CHAPTER 2

FIELD OF THE STUDY

This chapter introduces the field of the study, i.e., Barak Valley in terms of geographical, historical and socio-political features in the backdrop of the state of Assam. Before describing various aspects of the Barak Valley, a synoptic view of the state is being given with reference to its natural resources. The chapter is thus an attempt to contextualizes the socio - ecological setup of the Barak Valley in that of the state.

THE STATE OF ASSAM

Assam is located between the tropical latitudes $24^0$08'N and $27^0$59'N and the longitudes $89^0$42'E and $96^0$01'E. It is the most populous state in the North East India, sprawling in an area of 78,523 sq. km. It is surrounded on three sides by hills and mountains which are extensions of the great Himalayas, and is sharing boundaries with other states such as Arunachal Pradesh, Nagaland, Manipur, Mizoram, Meghalaya, West Bengal and the countries such as Bangladesh and Bhutan. Assam consists of 27 districts; namely, Tinsukia, Dibrugarh, Lakhimpur, Dhemaji, Shivsagar, Jorhat, Golaghat, Sonitpur, Darang, Nagaon, Morigaon, Nalbari, Barpeta, Bongaigaon, Goalpara, Kokrajhar, Dhubri, Karbi Anglong, North Cachar Hills, Cachar, Hailakandi, Karimganj, Chirang, Boksa, Udalguri, Kamrup (Urban) and Kamrup (Rural). The geology has endowed the state with many hills and rivers having tremendous influence on the soil quality, drainage, land use, vegetation, population, society and culture. The state broadly forms three distinctive geographical divisions. The first one is the comparatively long and narrow

Brahmaputra Valley or Assam Valley. The river Brahmaputra flows from east to west for about 700 km. within the state and has great role in the land formation, hydrology, ecology, population distribution, culture and economy of this valley and the state as a whole. The Barak, another large river of the state, creates the Barak Valley in the southern end of the state. The Barail range and Karbi Plateau have separated these two river systems.

The state's bulk of the surface and ground water is received from rainfall under the pre-dominant influence of the south-west tropical monsoons lasting from April to October with occasional winter showers. The low clouds of the south-west monsoons, after being intercepted by the North Cachar Hills range and Naga-Patkai range, cause heavy rainfall in the southern part of Assam and precipitate in the Brahmaputra Valley; their intensity increasing towards the foothills of the Himalayas. The arrival of the monsoon is marked by strong winds, overcast skies and occasional thunder showers, hailstorms and cyclones during April and May and it swings into full play of heavy showers from June onwards. The average annual rainfall in the state varies from 1780 mm to 3050 mm (Govt. of Assam 2006). This liberal rainfall endows the state with various water bodies and other natural resources in it.

About 8251 sq. km., 10.5% of the total geographical area of the state is covered by surface water bodies. Of this, about 6503 sq. km. is occupied by various river systems, including the mighty Brahmaputra, and 1748 sq. km. by natural wetlands including seasonal and permanent waterlogged marshy areas and man-made reservoirs and tanks of a size more than 2.5 hectares. In addition, there are innumerable tanks and ponds, mostly man-made, which are

smaller in size. The total surface water resources of the state are estimated at about 600 billion cubic metric (www. ask.com).

Thus, the state is endowed with rich natural resources of water bodies – rivers, lakes and ponds, and hills and forests. The heavy rain fall mainly due to monsoons has been keeping the ecosystems in good shape. Human habitations and their growth in this area from times immemorial have had their impact on the natural resources as much as the natural resources have impacted the human societies.

Availability of inland surface water resources has made Assam, one among India's states rich in resources, with a total water area of 3.74 hectares (www. ask.com). It's fisheries comprise various types as shown in the Table 2.1:

Table 2.1 : Fisheries Types in Assam 2005-06
(Percentage in parenthesis)

Type of Fishery	*Number of Fisheries (%)*
Registered Beel Fisheries	430 (0.20)
Unregistered Beel Fisheries	766 (0.35)
Registered River Fisheries	177 (0.08)
Pond and Tank Fisheries	2,08,121 (94.89)
Swamp and Wasteland (Low Lying Areas) Fisheries	9,852 (4.49)
Total (%)	2,19,346 (100)

Source : Government of Assam, 2006, Statistical Hand Book, Assam, p. 81. Guwahati : Directorate of Economics and Statistics.

The data reveal that most (95%) of the fisheries in the state is constituted by the pond and tank fisheries. The swamps and wasteland fisheries constitute less than 5% and other fisheries constitute less than 1% of the total fisheries. Besides these there are also found 121 eco-fisheries in Assam (Govt. of Assam 2006:83).

The fisheries of various types differ in terms of the water area covered by them, which accords differential importance in the life of people. There water area is shown in the following table :

Table 2.2 : Water Area Covered by Various Types of Fishery in Assam 2005 - 06

(Percentage in Parenthesis)

Type of Fishery	*Water Area (in Hectares)*
Riverine fisheries	2,05,000 (59.05)
Beel fisheries / Ox-bow lake	1,00,000 (28.81)
Swamps and derelict water body	10,000 (2.89)
Reservoir fisheries	1,713 (0.49)
Tanks and ponds	25,423 (7.32)
Forest fisheries	5,000 (1.44)
Total (%)	3,47,136 (100)

Source : www. ask.com

The figures in the Table 2.2 reveal that three-fifth area of the fisheries in the state consists of the riverine fisheries and over one-fourth consists of the *beel* fisheries. Other fisheries constitute one tenth of the total water area.

Production of fish seeds and fish in the state is shown in the following Table :

Table 2.3 : Production of Fish Seeds and Fish in Assam 1997-98 to 2005-06

Year	*Fish seed fry (Million)*	*Fish (Lakh tonnes)*
1997 – 1998	2246	1.55
1998 – 1999	1703	1.56
1999 – 2000	2114	1.60
2000 – 2001	1486	1.59
2001 – 2002	1801	1.61
2002 – 2003	Not available	1.65
2003 – 2004	Not available	Not available
2004 – 2005	2741.47	1.86
2005 – 2006	3208.00	1.87

Source : www. ask.com

The table shows unimpressive growth of fish seeds and fish in the state where as the demand of fish in the state is 2.86 lakh tons calculated on the basis of 11 kg per capita requirement (Govt. of Assam, 2006).

The fish production is directly related to infrastructure for pisciculture. Therefore, the following table shows the infrastructure in the state :

Table 2.4 : Fish Culture Infrastructure in Assam 2004 - 05

Infrastructural Item		*Number*
Eco hatchery		
Fish seed farm	(a) Private	220 (excluding hatchery farms)
	(b) Government	142 (majority on lease with private entrepreneurs)
Fish seed plants (Mini)		2 (private one, AAU 1 under ARIASP)
Training Centre		9 (6constructed under ARIASP)
Magur Breeding Centre		2 (established under ARIASP)
Mobile Fish Health Clinic		3 (procured under ARIASP)

Source : Govt. of Assam, 2006, Statistical Handbook, Guwahati : Directorate of Economics & Sttistics.

The Table 2.4 shows that the infrastructural status of the state is not favourable to produce more fish and it constraints the fish production.

Generally, development of fisheries in the state is constrained by various factors; like, under utilization of the potential aquatic resources and non-utilization of low-lying areas for piscicultural programmes, poor fund flow from financial institutions, high input cost mainly of fish seed and its inadequate availability and insufficient rearing tank areas for raising fingerlings from fry stage under private sector.

Technology, water resources and entrepreneurs are all available in the state. Therefore, infrastructure has to be proved alongwith elimination of the constrainst for utilizing the potential of the fish resource in the state.

Briefly, the Assam state is rich enough in natural resources in general and in fish resource in particular. As such, it has ever provided a situation for man-nature interactions based on the fish resource. The fish resource and the interactions, both, do vary according to regional variations. Therefore, it needs to look into the resource status of the Barak Valley in which the study has been contextualized.

The Barak Valley

The Barak Valley assumes its name after the river Barak is flowing through the plains of South Assam. It is situated between the longitudes $92^0$15' and $93^0$15' East and the Latitudes $24^0$8' and $25^0$8' North, covering an area of 68,412 sq. km., is bounded in the north by the North Cachar Hills district of Assam and the Jaintia Hills district of Meghalaya, in the East by Manipur, in the South by Mizoram and in the West by Tripura and Sylhet district of Bangladesh. It is geographically an extension of Bengal plains. The Indo-Aryan settlement extended into the valley from Bengal in early times in its spontaneous eastward march to the farthest limits of cultivable areas and, resultantly, there developed a distinct Bengali dialect group in the undivided valley from remote past (Bhattacharjee 1991; Chatterjee 2000).

The seasons are well defined with a comparative dry winter from November to February, hot dry summer from March to May and rainy season from May to late October. Sometimes, rain starts immediately after winter washing out the summer. Maximum rainfall is continued from July to September. The driest month is December even then the average humidity never falls below 40%. The average rainfall in the valley is 39 mm. However, the rainfall recorded for the last one decade or more indicates a steady decline.

It has a sub-tropical climate with high rainfall spread over a long period and high temperature without much variation. The soil varies from alluvial to laterite soil and the texture is generally clay loam to clayey. The riverine tracts are found to have loam to sandy loam textured soils. These soils are acidic in reaction with pH varying from 4.6 to 6.0. Organic carbon content varies from 1.5% to 2%. Laterite soils are generally found in the hill slopes and hillocks.

Agriculture is the main economic activity in the valley. The cultivation is basically of traditional type. Major crop is paddy. Other important crops are vegetables, pulses, oil seeds, pine apple and other horticultural crops. Agriculture is exposed to erratic action of nature like cyclonic storms and frequent floods from the river Barak and its tributaries. Besides, occasional drought also reduces crop production. Most of the cultivable land remains fallow in winter due to lack of irrigation facilities.

Thus, the Barak Valley's geographical and climatic conditions have endowed it with rich and diverse natural resources. The resources are variously distributed over the three districts in the valley. Specificities of resources may be different in the districts of the valley.

THE DISTRICTS

The valley comprises three districts; namely, Cachar, Karimganj and Hailakandi. The natural resources and their exploitation status is being discussed here.

Cachar

The district is a heterogeneous land composed of both high hills, low lands and level plains. On the North, East and south it ranges of purple hills

with beautiful landscapes. The Bhuban range on the eastern frontier covers a considerable area having peaks over 3,000 feet above the sea level. Low hills crept up here and there rising like rocky islets. The high lands are planted with tea, while the lower levels are covered with rich crops of waving paddy. Beyond the lime-stone ridge to the south-west of the hot spring, the upper tertiary rocks extend in an unbroken range of the Barail range. These rocks are horizontal consisting of fine grained sand, stone and shales. The principal river is the Barak flowing a tortuous course across the district from east to west. It has a length of nearly 274 km. in the district of Cachar. The main tributaries of the Barak in the district are the Jiri, the Chiri, the Madhura and the Jatinga, the Sonai, the Ghagra and the Katakhal. The bed of the Jatinga river is full of gravel which are abundantly used in construction works. The general drainage of the land is towards west through its principle river, the Barak. Upto Badarpur, the Barak has a catchment area of about 20,000 sq. Km. but reverine valley is of hardly 3,900 sq. km. The district has a forest area of 1,435 sq. km. including reserve forest area of 1014 sq. km. covering about 38% of the total geographical area. The forests in the district are full of valuable woods like *sundi, chanpa, teak, rata* and bamboos, cane, sand, stone, etc. Basing on the abundancy of bamboo as raw material the Hindustan Paper Mill has been established in Panchgram of Hailakandi district.

The district is very rich in water bodies. Hence, a good scope for fish production. There are 38 registered beels an 43 registered fisheries in the district. The number of Eco hatcheries in Cachar district is 02, Hapa Breeding centres are 15 while mini dyke (bandh) with hatchery is 01. The following table highlights the status of the fish seeds and fish production in the district :

Table 2.5 : Fish Seed and Fish Production Status in Cahcar 1997 – 2006

Year	*Number of fish seeds (in millions)*	*Production of fish (in tones)*
1997 – 1998	28.93	9,050
1998 – 1999	31.50	9,850
1999 – 2000	35.25	10.821
2001 – 2002	Not available	Not available
2002 – 2003	15.04	11,947
2003 – 2004	16.00	13,120
2005 – 2006	38.91	17,251
2006 – 2007	40.87	18,335

Source : Govt. of Assam, 2006, Statistical Handbook, Assam, Guwahati : Directorate of Economics and Statistics

The fish production comes from various sources in the district. It is shown, over the years, by various sources.

Table 2.6 : Fish Production by Various Sources in Cachar District (1992-1993 to 1995-96)

Year	*Rivers (in tones)*	*Beels (in tones)*	*Govt. Fisheries (in tones)*	*Private Fisheries (in tones)*	*Others*	*Total (in tones)*
1992-93	850	2330	0.373	3595	2120	8895.373
1993-94	830	2315	0.307	3725	2250	9120.307
1994-95	805	2280	0.013	3975	2375	9435.013
1995-96	756	2232	0.16	4198	2415	9601.16

Source : Govt. of Assam, 2006, Statistical Handbook, Assam, Guwahati : Directorate of Economics and Statistics

The table reveals that the fish production is gradually decreasing in open fisheries like beel fisheries and river fisheries. However, in the private fisheries it shows a gradual increase.

The fish production from a source depends upon the water area size and number of units of that area. Therefore, the following table is presented to show the fish production in various sources by number of units and water area size.

Table 2.7 : Fish Production from Various Sources by Number of Units and Water Area in the Cachar District 2005 – 06

(Percentage in parenthesis)

Sources	*Number of Units (%)*	*Water Area (in Hectares)*	*Production (in metric tonnes) (%)*
Beel fisheries	135 (10.42)	3792.57 (17.53)	733 (50.80)
River fisheries	29 (2.23)	2398.80 (11.09)	251 (17.39)
Forest fisheries	91 (7.03)	245.00 (1.13)	Not available
Tea Garden fisheries	81 (6.25)	230.00 (1.06)	80 (5.54)
Low lying area / Swamps	268 (20.69)	14,000.00 (64.71)	270 (18.71)
Paddy field	691 (53.36)	968.00 (4.47)	109 (7.55)
Total (%)	1295 (100)	21634.37 (100)	1443.00 (100)

Source : Govt. of Assam, 2006, Statistical Handbook, Assam, Guwahati : Directorate of Economics and Statistics

The above table reveals that the low lying areas constitute over three fifths of the water area and produce about one fifth of fish while the *beel* fisheries constitute about one fifth of the area and produce half the fish production. The river fisheries constitute one tenth of the area and produce one fifth pf the fish production. Briefly, the district is rich in natural and human resources, specially having potential for development of fishing.

Karimganj

The Karimganj district consists of 1,809 sq. km. area of varied geographical features like agricultural plains, shallow wetlands, hilly terrains and vast area of dense forests. The total forest cover in the district is 54,000 hectares, i.e., 30% of the total area. The district is located between longitudes $92^0$15'E and $92^0$35'E and latitudes $24^0$15'E and $25^0$55'N. It is bounded on the North by Bangladesh and Cachar district (Assam) and on the East by Tripura state and Hailakandi district (Assam). It shares 92 kms of international border with Bangladesh, out of which 41 km of border is demarcated by river Kushiara

while 51 kms by land. Some stretches have no natural demarcation of the border and it cuts across open agricultural and grazing fields. However, the international border with Bangladesh is marked by either river Kushiara or sub-mountainous tracts of the Adamail range in Karimganj, along with its neighbouring district of Cachar, demarcates the frontier between the plains of Padma – Meghna basin and hilly North-East India (Choudhury 2004). The district is having three hill ranges. Of these, the Chhatachra range starts from the south-eastern border and makes the entire length of the border with Hailakandi district. The summit of the range is called the Chhatachura peak, 2087 feet above the sea-level; the other hill range is known as the Badarpur hills with an average height of 500 ft. above the sea-level. The adamail range marks the western border of the district forming the international border with Bangladesh. Running from south to north, the length is about 28 kms and breadth about 7 to 8 kms. The third hilly range crossing the district is the Duhalia range, also called Pratapgarh range. It runs through the mid-south of the district which demarcates the Longai Valley and Chorgola Valley. Besides the hill ranges, the plains of the district are also covered with the hillocks and forests. The north and the north-eastern portions of the district are mainly plains whereas the south and south-eastern parts are covered with forest. Kushiara, Longai and Shingla are the three main rivers flowing through the district. The Kushiara is flowing in the west from north boundary of the district along the Bangladesh border. The Longai river originating in the Jampai hills of Tripura traverses northwards. Near Latu village in Karimganj, it enters Bangaladesh and flows into the Hakhaluki Hawr, which absorbs the entire inflow during the winter. During the monsoons an outlet springs out which ultimately merges with Kushiara near Fechuganj in Sylhet district of Bangladesh. The Shingla river originating in

Mizoram and flowing northward falls into the Shonebeel where from it bifurcates into the rivulets called Kachua and Kakra.

Like Cachar the district of Karimganj is also rich in fish sources. The water area and number of units of fish sources in the district are given in the following table :

Table 2.8 : Water Area and Types of Fisheries in the Karimganj District, 2006

(Percentage in parenthesis)

Types of Fisheries	*Number of Units*	*Water Area (in Hectare)*
Registered *beel* Fisheries	27 (0.18)	Data Not available
Un-registered *beel* Fisheries	Data Not available	1960 (12.59)
Registered River Fisheries	9 (0.07)	Data Not available
Ponds and Tanks	14,578 (99.75)	3247 (20.85)
Swamps and Waste lands	Data Not available	10,367 (66.57)
Total (%)	14,614 (100)	15,574 (100)

Source : Govt. of Assam, 2006, Statistical Handbook, Assam, Guwahati : Directorate of Economics and Statistics

The table shows that the swamps and the waste lands cover two thirds; ponds and tanks cover one fifth and beels cover one tenth of the fisheries in the district.

The production of fish seeds and fish over the years is shown in the table 2.9.

Table 2.9 : Production of Fish Seeds and Fish in Karimganj District 2002 - 2006

Year	*Production of Fish Seeds (in millions)*	*Production of Fish (in tones)*
2002 – 2003	318.27	483.95
2003 – 2004	9050.98	9420.97
2004-2005	659.29	9421.0
2005 – 2006	508.10	9916.0

Source : Govt. of Assam, 2006, Statistical Handbook, Assam, Guwahati : Directorate of Economics and Statistics

The table shows that in the year 2003-04 the fish production in the district was maximum as the average rainfall in the district was quite favourable for the fish and fish seed production. The data show that the stagnation and erratic trend of the production.

The district has developed a sufficient infrastructure of nurseries, rearing units and stocking tanks in the district, which are given in the following table :

Table 2.10 : Availability of Nursery, Rearing and Stocking of Fish in the Karimganj District, 2006

(Percentage in parenthesis)

Item	*Number of Units*	*Size (in Hectare)*
Nursery	1735 (11.9)	69.3 (2.13)
Rearing	4524 (31.03)	226.2 (6.97)
Stockings	8319 (57.07)	2951.5 (90.9)
Total (%)	14,578 (100)	3247.0 (100)

Source : Records of the District Fishery Development Office, Karimganj.

The above table reveals that the stocking capacity in the district is better than the capacity available in nursery and rearing of fish. Besides, there are 8 eco-hatcheries and 104 Hapa breeding centres.

Briefly, like Cachar, the Karimganj district is also rich in natural resources in the valley. Especially, the district is having a sizeable sources of fish and infrastructure for fishing.

Hailakandi

Hailakandi located between $24^0$40'N latitude and longitude $92^0$33'E has an average elevation of 21 metres (68 feet). It comprises three notified towns; viz., Hailakandi, Lala and Algapur and one industrial township; viz., Panchgram.

There are two main rivers; namely, Dhaleswari and Katakhal which run from south to north through the middle of the district. The river Dhaleswari originates in the hills in Mizoram where it is known as Thang. Originally it was flowing along the western side of the district and the falling into the river Barak near Panchgra. A former king is said to have diverted its course a little above Rongpur and that channel has now dried up for a distance of about 1.5 km., after the commencement of new channel which is called 'Katakhal' and the lower part of the Dhaleshwari is completely cut off from the river that originates from the Mizo hills. The Katakhal river flows along the east of the valley and falls into the Barak river near Katakhal railway junction. There are also 7 tributaries of the Kathakhal river in the district.

The only *haor* of the district 'Bakrihaor' having a considerable area of 20 sq. km. remains under flood water almost in every season. In the season there is heavy rainfall with high humidity. The average annual rainfall is 2873.078 and humidity is 85%. In winter the climate is cold and dry. The cold is intense in December, January and February. The maximum temperature in the month of August is 30^0 – 34^0 Celsius and the minimum temperature is 6^0 – 12^0 Celsius.

The district has two types of the fisheries as shown in the following table:

Table 2.11 : Number of Registered Beel and River Fisheries in the District
(Percentage in Parenthesis)

Category of Fisheries	*Number of Fisheries*
Registered Beel fisheries	6 (40)
Registered River Fisheries	9 (60)
Total (%)	15 (100)

Source : Govt. of Assam, 2006, Statistical Handbook, Assam, Guwahati : Directorate of Economics and Statistics

The data exhibit that the district has only two types of fisheries; viz., beels and rivers and both are registered fisheries.

Besides, there are 03 eco-hatcheries and 14 Hapa breeding centres in the district. A few Fish Seed Farms, Nurseries and Hatcheries have also come up.

The fish production from various sources over the years, is shown in the following table :

Table 2.12 : Fish Production in Hailakandi District (1992 – 93 to 1998 – 99)

Year	*Rivers*	*Beels*	*Government fisheries*	*Private Fisheries*	*Total*
1992 – 93	1115.40	1126.72	--	2185.40	4431.52
1993 – 94	1113.30	1121.40	--	3188.97	5423.67
1994 – 95	1125.21	1512.42	--	1952.37	5190.00
1995 – 96	1836.78	1692.86	--	2250.36	5780.00
1996 – 97	1648.32	1476.65	--	2178.59	5303.56
1997 – 98	1756.44	1562.26	--	2167.18	5485.88
1998 – 99	1054.00	1687.58	--	1792.83	4534.41

Source : Govt. of Assam, 2006, Statistical Handbook, Assam, Guwahati : Directorate of Economics and Statistics

The table 2.12 indicates that the fish production in the district remains almost stagnant and erratic, which needs to be probed and improved as the district has a potential for fish production.

Briefly, the district is rich in forest resource as well as water resources. Fishing infrastructure, beels and river fisheries provide the sufficient base for fishing development in the district. But as compared to the other two districts in the valley this district has less fish resource.

THE SAMPLED FISHERIES

Out of the fisheries of the Barak Valley two fisheries have been purposively sampled. These are : (i) Shone Beel fishery in Karimganj and (ii) Part No. 6 and 7 (Jalkar Fisheries) of the Barak River fishery - Cachar. Many people are depending for livelihood on these water bodies either by catching fish or by cultivating paddy.

The Shonebeel Fishery

Since long the Shonebeel situated in the Karimganj district of the valley has been a healthy fish stock in the region. The beel covers an area of 3,179.24 acres. Its peripheral area is still greater. At least 5,000 people of 150 villages or so are directly or indirectly depending on the fishing grounds for their livelihood. Before 1975 the beel was under the jurisdiction of Kumar Bahadur Estate. Kumar Bahadur, the then renowned Zamindar of the area had a number of employees to control over different zones of the state. The employees called *Nayeb* of Devadwar Kachehri controlled fishing management of the Shone beel along with other works. The 'Nayab' was the official revenue collector of Kumar Bahadur who collected the revenue from fishing activities also. After the collapse of Zamindari system, the Shonebeel fishermen established a society named the Shonebeel Fishermen Cooperative Society Limited (SFCSL) under the instruction given by the Government of Assam for the smooth running of beel fishery. Shonebeel touches two development blocks; viz., Ramkrishna Nagar Development Block of the district (Choudhury and Kar 1995).

There are so many rivulets, drains, canals and one river depositing water to the Shonebeel. Out of these, the main source of water is Shingla river

originating from Mizoram. The river passes through the Lakhicheera Reserve Forest and Cheragi forest reserve. Just 50 years ago, the bed of the Shingla river was only 10 to 15 meters (near Cheragi Reserve Forest). But now it is 60 to 80 meters. The depth of the river decreases due to enormous cutting of trees in the forest reserves resulting into huge soil erosion. The river deposits on the way while traversing through maximum silt in the plains of Dullavcheera, Anipur, etc. and finally enters into Shonebeel. This increases the fertility of peripheral areas of the river but it also causes a regular floods. The Government of Assam has built a '*bandh*' (dyke) on the river covering the area from Dullavcheera to the Shonebeel to prevent regular floods. Now, the silt carried by the river is reducing its depth and the silting may cause its disappearance in the near future. The water was channelised to the beel before the *bandh* (dyke) was constructed. But after its construction in 1960s, the water is logging to create an artificial flood and is destroying paddy crops. In the monsoon water level of the Shingla remains lower than that of the beel and thus the river loses its identity. However, when the water recedes in the winter, the Shingla river re-appears in the form of two rivulets; viz., Kachua and Kakra. The Kakra acts as an outlet of the Shonebeel and finally merges to Longai river. About 300 fishermen of 50 villages from the surroundings are fishing in the beel daily.

The entire beel comprises many hillocks looking like islands, each one being a village. During the monsoons when the water inundates, the villagers travel by boats (canoes). And hence they mostly prefer the monsoons for easy communication. They generally arrange marriages and other ceremonies during the monsoons. In the beel, both Common Property Resources (CPRs)

and Private Property Resources (PPRs) types of fishing are practised through out the year.

CPR fishing is practised during the monsoon when the bill area gets inundated and PPR is practised in the winter when water recedes and the individual owners of the land holdings cultivate crops or rear fish in ponds. Besides, the water still remains stagnated in several low lying pockets in beel. These pockets are leased out by the SFCSL to groups of fishermen for exploitation. These pocket fisheries are called group fisheries. Previously the beel comprised 24 group fisheries having a good water logging capacity. Now, due to continuous siltation and other reasons, the number of group fisheries has reduced to 16 only. These group fisheries along with their area coverage are given in the chart below :

Chart 2.1 : Group Fisheries of the Shonebeel

Sl. No.	*Name of Group Fisheries*	*Total Area (in acres)*
1	Shone beel Jalkar	2504.32
2	Mukamer Kuri	9.60
3	Panch Tikri Goyor	24.58
4	Bagar Sangan	11.46
5	Jabbarer Kuri	0.70
6	Kala Kuri	0.58
7	Binnah Kuri	4.61
8	Bharater Kuri	7.82
9	Boroi Kuri	33.43
10	Boro Kuri	1.04
11	Boroi kuri (Vashan Kuri)	329.94
12	Ekashi Haler Dhal	6.49
13	Jhaia Maa (1)	2.43
14	Thana Kuri	125.66
15	Nunail	10.06
16	Chunarer Kuri	5.42
17	Kathalala Goyor	7.33

18	Khuku Dakra Beel	14.04
19	Kholi Beel	14.82
20	Doloo Gang 2nd Part Jalkar	36.38
21	Ekshingi	5.31
22	Thubair Maar Kuri	3.08
23	Jhaia Maa (2)	3.37
24	Doloo Gang Part (1)	6.75
	Total	3179.24

Source : Record of the Office of the Settlement Officer, Karimganj, 2006.

Out of the 24 group fisheries, 08 group fisheries; namely Jabbarer Kuri, Kalakuri, Binnahkuri, Jhaia Maa (1), Kathalala Goyor, Ekshingi, Thubair Maar Kuri and Jhaia Maa (2) have already extinct due to the siltation. At present only 16 fisheries are found in the Shonebeel.

THE BARAK RIVER FISHERY

The Barak river, originating from Angami Naga Hill in Nagaland passes through Manipur state, traverses through Cachar district of Assam and comes to Haritikar where it bifurcates into Kushiara and Surma rivers. The river Surma then flows towards the northern side and finally it flows towards western side of the district and enters Bangladesh while the river Kushiara flows towards northern part of Karimganj district and finally enters Bangladesh.

The entire Barak river passing through the Cachar district is divided into nine part fisheries which are called Jalkar fisheries. Of these, Part No. 2 fishery (Jirighat to Lakhipur) is a reserved fishery. Besides, two other part fisheries; viz., Part No. 4 fishery and Part No. 5 fishery are also reserved by the Government for conservation of Dolphin. Rest of the part fisheries; viz., Part No. 3 and Part No. 5 to 10 are leased out by the Government. Tender is generally requisitioned by Deputy Commissioner, Cachar. The tender may be

submitted by a fishermen's cooperative society or an individual. Such a society controls fishing in the part allocated to it and collects revenue from its members fixed on the basis of the nets used for fishing.

In each part fishery of the Barak river, the fishermen register them under a fishermen's cooperative society or as an individual lessee.

THE SAMPLED VILLAGES

The sampled villages, three each, have been taken purposively from the Shone beel and the Part No. 6 and Part No. 7 Fishery of the Barak river. These are being discussed below :

The Shonebeel Villages

The three Shonebeel villages selected for the study are : (i) Devadwar Village, (ii) Belala Village and (iii) Kalyanpur Village. Devadwar is the oldest village of the Shonebeel area, which is inhabited by the Patni. It has grown out of a few households, initially scattered in the Shonebeel area. In 17th century Radharam Dutta invaded the area and established his zamindari. He brought many of his community people (Patni) from Gopalganj (Bangladesh). Within a short period, the number of households increased due to rapid immigration (Choudhury and Kar 1995).

In 1990, in Devadwar, there were 154 households engaged in agriculture, ferry boat service and fishing activities. But after 1991 there occurs a rapid emigration at a rate of 2.9% because of lessening of fish stocks in the beel (Census Report 2001). In Belala, the Mahimals and in Kalyanpur the Kaivartyas are inhabiting. However, the population of Belala and Kalyanpur is increasing at a rate of 9.8% and 84.4% respectively.

The villagers of Devadwar, Belala and Kalyanpur of the Shone beel possess different land holding rights. In Kalyanpur, the villagers have the permanent settlement right both for their residential and cultivable lands. In Devadwar, there is land holding right for residential purpose but not for cultivation. Therefore, they have no legal right to sell it. However, selling and purchasing is in practice unofficially. When both parties agree to mortgage or sell, or purchase the land they carry out it by witness of a renowned person of the village.

In Belala, a portion of the cultivable land is found under the permanent settlement category (patta land) while whole of the residential area are found having the permanent settlement. Table 2.13 shows the distribution of the land holding size of the 50 sampled households each, from the three villages :

Table 2.13 : Distribution of Landholding by Number of Households in the Three Villages of the Shone beel

(Percentage in parenthesis)

Land holding (in hectares)	*Devadwar*	*Belala*	*Kalyanpur*	*Total*
0.1 – 0.7	19 (38)	25 (50)	08 (16)	52 (34.7)
0.7 – 1.3	22 (44)	18 (36)	24 (48)	64 (42.7)
1.3 – 2.7	09 (18)	07 (14)	09 (18)	25 (16.6)
2.7+	0	0	09 (18)	09 (6.0)
Total	50 (100)	50 (100)	50 (100)	150 (100)

Source : Field Survey Conducted during January 2005 to December 2006

The table reveals that in the Shonebeel two thirds of the households (42.7%) are having the landholding .67 hectares or more. The pattern is not uniform in the three villages. Belala has half the villagers and Kalyanpur over four fifths of the villagers who are holding land .67 hectares or more.

The villagers of Belala and Devadwar are exclusively using oxen and buffaloes for ploughing. But in Kalyanpur, they are using power tillers for tilling their lands. Power tiller may be obtained even on rent basis. Before 1990, they were also using oxen and buffaloes for tilling. Earlier, all the three villages had the boro varieties of crops in winter after the recession of water but, due to rapid siltation, the lands of Kalyanpur are getting upped and thereby the water is now receding faster than in the past. The villages have started to cultivate Sali varieties of crops.

The rice yield of the households in the three villages is given in following table :

Table 2.14 : Annual Yield Rice Grain in the Three Villages of the Shonebeel
(Percentage in Parenthesis)

Rice Production (in Kg.)	*Devadwar*	*Belala*	*Kalyanpur*	*Total*
0 – 500	07 (14)	09 (18)	06 (12)	22 (14.7)
500 – 1000	19 (38)	22 (44)	10 (20)	51 (34.0)
1000 – 1500	06 (12)	04 (08)	05 (10)	15 (10.0)
1500 – 2000	09 (18)	07 (14)	20 (40)	36 (24.0)
2000+	09 (18)	08 (16)	09 (18)	26 (17.3)
Total	50 (100)	50 (100)	50 (100)	150 (100)

Source : Field Survey Conducted during January 2005 to December 2006

The table 2.14 reveals that the maximum production of rice grains are found both for Devadwar and Belala is 500 – 100 kg. while in Kalyanpur, it is 1500 – 2000 kg. Besides the rice grain production, the Shone beel villagers are having the trees like mango, jackfruit and blackberry. However, they do not sell the fruits in the market. They use these for their domestic consumption. They also produce vegetables both for domestic and commercial purposes. In

all the villages the kitchen gardens are maintained by the womenfolk, the old persons and the youngsters.

The villagers especially, those of Devadwar and Belala, grow vegetables like sweet potato, cucumber, gourd, brinjal, chilly, pea nuts, etc. for commercial uses. The vegetables are grown in a large scale either on their own land or on a land leased in.

The land is a private property until it is inundated by water or having a crop on it. After its inundation by flood water or harvesting of crop, it turns into common property. Besides the animals like cows, goats, buffaloes and ducks freely graze over the lands of the Shonebeel in the winter as well.

Besides agriculture and fishing the villagers are engaged in various other occupation such as petty business, wage labour, rickshaw pulling, boat ferrying etc. and these are combined variously by them. The occupations and income of the households in the three villages are shown in the following table :

Table 2.15 Mean Annual Income of the Households in the Three Villages of the Shonebeel
(Percentage in parenthesis)

Sources of Income	*Devadwar*		*Belala*		*Kalyanpur*		*Grand Total*	
	Number of Households	*Mean Income (in Rs.)*	*Number of Households*	*Mean Income (in Rs.)*	*Number of Households*	*Mean Income (in Rs.)*	*Number of Households*	*Mean Income (in Rs.)*
Agriculture	12 (24)	10,782 (28.3)	05 (10)	6,075 (16.04)	08 (16)	10,082 (19.9)	25 (16.7)	26,937 (19.8)
Agriculture cum fishing	17 (34)	17,083 (35.3)	17 (34)	14,081 (37.17)	26 (50)	24,289 (47.94)	60 (40)	54,088 (39.7)
Agriculture cum fishing cum petty business	15 (30)	15,718 (32.5)	14 (28)	10,517 (27.76)	10 (20)	11,930 (22.17)	39 (24)	38, 163 (28.0)
Rickshaw putting cum wage labour cum Ferrying boat	6 (12)	4,782 (9.9)	14 (28)	7,208 (19.03)	06 (12)	5,063 (9.99)	26 (17.3)	17,053 (12.5)
Total	50 (100)	48, 365 (100)	50 (100)	37,881 (100)	50 (100)	50,664 (100)	150 (100)	1,36,245 (100)

Source : Field Survey Conducted during January 2005 to December 2006

The table shows that in the villages, the traditional occupations like agriculture and fishing are dominant and maximum income comes from the two occupations. But there have significantly emerged new occupations among about two fifths of the households which supplement their main income.

Not only the occupational and income patterns are derived from the existing environment but also the expenditure pattern is also determined by it. Therefore, the items and mean expenditure of the households of the three villagers of the Shonebbel is given below :

Table 2.16 : Mean Expenditure in the Three Villages of the Shonebeel

(Percentage in parenthesis)

Item	*Devadwar*	*Belala*	*Kalyanpur*	*Total*
	Mean Expenditure (in Rs.)	*Mean Expenditure (in Rs.)*	*Mean Expenditure (in Rs.)*	*Mean Expenditure (in Rs.)*
Food	30,401 (76.42)	28,235 (81.80)	32,281 (69.86)	90,917 (44.4)
Cloth	2,257 (5.67)	1,224 (3.55)	3,32 (7.21)	3,813 (3.2)
House repairing etc.	1,325 (3.33)	1,827 (5.29)	1,200 (2.60)	4,352 (3.6)
Education	899 (2.26)	750 (2.17)	2,131 (4.61)	3,780 (3.1)
Medicine	1,200 (3.02)	800 (2.32)	1,735 (3.75)	3,735 (3.1)
Entertainment	400 (1.01)	200 (0.58)	598 (1.29)	1,198 (.99)
Traveling	1,800 (4.52)	900 (2.61)	2,800 (6.06)	5,500 (4.5)
Miscellaneous	1,500 (3.77)	580 (1.68)	2,135 (4.62)	4,215 (3.5)
Total	39,782 (100)	34,516 (100)	46,212 (100)	1,20510 (100)

Source : Field Survey Conducted during January 2005 to December 2006

The table exhibits that the villagers are mainly spending on food and a meager amount on clothes and house repairing. Significantly, new needs like education medicine, entertainment, traveling etc. have emerged and a meager amount is spent to meet these needs.

There is a banking system run by the people in the villages of the Shonebeel. A group of people ranging from 6 to 15 members first constitute a body, having one president and one secretary or sometimes one Secretary-cum-Cashier. Each member of the group will have to deposit a fixed amount, say Rupees 10/- per week. After collecting the amount the Secretary will deposit it to the nearby commercial bank. If anybody fails to deposit the amount, then he will deposit it in the next week alongwith a penalty of Rs. 2/-. One can deposit it in a month also along with penalty. This fund will run for one year or sometimes for two years. Meanwhile one can take a loan from the fund at an interest rate of 5% per month. Any non-member may also take loan from the fund, if guaranteed by a member of the group. Any member of the group can withdraw the fund after its approval in a general body meeting and calculation of the profit. If anybody cannot deposit the amount regularly, the profit will be paid on completion of the fund tenure. The banking system is more popular as the people are getting easy loan and due to the illiteracy and non-availability of time they prefer such banking system rather by participating in the nationalized banking activity.

The people of Shone beel are suffering from acute drinking water problem. In Devadwar, the District Rural Development Agency (DRDA) has provided open ring wells for drinking water. The people of Devadwar are using the water of the wells both for drinking and domestic purposes. Besides, the villagers also dig some wells for meeting water requirements. In Kalyanpur, the people have dug six CPR wells. And from DRDA also they received 12 CPR ring wells. Now, these CPR ring wells have become the prime source of the drinking water both for Devadwar and Kalyanpur villagers. However, the people of Belala do not receive any ring well from DRDA. Some villagers have dug the well but the water is not sustaining for the whole year. As soon as the water recedes during the winter, the water level of

the well is also reduced and finally it dries. The people of Belala are still collecting their drinking water from the middle part of the beel. They believe that the water of the middle part of the beel is free from all kinds of pollutants. As the beel is connecting with several paddy lands, there is a lot of chances to mix with the nitrogenous fertilizer from these paddy lands to the beel. It is observed that if 0.5 mg./lt. of nitrate is present in water during rainy seasons which reveals that the water is extremely harmful for drinking purpose (Birdi 1994).

The Barak River Villages

Three villages selected from the fisheries of the Barak river are (i) Netaji Nagar; (ii) Radha Nagar and (iii) Balighat. Netaji Nagar and Radha Nagar are very near to the Barak river. The fishermen of the villages catch the fish from the Part No. 6 fishery under control of the Central Silchar Fishery Co-operative Society Limited. The jurisdiction of the society starts from Betukani point (Mahisher Kara) to Sarabpatty Ghat, Tarapur. The fishermen of Balighat are fishing in the Part No. 7 fishery and are registered under an individual lessee, Islam Uddin from 2007 – 08. previously the fishery was being exploited through the Machimpur Fishermen Cooperative Society Limited which defaultered in payments of installments and was deprived of the fishing rights in 2007. Its jurisdiction stretches from Tarapur Sarabpatty Ghat to Machimpur. Due to overexploitation of fish resources some fishermen have changed their area of catch from Barak river to Boula *Haor*. Netaji Nagar is inhabited by the Patni community and Radha Nagar is occupied by the Kaivartya. Both the villages are located under the Dudhpatil Grant Gaon Panchayat. To visit the villages, one must cross the Barak River by a boat, available at Madhuraghat Ferry Boat Service. Besides, one motorable road connects Silchar - Kumbhirgram road at Moinarbond Point, 3 km. from Silchar town.

These villages are located at the northern part of the Silchar town where as Balighat is located 3 km. in its eastern part under Salchapra Community Development Block. The inhabitants of Balighat are the Mahimal.

The landholding pattern of Barak river villages is different from the Shonebeel villages. The people of Netaji Nagar have emigrated from the then East Pakistan (now Bangladesh) and settled in this village on ceiling land. Later on, the Government provided them *maayadi patta* (permanent settlement) giving them rights to legally sell or purchase the land. In 1952, there were only seven households, which gradually increased to 85 in 1980. However, after 1980 no immigration took place. Rather, the people of this area began to emigrate from this area as overexploitation reduced the CPR fish in the Barak river – the main source of livelihood. This also led to few (20%) of fishermen to change their area of fish catch from Barak river basin to Boula haor. Presently, Netaji Nagar has only 71 households. The depletion of fish stock alongwith the increasing number of fishermen, has compelled the villagers to search alternative means of livelihood by emigration to new areas. In Radha Nagar, the Kaivartya settled down with 17 households in 1952. In 1980, the figure went up to 101 and in 2007, it recorded 115 households. All of them have the land holding rights under *mayadi patta* (permanent settlement).

On the other hand, the land holding pattern of the village Balighat is totally different from other villages. The people in this village were the *ryots* settled here by a Muslim zamindar, mainly for paddy cultivation. The village, inhabited by the Mahimals, as *ryots*, They had no landholding rights. Even till date they do not have any landholding right but the possession right. So, they sale or purchase or even mortgage their land holdings unofficially. The rate of emigration in this village is

significantly less probably in view of very good communication facilities existing between the village and the Silchar town.

The population in the three villages is at little variance. The people of Netaji Nagar are commuting daily to Silchar for different occupational activities like carpentry, mason work, rickshaw pulling, daily wage labour, etc. Some of them are staying permanently in the town or in other areas. Resultantly, its population is gradually decreasing. On the contrary in Balighat and Radha Nagar, all the villagers are local immigrants, causing an increase of the population there.

Radha Nagar and Netaji Nagar are the two villages under Dudhpatil Grant G.P. which comprises nine villages, in all. According to Census, 2001 the population of Dudhpatil Grant Gaon Panchayat (G.P.) is increasing. But the field data collected during January 2005 to December 2006 recorded a decrease in Netaji Nagar, while an increase in Radha Nagar. In the Balighat Gaon Panchayat also, the population is increasing. The following table throws light on the population growth in the Dudhpatil Gaon Panchayat and Balighat.

Table 2.17 : Population Status of Three Villages of Barak River

Name of the Gaon Panchayat	*Year*		*Decadal difference*	*Decadal Growth (%)*
	1991	*2001*		
Dudhpatil Grant	4224	6390	2166	51.3
Balighat	1648	1851	203	12.3

Source : Records of the deputy Director of Economics and Statistics 2006, Silchar, Cahcar.

In sum, the Patnis are inhabiting Devadwar, Kaivartyas in Kalyanpur and Mahimals in the Belala in Shonebeel, while these same communities are found in Netaji Nagar, Radha Nagar and Balighat respectively of Barak river basin. The Patnis in both the villages Devadwar and Netaji Nagar are emigrating while

Kaivartyas are staying in their own villages in both the fishery systems. The Mahimals in the Shone beel are mostly engaged in ferry service along with their traditional occupation of fishing are while, in Barak river basin, they are now engaging in diverse occupations.

Land holding Rights of the Barak River Village

The villagers in Netaji Nagar and Radha Nagar possess the permanent settlement right. Patnis of Netaji Nagar have emigrated from the then East Pakistan (presently Bangladesh) in 1952. At that time the land was ceiling land. Later on, the Government provided them mayadi patta (permanent settlement) on this land. Similarly, in Radha Nagar 1952, there were only 17 households who came here from East Pakistan (presently Bangladesh). The figure increased to 101 in 1980 and to 115 in 2007. All are having the landholding rights or mayadi patta (permanent settlement). The land value is also remarkably increasing in the area. The land holding pattern of Balighat is totally different from other villages. They were the tenants of a land owner who settled them for cultivating paddy. Till date, they do not have any land holding rights though they are now enjoying the possession rights. Due to the non-availability of land holding right, they cannot purchase or sell the lands. However, the people of Balighat are practising so unofficially. As the connectivity of the village with Silchar town is much better, the rate of emigration is very less. Initially, there were only 20 households and now it has grown to 125 households. The following table reveals the land holding pattern in the three villagers :

Table 2.18 : Land Holding Pattern in the Households of the Three Villages Netaji Nagar of Barak River

(Percentage in parenthesis)

Land size in Hectares	*Netajinagar*	*Radhanagar*	*Balighat*	*Total*
0.1 – 0.7	22 (100)	29 (100)	28 (100)	79 (52.7)
0.7 – 1.3	17 (100)	09 (100)	10 (100)	36 (24.0)
1.3 – 2.7	07 (100)	07 (100)	07 (100)	21 (14.0)
2.7 +	04 (100)	05 (100)	05 (100)	14 (9.3)
Total	50 (100)	50 (100)	50 (100)	150 (100)

Source : Field Survey Conducted during January 2005 to December 2006

The table reveal that in Barak River villages one third or more households (52.7%) having 0.7 hectare of land holding. Almost in all the villages the pattern of the land holding is uniform.

The villagers in Radha Nagar produce Sali varieties of crops which include swarna sali, agnisali, akri sali, chiyamora, ranjit-68. Because these high yield varities (HYV) of rice give more return in comparison of other varieties. Radha Nagar is not a flood prone and thus they grow such varieties of rice. They also produce various types of vegetables during the winter. The villagers of Balighat, on the other hand, produce Sali varieties of paddy as the area is not low-lying. They also prefer to produce ranjit-68, chaiyamora, etc.

Table 2.19 : Annual Production of the Rice Grains in the Three Villages of the Barak River

(Percentage in parenthesis)

Rice Production (in Kg.)	*Netaji Nagar*	*Radha Nagar*	*Balighat*	*Total*
0 – 500	08 (16.0)	11 (22.0)	11 (22.0)	30 (20)
500 – 1000	13 (26.0)	14 (28.0)	12 (24.0)	39 (26)
1000 – 1500	13 (26.0)	05 (10.0)	08 (16.0)	26 (17.3)
1500 – 2000	11 (22.0)	14 (28.0)	15 (30.0)	40 (26.7)
2000+	05 (10.0)	06 (12.0)	04 (08.0)	15 (10)
Total	50 (100)	50 (100)	50 (100)	150 (100)

Source : Field Survey Conducted during January 2005 to December 2006

The table reveals that about half the households in RadhaNagar and Balighat have rice grain production of looking or more in a year where as over four fifth of the households produced that quantity of rice grains.

Live stock is and part and parcel of agriculture and fishing any where and it found in the villages of the two fisheries also. It is shown in the following tables :

Table 2.20 : Live Stock and Poultry in the Households of the Barak River Villages

Name of village	*Type of Livestock*	*No. of households having the livestock*	*Mean of Livestock*
Netaji Nagar	Cow	27	02
	Duck	24	06
	Goose	0	0
	Oxen	12	02
	He buffalo	02	01
	She buffalo	04	01
	Poultry	15	04
	Pigeon	24	01
	Sheep	15	01
	Goat	11	02
Radha Nagar	Cow	28	03
	Duck	25	08
	Goose	0	0
	Oxen	16	02
	He buffalo	24	02
	She buffalo	12	01
	Poultry	08	02
	Pigeon	12	02
	Sheep	21	01
	Goat	15	04
Balighat	Cow	14	02
	Duck	12	03
	Goose	08	02
	Oxen	10	01
	He buffalo	12	02
	She buffalo	08	01
	Poultry	37	14
	Pigeon	12	02
	Sheep	17	02
	Goat	18	03

Source : Field Survey Conducted during January 2005 to December 2006

The table indicates that rearing of cow is more popular both in Radha Nagar and Netaji Nagar (Hindu village) while poultry rearing is more popular in Balighat. The cows are used mainly for ploughing. Besides ploughing, they receive milk, cowdung as fule and manure for their paddy fields as well. However, the people of Balighat are now engaging in different occupations other than cultivation. This is the prime cause of their deviation from rearing of cows and buffaloes to poultry which brings more returns to them.

The mean income of the households in the villages is given in the following table :

Table 2.21 : Annual Mean Income of the Households in the Three Villages of the Barak River

(Percentage in parenthesis)

Occupation	*Netaji Nagar*	*Radha Nagar*	*Balighat*	*Total*
Agriculture	15,708 (37.9)	15,589 (25.62)	15,589 (25.62)	42,429 (29.04)
Agriculture + fishing	12,802 (30.89)	32.138 (52.83)	32.138 (52.83)	60,771 (41.59)
Agriculture + fishing + Petty business	8,700 (20.99)	11,109 (18.26)	11,109 (18.26)	35,640 (24.39)
Rickshaw pulling + wage labour	4,238 (10.22)	2,001 (3.29)	2,001 (3.29)	15,847 (10.85)
Total	41,448 (100)	60,837 (100)	60,837 (100)	1,46,117 (100)

Source : Field Survey Conducted during January 2005 to December 2006

The table shows that in the Bark river villages also the traditional occupations like agriculture and fishing are dominant. Of course, the newly emerging occupations have a significant contribution to substantiate their socio-economic life.

The income is spent on various items by the households in the villages and the expenditure pattern shows their need structure and life style. Therefore, the following table is presented to give the mean expenditure of the households :

Table 2.22 : Mean Expenditure of the Households in the Three Villages of the Barak River (Percentage in parenthesis)

Name of the Village	*Item*	*Mean Expenditure (in Rs.)*
Netaji Nagar	Food	28,235 (75.20)
	Cloth	2,185 (5.82)
	House repairing etc.	1,135 (3.02)
	Education	581 (1.54)
	Medicine	1,100 (2.92)
	Entertainment	1420 (3.78)
	Traveling	1,189 (3.17)
	Miscellaneous	1,700 (4.53)
	Total	37,545 (100)
Radha Nagar	Food	31,620 (54.30)
	Cloth	12,541 (21.54)
	House repairing etc.	837 (3.56)
	Education	6,435 (11.05)
	Medicine	2,068 (3.55)
	Entertainment	778 (1.34)
	Traveling	3,182 (5.46)
	Miscellaneous	771 (1.32)
	Total	58,232 (100)
Balighat	Food	24,781 (60.96)
	Cloth	7,535 (18.53)
	House repairing etc.	837 (2.06)
	Education	1,135 (2.79)
	Medicine	1,835 (4.51)
	Entertainment	785 (1.93)
	Traveling	2,246 (5.52)
	Miscellaneous	1,500 (3.69)
	Total	40,654 (100)

Source : Field Survey Conducted during January 2005 to December 2006

The table indicates that the average annual expenditure in Radha Nagar is higher than in other two villages. All the villages have the largest expenditure on fooding followed by clothing. The mean expenditure of Radha Nagar in education is higher than that of the other two villages. The expenditure pattern does not reflect any significant deviation in the traditional life style.

The village banking system is more popular in Radha Nagar and Netaji Nagar than in Balighat. The mechanism of the village banking is the same as that in the Shonebeel villages.

The villagers of Netaji Nagar are taking their drinking water from well. Only 3% of the households are still using pond water for drinking as their houses are far away from wells. There are four ring wells provided by the Public Health Engineering Department (PHED) to the village. Besides these, nine more open wells are individually owned by the villagers. A natural fountain is located in Radha Nagar. The people of far off villages are taking its water for drinking. As they believe that by drinking that water they can be immunized of all diseases. In Radha Nagar, the Public Health Engineering Department supplies water. Besides, all the households have ponds for domestic use. Earlier, they had only the pond water. In Balighat, the people are using the water supplied by the PHE Department. In case of irregularity of the water supply, they use the pond water for drinking. They also collect water from the middle part of the Barak river as done by the Shonebeel villagers.

In sum, the Patni are settled in Devadwar, the Kaivartya in Kalyanpur and the Mahimal in Belala of Shonebeel, while the same communities are found in Netaji Nagar, Radha Nagar and Balighat respectively of Barak river. The Patni in both the villages, Devadwar and Netaji Nagar, are emigrating for new occupations while the Kaivartya are staying in their own villages in both the fisheries. The Mahimal in Shone beel are mostly engaged in ferry service along with their traditional occupation of fishing while in the Barak river, they are now engaging in diverse occupations. The land pattern of Barak river villages is different from that of the Shone beel. All the three villages, Radha Nagar, Netaji Nagar and Balighat, are

not flood prone. The distance of the three villages Radha Nagar, Netaji Nagar and Balighat, from the river is 3.5 km., 4 km., and 0.5 km respectively. The villagers prefer to cultivate Sali varieties of rice; mainly swarna sal, akri sali, agni sali, ranjit – 68, chaiyamora, etc. The people of Netaji Nagar, in particular practise boro varieties of rice also at Boula haor, two km from the village.

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