CHAPTER II

GEOGRAPHICAL BACKGROUND OF THE STUDY REGION

2.1 LOCATION

The Brahmaputra valley lies between 25° 40' N and 27° 56' N latitudes and 89° 42' E and 96° O' E longitudes. The valley is a distinct physiographic unit of the north eastern region of India. The study area lies within the present state of Assam, and consists of eighteen (18) districts. The valley is an alluvial plain covering an area of 56194 Sq. Km representing 72 percent of the total area of Assam. It represents a narrow plain extending from the syntactical bend of the eastern Himalayas, westward beyond Dhubri on the border of Bangladesh. It has an east-west extension of 720 kms and an average width of 80 kms. The Brahmaputra valley is bordered physically by the Bhutan and the Arunachal Himalayas in the north, the Tirap and the Naga hills in the east, the Karbianglong plateau, Meghalaya plateau and Barail hills on the south and West Bengal on the west.

The Brahmaputra valley is mainly made up of old and new alluvium deposited by the river Brahmaputra and its numerous tributaries. The Brahmaputra valley though specially a compact unit has clear regional subdivision within it. There are the forested hills and high grounds of older alluvium, relatively high built up area made up of silt, clay and sand and the vast riverine swamps and active flood plain zones bordering the river. Each of these three belts exits on both sides of the river Brahmaputra.
The valley is generally regarded as the gateway for the whole of north-eastern region, through a narrow corridor of only 60 km width the Brahmaputra valley is open to the rest of the country. If the nature and the degree of interaction between the valley and its surroundings are considered, it seems to be unrealistic to separate the valley from the surrounding areas. Any important developmental activities in the valley shall naturally have certain impact in the neighbouring areas which happened even in the remote past. From the relative locational viewpoint therefore, the importance of the valley in the neighbouring areas is not much less than its importance to itself.

The valley consists of 39 subdivisions of 18 administrative districts of Assam. The districts are viz Dhubri, Kokrajhar, Bongaigaon, Goalpara, Barpeta, Nalbari, Kamrup, Darrang, Sonitpur, Lakhimpur, Dhemaji, Morigaon, Nagaon, Golaghat, Jorhat, Sibsagar, Dibrugarh and Tinsukia. It supports a population of 19109302 with an arithmetic density of 340 persons per square km against the overall arithmetic density of 286 persons per Sq.km for the state Assam as a whole and 267 persons per Sq.km for India as per 2001 census. This clearly throws light on the fact that this part of the country is highly populous.

The whole Brahmaputra valley can be longitudinally divided into three sub regions, viz

1. The upper Brahmaputra valley
2. The central Brahmaputra valley
3. The lower Brahmaputra valley
The upper Brahmaputra valley consists of Tinsukia, Dibrugarh, Sibsagar, Jorhat, Golaghat, Lakhimpur and Dhemaji administrative districts of Assam, while the central Brahmaputra valley consists of Nagaon, Morigaon, Darrang and Sonitpur administrative districts and the lower Brahmaputra valley consists of Kamrup, Nalbari, Barpeta, Goalpara, Kokrajhar, Bongaigaon, and Dhubri administrative districts of Assam.

2.2 PHYSIOGRAPHY

The Brahmaputra valley is an alluvial plain which is mainly made up of new and old alluvium deposited by the river Brahmaputra and its innumerable tributaries. The spatial characteristics of the valley is that it is dotted with a large number of beels and scattered hillocks mainly from Golaghat to Dhubri. These hillocks are structurally and geologically parts of the Meghalaya plateau.

The whole valley has a general slope from north-east to south-west from sadiya to Guwahati and then to the west up to Dhubri. The north bank of the Brahmaputra again has a gradient towards the south and the south bank towards the north within the valley. The gradient of the plain from sadiya to Dhubri is very low which is only 14cm per km. However this varies from upper to lower parts. From Sadiya to Dibrugarh the average slope is 25cm per km, from
Dibrugarh to Sonitpur (Tezpur); it is 9.5 cm per km and beyond Tezpur down stream it becomes very gentle. The Brahmaputra becomes sluggish in the plain and numerous river islands called Chapari are formed due to the deposition of immense sediments in the riverbed. The river therefore becomes braided more and more as it flows towards west.

The Brahmaputra valley is generally divided into five distinct physiographic divisions. They are

1. The Northern Bhabar and Terai foothills zone
2. The middle built up plain of the north bank
3. The active flood-plain and charlands.
4. The middle built up plain of the south bank
5. The southern foot hills zone.

1) The Northern Bhabar and Terai foot hills zone

This zone is elongated along the foot hills of the Bhutan and the Arunachal Himalayas. It is wide in its western parts and gradually becomes narrow towards the east.

The narrow Bhabar belt is located along the piedmont of the lesser Himalayas and it consists of fairy high ground composed of unassorted detritus. This belt consists of various depositional features like alluvial fans and alluvial cones formed due to the deposition of the material carried by the streams coming down from the Himalayas. As there is a sudden abrupt fall in this part, the streams and rivers coming down from the mountainous region of the north deposited the materials and water percolates down through the
unconsolidated soil and reappears few kilometers down streams. The flat belt of Terai occurs in south of the Bhabar belt. The soil of this belt is damp, which is suitable for the growth of tall grasses. This belt contains many reserve forests and is the home of many birds and wild animals. Due to constant human interference especially in the southern fringe of the Tarai, the actual character of this part has been gradually disappearing. Interestingly, the stream water that disappears in the bhabar zone seeps out in this part of tarai and gives rise to numerous small tributaries of the Brahmaputra.

2. The middle built up plain of the North Bank

The middle plain i.e. the built-up plain of the north bank lies between the tarai on the north and the active flood plain on the south, runs parallel to the river Brahmaputra.

The plain is large and high gradually tapering towards the east. Many north bank tributaries of the river Brahmaputra drain the area. Especially in this region beyond Jia Bharali river eastward there are occurrences of slightly higher grounds of older alluvium which are two-three meter above the flood plain level and are favourably devoted to tea plantation. The whole elongated fertile tract of the middle plain is very thickly populated and is well developed human habitat. Scheduled caste dominated villages are mainly distributed in the banks of the rivers in rural areas in this part of the study area. However in the urban areas, scheduled castes people generally scattered in different localities depend on availability of economic opportunities.
3. The active flood plain and charlands.

In the south of the relatively high middle ground lies the extensive active flood plain composed of newly deposited alluvium covering both the banks of the river Brahmaputra and the charlands and chaparies.

The active flood plain extends south wards to the south-bank plain. To the north east it extends from Saikhowaghat to Dibrugarh and to the confluence of the Burhi Dihing. To the west it extends over Majuli including the Kaziranga national wild life sanctuary. In other districts also viz Nagaon, Morigaon, Lakhimpur, Kamrup, Goalpara and Dhubri the active flood plain zone is wide. However, the continuity of the plain has been broken due to the presence of innumerable marshes and beels and some scattered erosional hillocks in the lower Brahmaputra valley. The presence of such marshes on the banks of the river is mainly due to the existence of the natural levees, which interrupt the process of easy discharge of the tributaries to the main stream. The active flood plain is favourable for of jute, rice and vegetable cultivation. This flood plain is also rich in tall grasses which are favourite for buffalo grazing and wild sanctuaries like Kaziranga, Manas, etc. Many scheduled castes dominated villages mainly Kaibartta villages are found in this part of the river valley including Majuli island.
4. The middle built up plain of the south bank

The middle plain of the south bank is comparatively narrow and uneven in its outline towards the eastern part of Dibrugarh and Sibsagar districts. The plain is relatively large and narrowed down to the central part and again becomes wide in Nagaon and Morigaon districts. Towards the west of Morigaon district it becomes again narrow. However, in the extreme western part of the Dhubri district the plain becomes somewhat wide as the Garo hills recede south ward. The dissimilarity in the width of the plain is firstly due to the presence of highlands of irregular northern fringe of the Meghalaya plateau and the karbi hills; secondly by the gradual southward extension of the flood plain on the southern part of the valley. Thirdly, the north-east and the central part of the south bank, the plain is relatively wide, because many big tributaries of the Brahmaputra like the Burhi dihing, Dikhow, Dhansiri and Kapili by their headward erosion widen the plain at Dibrugarh, Sibsagar, Nagaon and Morigaon districts. In the districts of Kamrup and Goalpara the plain is extremely narrow due to the northward projection of the Karbianglong hills and the parts of the Meghalaya plateau.

The middle plain of the south bank is made up of both new and old alluvium which is suitable for production of various crops. Depending on the availability of economic opportunities especially fishing, and pottery making, many scheduled caste groups are also distributed in this part of the valley especially in the rural areas.
5. The southern foothill zone.

The southern foothill zone is a continuous belt, which covers the foot hills of Tirap hills, Nagahills, Karbianglong hills and the Meghalaya plateau respectively from east to west. In the upper Brahmaputra valley the southern foothill zone in the districts of Dibrugarh and Sibsagar is composed of high ground and hillocks which are mostly under tea plantation. The foot hills of the Meghalaya plateau covering the southern part of Kamrup, Nagaon, Morigaon, and Goalpara districts are isolated and composed of hillocks scattered here and there in the region. This zone is under mixed forest and scattered agricultural fields. This area is inhabited mostly by tribal population, However, some households of scheduled castes population mostly artisans are found in this area.

2.3 DRAINAGE

The valley is a riverine basin of the mighty river Brahmaputra and its innumerable tributaries. The upper course of the river Brahmaputra lies in Tibet where it is known as Tsangpo and source of the river is from the Chemayung Dong glacier situated in the east of Manasarowar lake.

A large number of tributaries from all sides flow across the high slopes of north and south with variable speed and load and fall into the master river through a detailed network of drainage channels over the plain. The major north bank tributaries are Subansiri, Jia-bharali, Manas, Gadadhar, Ranganadi,
Dekrong, Buroi, Bargang, jia Dhansiri, Barnadi, Pagladia, Champabati and Sankosh. It has extensive catchment area and wide flood plains in the north. The main south bank tributaries are the Dihang, Burhidihing, Dikhow, Dhansiri, Disang, Jhanji Kapili, Degaru, Kulsi, Singra, Dudhnoi, Jenjiram and Krishnai.

It has been mentioned earlier that the slope of the valley varies from east to west and north to south direction and hence the pattern of drainage also differs from area to area. In the foothills of the bhabar zone the tributaries become shallow and braided, while in the tarai zone water percolates down and renders the area unceasingly moist and damp. The tributaries while approaching to the river Brahmaputra tend to have a sub-parallel course because of the presence of natural levees on the immediate river bank. Thus the portion beyond the levee has high marshy tract in which the tributaries are frequently shifting their channels during floods following continuous heavy rainfall in the lesser Himalayas in the summer months. The extent of the Brahmaputra flood plain is irregular in the south bank. The south bank tributaries have gentler gradients and have changed their course less frequently and have caused lesser flood havocs than the north bank tributaries. Most of these tributaries have braided and meandering channels over the plain. In some parts of the districts like Dhemaji, Darrang, Kamrup and Goalpara in the north bank plain and Dibrugarh, Tinsukia, Gelabil in Sibsagar, northern part of Morigaon, Dhing area of Nagaon and Jaleswar area of Goalpara in the south bank large area are turned into marshy tracts. This marshy land is not favourable for transport and communication. The ecology of this region is best
suited for aquatic animals, insects and swamp birds. Many scheduled castes villages especially Kaibartta village are found near these beels and swamps.

2.4 CLIMATE

The climate of the Brahmaputra valley is monsoon type which is slightly different from the Gangatic type. The climate of this valley is characterized by hot and moist summer and cool and dry winter. The hot and moist summer begins in the early June to September. In this season temperature is ranging from 28° c and 36° c with very high humidity and cloudy sky. High temperature associate with high humidity makes the atmosphere sultry. The dry cool winter season which is confined to the months of December, January and February is characterized by cool weather and frequent morning fog. The average temperature of this season is 15°-20° c and rainfall is very less.

In addition to these two broad seasons mentioned above there are two transitional periods, pre-winter or post-monsoon period and post winter or pre-monsoon period. The months of the pre-winter period are October and November and the months of the post-winter start in late February with the beginning of the Indian ‘Falgoon’ and continue upto early June. As the season advances the frequency of rainfall increases with frequent thunder showers and hailstorms in the afternoon. These thunder showers are called Norwesters locally known “Bardoichila”. The average temperature is 23° c and average rainfall is 2670.4mm in the valley. The distribution of average annual rainfall during the period 1989 to 1999 is presented in the appendix 1. There is another
important feature of the climate of the valley which is the location of rain shadow zone in the Lanka, Lumding area of Nagaon district. Due to its location in the westward side of the Meghalaya, this area receives a very less amount of rainfall compared to other districts of the valley. This valley normally experiences four climatic seasons.

a) pre-monsoon b) monsoon c) retreating monsoon and d) dry winter.

**Pre-monsoon** : This season starts from early part of March and continued upto the end of May. From the Norwester the valley gets considerable amount of rainfall during this season.

**Monsoon** : Monsoon bursts from the month of June and continues upto early September. Rainfall is very high during these months.

**Retreating monsoon** : The south west monsoon starts retreating by the middle of September and continues till November. The number of rainy days and intensity of rainfall decreases in this season than the monsoon season.

**Dry-winter** : Basically from the middle of the month of November upto February the climate of the valley becomes dry. The temperature is also low with minimum 10°c -11°c and maximum 24°c -30°c. This season is characterized by regular morning fog.

### 2.5 SOIL

The soil of the Brahmaputra valley is mostly alluvial soil is made up of sediments deposited by the river Brahmaputra and its tributaries which contains silt and sand with a high quality of humas. In the fringe of the valley particularly in Kamrup and Nagaon districts laterite soil is found. In addition
to these, submontane soil and hill soil are also found along the northern foothills and southern fringe of the valley respectively.

**Alluvial Soil**

The alluvial soil of the Brahmaputra valley can be classified as new alluvium and old alluvium depending on the origin. The new alluvium is basically found in the river banks and is subjects to annual floods. This type of soil is favourable for agriculture especially for production of cereals, vegetables and jute. In the flood plain tract PH value of alluvial soil is around 5.5. Away from this tract of new alluvium towards the valley edges both on the north and south banks old alluvium occurs. However, the old alluvium is distributed in scattered manner. This soil is reddish in colour and acidic in reaction with PH value ranging from 4.0-4.5. It is also heavier than the new alluvial soil. It contains sand and clay and loam and rich in nitrogen. This acidic character of the old alluvial soil renders it suitable for the plantation crop especially tea more particularly in upper Assam valley. This soil is also suitable for cultivation of vegetable, fruits, sugarcane, rice and mustard. In the upper Brahmaputra valley the acidic alluvial soil is rich in phosphorous content while in the lower Brahmaputra valley the soil has less phosphoric content. Therefore, it is not favourable for tea. Majority of the scheduled castes people though concentrated in this part, they are mostly land less and therefore they are engaged in the fishing and fish trade in this area. However, a section of them is now turned to agriculture.
**Hill Soil**

This soil mainly is composed of red loams and mostly found in the foothills of the southern bank of the upper Brahmaputra valley. The dark coloured loamy hill soil is suitable for cultivation of maize, cotton, potatoes and fruits with proper irrigation facilities. Some scheduled castes people are though found in this part, this area is mostly dominated by scheduled tribes.

**The soil of the submontane tract**

This type of soil is found in the northern foothills. It is loose and unassorted and the damp ground is covered by tall grasses.

**The laterite soil**

It occurs in the foothills of south eastern part of the valley particularly in the foothill region of Nagaon, Golaghat and Jorhat districts. Lateritic soil in the valley is of two types a) high level laterite and b) low level laterite. The high level laterite is less capable of retaining moisture. While the low level laterite is good in texture and has heavy loam and clays, suitable for cultivation of millets and pulses. The soil of the Brahmaputra valley plays a suitable role for human habitation. Due to its fertility factor it leads to high concentration of population. However in case of scheduled castes population who are primarily non-agricultural people the role of soil is not significant.
2.6 NATURAL VEGETATION

The Brahmaputra valley which has fertile soil with hot and humid climate, favours a luxuriant growth of natural vegetation. The flora is the important resource of this valley. It provides raw materials for industries, timber for construction work and fuel for domestic use.

The natural vegetation in the valley is predominantly of three types viz tropical evergreen, moist deciduous and grasses and marsh vegetations.

The tropical evergreen forest generally appears in the bhabar zone bordering Dibrugarh and Sibsagar districts. The tropical forest contains the various species of trees like Nahar (*Mesuaferrea*) Hollong (*Dipterocarpus, Macrocarpus*), Makai (*Shorea assamica*), Titasapa (*Michelia champara*) etc. In the high rainfall region of the valley dense luxuriant growth of vegetation is common. It may be noted here that Hollong (*Dipterocarpus macrocarpus*) and the Makai (*Shorea assamica*) provide raw materials for plywood mills in the upper Assam valley.

Some species like Sam (*Artocarpus chappara*), Jutuli (*Altimegea exeeba*), Bargach (*Ficus benghalensis*), Gamari (*Gmelina robusta*), Kadam (*Anthrocephalus cadomba*) and Hollock (*Terminalia myriocapa*), are mostly found in northern fringe of Bhutan foothills. Khair (*Acacia catechu*) and sisso (*Dalbergia sissoo*) are found in the flood plain areas by the side of the river.
To the extreme eastern part of the north bank of the Brahmaputra is covered by evergreen forest specially by Sia-Nahar (Mesua ferrea). The semi evergreen forest also covers extensive area of the valley. This type of forest occurs mainly in Goalpara, Dhubri, Kamrup, Darrang and Sibsagar districts especially in the moist areas and in the Tarai region. Semi -evergreen forest are less dense than the evergreen forest.

The deciduous forest also covers a large area in the Brahmaputra valley comprising Goalpara, Bongaigaon, Dhubri, Kokrajhar, Nalbari, Barpeta, Kamrup, Darrang and the western part of Nagaon and Morigaon districts. The important species of deciduous forest is Sal (Shorea robusta) and Teak (Tectona grandis) These forests contain another associated species of Sal known as Makri-Sal (Schima wallichii). It is the important plywood species of the lower Assam valley. Besides tall grasses up to a height of 4-5m are found along the riverine tract of the Brahmaputra and its major tributaries like the Manas especially in the north bank. The common grasses are buffalo grass, Khernal, Birena, Ekara, Khagri, etc which can be used for making pulp, paper, and paper board.

The Savana type of forest mainly occurs in the well drained higher areas adjoining foothills. The valley also supports some special kind of species like Bamboo (Bambosa arendinacea) and Cane (Dendrocalamus strictes) which have great economic value. Bamboo occurs throughout the valley but it is more in upper Assam. The main varieties of bamboo are Jati (Bambusa nutans) Bhaluka (Dendrocalamus longispathus) and Kotohia (Bambusa...
Some varieties of Cane also occur in the swampy areas, all over the valley. Some scheduled castes people especially Bania and Bansphor are engaged in bamboo and cane works.

The whole valley is also rich in Orchids. About 300 species of Orchids have been identified so far in this valley.

The forests of the Brahmaputra valley have been degraded at a very fast rate. The growing settlement inside the forest has gradually made the forest less dense without affecting much of the total forest area apparently.

**SOCIO-ECONOMIC BACKGRUOND**

From the ancient past the Brahmaputra valley is inhabited by various ethno-linguistics population groups viz Indo-Aryan, Tibeto-Burman and Austro-Asiatic. Moreover, during the twentieth century different groups of population have entered the valley and settled in the different parts of the study area. They are mainly immigrants from East Bengal, immigrants from Nepal and tea garden labours from Orissa and Madhya Pradesh and people from other parts of India. Therefore this valley is the home of general scheduled castes and scheduled tribes, and OBC population. They profess different faiths like Hinduism, Islam, Christianity, Buddhism, Jainism, Sikkhism etc.
The scheduled castes population in the study area is a native and aboriginal group of people springing up from the early wave of Aryan immigration.

According to 1991 census the Brahmaputra valley has a total of 191,093,02 population of which 6.66 percent of the total population is scheduled castes claiming 127,417,0 numbers as against 7.40 percent for the Assam and 16.33 percent for the nation as a whole. On the other hand, scheduled tribes constitute 241,518 population i.e 12.63 percent of the total population of the valley as against 12.82 percent for the state Assam and 8.00 percent for the nation as a whole. In 2001, the total scheduled castes population rose to 139,462,6 claiming 6.16 percent of the total population of the study area. Prima-facie the number of scheduled castes population and their percentage is though not very significant, considering their low status in the society and constitutional safeguard to uplift this section of people in the society and constitutional safeguard granted to them by the constitution of India to uplift this section of people in the society, their study is very meaningful.

Economy

The economy of the valley is mainly agrarian in character. However, fishing is the main occupation of the scheduled castes population. The main occupations of the indigenous scheduled castes people are goldsmithy, sweeping, pottery-making, fishing, carpentry etc. Similarly the immigrant scheduled castes are engaged in the activities like sweeping, laundering, drum making, corpse bearing, shoe-making and such other specialized profession.
Settlements of scheduled castes, therefore, have grew up in those areas where there are ample opportunities for pursuing their crafts and occupation fruitfully.

**Transport and communications:**

The whole valley is not well connected in respect of transport and communication. The built-up area particularly the middle plain is well connected with road and railway network. However, the fishing communities i.e., scheduled castes who generally settled in the low lying rural areas like the bank of the rivers and the beels and near the other water bodies and these are generally not well connected. A major part of the low lying areas inhabited by them is also affected by flood. Therefore, transport system is not well developed in these areas, where majority of the scheduled castes are concentrated. Perhaps this is one of the main cause of socio-economic backwardness of scheduled castes people in the study area.

**References:**


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