CHAPTER-4

FLOOD, EROSION AND DISPLACEMENTS

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4.1 INTRODUCTION

Among the widespread natural disasters all over the world, flood is one which caused mainly due to heavy rainfall and damages life and social developments (Kandilioti & Makropoulos, 2012). Flood can be classified into four basic categories as Flash flood, standing flood, coastal flood and riverine flood. Of all these four types of flood 'riverine flood' is the most difficult to control (Cuny, 1991). India is endowed with huge natural resources, suffers from flood events of various magnitudes annually. The Brahmaputra River ranks fifth in the world in terms of discharge (Akhtar, 2001).

Flooding in the floodplains of Indian rivers is a recurring phenomenon and thereby not of much concern until and unless it is associated with some serious socio-economic consequences (Sen, 2010). Flood inundation in the rural areas of the country is mostly associated with large scale loss in agricultural production, loss of livestock and sometimes loss of human lives too (Sen, 2010). Historical records reveal that the char areas of Brahmaputra suffered from several large floods that have devastated the area causing extensive flood inundation and severe bank erosion (Sarma & Phukan, 2004).

Riverbank erosion associated with the loss of land and deposition of sediments along the river course. Land loss due to river bank erosion not only threatens the existence of infrastructures and agricultural lands near to the river bank but also poses threat to aquatic habitats and causes sedimentation downstream due to the generation of fine-grained sediments (Darby & Thorne, 1995). In India, most of the hydrological challenges are owed to the high sediment load of the rivers which ultimately results in riverbed aggradations, bank

erosion and channel widening (Thakur, 2012). The land once lost due to riverbank erosion could not be revived. The severity of the problem can well be understood in case of char areas of Assam which witnessed flood and erosion recurrently every year.

Internally displaced people are those who have been forced or compelled to flee or leave their homes or place of habitual residence, in particular as a result of, or in order to avoid the effects of armed conflict, situations of generalized violence, violation of human rights or natural disasters, and who have not crossed an internationally recognized state border' (Washington DC, 1999). For a country like India, the problem of internal displacement assumes a vital issue in the post-colonial period whether it is development induced or environment induced displacement. Besides these displacements, in India, there are other lesser-known corners where massive internal displacement has been taking place silently since last hundred years. Assam is such one remote corner in the Northeast which has witnessed large scale internal displacement of people following environmental changes (Hussain, 2000).

Assam had been historically a place of migration for diverse of population. This trend of migration has continued till current times. Assam has already taken on a large number of refugees from East Bengal and neighbouring states belonging to different religions, languages and cultures. Assam witnessed huge number of displaced population due to conflict among different tribes and races in the form of movement. The conflict induced displacement is of more recent origin. An older form of displacement that continues to engage attention of local social and political thinkers as well as the general public is the recurring flood induced internal displacement. Every year, the Brahmaputra made flood and erode the river-banks and river islands where thousands farmer carrying their subsistence agriculture.

The erosion of the river banks and *chars* (midstream river islands) displaces thousands of people, who then migrate to neighbouring 'mainland' areas in search of shelter and livelihood. During flood time water of the Brahmaputra is carrying huge sand and clay which increases the water current and as a result erosion taken place. The valley is so densely populated and hence so attackable to natural disasters, and so easily displaced.

The problem of internal displacement along the Brahmaputra in the Assam valley can be analyse with two aspects. **Firstly**, even at the best of times, internally displaced persons (IDPs) are unwelcoming in any society anywhere in the world, and this also found true in case of the *char*-displaced as well when they try to resettle a life in the mainland of Assam. **Secondly**, the problem of IDPs in this instance is intrinsically overlapped with the politically contentious issue of illegal immigration into Assam from East Pakistan/ Bangladesh (Guha, 1997). Most of the internally displaced persons of *char* area are Muslims of East Bengal origin settled in Assam since the colonial years (Dasgupta, 2001), a community that is commonly suspect for being latter-day illegal immigrants from Bangladesh. In mainland towns, presence of latest face is given as simple proof of fresh illegal immigration from across the international border in south Assam. But the important fact is that they're not illegal immigrants or outsiders but displaced people of char area of the state. they need lost all everything thanks to devastating flood and erosion.

In Assam, there's a chorus since last five or six decades has been the threat of the indigenous people is facing from a gentle and illegal immigration. Significantly, in spite of lengthen anti-immigrant social movements over the last 20 years, there has been little movement by the Indian State towards a political settlement of the 'Bangladeshi' problem in Assam and new dimensions are added to the present fear when thousands of poor Muslim

peasants from the far reached riparian areas spread into the Assamese hinterland (Guha, 1983).

The political elite of Assam adds a political overtone to what's primarily a humanitarian and socioeconomic problem, which partly explains the low priority given to the relief and rehabilitation of the char displaced. Non recognition of erosion as a disaster within the state is additionally an outcome of this overtone. The char area is a crucial contribution of the river Brahmaputra. Char land is given rise during a natural action of the river during flood time. Height of char land is usually determined by highest water level during flood (Bhagawati 2001). Chars are normally very unstable in respect of its survival and are subject to erosion. The dimensions and shape of chars are rearranging per annum after flood. The erosion in Assam exhausted a huge tract of land year after year. Only within the district of Barpeta, the river Brahmaputra eroded quite 50% of the char land during the amount 1988-2003 (Chakraborty 2009) and therefore the Beki takes away 93% land of char dwellers during 1983-2004 (Chakraborty 2006).

Natural pasture within the river Brahmaputra was converted into human settlement during the tenure of British. To boost the land revenue to the govt exchequer East Bengal farmer were welcome. The high density within the adjacent district of East Bengal and thick density in Assam valley district was also attracted many peasants to settled down here. Under the patronage of local Zamindars, Jotedars etc. peasants inherit Assam and settled within the char area.

There was a light and slow migration at the start. the method ready when Assam was attached with East Bengal and made one province with Dacca as capital. It's to be mentioned here is that in 1905-1911 these two separate regions were took together one province. Till 1950, there have been 15 to twenty lakhs of immigrant farmers within the state (Goswami

1994). They occupied nearly 10 lakh acres of wasteland in chars and riverine area (Guha 1977). These immigrant peasants contribute much to the economy and particularly to the agricultural sector. it had been they who diversified the cropping pattern of the state.

4.2 THE INDIAN FLOOD SCENARIO:

Though people loss their life and damage to property, the sense of insecurity and fear in the minds of people living in the flood plains is of a great concern. Impact of flood such as the suppressed pain of survivors, spread of epidemics, lack of drinking water, essential commodities and medicines, loss of the dwellings etc. make floods the most fearsome among the natural disasters. Heavy flood damages had occurred in the country during the monsoons of the years 1955, 1971, 1973, 1977, 1978, 1980, 1984, 1988, 1989, 1998 and 2004. The major highlights of the flood damages are given in the table 4.1:

TABLE 4.1: Flood Damages in India during 1953-2005**.**

Loss	Average
Area affected (in lakh hectares)	75.6
Number of Human Lives lost	1,504
Cropped Area (In Lakh hectares)	35.3
Population affected (in lakh)	320
Value of Damages (in Rs. million)	9,821

Source: NDMA, Govt of India, 2008.

4.3 FLOOD AND EROSION IN ASSAM:

The flood has been affected vast area every year and erosion erode land including embankments. Erosion is taking away land on the bank of river and flood covered crop land with sand. Both of these two are cause a huge loss to the agricultural sector of the state.

Before 1950, the mentionable floods occurred in Assam were in the year 1897, 1910, 1911, 1915, 1916 and 1931 mainly in the north bank of river Brahmaputra. After 1950, the year of great earthquake, Assam experienced floods in 1954, 1962, 1966, 1972, 1974, 1977, 1978, 1984, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2008, 2012, 2019 and is still continuing. Table 4.2 shows the major highlight of the flood occurred in Assam during the period 1953 to 1995.

TABLE 4.2: Flood damages in Assam during 1953 - 1995

Loss	Total
Area affected (in Lakh hectares)	41.66
Population affected (in Lakh)	981.0
Number of Human Lives lost	1724
Value of damage (in Rupees million)	8,324.2

Source: GoA report.

Floods was a every year occurrence during 1950-1980. But unfortunately, systematic data on both flood and erosion are not available. From different sources some information have been collected that may be helpful to understand the intensity and damaged caused due to flood in past decades.

4.4 FLOOD DURING 1954-70:

During two decades after independence, the erosion takes away land of nearly 2534 number of villages and the flood was affected 90,726 number of households along with a damage of 294421 hectares of crop land in Assam. In 1964, a Government expert group was of the view that the river bed of Brahmaputra was made high at 6.5 metre on average through deposition of sand on the bed. Rise of river bed is one of the main factors causing devastating flood.

The Government of Assam took an initiative to reduce the suffering of flood through formation of ‘Ministers' Committee’ on flood relief. This committee took various relief schemes during the flood time in order to save the lives of human and livestock. There was no flood happened in 1978 but next two consecutive years witnessed of devastating flood in the state. Series of flood waves make serious challenge to the society and assets.

TABLE 4.3: Flood damages in Assam 1954 -1970

Damages	**1954**	**1958**	**1962**	**1966**	**1970**
Area affected (Lakh Hectares)	29.00	12.29	15.95	15.11	7.58
Cropped land (Lakh Hect.)	3.05	0.25	3.61	3.69	2.26
Population affected (in Lakhs)	13	4.04	39	36.2	18.9
No of houses damaged	NA	2044	44018	213	44281

Source: Directorate of Economics and Statistics; Assam

TABLE 4.4: Flood damages in Assam 1973-1980.

Loss	1973	1974	1975	1976	1977	1978	1979	1980
Area affected (Lakh Hect)	10.2	29	1.2	14.1	10.2	3	6.7	12.4
Cropped land (Lakh Hect.)	2.9	3.2	0.17	NA	NA	1.18	NA	NA
No of villages affected	6710	7558	NA	NA	NA	NA	NA	NA
Population (in Lakhs)	22	40	2.3	14.6	45.4	9.1	23.5	33.5
Human Lives lost (Nos.)	19	40	05	Nil	70	02	29	57
No of houses damaged	29596	57700	4865	NA	NA	NA	NA	NA
Total loss (in Million)	NA	NA	NA	119.8	310.8	42.7	28.16	398.0

Source: Govt. of Assam

1984 floods: Another great flood that the people of Assam suffered was held in 1984. This flood like other devastating year flood caused tremendous loss of lives and property of the state. It also damaged a vast area crop land. From the month of June there have been five waves of flood and the last one happened in the month of September 1984. The untimely happened last wave of the flood carried sorrow to the farmers particularly live-in chars.

TABLE 4.5: Flood damages in Assam 1981-1985

Loss	1981	1982	1983	1984	1985
Area affected (Lakh Hect)	4.5	68.8	7.2	15.1	2.7
Cropped land (Lakh Hect.)	NA	NA	NA	4.9	0.50
No of villages affected	NA	NA	NA	NA	NA
Population (in Lakhs)	13.5	14.2	22.5	56.8	8.8
Human Lives lost (Nos.)	22	16	23	90	23
No of cattle lost	99	227	2735	26239	145
No of houses damaged	NA	NA	NA	NA	9585

Source: Govt. of Assam

***1987 and 1988 floods*:** Data and information relating to flood tells us that the volume of loss and damages due to flood are increasing. In 1987 and 1988 two great flood occurred in the Brahmaputra valley districts. In 1987 flood have been affected 90 Lakh people in Assam. The flood happened in 1988 was more devastating than any other flood happened in past. The water level crossed the danger point 2.2 metre that brings various kinds of loss and difficulties to the state. The devastating flood of this year affected 1.13 million hectares of crop land. Another important fact of 1988 flood was that the flood prone area of the state went up extended from 40% to 62%. Except two Hill districts, all plain districts in Assam were under flood water in 1988.

TABLE 4.6: Flood damages in Assam 1986-1993

Loss	1986	1987	1988	1989	1990	1991	1992
Area affected (Lakh Hect)	4.3	15.3	38.2	6.9	4.8	9.97	2.3
Cropped area affected (Lakh Hectare)	2.2	0.9	1.1	0.3	0.2	0.33	0.04
Population affected (in Lakhs)	23.8	104.9	84.10	24.09	16.92	53.07	9.71
Human Lives lost (Nos.)	15	127	232	28	28	108	12
No of houses damaged	222920	401110	618272	104408	36658	321355	15117
Value of crop damaged (in Rs. crores)	98.01	139.04	334.10	NA	63.70	115.558	17.78
Total loss (in Rs. crores)	204.60	346.60	663.84	NA	74.58	191.15	26.56

Source: PLAVAN, 1999

1997 Floods: Flood occurred for a long duration in the year 1997 from June to September. According to the report 5408 nos. of villages damaged which effected 7.53 lakh hectares of land in 1997. Flood of this affected 27.51 lakhs population and 1.0 lakh hectares of crop land. Damage of crops was estimated at Rs. 19.46 crores. The extent of erosion due to flood are taking place in different district of the valley. The bank erosion on an aggressive mode taken place in North Lakhimpur (31235 Hectares), Darrang (9877 Hectares), Hailakandi (3404 Hectares), Nalbari (1402 Hectares),

Cachar (1818 Hectares), Dhubri (599 Hectares), Bokakhat (404 Hectares), Dhemaji (206 Hectares), Hatsingimari (189 Hectares), Kamrup (133 Hectares), Goalpara (69 Hectares) and Majuli (15 Hectares).

1998 Floods: After 1988, flood of 1998 was found to be a long duration flood over all valley districts in the state. Flood was affected 13.2 lakh hectares of land and 7740 numbers of villages. Along with all other damages, heavy erosion was taking place. Total 5634 hectares of land was eroded this year. The serious erosion was taken place in Sonitpur (1109 Hectares), South Solmara (511 Hectares), North Lakhimpur (368 Hectares), Barpeta (257 Hectares), Kamrup (489 Hectares), Morigaon (995 Hectares), Bilasipara (167 Hectares), Jonai (72 Hectares), Bijni (57 Hectares), Tinsukia (Hectares) and Goalpara (46 Hectares).

TABLE 4.7: Flood damages in Assam 1994-1999

Loss	1994	1995	1996	1997	1998	1999
Area affected (Lakh Hect)	0.5	7.2	10	7.5	9.6	2.2
Crop land (Lakh Hectare)	2.5	3.9	2.4	1.03	2.8	NA
No of villages affected	711	7998	4797	5408	5298	1503
Population affected (in Nos.)	NA	5599	3077	2751	4710	890648
Human Lives lost (Nos.)	7	74	42	28	102	3
No of houses damaged	2557	199157	27539	18104	29791	NA
Total loss (in crores)	NA	NA	NA	29.4	496.9	51.9

Source: Flood Control Department of Assam

In the year 2000 like any other previous flood, the state had to incur a heavy loss of the flood waters. Media reported that 447000 people of 12 districts has been affected by flood

along with 27608-hectare land, 11200 hectare cropped area. Dhemaji district was the worst affected area by flood in 2000.

TABLE 4.8: Maximum flood damage in Assam.

Flood Loss	**Unit**	**Maximum effect (year)**	**Average**
Affected area	Hectare	3.2 (1988)	0.95
Crop land	Hectare	1.1 (1988)	0.22
Crop damage	Rs. Crores	334.1 (1988)	27.6
Total value	Rs. Crores	663.8 (1988)	55.2
Lives lost	Numbers	232 (1988)	38.0

(Source: PLAVAN, 1999)

TABLE 4.9: Average flood damages in Assam.

Headings	Area affected (m. ha.)	Cropped area affected (m. ha.)	Damage to public utilities (Rs. In Crores)	Total damage (Rs. in crores)
(a) Average values excluding high floods	0.58	0.11	1.07	8.1
(b) Average value 1953-82	1.8	0.3	2.1	21.3
(c) Average value 1985-90 excluding high flood	0.6	0.2	85.7	139.7
(d) Average value 1983-90	2.2	0.8	119.6	353.7

(Source: PLAVAN, June, 1999)

TABLE 4.10: Flood Damage in different districts 1974

District	Total Area Affected (in sq. km)	Cropped Area Affected (in Lakh Hect)	Population Affected (in thousands)	Human lives lost (nos.)
Goalpara	5000	0.90	900	1
Kamrup	4800	1.20	725	12
Darrang	4000	0.31	300	1
Nagaon	3500	0.48	650	18
Sibsagar	4500	0.32	550	3
Dibrugarh	2000	0.02	75	1
Lakhimpur	3000	0.06	375	2
Cachar	2000	0.12	400	1
Karbi Hills	200	0.02	25	1

Source: Govt. of Assam

TABLE 4.11: District-wise damage 2000

Districts	Nos. of villages affected	Area affected in hac.	Cropped area affected in hac	Population Affected in nos.	Nos. of lives lost
Dhubri	625	131400	31090	800	3
Kokrajhar	35	NA	NA	NA	NA
Bongaigaon	58	3980	NA	53	2
Goalpara	265	53168	NA	400	NA
Barpeta	142	95100	35000	210	3
Nalbari	247	NA	NA	257	1
Kamrup	329	65931	3500	377	9
Darrang	131	20302	9533	178	1
Sonitpur	330	43282	7175	241	10
Lakhimpur	821	149765	112856	581	18
Dhemaji	810	103601	28084	306	29
Morigaon	30	NA	NA	NA	NA
Golaghat	156	93238	18337	174	5
Jorhat	415	92559	20497	287	5
Sibsagar	153	45433	NA	209	4
Dibrugarh	123	11000	NA	112	NA
Tinsukia	61	4933	NA	29	NA
Nagaon	30	NA	NA	NA	1
Karbi Anglong	NA	NA	NA	NA	NA
N.C.Cachar	NA	NA	NA	NA	8
Karimgang	65	1900	NA	8	1
Hailakandi	NA	NA	NA	NA	NA
Cachar	115	10000	3508	23	2

Source: Govt. of Assam

4.5 EXTENT OF EROSSION:

Erosion is a long lasting and a burning problem to chars. It takes away village, agricultural land, homestead and the last shelter of farmers and breaks down the backbone of rural economy. It can be termed as a life death issue of the people living in chars.

The severity of erosion is more in middle and lower Assam than upper Assam. In the last 60 or 70 years of the history of erosion in the district like Morigaon, Darrang, Barpeta, Kamrup, Nalbari, Goalpara and Dhubri, it is clear that rural areas were more affected than town urban areas. The Flood Control department in its survey of the period 1954 to 1969 said that 253 villages and 8091 hectares of land washed away by erosion of Brahmaputra every year. In a report placed in the State Assembly it was revealed that during 1954 to 2007, total of 4,25,932 hectares of land has been eroded and there on displaced more than 8 lakh households in different parts of the state (Sheikh: 1993 p82). The said report also admits that erosion is a more devastating that flood.

The erosion of the Brahmaputra hits the life and livelihood of lakh of people in chars. After the great earthquake in 1950, numerous char land goes into the bed of river. The chars which are visible in the Brahmaputra valley from Tinsukia to Dhubri, most of them were *kayem* (or permanent) land. In Majuli, the greatest river island lost its 16 km of embankment and 235 sq. km of area due to erosion during 1956 to 1964. In a study organized jointly by Indian Space Research Organisation and Brahmaputra Board find that during 1969-94, Majuli has lost its 50.07 sq km area in erosion. Out of 244 villages 64 has completely washed away and other 30 villages have partially affected by the erosion (Asomiya Khabar 7 Sep, 2008).

In Lahorighat Block of Morigaon district, a total of 100 villages have been eroded completely including Kochari gaon, Botahmari, Tulsiguri, Mitmari, Jotiabari, Holowkhunga,

Chitakati, Joribor etc. and more than 2000 bighas of cultivated land destroyed. In Bhuragaon Circle, 21 villages have completely been going in Brahmaputra.

In Barpeta district, more than 100 villages under Chenga and Mondia Block were washed away. There found no existence of villages like Chenimari, Chenglidia, Balidhari, Jatradia, Bordia, Atia, koltoli etc which once a crops full green village. Tarabari, a known river port of the area has been washed away by Brahmaputra in 1959.

In Goalpara district, as consequences of construction of unscientific embankment, massive erosion takes place and many villages, trading centers and agricultural tract goes in to the bed of Brahmaputra particularly in the south bank of the district. In 1954, a long embankment was constructed from Khormuja to Molakhowa. The embankment protects the inside area from flood, but the river deposit sediment in the outside of the embankment which make the area higher than the area of the inside. This has invited erosion of the land more repeatedly and most part of the embankment become in front of erosion. The first attack came in 1972 with breaking down the embankment at Balikashi. Within a very short time vast area become under water, cultivated land were covered by sand and thousands of households become shelter less and they begin travel to different towns in search of livelihood.

After 1954, near Pancharatna-Khormuja, several chars like Katlamari char, Sonahara, Ramhori, Roshidpur, Soner sala, Tiyapara, Kalodanga, Hojua, Khodertari, Balarbhita, Sholmari etc have been washed away by the erosion of Brahmaputra. Flood occurred in 1990's several villages and crop land near Chunari, Monkola, Haguripara, Fetengapara, Mechervita, Chulkanipara, Saptibari etc were covered by sand and has affected numerous farmers families. After destroying several villages, now the Brahmaputra offers a open challenge to the villages like Bilpara, Sanvendi, Tangvita, Beldubi, Duramara, Buraburi, Digirpara etc, near Jaleswor. Again in 1980's, erosion takes several villages near Poravita

such as Sundarpara, Amtoli, Kashiartari, Ferabari, Shakaripara, Khoilsamari, Kandapara, Kushbari, Jamadarpara, Dudtola, Bhalukmari, Mathakata, Balachapa, Kapurpuri, Nichinpur, Mondia etc.

On the acuteness of erosion, the Dhubri district may be consider as a most affected district in Assam. Only in South Salmara Revenue Circle of the district, 107 villages out of 201 villages have been completely washed away in erosion since 1962, the year of survey. All the villages under Permanent Settlement in Goalpara district were densely full of habitants. The divesting flood that begins in 1980's took three historical trading centres viz. Fakirganj, South Salmara and Sukchar of the district for ever from the map of Assam. In 1989, the South Salmara towns become the target of Brahmaputra and in 1991-92, all institutions, offices, business firms etc are destroyed and transferred to another place. Now there is no existence of historically important trading centre of South Salamra. The Brahmaputra meets the river Jinjiram at Fulbari of Meghalaya. Both the river frequently changes its direction and along 42 km vast tract including 27 villages severely facing erosion that affects more than 1.51 lakh peoples. Total area of the circle was 44,068 hectares of which 32,769 hectares of land have been gone into the bed of river Brahmaputra.

Among char areas of Assam, chars neighbouring the Dhubri town are more woeful. Some chars like Boyejer alga, Bondihana etc is exists only in name. Since last 20/25 years these chars are under the bed of Brahmaputra. For continuous erosion in 1990's chars like Kalsabhanga, Marowar Char, Chalbanda, Chenikhowa, Majerchar, Cholakura etc have no existence. Likewise chars once existed in west of Dhubri like Khodar char, Motirchar, Hawrar par, Bhasanichar etc vanished due to erosion of Brahmaputra. But chars those are located on the north side of Dhubri town were frequently erodes and thrown up again and again in the last 20 years. Some important chars in this category were Birsing, Airmari,

Aminerchar, katiar alga, Moinakandi, Bonsirchar, Khedaimari, Porarchar, Pocharchar, Muhrirchar, Muthkhowa, Nilokhia, Montirchar, Moshlabari, Takimari, Patamari, Sostharghat etc.

A brief picture of destroys by erosion in South Salmara Sub division is shown below:

TABLE 4.12: Loss due to Erosion in South Salmara Sub Division

Year	No. of Villages Completely eroded	Eroded Cultivable land	Government Land	No. of affected Household	Remarks
1993-94	65	241	81	5284	Some eroded village thrown up and eroded again.
1994-95	--	159	52	--	
1995-96	93	287	95	7043	
1996-97	56	371	124	4199	
1997-98	29	142	47	972	
1998-99	76	382	127	5805	
1999-00	114	1046	348	1884	
2000-01	34	895	298	4587	
2001-02	68	454	130	2437	
2002-03	79	722	241	4995	

Source: Sub Divisional Office, South Salmara (Sheikh, 2013: 89)

Erosion and frequent changes of direction of Brahmaputra have deep impact on the social life of the people living in lower Assam particularly in char areas. Some of them are as,

1. Geographical structure of Brahmaputra valley destroyed.

2. Movement of people towards towns and cities increases due to loss of cultivable land. People in the occupation like Riksha puller, Thela Puller, Kuliwala etc increases at high rate.

3. Erosion takes many revenue villages which has decreases the land revenue to the Government and extent of *patta* land also decreases.

4. Many of historic places were washed away by Brahmaputra erosion e.g., Kamalabri Satra, Bordowa Satra etc.

4.6 EXTENT OF DISPLACEMENT:

In Assam, the riverbank erosion is happening per annum. Thousands of individuals living in char areas loss their livelihood thanks to flood and erosion. Sometimes thanks to break down of embankment results in over bank flood and it causes damage of fertile cultivable land to unusable land by covering surface with sand. This led farmland to unsuitable for cultivation. During 1994 only, the river Brahmaputra eroded 6116 hectares of land on its north bank. Average annual damage has been found over Rs 124 crores and average erosion rate has been estimated at 8,000 hectares per annum. Erosion on Brahmaputra valley have affected quite 90,700 families in Assam since 1954 (Sheikh, 2000). Brahmaputra carries a large-scale damage to the lives and assets to the whole valley particularly to the flood and erosion prone char area of the state.

According to the report of the Internal Displacement Monitoring Centre, in the year 2009, at least 16.7 million people were found displaced due to the natural disasters like flood, storm etc. out of the total people effected by disaster 16 percent were displace. In this very year, 15.2 million people which are 91 percent of the total were displaced due to climate related disaster like flood and storms. Of the total displaced people 14.9 million people i.e. 87 percent of the total was from Asia.

Generally, most of the internally displacement was found in a relatively small number of countries. Asian countries like India, China, the Philippines and Bangladesh were found where over one million people were displaced. However, the impacts of major floods in Mexico and Brazil in the Americas, and in Senegal in Africa, remind us that large-scale displacement is not only an Asian concern. India was found to be the country in which the most people were displaced due to the disaster like flood. Floods in India displaced an estimated 2.5 million people.

Assam is frequently affected by its both flood and erosion. During a period of normal flood (1989-98), only in Barpeta district of Assam, 45% of the total households were affected and 51% of the total land was lost. The char dwellers were lost 77% of their land in the erosion of Beki river only during 1980-2004. In such a circumstance, after displacement due to erosion, char dwellers have no option except flee to other place and towns for their livelihood.

In Assam, flood recognised as a disaster but the erosion is not (Dasgupta). Displacement due to flood is a temporary and is for two or three months in a year for the victims. When flood affects the villagers, they went to some safe and secured place where they can protect themselves from the flood. During flood time Government and Non-Government Organisations (NGOs) come forward and open some rehabilitation camps for

those victims. Food, drinking water, baby food, medical aid etc are provided. After the flood is over, villagers go to their home and the problem of displacement disappeared.

But the unlike the flood, erosion is different type of disaster or calamities. Erosion takes away all assets, livestock, homestead and agricultural land. For the farmers agricultural land carries much more value as it gives them the means of livelihood. Once erosion taken place households lost all everything they have. After losing their shelter and homestead they take resort in forest land, Government *khas* land, railways, embankment etc. Though they lost everything of them, in government record they did not recognise as displaced people. Therefore, erosion affects heavily on the socio economic and socio-political life of the erosion induced displaced households. This is found more acute in the char areas because people displaced due to erosion of the char villages are suspected as illegal immigrants or encroacher from neighbour country Bangladesh.

The problem of erosion particularly in the char areas of Assam needs special attention from all stakeholders. Government and other stakeholder may pay special attention to enquire, study on the problem of erosion and the impact of erosion on the household living there. Researcher may also come forward to take research initiative and to formulate policies in order to providing relief to the victims.