CHAPTER-II

THE REGIONAL BACKGROUND

PHYSICAL SETTING OF COASTAL AREA

Patuakhali region is situated in the northern coast of the Bay of Bengal. It is one of the most important riverine areas of Bangladesh. It has physical area of 1058 square kilometers. The area represents the southern extremity of the alluvial delta formed by the Ganges, Brahmaputra and Meghna rivers where these systems reach the Bay of Bengal and a continuous process land being formed and reformed by siltation and the wash of the tidal bore. This process results in the formation of new land, locally known as ‘char lands’. Char lands are frequently inundated with water during high tide. The whole area is extremely prone to cyclone and tidal surge resulting in frequent losses of human and animal lives, as well as crops. Fifty per cent of the land in the coastal area is vulnerable to floods of one kind or another. The soil
can be classified as silt loam and silty clay loam. Land elevation is low with variations probably not much more than two meters. Most of the land is inundated during the monsoon season.

The district of Patuakhali is an agricultural district. The area of the district was recorded as 977.81 squire miles, excluding the reserve forests and water areas. There has been addition of accretion and now clear formations. On the basis of the Census Report of 1961, the area of Patuakhali district, including the water areas and new formations of char etc. stood at 1,572 sq. miles. The following table shows the figures of the area actually cultivated, area cultivable but not cultivated, as well the area which could not be brought under plough. This figures are taken from the Final Report on the Rivisional survey and settlement operation.
Table-4: Agricultural Land Use Pattern of Patuakhali District.

<table>
<thead>
<tr>
<th>Patuakhali District</th>
<th>Total land area in Sq. miles</th>
<th>Area cultivated</th>
<th>Area cultivable but not cultivated</th>
<th>Area unculturable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Sq. miles</td>
<td>%</td>
<td>Sq. miles</td>
</tr>
<tr>
<td>977.81</td>
<td>813.56</td>
<td>83</td>
<td>77.38</td>
<td>8</td>
</tr>
</tbody>
</table>


According to the report of 1971-72, the percentage of the population depending directly on agriculture for their livelihood was 80 per cent. The ten main agricultural crops of the district, in order of importance are aman, aus, boro, khesari, mug, musuri, gram, till, mustared and sugarcane. The fruit crops, of importance, are banana and cocoanut.

Moderate and intermittent rains are needed from February to April for the ploughing of rice and jute but excessive rains in February and March damage mustared and other winter (rabi) crops which are then in seed. Winter paddy is broadcast in April and May, and at that time heavy precipitation is necessary. In a successful year the monsoons should begin in June and till
September, which frequent intervals of fine weather at the beginning to allow weeding operations and to enable rice seedlings to keep their heads about water. Ideal weather in July and August is an alteration of dry and rainy days, deficient fall in these months is fatal to the aus crop. Showers in October are very beneficial to the aman paddy crop as it help to swell out the grain. September and October rains are useful to the cultivator for preparing high lands for rabi crops, which also need rains when they flower in December.

The soil of the district is everywhere suitable for the growth of winter rice, although it varies in the degree of suitability. In the Meghna estuary the soil is sandy loam, and clay is only found in depressions. The soil gives good crops although not so heavy as in the north and centre of the district. So the best crops are obtained in the interior of the mainland and particularly in Patuakhali and Bauphal thanas where the level in lower and the soil is stiff clay.
GEOPHYSICAL CHARACTERISTICS OF COASTAL AREA

The District of Patuakhali is located 21 degree 75 inches and 22 degree 62 inches north latitudes and between 89 degree 90 inches and 90 degree 66 inches east longitudes. Geological, topological and climatological conditions have made the soil of the area fertile. The soil of the area mainly comprises salt and sand. No stone or gravel is to be found in any part of the area. The percentage of sand near the sea shore is much higher than in the interior.

The District stands near the Bay of Bengal and 11 feet above the mean sea level. For protecting coastal villages, in remote peninsulas there are many polders in the southern part of the District. Inside the polder, farmers cultivate their lands by controlling flood environments. The polder also protects villages from tidal bore.
CLIMATE

The climate of the area is moderate. The wind blows from the Bay of Bengal most of the time during the year. The maximum temperature is observed in the month of May when it records as high as 34.50 centigrade and the minimum temperature in the month of January is 14.80 centigrade. But due to coastal wind of the Bay of Bengal the winter season appears only a few days. The summer begins from the end of February and continues till mid October. Almost all the time during the year weather remains pleasant. The maximum rainfall as recorded in the month of June is 606 mm and no rainfall recorded in November-December. The humidity recorded in August is 97 percent which is the average maximum and the average minimum is 64 percent in the month of March.

CYCLONE AND FLOODS

Tropical cyclones are the frequent visitors to this coastal area. As many as 35 damaging cyclones had destroyed physical infrastructure, heavy human and animal casualties. The people learned how to live with natural disaster.
Coastal areas are affected by tropical cyclones. As many as 35 damaging cyclones were reported to occur in the coastal areas of Bangladesh in the period between 1868 and 1985 (Hoque, 1991). The loss distribution of 10 cyclones have been shown in (Table-5).

Month of May and October are the most cyclone prone month in a year, although cyclones have occurred from March through June and from September through December. It has been found that the Districts of Chittagong, Cox’s Bazar, Patuakhali are the most cyclone prone areas in the coastal belt. In 1876 Bakerganj was severely hit by cyclone and flood. The parts of Patuakhali and Bakerganj went under up to 3 to 5 meter inundation above the normal tide level. Storm surge in the sixties have been noted to be same 3 to 6 meter in height. The cyclonic storm could inundate lands, or overtop embankment up to elevations of 9 to 17.5 meter if surge occurs at the time of high tides.
Table-5: Death Toll in Cyclones in whole Coastal Belt.

<table>
<thead>
<tr>
<th>Year</th>
<th>Death</th>
</tr>
</thead>
<tbody>
<tr>
<td>1828</td>
<td>40,000</td>
</tr>
<tr>
<td>1876</td>
<td>100,000</td>
</tr>
<tr>
<td>1897</td>
<td>1,75,000</td>
</tr>
<tr>
<td>1960</td>
<td>5,149</td>
</tr>
<tr>
<td>1961</td>
<td>11,468</td>
</tr>
<tr>
<td>1963</td>
<td>11,520</td>
</tr>
<tr>
<td>1965</td>
<td>19,279</td>
</tr>
<tr>
<td>1970</td>
<td>500,00</td>
</tr>
<tr>
<td>1985</td>
<td>11,069</td>
</tr>
<tr>
<td>1991</td>
<td>1,38,000</td>
</tr>
</tbody>
</table>

*Source: UNCFRD, Ahamad, 1991.*

The people here live with unexpected flood. During the month of June October occasionally high tide submerges the agricultural and homestead lands. Also flood damage crops, village roads and normal social life is thus greatly disturbed. This flood is not however a permanent feature; because after ten to twelve hours flood water flash out in the near Bay of Bengal by local rivers. It is the normal characteristics of local rivers in the area to contain high tide and low tide twice a day all the months in the year. High
tide and low tide stay six hours in a day. In the rainy season water flow rises up to ten to twelve feet during *Amabasia* (full dark night) and *Purnima* (full moon night). Big rivers which connect from upper to the Bay of Bengal are Pyra, Lohalia, Andermanik.

**FLORA AND FAUNA**

The coastal belt has a tradition for flora. Once this area was covered by *Sundarban*. The people cutt the trees and destroyed the natural forest and converted forest land into agricultural land. So *Sundari* (mangrove) trees are not widely available now-a-days while other trees are grown by the people. Mangrove trees grow naturally in the marshy land and bank of the *char* lands. Some trees are grown by the people in their homestead land and beside the rural roads. The different trees at present found in the area are Gab (*Diospyros embryopetris*), Keora (*Suneatia Spetaca*), Bairi (*Zizyphus jujiba*), Haritaki (*Terminalia Chebula*) etc.
Normally different patches of high ground are densely covered with reserve forest. Important fruits are Jackfruit (artocarpus heterophyltus), Banana (Musa covedishi), Mango (Mangitira indica), Lemon (citrus limon), Tamarind (Tamarindu indica), Litchi (Nephellim litchi), Kadam (Anthocephalus Chinensis) etc.

The marshes are covered by floating grasses and weeds. Sandy river banks are covered by reeds known as (Hogla pata). Farmers are using hogla pata for roofs and for making packages. Golpata (a kind of long leaf) is also very important for house roofing.

The main agricultural products of the area are paddy (Orizasativa), tobacco (nicotine tabacum), mustard (brassica sp), pulses (Legumuniacca), ginger (Zinzibir Officianale), turmeric (Curcuma aromaica), taro (Colocasla antiquorum), beans (Polichos lablab), potato (Solarum tubersosum), brinjal (Solamum melongena), bottle gourd (Lageneria siceraria), nozella (Hibiscus sabdarefa) etc.
Wild animals are found in the reserve forests. Leopards are available in the jungles and islands. Leopards are found in large number all over the district. The wild monkey, fox, wild cat are visible in the area. Domestic animals found in the area are buffalo, ram, goat. (District Gazetteers, 1982.) etc.

Among the birds, snipes, ducks and geese are found in the rivers. jungle fowls, cuckoo, king fisher, lark swallow are some of the common birds of the district. Once in the crocodiles and sharks were found in the river, but presently these species are extinct. *Guisap* (Iguana) python, cobra and variety of poisonous snakes are found all over the district.

Marine fish or salt fish (*bhetki, hilsa, bhoal, rup chanda, lotkaa, poma, gagra, bagni*) are found in the region. Fresh water fish *katla, pangas, chital, rita, tapashi, mrigal* are also available. Inland fish of swamp fishes are (*kai, magur, singi, gagal and shawl*) etc.
DEMOGRAPHIC FEATURES OF COASTAL AREA

The origin of plain natives are Austro-ASIatic or Austric race. According to Herbert Risley “Bangladeshi people are from Dravidian and Mongolian mixing race. The original inhabitants of this area like most of the people of the other parts of Bangladesh were the Austric” (Risley: District Gazetteers, 1982).

In the subsequent periods other groups of people migrated to Bangladesh. Among these there were people who spoke the Dravidian and Mongolian Language. But it is believed that they were not Dravidians or mongolians by origin. Another group of people who settled in Bengal are called Homo-Alpines (or the people Alpine and Pamirs). These settlers were the forefathers of the Brahmins and kayasthas of the Bengali Hindu society. They spoke the aryan language but they were not Vedic Aryans by race. Anthropologists believe that the head-structure of the Bengali Brahmins is fundamentally different from the head-structure of the Brahmins of northern India. (District Gazetteers, 1982).
COMMUNICATION

In Patuakhali water way is the main mode of communication. People communicate from one place to another place by country boat, motor launch, trawler and mechanized boat. Mini local boats are the main mode of transport. To communicate remote peninsulas are used big motor launch. For communication purpose from thana headquarters to villages people use small local boats like taburia boats, mini engine boats, tintakta boat etc.

People also use ghashi boat, which is a slow moving craft generally 50 to 60 feet long and 12 feet wide. This boat is generally used for ceremonial purpose. Another craft which is locally known bachari boat 60 to 70 feet long and 4 to 5 feet broad is found. This is a bais (racing) boat and is manned by 80 to 100 oars.

Golernao is 20 to 25 feet long and 10 to 12 feet broad, this boat is used for carrying Golpata from Sundarban. Taburia is a passenger carrying boat.
This is the most popular mode of transport. This boat is found every part of the area. This boat is driven by *Malla* (oar).

For carrying paddy, betel-nuts, coconuts *kathami* boats are used all over the area. Businessmen use this boat for carrying goods to different *hats* and *bazars*. Rich people and Government Officers use pinish boat. Locally this boat is know as house boat (District Gazetters, 1982).

Farmers use *donga* boat, this boat is 9 to 12 feet long, 4 to 5 feet broad. Farmers use Donga for carrying paddy, grass, fire wood from different areas. Once upon a time people used only *goina* (long boat) for coming from remote islands to district headquarters. Now this passenger carrying boats are not available in this area.

Highways, rural agricultural roads and feeder roads are the next means of communication in Patuakhali district. Of the total road system 121.26 km are paved, 111.9 km are HB and 1864.38 Km are *kutcha* roads. There is neither rail road nor air transport in the district. But Government has newly constructed an agricultural air port. Sometimes high officials move this area by small air craft.