6. Micro Situation through Case Studies of Regions and Individuals

6.1 Majuli

6.1.1 A Case Study of Majuli River Island

An informed understanding of the impact of Brahmaputra on the socio-economic life of Assam can never be possible without an analysis of ‘Majuli’, the largest river island in the world. Located in the north of Jorhat district of Assam, the island is surrounded by the river Subansiri on the northwest, the KherkutiaSuti in the northeast and the main Brahmaputra River on the south. This island was initially spread over an area of 1250 km² in Upper Assam but has been reduced to 584.38 km² in 2011. The population profile as per 2011 Census reveals that the island is inhabited by 44% of STs, 14% SCs and 42% of others. The overall literacy rate is 73.9%. The island is accessible by ferries and about 20 km from the city of Jorhat. The people living in the island are mainly belonging to Mishing tribe who have migrated from Arunachal Pradesh. Other tribal inhabitants are Deori and Sonowal Kacharis. They speak mainly Missing, Assamese and Deori language/dialect. There are six colleges, five junior colleges, not less than 40 schools and two civil hospitals in dilapidated condition with poor service in the island. Main occupation of the people living in the island is agriculture.

Fig. 14: River Bank Erosion in Majuli Island
However, the island is prone to continuous riverbank erosion and high floods as shown in Fig.14. From Table 21, it is evident that the island is prone to very high degree of erosion. The impact of the continuous riverbank erosion and high floods is clearly visible on the socio-economic life of the people here in the form of increased density of population and shifting pattern of economic activity of workers. It is evident from table that the density of population has increased from 61 in the year 1951 to 286 in the year 2011. Although relative population growth is one of the reasons for it, but the dwindling physical area of the island is the most important reason for it. This high density of population has its obvious pressure on the available economic activities to be pursued. Continuous erosion and extensive sand silting because of recurrent floods compel the natives (majority of whom happen to be tribal) of the island to search for alternative employment opportunities within and outside the island. Often, this situation makes them remain heavily underemployed or virtually unemployed. Table 22 makes this situation explicit. From this table it is obvious that the percentage of people who used to depend on agriculture has continuously been falling. The severity of this situation is clearly visible from the pattern of employment in the year 2001. The 1990 decade has experienced two very major floods with extensive soil erosion and sand silting. As a result, 2001 Census reports a significant percentage point fall (50 percentage point) in the workers engaged in self-cultivation against the Census year 1991. This magnitude of fall is unprecedented not only in the state but also in the country as a whole.

Along with these countless distress brought on the people, this mighty river has also some positive stories to tell and blessings to offer to the natives of this island. Farmers also grow large varieties of paddy and vegetables because of alluvial soil deposited on the cultivable land due to
frequent flood in the island. The other three important occupations which have direct positive connections with the river include fishing, boat making and pottery. Besides, people are also engaged in few other economic activities such as dairy, handloom, and mask making which are somehow indirectly dependent on the water of the river Brahmaputra.

Of late, the island is attracting a good number of tourists particularly in the autumn and winter months. This is because the island is the abode of neo Vaishnavism culture of Assam. It has been the cultural capital of Assamese civilisation since 16th Century based on records describing the visit of Srimanta Sankardeva, a 16th Century social reformer and the pioneer of medieval age neo Vaishnavism movement and the preacher of monotheist form of Hinduism called Vaishnavism. While preaching the said culture he had established 65 monasteries and hermitages in the island locally known as Satras, the photographs of four Satras shown in Fig.15.

But now only 22 Satras are functional and the main surviving ones are Dakhinpat, Garamurh, Auniati, Kamalbari, Benegenaati, and Shamaguri. These Satras have preserved antiques like utensils, jewellery, weapons, and other items of cultural significance in their museums. The island is also a treasure and hotspot of flora and fauna, which harbours many rare and endangered avifauna species and migratory birds that arrive in winter season. The southern part of the island is a paradise for bird lovers and watchers. All these treasures attract large number of tourists to the island every year and have become sources of livelihood to the inhabitants. However, along with these positive narratives, happenings and accruals, one also comes across undesirable developments. The high endemic floods coupled with continuous river bank erosion leading to depletion of landmass have compelled many of the established ‘Satras’ to relocate to places outside of Majuli for reasons of safety and economics. This situation, if it is allowed to continue unabated, may finally bring the curtain down on the age-old cultural richness of the land and its people leading to a sharp fall in the numbers of tourists.

Fig. 15: Some Satras in Majuli Island
6.1.2 Individual Case Studies in Majuli

Visits were paid to Kamalabari village to understand the villagers who are living on the bank of the river, their occupations and livelihood and the office of the ferry services at KamalbariGhat and to have first-hand information about the impacts of river and the Ghat on the economy of the people in the Majuli Island during 21-24 October 2015. The information received from the three villagers and the ferry officials are summarised in the form of case studies presented in the following paragraphs.

Rajiv Pamegam is the resident of village Kamalbari which is situated on the bank of the River Brahmaputra in Majuli (Fig.16). Rajiv belongs to the legendary Mishing Tribe. Members of this tribe have historically been living along the banks of River Brahmaputra. Rajiv was originally a resident of Alimur Mishing Village, which was situated 10-12 km from the present location. Twenty one years back i.e., in 1994 his village was submerged in folds of Brahmaputra. He along with other fellow villagers was forced to displace and get relocated in the present village. His family lost approximately 10-12 acres of land.
In the present village, the life of Rajiv and his family members to a great extent is dependent on the river Brahmaputra. He owns four acres of land and undertakes cultivation. He earns on an average ₹ 72,000/- per annum from agriculture. His land gets the benefit of the alluvial deposits from the floods in River Brahmaputra. In addition to it he also undertakes piggery and earns approximately ₹ 24,000/- per annum. Rajiv and his family of three members also collect two to three logs from river Brahmaputra during the floods. Last year his family earned ₹ 6000/- by selling these logs in Kamalabari Market. Rajiv and his family are directly and indirectly dependent on river Brahmaputra for their livelihood and life. Their cultivation depends on river Brahmaputra, their water source depends on Brahmaputra and their collection of woods and logs depend on the floods of Brahmaputra. They too use the ferry services on the River for commuting to palaces like Jorhat. However, Rajiv like his other fellow villagers also lives under the constant fear of losing his cultivable lands to the floods of Brahmaputra through continuous inundation and erosion. For Rajiv and his family, Brahmaputra is simultaneously a necessary evil as well as an uncertain noble.
Sanjiv Kumar Pamegam, aged 40 years, is also another resident of village Kamalbari. Sanjiv lives with his wife Junti and two sons Pramananda and Bitul. Sanjiv too belongs to the well-known Mishing tribe and originally was a resident of Alimur Mishing Village, which was situated 10-12 km from the present location (Fig.17). Like Rajiv, he and his family got displaced to this village when he was only 19 years old, because of very severe floods in Brahmaputra in 1994. His family lost their precious 6 bighas of land. Presently, Sanjiv along with his partner Pulandaris primarily engaged in fishing in river Brahmaputra for making a livelihood. He owns two boats and catches fish for five months i.e., from October to February every year. He earned approximately ₹ 75,000/- last year through fishing. Besides fishing, he also collects logs from Brahmaputra every year during floods. Last year he earned ₹ 7000/- through collection of logs and disposed them in Kamalabari Market in Majuli. Sanjiv’s wife works as an assistant in the Aganwadi centre in the village and earns ₹ 24,000/- in a year. Sanjiv cannot think of his and his family’s life without the river Brahmaputra. With a gross annual income of approximately ₹ 100000/- he can afford to provide education to two of his children. His eldest son aged 16 years, is in class XII and his second son Bitul is in class VII. However, like Rajiv Pamegam, Sanjiv cannot forget the 1994 fury of Brahmaputra that had taken away from them their most important source of livelihood i.e., their prized cultivable land. Hence the continual fear of losing the present land and homestead haunts him incessantly.

P.C Bora, aged 60 years, happens to be another resident of the same village Kamalabari, Majuli (Fig.18). He is an ex-service man, who had retired from Indian Army way back in 1991. Bora
has five family members. He gets a pension of ₹13,000/- and is presently engaged in cultivation. His only son, who is a class X pass-out, works as a driver with a local ferry company and earns ₹2200/- per month. To Bora, river Brahmaputra is something in the absence of anything better in terms of employment and livelihood opportunities. It gives his family a critical minimum of income. Like Sanjiv and Rajiv, Bora is also very frightened that someday he may lose his land, livelihood and identity because of high floods.

6.1.3 Lessons from the Cases from Majuli

The common message of these cases: (i) River Brahmaputra has been and continues to be the life line of the people of Majuli; (ii) However, during the past five decades, because of manmade and natural negative developments, the benign Brahmaputra has turned largely devastating threatening the foundation of the socioeconomic and geo-economic life of the natives; (iii) Brahmaputra is simultaneously a necessary evil as well as an uncertain noble; (iv) To reduce the devastating effect and to continue to realise its benevolence on the socioeconomic life, immediate, short term and long term measures in the form of environmentally, economically, socially and culturally sustainable measures need to be taken up by all the relevant stake holders.

6.1.4 Economics of Ferry Business in Majuli Ghats

To understand the ferry business and its implications in the local economy in Majuli two of the ferry officials Mr. Pabitra Dutta, aged 55 years and Mr. Babul Dowarah, aged 52 years were contacted and relevant information collected. According to them there are eight nos. of Ghat, namely, (1) KamalbariNimati, (2) AfalaNimati, (3) DakshinpathNimati, (4) ChalbharaNimati, (5) BaguriguriNimati, (6) PhoolaniDikhamukh, (7) ShikariDikhamukh and (8) SumaimariNimati at Majuli which operate ferry services for the day to day movement of people from Majuli to Jorhat and Jorhat to Majuli. The biggest Ghat is known as NimatiKamalbari which has five small boats and two big boats. Each boat provides one up and one down trip every day. Generally boat(s) start at 8.00 am, 8.15 am, 8.30 am and 10.30 am for onward journey to Majuli and return back to its starting point. There are only two up and down trips for each for AfalaNimati and DakshinpathNimati. The rest five Ghat's, each has one up and one down trip. The people who use ferry services are mainly office goers, daily wage labourers, students and the tourists visiting different Satras in Majuli which is famous for preservation of Vaishnavite culture. Because of the movement of people, vehicles, and goods a lot of money is earned by the owner of ferry
services. The ferry services create a number of employment as ferry drivers, ferry workers, office staff etc along with workers working in various food stalls on the Ghats. The boats are owned by the Government of Assam and the staff working for the ferry services is state government employees. However, the service is outsourced to private companies by auctioning boats. It is observed that each small boat has a capacity for 150 persons, 3 four-wheelers and about 50 two-wheelers. Large boats carry 200 persons, 6 four-wheelers, and about 50 two-wheelers. Although there are a limited number of boats with limited capacities, these are always overloaded with passengers. Price of ferry ticket for person is ₹15/-, for two-wheelers it is charged ₹25/- and for four-wheelers it is ₹706/-. Per day earning from the biggest Ghat in terms of ferry services is about ₹82,500/- consisting of ₹34,500 from passengers, ₹30,000/- from four-wheelers and ₹18,000/- from two-wheelers. This is a conservative estimate which excludes earning from overloading passengers. There are 12 food stalls on KamalbariNimati. Each food stall is earning per day on an average ₹3000/- with a variation from ₹1500/- to ₹4000/- by selling food stuffs. Thus an amount of income of ₹36,000/- is generated by the food stall owners. Total earnings from the biggest Ghat per day comes to about ₹1, 18, 500/- and generating employment for at least 35 persons including ferry staff and food stall owners.

Although the ghats and ferry business generate income and employment for the local people, it has its own shortcomings in terms of poor infrastructure and services. It is found that the infrastructure in the Ghat is not properly developed because of which passengers and vehicle owners face problems while boarding and off boarding the boats. Reasons for not making permanent structures in the Ghat as reported by the officials and general public is due to frequent flood and erosion of banks of the river. Location of a Ghat changes from year to year depending upon the extent of erosion of banks. As a result permanent structure for ghats becomes next to impossible. This not only causes a lot of hardships to the management of ferry, a good amount of money is also spent for making temporary structures in the ghats. During rainy season, when river is full with water and surrounding is flooded, ferry business gets affected and the people suffer to a great extent as they have to remain underemployed.

6.2 Dhubri

6.2.1 A Case Study of Dhubri
Located in the extreme western part of the state of Assam, the district of Dhubri is bounded by Bangladesh and West Bengal in the west, the Garo region of the state of Meghalaya and the districts of Goalpara and Bongaigaon of Assam in the East; Kokrajhar district of Assam in the north and Bangladesh and Meghalaya in the south. The district gets bisected by the river Brahmaputra. As a result of this bisection, the sub-divisions of Dhubri and Bilasipara lie to the north of it and the subdivision of South Salmara-Mankachar to the south of it. The total area of this district is approximately 1664 sq. km which includes plains, river islands and hillock ranges.

The local economy of Dhubri sub-division and the subdivision of south Salmara-Mankachar revolve around Brahmaputra and its tributary Gadadhar. Since the district and its headquarters are bounded by both national and international boundaries and Brahmaputra flows down in the middle, Dhubri town has become an important point of confluence for trade, transportation, and tourism. Along the banks of the river in the town, several ghats such as New Ghat, Jogamayaghat, Panchughat, Patharghat etc. have come up facilitating intra district, inter-district, inter-state and international transportation of men and materials. Every day around 150-200 ferries of different types and sizes ferry in the waters of Brahmaputra carrying small business men, small cultivators along with various types of goods such as fresh vegetables, fresh milk, fresh fish, live country chickens, cows, cement, iron rods, other building materials, groceries, utensils, household gadgets, plastic utilities etc. Most of these small time traders, cultivators etc. come from places such as Phulbari (in Garo Region of Meghalaya), Mankechor, Sukhchor, Phakirganj, Hatsinghmari etc. There are around three hundred small venders/shopkeepers selling and dealing with various commodities and services ranging from groceries, clothes and eatables to haircuts. A simple estimation of the daily economic activities centring Brahmaputra and its tributary along the various ghats in Dhubri town is presented in the following Table 23.

It is evident from the table that on an average 2600 people get direct daily employment depending on the Brahmaputra River. These people work in the ferries, in bamboo transportation trade, retail shops and services units along the bank, retail traders commuting from surrounding islands, regions including states like Meghalaya. Daily average indirect employment created is estimated to be around 5000 person days. Daily direct and indirect employment taken together comes to about 7600 person days. This figure is significant considering total population of 63000 in Dhubri municipal area as per 2011 Census. Further, when it comes to gross amount of sales undertaken, the figure is noteworthy at ₹3.312 crores.
Although, the case of Dhubri town and its bank economy cited above presents a very positive picture of the impact of Brahmaputra, the river has its storey of devastation and misery too. Below we present two individual sample cases that narrate the cascading negative impact on the economic life of individuals and households and that too barely 3 km away from the centre of the town.

6.2.2 Individual Case Studies in Dhubri

Visits were paid to two villages, namely, Chhagalchhara (Part I) and Majhherchar N.C. to understand the villagers who are living on the bank of the river, their occupations and livelihood to have first-hand information about the impacts of river on the economy of the people in Dhubri during 5-8 December 2015. The information received from the two villagers are summarised in two case studies presented in the following paragraphs.

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<th>Fig. 19: Case Study IV</th>
<th>Fig. 20: Case Study V</th>
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<td>Akkar Ali (In the right)</td>
<td>Md. Shermat Ali Sekh</td>
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Md. Akkar Ali is a resident of village Chhagalchhara (Part-I). This village is only 3 km away from Dhubri City centre (Fig. 19). Akkar’s (aged seventy years) life in this village is a story of the unceasing flurry and raze of Bramhaputra. He has been staying in this village for the last sixty years. This year he has lost his house to the floods of Brahmaputra. During the period 1991-2015, he has lost 10-12 bighas of cultivable land. Presently he and his 10 family members make a living through share cropping, rickshaw pulling and undertaking of casual labour in Dhubri town. This year, he and his family members had to be shifted to the river bank for temporary rehabilitation for a month. Md. Akkar’s story of a reasonably well grounded cultivator to a traumatised share cropper and casual labour within a span of two and half decades, is also the
story of another 8 households who still live in this village with no hope but all despair and despondency. It is a story of riches to rags, resources to ruins; hope to despair because of the continuous course change and heavy floods in River Brahmaputra.

Md. Shermat Ali Sekh, aged 62 years, is a resident of village Majhherchar N.C. This village has a total population of 105 (Fig.20). He has 10 members in his household. Presently, he works as a casual labour in Dhubri town with little of supporting income from animal rearing such as cows. During the last 40 years, he has lost 60 bighas of cultivable land because of river bank erosion and change of course of the river. During the last 10 years, he has changed his homestead three times because of inundation and engulfing of his homestead by the river Brahmaputra. Acute poverty inflicted on him by Brahmaputra has not allowed him to send his children and grandchildren to schools. Like Md. Akkar in the earlier case, Shermat’s social and economic life story narrates a tale of previous treasures and riches to a present captivity in untold misery and destitution.

6.2.3 Lessons from the Cases in Dhubri

The common message of these cases: (i) River Brahmaputra has been and continues to be the life line of the people of Dhubri town and surrounding areas and regions; (ii) The socio-economic life of people of Dhubri town, surrounding islands, areas in Garo region in Meghalaya and other neighbouring districts of Assam like Goalpara, Bangaigaon and Kokrajhar get positively impacted by Brahmaputra; (iii) Brahmaputra has been significantly contributing to the thriving local economy of Dhubri town in terms of employment and trade; (iv) Brahmaputra is simultaneously a certain noble as well as a perpetual agony; (iv) To reduce the devastating effect and to continue to realise its benevolence on the socioeconomic life, immediate, short term and long term measures in the form of environmentally, economically, socially and culturally sustainable measures need to be taken up by all the relevant stake holders.

6.3 Guwahati

6.3.1 A Case of Rani Chapari Island

We had purposively selected another island on the outskirts of Guwahati city known as Rani Chapari. This Island belongs to the Palashbari revenue circle and is used by the farmers of villages like Bhattapara, Kheliapara, Mirzapur, Aambari, Kuhabari, Majirgaon, Sadilapur,
Palashbari, and Sualkuchi etc. Farmers belonging to these villages cultivate in this island vegetables of all types, jute, mustard, paddy etc. some of which are presented below in the form of few photographs (Fig.21). The island gets alluvial soil deposits every year through floods and its soil has become very fertile too. It becomes easy for the villagers of these villages to commute to this island by local boats. This saves time for them as they are able to avoid the traffic of the city.

**Fig. 21: Cultivation of Crops and Vegetables in Rani Chapari Island**
6.3.2 Individual Case Study in Bhattapara

Golak Das is a resident of village Bhattapara having six members in his household. Out of all the six members, five are literate and one is illiterate (Fig. 22). Agriculture happens to be the principal economic activity of his household. Presently Golak owns 5 Bighas of cultivable land in the Rani Chapari Island. He and his family earn a net annual income of ₹60,000/- from agriculture. This is possible because of the fertile nature of the landed property that he owns in Rani Chapari Island. In addition to agriculture, he and his family members catch fish from Brahmaputra for self-consumption. Including imputed value of agricultural products for self-consumption, the total annual income of his family comes to around ₹1,30,000/-. Golak’s family use the water of Brahmaputra for various purposes such as washing of cloths, washing of domestic animals and bathing and toilet. They also use Brahmaputra for travel to their agricultural fields in Rani Chapari Island. However, Brahmaputra is not an unmixed blessing to him. During the last five years he has lost 4 bighas of cultivable land to the changing course of this mighty river including soil erosion. Last year he has suffered a crop and land damage to the tune of ₹50,000/-. For Golak and his family, they cannot think of a life without Brahmaputra. However, they do live under constant fear of losing their valued cultivable land.