

Some Local Survival Strategies to Cope with Flood: Examples from Bhakat Chapori, Majuli, Assam

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Abstract

The understanding of local coping and survival strategies are very important to know about how a community deals with hazardous condition. Each community builds own local survival strategies to overcome the vulnerability of familiar disastrous events. Histories have shown that 'Majuli the largest riverine Island of the world has been experiencing the effects of flood since past. The mainland of Majuli Island is surrounded by several small islets or chapories and the studied area "Bhakat Chapori" is one of them. Local people of this chapori have been living with flood since long and now flood became a part of their life and culture. The present study includes how local or indigenous knowledge system of the villages of Bhakat chapori can help them to manage mild effects of flood as per their own survival strategies. The paper is an outcome of ongoing doctoral research work, purely based on ethnographic fieldwork. Here an attempt has made to document and understand the local survival or coping strategies of a small island during flood events. Some strategies are so effective that those can be applied other parts of the country or world for the better survival of the people.

Keywords: Survival; Coping Strategies; Flood; Local/Indigenous Knowledge System.

INTRODUCTION

Survival strategies are different ways in which an organism survives in their environment. Each human community has their own survival strategies

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to deal with their respective environment. Human Environment relationship and socio-cultural settings play a vital role to discover the different means of local or indigenous coping strategies. The term survival strategies or coping strategies is highly associated with hazard, disaster and disaster management. Hazard is "a process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation" (UNGA, 2016, 2017). Disaster means a "serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope using its own resources" (WHO,



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2007). It is also defined as a crisis situation requiring the capacity of a society to cope with. It is argued that while hazards are natural, disasters are not (Jha & Jha, 2011). According to the International Federation of Red Cross & Red Crescent Societies a disaster occurs when a hazard impacts on vulnerable people. Therefore the combination of hazards, vulnerability and inability to reduce the potential negative consequences of risk results in disaster. On the other hand Disaster management is how we deal with the human, material, economic or environmental impacts of said disaster, it is a process of how we "prepare for respond to and learn from the effects of major failures" (Elliott, 2014). Hence disaster management cannot eliminate or avert the disaster threats but it can only decrease the adverse effects or impacts of disaster. "Vulnerable communities are more confident and comfortable about using their local knowledge in crisis situations and indeed their functional knowledge-developed over generations- has often proved to be more effective in situations where modern technical methods have been found inadequate" (Bose & Saji, 2020). When people are aware of the probability of hazard or disaster occurrence, they generally develop their own coping mechanisms or safety measures. Such coping mechanisms, which one may call as survival strategies. Coping or survival strategies work on the assumption that an event will follow a familiar pattern and past experience could be successfully drawn upon to meet the present or future threats. Thus environment, culture and ecology of a community help the people to develop several structural and non- structural, household or community level survival or coping strategies to deal with the hazardous or disastrous conditions.

About Majuli and Its relation with Flood

"Majuli and flood are two sides of a same coin"- (Borah, 2017; p-148)

"Set amidst the mighty and the mythical male river Brahmaputra, Majuli is known as the oldest and the largest inhabited riverine island of the world... Majuli is not a single island by its parameter, but it is the combination of cluster of islets formed in the mid-river stream of the mighty Brahmaputra and its tributaries, the subanshiri and the Kherkatia to the north and north- west extremity" (Nath, 2013).

Majuli is situated at the upper reaches of the river Brahmaputra at 1100 kilometre, from the mouth of the Bay of Bengal and is 85 to 95 metre above the mean sea level. It lies between the latitudes 26°45' N - 27°12' N and longitudes 93°39' E - 94°35' E. Majuli is the lone river island district of India

situated in the lower energy fluvial system of river Brahmaputra in upper Assam. Geologically, the landform of the Majuli is depositional in origin and such a unique landform developed as a result of the long term cumulative action of flow, erosion and depositional processes of Brahmaputra river system. The island is bound by river Brahmaputra in the South, river subanshiri in the North-West and the Kherkutia Suti in the North-East. The river Tuni is the only river channel flowing within the Majuli. The total geographical area of Majuli was 1250 square kilometre at the beginning of the 20th century but due to the severe and constant bank erosion by the year of 2014 it become 483 square kilometre. According to 2011 census, it has population of 1, 67,304. Earlier Majuli was a sub-division under Jorhat district but declared as a separate district since September 2016. There are many chapories around the main mass of Majuli Island which are the parts of the Majuli district. (Hazarika, 2010-11; Disaster Management Plan, 2019 & Flood contingency Plan of Majuli Revenue Circle, 2022)

Chapories/ Charlands (Islets) of Majuli district

Chapories of Majuli have a great significance within the physiographic divisions and units of Majuli. According to Thakuria (2015), there are four macro physiographic units- 1. The Ujani and Pub Majuli Unit; 2. The Madhya Majuli Unit; 3. The Lower Majuli Unit and 4. The vast Charlands and active flood plain of the Upper, Middle, Lower Majuli unit. Here, the author has placed all the chapories of Majuli as a separate category and the charlands inside the river course are included in this region. It covers about 90 kilometres length right from the extreme part of Ujani Majuli to the last part of Namoni Majuli. These Chapories have created due to the fluvial and erosion activities by the Brahmaputra River and its tributaries. At the initial stage, these chapories were full of varieties of wild animals and plants, with the passage of time erosion affected people from different parts of Majuli have migrated to those chapories for their survival. Agriculture is the mainstay of the inhabitants. Charlands are also favourable for the grazing of cattle. This whole area faced not only local floods but also several killer floods of different times. The chapories of lower Majuli region are very significant not only from physiographical point of view but also from economical point of view, the most important chapories are Dhodang, Bhakat chapori, Chikali chapori, Charai chapori and kurkuri chapori respectively (Thakuria, 2015; Borah, 2017).

The chapories along with main land of Majuli district is highly prone to flood and erosion. The island has been subjected to the floods of the main river Brahmaputra and its tributaries on either side in high spate since long. The earlier report by E. A. Gait in 'A History of Assam' (1906) states that the Island had been subjected to heavy floods in the year of 1570, 1642 and 1735. The report also says that a wild flood of great intensity in the Debang River (a major tributary of Brahmaputra on the entry to the state) devastated the entire area in the year 1735, when the Brahmaputra River, after abandoning its own course, followed the abandoned course of Dihing River. In the recent past, the island experienced heavy floods during the year 1931, 1935, 1948, 1949, 1951, 1962, 1966, 1969, 1970, 1977, 1987, 1988, 1991, 1998, 2008 and 2012. The Island consists of three Mauzas- Ahatguri, Kamalabari and Salmora, two development blocks- Majuli and Ujani Majuli and 20 Gaon Panchayats (Village councils). According to 2011 census, the total number of villages were 243 (210 cadastral and 33 non- cadastral) but now only 141 cadastral villages exist out of 210 cadastral villages due to loss of landmass in erosion during last three decades. According to Disaster Management Plan (2019), out of total existing 141 cadastral villages of the district 96 cadastral villages (68%) are vulnerable to flood; whereas according to the Flood Contingency Plan of Majuli Revenue Circle (2022), 103 cadastral villages (73%) are vulnerable to flood. Flood is a perennial problem affecting people of Majuli every year during monsoon season. Majuli gets inundated not only in severe floods but also in normal flood cycles. Every year, at least three waves of floods affect Majuli with different intensities (Hazarika, 2010-11; Disaster Management Plan, 2019 & Flood contingency Plan of Majuli Revenue Circle, 2022).

After the 2012's devastating flood, there has been no such destructive flood occur in Majuli. Author's interaction with the officials from some govt. organisations like Brahmaputra Board office of Majuli Division; Flood cell of Water Resource Department, Kamalabari; Majuli Revenue Circle office and Disaster Management Committee of Majuli circle office etc. and members from NGO like RVC (Rural Volunteers), Save the Children etc. helped her to understand that collective efforts from different bodies really becoming very handy to mitigate the negative effects of flood in Majuli. But above all the special focus should be given to the local survival strategies of the villagers to cope with flood, who have been experiencing and living with flood, as flood is a hazardous event for them since long time.

AIM AND OBJECTIVE OF THE STUDY

The main aim and objective of the present paper is to know different survival strategies of a small islet named 'Bhakat chapori' of Majuli district, Assam to cope with flood. To understand their local structural coping mechanisms of household and community level to deal with normal and mild flood is the primary focus of this study.

The study Area:

Bhakat chapori is a small island of Majuli district under kamalabari Mauza. It is covered by Brahmaputra River and Tuni River from all the sides. The *chapori* is connected to the E&D of Alimur and Notun Bokura village of mainland Majuli through a wooden bridge. Most probably in 1967 the place got its popularity as Bhakat chapori, as the *bhakats* (disciples) of Auniati *sattr*a used this *chapori* for rearing of cattle. The land of the Bhakat Chapori was property of Auniati *Sattr*a and later the head of the *sattr*a handover the land to the state government. This chapori comes under non-cadastral land and consists of 16 small villages (as per local people's perception), out of which 2 villages (notun or 1 No. chamoguri, Chapori Alimur) are under Dakhin Kamlabari Gaonpanchayat and rest 14 villages (Chandrapur, Fakuya, Modarguri, Jamugari, Milanmadhupur, kongso or 2 No. chamoguri, Bhimpura, pokimori, Ulupam, Koliya Goli, 1 No Podumoni, 2 No. Podumoni, 3 No. Podumoni and Mach Gaon) are under Sriluhit Gaon Panchayat. Majority of the people of Bhakat chapori have migrated from Ahataguri Mauza due to their loss of habitation in bank erosion. The population of this *chapori* belongs to different community groups- kalita and keot (GEN), Koch, kumarkalita, Chutiya (OBC), Kaibarta (SC), Mishings (ST) etc. Hence it is a place of mixture of general caste (GEN), OBC, scheduled caste (SC) and scheduled tribe (ST) people. All are Hindu in religion. They speak Assamese language, only Mishings have their own dialect but speak Assamese in general. The land of this area is very fertile. The economy of the Bhakat Chapori is generally based on traditional agriculture. The agricultural products include rice, pulses, onion, garlic, potatoes, mustard oil seeds, sugarcane and various vegetables. Besides agriculture, the people of this region also earn from traditional fishing activity, sericulture, business, wage labouring, service and animal husbandry. Bhakat chapori is known for large volume of sugarcane production and its main product is jiggery (*Gur*). According to

the report of Flood Preparedness of Majuli district, 2022-23 collected from Majuli Revenue circle office of kamalabari, Bhakat chapori is a vulnerable village, highly prone to flood and erosion. Here, one notable thing is that as per govt. documentation the whole Bhakat is treated as a single revenue village and the 16 small villages within this *chapori* are considered as habitation area (Flood contingency Plan of Majuli Revenue Circle, 2022). But according to the local population there are 16 different villages within this chapori. Each villages has their own history of migration and displacement due to erosion and habitation land lose. Majority of

the villages shifted here from their original area of Ahataguri Mauza time to time and caring the same old village name. For example Bhimpura, Fakuya, Modarguri, Jamuguri etc. whereas two villages Auniati Notun Chamoguri or 1 No. Chamoguri village and Kongso Chamoguri or 2 no. Chamguri village, these two villages have migrated from Chamoguri village of Ahataguri Mauza (which they refer now as puroni Chamoguri or Namoni Chamoguri or Votiya Chamoguri) and have been continuing with the same original name of the old village only with a prefix of 'Notun / 1 no' and 'Kongso/ 2no'.

Table 1: Demographic Profile (Total households and caste composition) of Bhakat Chapori:

Name of the villages	Total number of households	Caste composition only for the surveyed villages
1. Notun or 1 no. Chamoguri	35	SC
2. Chapori Alimur	25	SC
3. Chandrapur	9	GEN
4. Fakuya	23	OBC
5. Modarguri	30	OBC
6. Jamuguri	29	GEN, OBC
7. Kongso or 2 no. Chamoguri	20	SC
8. Bhimpura	42	GEN, OBC
9. Milan-madhupur	18	-
10. 1 no. Podumoni	34	-
11. 2 no. Podumoni	17	-
12. 3 no. Podumoni	5	-
13. Mach Gaon	21	-
14. Pokimori	6	-
15. Ulupam	19	-
16. KoliyaGoli	20	-
Total households	353	-

[Data for first 8 surveyed villages have been collected from household survey of 2022-23 fieldwork; data for rest 8 unsurveyed villages have been collected from village headman/pradhan during 2022-23 fieldwork]

MATERIALS AND METHODS

The present paper is an outcome of an ethnographic case study of a small Island (*chapori*) of Majuli district of Assam named Bhakat Chapori. This study is a part of an ongoing doctoral research work. Ethnographic fieldwork is the core of this study. Primary data have been collected by survey schedule, participant and non-participant observation, structure and non-structure interviews, with audio-visual aids etc. Secondary data have been collected from different books, govt. documents, online sources etc. To collect secondary data the college library books of Majuli

College, Kamalabari have been used and Govt. documents have collected from Majuli Revenue Circle, kamalabari.

Out of 16 villages of Bhakat Chapori, 8 villages have been surveyed which consist of 213 households (60%) of the total households (353).

Major Findings

Religion and caste composition are the two integral part of the life of the people of this area, as like whole Majuli. The people of the 8 studied villages are Assamese Hindu and believers of neo-vaishnavism. GEN and OBC population are under *Bhamuniya* religious sect. but SC population

of Bhakat Chaopori are divided into two religious sects- *Bhamuniyasamaj* and *Ek saran harinaamsamaj*. The caste gradation is very rigidly followed here. GEN and OBC people have their own separate cultural settings. Whereas the Scheduled caste people have their own meaning of cultural life. SCs of the Bhakat Chapori are known as *kaibarta* (*kai* means water and *barta* means business) people hence prefer and love to live near river side. They exhibit a close relationship with water and River Brahmaputra. Each villages has their own *Naamghar* or religious temple to pray and worship, which plays a dominant role among the lives of the villagers. There is a famous '*Shri Shri Bhola Mandir*' (Temple of lord Shiva) at the *Gorukhuti* area of the Chapori. Their livelihood mainly depending on agriculture, animal husbandry, fishing, small business, wage labouring, private company service etc. In case of formal education there are 3 Primary Schools ('Auniati Chamoguri Prathamik Vidyalaya', '225 no. Modarguri Prathamik Vidyalaya', 'Jamoguri Bhakat Chapori Prathamik Vidyalaya') and 1 High School ('Bhakat Chaori High School') within the 8 studied villages of Bhakat Chapori.

Local People's Relation with Flood

Every year the people of this area have been experiencing mild or severe flood since they shifted their habitation here from Ahataguri in time to time. According to local terms, flood is '*Baanpani/pani*', mild flood is '*horupani*' and severe flood is '*dangorpani*'. In 2022, four waves of mild flood have touched them. According to them in 2022 they have not gone through any difficult or severe flood situations as like past. First wave of flood came during the last part of May; second wave came in the month of June, the third wave came during the month of September and the last wave came on the month of October. Again in 2023, till present (July 31st) two waves of flood have come, one in June and other one in July. The flood condition of July, 2023 was problematic and serious than the other 5 previous flood waves occurred from May, 2022 to June, 2023.

During severe monsoon season flood they have to face very critical situation of living on *chang* (bamboo made pile structure) for three to five days and even in worst vulnerable condition have to leave their village and stay at relief camp. Throughout the fieldwork from Aug, 2022- July 2023, the author has observed several structural and non- structural survival strategies adopted by the villages to deal with flood. The past experiences with flood, help them to do some flood preparedness and

management as survival strategies to cope with mild or severe flood condition.

Some observed survival strategies or coping mechanisms

- The houses of the villagers and cowsheds are built on slightly high platform from the land. They also build pile dwelling for keeping domesticated goats. Some villagers generally build *chang* (bamboo pile platform) permanently as a safety measure from flood whereas some build such structure temporary during the month of May or Jethmah (2nd month of Assamese calendar year) as per noticing the raising of river water level and after the ending of September month or Vadomah (5th month of Assamese calendar year) with the finishing of flood risk and threat, they break such temporal structure.
- Villagers regularly notice the river water level during monsoon season. When they feel that water has reached up to the level of river bank and it will start over flowing very soon. The Menfolk and womenfolk start their respective job or role to deal with upcoming flood water.
- Womenfolk generally collect branches of trees and light woods, which they will use as firewood during flood. Women collect different available vegetables from their kitchen garden and nearby areas. They also keep their clothes, loom at safer place from out of the reach of flood water. During flood they mainly engage in preparing meals for the family members.
- Menfolk cut the heavy trunk of big trees and store enough firewood. Menfolk engage themselves to shift all the costly and important materials of household like furniture, showcase etc. at high platform. Who have their own boat, start to keep them clean and get ready for future use. During flood they engage in cutting and collecting grasses for cattle and goats.
- Having boat as a personal family vehicle is also a survival strategy for them. Majority of villagers have their own boat and those who don't have boat, use banana raft (*kol-bhur*) during flood.
- Except the children, some teen agers and some women who born and brought up

outside the Majuli, rest population has a very good knowledge of swimming. Menfolk and some women know the skill of boating too.

- Inside the Naamghar also they build permanent changes to keep important things. And in some villages they built the naamghar in such a way that flood water cannot cause much harm.
- As a pre-flood preparedness, even some arrangements also make inside the school. School authority Prepare a high platform with benches and table, then keep the wardrobe full of important book, papers and documents etc. on that platform.
- In case of cultivation, during rainy season they do not cultivate much crops. But their agriculture field generally filled with under growing sugarcane plants and their kitchen gardens, which also build on high platform have some climber vegetables like kunduli (Ivy gourd), Jika (Ridge gourd), kumura (White gourd) etc. Sugarcane plants are generally least affected by mild flood water hence, during pre-monsoon season they cultivate sugarcane, it's a survival strategy for them.
- People store drinking water and prime eating materials like rice, pulses (Mugomaah, mati-maah) etc. They also store the waste-product of black gram harvest (Mati-maah kotali) and rice husk for feeding cattle during flood.
- Fishing become very easy and effortless livelihood during flood and hence they can catch varieties of local fishes like Singorah (Cat fish), Cheniputhi (Olive barb), Litha (Rita fish) etc. and eat them as their meal during those critical days.
- Making of temporary bamboo bridge is also a structural coping mechanisms for them. Sometimes flood water makes road disconnectivity and people face difficulties to cross that road but they prepare Bamboo Bridge for their transportation.
- During flood people use Govt. given RPF (Raised Platform) to protect themselves and also their cattle.

Hence every year they have to make several structural arrangements to cope with flood and its effects. They are living with flood and with their experiences, with their local environmental

knowledge, they adopt some survival strategies to cope with flood.

CONCLUSION

Coping and Survival strategies are often complex and involve a sequence of activities involving obtaining, managing resources of the household and community in times of hazard and disaster. Natural hazard like flood is common occurrence in different places and people there try to live with these events such that this endeavour becomes a way of life for them. People possess their own perception, knowledge, and understanding of hazard and disaster according to their environment, socio-cultural and ecological set up. Local or indigenous knowledge is very important for adopting several coping mechanisms for disaster management. The people of Bhakat Chapori have a close and unbreakable relationship with flood. They have an unspoken, undocumented history of living and coping with flood. Their migration history reveals that they have many stories, sufferings, past experiences and knowledge related to flood. With such knowledge system the villagers adopt several coping mechanisms for their survival and these coping strategies are very helpful for their survival and livelihood. Moreover if possible these simple and eco-friendly coping mechanisms can be used by other communities from different parts of country and even world who are living under the same hazardous condition.

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