centre, Guwahati

**Rainfall Regime:**

Rainfall is a very important parameter which influences the weather and climate of a place. The distribution of the mean monthly rain fall in the district during the study period is shown in the chart (plate A3). It is clear from the chart that maximum rain fall occurs during the months from May to September. The chart also clearly indicates that during the months of November, December and January not much rain fall occurs.
Relative Humidity Regime:

Relative humidity of a place is an important climatological factor. It is observed that the study area is of comparatively high humidity zone. It does not go down below 65 percent during the study period. The chart shows the monthly average humidity of the area for 2002 to 2005. It is also noted from the chart that humidity is maximum during the months from May to September.
PLATE NO: A3
Mean Monthly Rainfall of the Study Area during 2002-2005

PLATE NO: A4
Mean Relative Humidity of Bongaigaon District during 2002-2005
Chart: Average Monthly Humidity (in percentage) of the study Area

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Source: Regional Meteorological Centre, Guwahati

**Demography and Land Use Pattern:**

As revealed by the Census of India report' 2001, the district of Bongaigaon has a total population of 9, 04,835 with sex ratio of 1000:945. In this district total male population is 4, 65,240 and total female population is 4, 39,595. Here, rural population is much more than the urban population. Total rural population is 7, 95,053 while the urban population is 1, 09,782. Muslim population in this district is 3, 48,573 constituting 38.52 percent of the total population.