

#### RESEARCH ARTICLE

# 'The wait for the Flood is also the wait for Fish!': Water Commons among the Mishing on Majuli Island (Assam), India

Kh. Neil Young

PhD candidate, Department of Sociology, Delhi School of Economics, University of Delhi, Delhi, India

#### **Abstract**

Flood is often perceived as a destructive force in state and other hegemonic discourses on Majuli Island, India. However, for the indigenous Mishing who live near river banks or on *chapories* (sand bars), flood is not perceived as an abnormal external force, but as deeply intertwined with their daily living, culture and economy. More importantly, for the Mishing, flood represents the continuous annual creation of water commons. This paper examines the water commons formed by the annual deluge and describes the fishing culture of the Mishing in these commons. Contrary to privatised fishing grounds and private fisheries, where public access is limited, water commons are open to everyone and all villagers have equal access to this "common pool of resources." Further, the paper examines the different aspects of Mishing subsistence fishing culture on the commons: community fishing; gender; fishing as subsistence and livelihood. This article is based on an ethnographic study of a Mishing village on Majuli Island. Participant observation and interviews were the main tools of data collection for this research. The paper concludes that Mishing subsistence fishing is economically and socio-culturally significant for the community, and Mishing fishing culture on the commons highlights their everyday life with the river on Majuli Island.

Keywords: Chapori, commons, flood, Majuli Island, Mishing

1. Introduction

One afternoon in June 2016 I found Raju Pegu, a fisherman in Misamora village, and his younger brother Ronosh mending their old fishing net. As I sat down with them to have a closer look at what they were doing with the fishing net, Raju<sup>1</sup> explained, "We have to finish repairing the net at the earliest because flooding has started and soon it will be good time for fishing." He added, "The wait for flood is also the wait for fish." By June, the first flood of 2016 monsoon had already inundated parts of Missamora, a Mishing tribal village on Majuli Island, creating water commons around the village. Water commons, which served as fishery resources, were crucial for the Mishing who inhabited the fringes of Majuli Island, on the Brahmaputra River in Assam, India. However, studies on Majuli have paid little attention to the water commons and the fishing culture associated with it among the Mishing. This study is an attempt to fill this gap.

<sup>&</sup>lt;sup>1</sup> Interview conducted on 20<sup>th</sup> June, 2016

Majuli, in the middle of the Brahmaputra,<sup>2</sup> is a rich fishing ground. The island has a large number of inland water bodies which serve as rich fishery resources. Studies have shown that on the island, there are over hundred and fifty registered and unregistered *beels*<sup>3</sup> and a large number of ponds, streams, swamps, channels and other fishery resources (Barik & Sharma, 2006). This bountiful availability of fishery resources makes Majuli a naturally good fishing ground for commercial fishing of different scales. However, most of these privately or government-owned fishery resources were not accessible for most of the public. For example, sections of the fringes of Majuli along the Brahmaputra were leased out by the state to private individuals for a fixed amount of money. Community fishing was disallowed in these private fishing grounds. Around Missamora village, during the winter months, when the river dried up, it was a common sight to see a boundary of nets strung on bamboo frames creating enclosures in the river. Such enclosures served as a habitat for fish during the dry winter. It also served as a marked boundary of private fishing grounds.

In addition to the fishery resources tapped by private and government-owned fisheries, there were other kinds of fishery resources which came with the flood and were subsistence in nature. After the monsoon, the low-lying areas on the island were filled with water and become temporary water bodies for few months, thus becoming fishery resources for all practical purposes (Baruah, 2016). These temporary water bodies included small streams, swamps, *tulub* or ponds and other shallow water bodies created by the annual deluge near the village. For the Mishing, these temporary water bodies served as a water commons on Majuli Island. During the annual floods, *tulubs* filled with different varieties of fishes and other aquatic resources, and with the receding flood, *tulubs* shrunk and served as water commons for the villagers.

In Majuli, fishing was an important everyday activity for the various communities such as the Mishing, the Deori, the Kaivartas, etc. Every community on the island practiced some type of subsistence fishing. However, commercial fishing was mostly done by the Kaivartas<sup>4</sup> and, to some extent, by the Mishing (Nath, 2009). Nath (2009) noted that in recent times, more communities are taking up commercial fishing as it ensures good economic returns. Recent studies suggest that the fish population of various inland water bodies have decreased tremendously because of the states' various infrastructure projects such as embankments and this has caused a huge economic loss to the fisher folk, leading to many taking up occupations other than fishing (Baruah, 2016). For example, Baruah (2016) points out that the Kaivartas community on Majuli who have traditionally relied on fishing for their livelihood have taken up other livelihood profession such as goat rearing due to the increasing lack of fishing opportunities on Majuli in more recent times. However, despite studies pointing to the decreasing scope for commercial fishing on Majuli, subsistence fishing that comes with the flood continues to have a significant role in maintaining sustainable livelihood and socio-cultural practices connected with fishing for the Mishing on Majuli.

This paper examines the material and cultural practices of fishing in water commons, created by the annual floods, among the Mishing on Majuli Island. The paper first briefly defines the concept of commons. Next, it introduces Majuli and the Mishing who live on the edge of the island and

<sup>&</sup>lt;sup>2</sup> The Brahmaputra River and its tributaries serve as a lifeline of natural fisheries in the north-eastern region of India (Bhattachariya, Bhaumik & Sharma, 2017, p. 103).

<sup>&</sup>lt;sup>3</sup> Beels are fishing ponds usually owned by individuals or groups. Fishing in beels is restricted.

<sup>&</sup>lt;sup>4</sup> Kaivartas community belongs to a subgroup of the Schedule Caste community of Majuli.

discusses the research methods of the paper. In the following section, it examines the creation of water commons with the coming of the annual floods. Further, it examines the practice of fishing culture and its different aspects on these commons. The paper concludes that Mishing subsistence fishing is economically and socio-culturally significant for the community, and the Mishing fishing culture on the commons highlights their everyday life with the river on Majuli Island.

## 2. Literature Review

The original meaning of the term "commons" comes from "the way communities managed land that was held 'in common' in medieval Europe" (About the Commons, n.d.). For example, in 18<sup>th</sup> century England, commons were still widespread and about "half the villagers of England were titled to common grazing", and in many cases the "... whole family commoned. It provided subsistence, a safety net against unemployment or low wages, and social security for the old" (Linbaugh, 2012, p. 102). In the late Roman Codex Justinianus (529 ce), a distinction is drawn between "res privatae" (private thing/matter), res publicae (public thing/matter) res nullius (nobody's thing/matter, and res communes (common thing/matter)" (Helfrich et al., 2010, p. 4). However, the modern usage of the concept of commons in the academic literature is largely credited to ecologist Garrett Hardin through his work The Tragedy of the Commons (1968). Hardin's argued that multiple users would compete with one another to appropriate common resources, thus exhausting the commons. He argued that in order to avoid this "tragedy of the commons" the privatisation of property and state control of the property was the solution. Scholarship on commons became popular following Hardin's work and prior to his publication "title containing the words, the 'commons', 'Common Pool Resources' and 'Common Property' were very rare in the academic literature' (Laerhoven & Ostrom, 2007, p. 5). But the concept of commons changed and today, commons as a concept has become an important field of inquiry, including the critical study of traditional commons such as forests, fisheries, or groundwater resources to broader set of domains such as knowledge commons, digital commons, urban commons, cultural commons, global commons, etc. Given the large scope, scholars have debated the difficulty of having a simplistic and well-accepted definition of commons. However, for the purpose of this paper, we will examine few of the definitions and try to come up with a working definition of commons to further examine the water Commons of Majuli Island.

The digital library of the commons defines "commons' as a general term for shared resources in which each stakeholder has an equal interest" (Digital Library of the Commons, n.d.). Nonini (2006) defines "commons" as follows:

Assemblages and ensembles of resources that human beings hold in common or in trust to use on behalf of themselves, other human beings, and past and future generations of human beings, and which are essential to their biological, cultural and social reproduction. (p.164)

Ostrom, in her seminal book *Governing the Commons (1990)*, studied commons or common pool of resources. She describes commons as "long-enduring, self-organized and self-governed." These include the high mountain meadows in Switzerland and forest in Japan, irrigation systems in Spain and in the Philippines (Ostrom, 1990, p. 58). Thus, following Ostrom (1990), the analysis of water commons among the Mishing on Majuli views the commons as a natural resource which is open for everyone in the community, and which is governed by the community according to certain sets of local rules.

## 3. Materials and Methods

## 3.1. Study Area

Majuli is the largest river island in the world, covering an area of about 880 square km (Guinness World Records, n.d.). The island district is located in the north of Jorhat district in Assam and is bounded by the Brahmaputra River and its tributaries Kherkuti, Suti and Subansiri rivers (Bhaskar et al., 2010). As much of a landscape as a waterscape, Majuli sustains high ecological diversity and is inhabited by various groups such as the Mishing, Deori, and various Hindu caste groups such as the Brahmin, the Kalitas, the Koch, the Nath, Scheduled Castes, etc. (Nath, 2009). The phenomenon of chronic flood and erosion on Majuli is not new and has been a perennial feature of the Brahmaputra (Hazarika, 2006). However, studies suggest that the earthquake of 1950, which resulted in the elevation of the riverbed of the Brahmaputra, further aggravated the problem of flood and erosion on Majuli, leading to continual loss of the landmass of the island in recent decades (Kotoky et al., 2003; Sahariah et al., 2013; Saikia, 2013). This existential threat has brought much conservation attention to Majuli in more recent times.

The Mishing (also referred to as the Miris in the Scheduled Tribe list of Assam) are the second largest group of scheduled tribes in Assam with a population of 6,80,424 people (Census of India, 2011). They belong to the Tibeto–Burman linguistic family and the Mishing live in several parts of Assam such as Dhemaji, Lakhimpur, Dibrugarh, Sibsagar, Sonitpur and Majuli districts (Hazarika, 2009, p. 38). The Mishing have "historically settled near rivers" (Baruah & Jenia, 2018, p. 333) and are generally referred to as "river people". Agriculture is the backbone of Mishing economy and studies suggest that, traditionally, the Mishing practiced *jhum* or slash and burn cultivation prior to adopting sedentary wet paddy cultivation (Nath, 2009). Most Mishing practice wet paddy cultivation and cultivate different varieties of paddy locally known as *Ahu*, *Bao* and *Sali*. Apart from paddy, they also cultivate *matima* (lentil), mustard seeds and different types of vegetables. Besides agriculture, the Mishing practice cattle rearing, fishing and some also have small businesses, government jobs, etc. (Doley, 2016). Some of the important cultural festivals of the Mishing are *Ali-Aye-Ligang* and *Porag*. Most of the socio-cultural practices of the Mishing revolve around agriculture and fishing (Hazarika, 2009).

On Majuli Island, the Mishing form the single largest community on the island, constituting about 42% of the total population of the island (Census of India, 2001). Mishing villages are usually situated near the river or on chapories<sup>6</sup> (Nath, 2009; Baruah, 2016). This proximity of their settlement to the river and their continual exposure to multiple waves of flood every year shapes the daily life of the Mishing. The Mishing on Majuli live in sync with the flow of the river and thus sustain a unique culture of living with the river. For the Mishing, flood is seen as part of their daily lives and their sociocultural and economic practices are deeply intertwined with the annual flooding cycle. Flood represents the continuous annual creation of water commons which are central to the material and socio-cultural practices of the Mishing. In the following sections, we will examine these commons and the practice of fishing culture among the Mishing in detail.

<sup>&</sup>lt;sup>5</sup> Mising Autonomous Council. (n.d.). *About Mising*. <a href="http://www.macassam.nic.in/about-mising.php">http://www.macassam.nic.in/about-mising.php</a>

<sup>&</sup>lt;sup>6</sup> Chapories are land masses that appear and disappear with the annual flood.

#### 3.2. Methods

This paper was based on an ethnographic fieldwork conducted between June 2016 and April 2017 as part of my PhD fieldwork in Missamora Mishing village on Majuli Island. Participant observation and interview were the main tools of data collection for this research. Missamora village, a cluster of hamlets formed and reformed through river erosion, is situated towards the extreme northwestern part of Majuli Island. The village surrounded by the Brahmaputra and its tributary, Subansari, is susceptible to multiple waves of flood annually. Every flood, the whole village is submerged and becomes part of the river. In this way, river is a normal part of the habitat and flood is routine for the Mishing and the community have adapted to river ecology.

Living with the Mishing in Missamora enabled me to understand and explore how the Mishing live and interact with the river and flood on a daily basis. Apart from participant observation, informal interviews gave me an opportunity to discuss various issues which directly or indirectly related to my research question, while formal in-depth interviews were useful in clarifying my specific research question.

## 4. Results and Discussion

# 4.1. Flood, Water Commons and Fishing Culture of the Mishing on Majuli Island

The arrival of monsoon marked the beginning of flooding and fishing on Majuli Island. Flooding season on Majuli Island began sometime in the month of June and ended in October. The coming of flood after a long spell of dry winter months was much anticipated by farmers and fisher folks alike on Majuli. For the fisher folk, fish came with the flood. The wait for flood was particularly important for the fisher folks because during the dry months, with no fishing possible in the dry river, fishermen were often forced to take up other odd jobs to support their family. With the monsoon, this wait for the flood became more and more evident among the villagers. Ronosh, a young fisherman, told me, "I struggled to earn income for my family during the dry season, taking up odd jobs as daily wager or helper in construction work. Finally, I can make some money by fishing. I have incurred some debts to support my family, which I have to repay soon." Similarly, Pathori, a young fisherman in the village, expressed his excitement about the coming flood. He said, "During the dry months we are left with little options of work and less income. With the coming of the flood season we can get back to fishing and have more income."

During the flood, the whole village was submerged for many days. With the receding waters, the low-lying areas around the village become temporary water bodies teeming with different varieties of fishes and other aquatic resources. These temporary water bodies were treated as water commons for the village and villagers had free access to these water bodies to fish for subsistence. Fishing in these temporary water commons produced an interesting fishing culture among the Mishing. Throughout the flood season, women fished in small groups using handmade bamboo baskets, children fished with fishing hooks and nets, and men fished using fishing nets.

<sup>&</sup>lt;sup>7</sup> During my fieldwork I was informed that, on an average, Majuli experiences three to four waves of flood during the season.

<sup>&</sup>lt;sup>8</sup> Interview conducted on 21<sup>st</sup> June, 2016

<sup>&</sup>lt;sup>9</sup> Interview conducted on 5<sup>th</sup> July, 2016

# 4.2. Community Fishing

Community fishing was an important aspect of Mishing fishing culture on fishing commons. During the flood, *tulubs* and other temporary water bodies turned into water commons. The *tulubs*, unlike private fishing grounds in the river, were not owned by any single individual, but were commonly-owned and governed by the community according to the certain sets of customary rules. In this way, *tulubs* served as a village fishing commons.

Towards the end of August 2016, Pankaj, a young farmer in Missamora village, invited me to community fishing in a *tulub*. It was a group event where participation was based on membership in the village. Prior to the fishing day, no one was allowed to fish in the *tulub*. Interestingly, no prior date was set for the community fishing day and the decision of when to fish was based primarily on the feasibility of fishing. The villagers had to make sure that the water had dried up enough for a good catch.

Around 7:30 a.m. in the morning, as I was preparing to go to a nearby village, Pankaj came to my room and told me that there would be community fishing in one of the *tulub* that day. I cancelled my plan of going to the other village and joined Pankaj for fishing. On reaching the spot, I noticed many of the villagers rushing towards the *tulub*. The women carried handmade fishing bamboo baskets, whereas most of the men carried fishing nets. Children were given the task of holding the pots to store the fish. There were more than hundred people who joined in the fishing spree that day.

Although various community feasts and other rituals also brought together the villagers, community fishing served to bring together the community, creating some kind of unity. The fishing days brought together those who otherwise didn't live in the same neighbourhood and were usually busy in their own activities.

Community fishing was also the time for forming alliances. Pankaj and his wife wanted to team up with Myna because they needed someone to assist him with the net. Pankaj and Myna also shared economic relations. Myna was a sharecropper with Pankaj on chapori land. Pankaj owned a large tract of land on a nearby chapori which he rented for sharecropping. Possession of fishing net played an important role in this temporary social formation. Families who do not own fishing nets teamed up with families with fishing nets. Bigger families formed groups with family members itself. For example, Min, the youngest son of the Nagen Kumbang family, expressed his unwillingness to team up with other villagers because he shared his net with his elder brothers. Further, there were others, who fished alone using their small bamboo basket. This group of people consisted mostly of elderly women. For example, Pathori who came to fish with her young daughter explained that she preferred to fish alone with her small bamboo basket because nobody would team up with her. Her husband was sick at the time and too old to fish. Thus, fishing on commons represented a communal activity for the Mishing on Majuli Island.

Fishing on water commons was also associated with fun and merrymaking. Whether it was community fishing in *tulubs*, children fishing with fishing hooks and nets in shallow water, or women fishing in small streams for night's dinner, it was always associated with fun and excitement. When the water level rose, schools were closed down for many days, even weeks. This gave children ample

of time to fish and play in small streams and water commons. Tiranjan, who studied in the village high school, spoke of his plans of how he would spend time when his school was closed during flood:

When our school campus is flooded, we get unlimited holidays. We plan to fish and swim with our friends in the shallow water near our village. Because it's flooded we don't even have to take our cattle to the nearby chapori for feeding. So, we get more time to swim and play in the river.

Similarly, Moni,<sup>11</sup> a student in the village school expressed her excitement about learning to swim and fish during the flood:

During the flood, when our school is closed I plan to learn how to swim and fish with my friends near our village. We generally have so much of fun fishing and swimming with our friends. Sometimes we catch more fish and sometimes less fish. We share among our friends whatever we catch and bring the rest home for dinner.

The flood season was also a source of excitement for children because of the endless fish curries their mothers would prepare for the family. During the dry season, fish curry is rarely eaten, except on days when parents could afford to buy fish from the nearby weekly market. But during the flood, every evening, women and even children could catch fish in water commons for family consumption. The absence of fishing during the dry season was also understood as the absence of fish curry among villagers.

## 4.3. Gender and the Water Commons

Subsistence fishing or monsoon fishing also has a gender dimension. Monsoon fishing is subsistence in nature and is largely carried out by the women folk, whereas commercial fishing in the river is done entirely by men. For women, the arrival of flood meant getting a short break from the various agriculture activities and other daily activities such as taking care of their young children. During the flood, women went out to fish with their friends in small groups. By dusk, they would return home with their catch and prepare family dinner. They usually caught just enough fish for the families' daily consumption. This daily monsoon fishing was a space of freedom and sociality for women.

Shilpa, a young woman, told me how fishing eased her constant thought of what to cook for the family dinner. For women who prepared food, the coming of flood and monsoon fishing was a big relief because fish formed an important source of protein for the villagers of Missamora. Shilpa<sup>12</sup> added:

Fishing is the time when I could get away from my crying daughter and be free for a while with my friends. It is the time when I meet up with my friends and discuss personal problems and family issues. It is because of this we prefer to go alone without our husband.

<sup>&</sup>lt;sup>10</sup> Interview conducted on 17<sup>th</sup> August, 2016

<sup>&</sup>lt;sup>11</sup> Interview conducted on 10<sup>th</sup> September, 2016

<sup>&</sup>lt;sup>12</sup> Interview conducted on 18<sup>th</sup> July, 2016

Similarly, Pegu<sup>13</sup> told me, "Sometime I get so exhausted with all the agricultural work and household chores. And fishing with friends is a good getaway from all the daily chores for a while."

The notion of risk also played an important role in creating the gendered space of fishing. Monsoon fishing, done near the village, was considered safe for women, whereas commercial fishing which required the fishers to go to deeper water, and sometimes even sleep over on chaporis, was considered unsafe for women. Ram Dao<sup>14</sup>, a fisherman in the village, explained why commercial fishing was considered unsafe for woman:

My wife fishes for feeding the family while I fish for money. Commercial fishing is too risky for the womenfolk because of the need to go to deeper water and sleep overnight on chapori.

Thus, fishing on commons has a gender dimension for the Mishing on Majuli. Subsistence fishing on commons is a space of freedom and sociality for women and are largely carried out by the women folks, whereas, commercial fishing which is done in the big river is done entirely by the men.

## 4.4. Fishing as Subsistence and Livelihood

Fishing on water commons is an important source of livelihood for the Mishing who inhabit the fringe of the island and are subjected to multiple waves of flood and erosion annually. Mishing economy is based on diverse livelihoods sources to reduce vulnerability to poverty and food security. Subsistence fishing contributes substantially to Mishing diet. Fish is a good source of protein and for most of the poor villagers fish serves as the only readily available and affordable source of animal protein. From July to October, Mishing's diet consisted of fish curry in almost every meal. The absence of fishing during the dry season is also seen in the absence of fish curry among the villagers.

Subsistence fishing also contributed to food security for the Mishing during the long dry season from October up to April. During the dry season fishing was limited to private fishing grounds and *beels* which were restricted for commercial use. To maintain fish protein in their daily diet, the Mishing relied on fermented fish paste locally known as *namshing*. *Namshing* is considered a delicacy among the Mishing as well as other communities of Assam. Pankaj often reiterated the significance of *namshing* not just for its health benefits, but also for its taste. Almost every household made enough *namshing* to last for several months before the coming of the plentiful green leafy vegetables in the winter months. If fish was the delicacy during the flooding season, fresh green vegetables were the important source of nutrition during the winter months.

Fishing also provided additional cash income for the Mishing. Households with surplus fish catch often took it to the nearby small market for sale. This income from selling fish provided an important contribution to household cash income. The cash income generated from selling surplus fish was diverted to other benefits such as education, health services, clothing, food, etc., which, in turn, further reduced the Mishing's vulnerability to poverty. It was common to hear of villagers eagerly waiting for the flood when they could fish in order to lighten their economic burden. For instance, Dao<sup>15</sup>, a young fisherman in the village, explained why he waited for the flood to fish:

<sup>&</sup>lt;sup>13</sup> Interview conducted on 20<sup>th</sup> July, 2016

<sup>&</sup>lt;sup>14</sup> Interview conducted on 27<sup>th</sup> July, 2016

<sup>&</sup>lt;sup>15</sup> Interview conducted on 29th June, 2016

For fishers like us, dry winter months are very difficult to manage. We struggle with shortage of income as there are very limited or no fishing opportunities available. We sometimes go to nearby towns to work as wage labourers or engage in construction and repairing embankments. Now that flooding season has started, I can fish to earn money and support my family.

Similarly, Mili, a farmer in the village, expressed his excitement at the coming flood and the possibility of earning additional income. He said, "It is difficult to earn money in the village. But during the flood season, we can fish and sell it in the nearby market to earn some additional income. That is why we look forward to the arrival of flood and the possibility of fishing and making some extra money." Thus, monsoon fishing is an important part of the diverse livelihood strategies adopted by the Mishing community on Majuli.

## 5. Conclusion

Flood, which is often perceived as a destructive force in state and other hegemonic discourses, produces resourceful water commons on Majuli Island. Contrary to the private fishing grounds and private fishery resources which restrict public access, water commons are open to all, and villagers have equal access to these common pools of resources on Majuli Island. This paper highlighted the socio-cultural and economic significance of fishing in water commons for the Mishing who inhabit river banks or chapories. Further, the paper described the subsistence nature of fishing in water commons and different aspects of the Mishing's fishing culture in water commons, including: community fishing; gender; subsistence and livelihood.

For the Mishing on Majuli, subsistence fishing in water commons is economically significant. And it is significant socio-culturally, as it serves as means to bring about unity and alliance formation among the Mishing. The subsistence fishing culture of the Mishing in water commons represents their daily experience of living with the river on Majuli Island.

The development and other dominant discourses perceive flood as a destructive force and a stumbling block to development, which requires large-scale infrastructural protection such as building embankments and dams. Contrary to this, for the Mishing, flood is perceived not as an abnormal external force, but as part of their everyday life. Flood is seen as deeply interwoven with their lives, culture and economy. Further research in flood and fishing in the Brahmaputra should focus in understanding the complex interaction between the river and the various communities inhabiting the edges of Majuli Island, along the river. Given that millions of farmers and fishers in Assam rely on the Brahmaputra, better understanding of these complex interactions will help policy makers formulate more inclusive policies.

## Acknowledgement

I would like to express my special thanks to Professor Sudha Vasan for giving her invaluable feedback on earlier drafts of this article. I would also like to thank the anonymous reviewer for the many insightful comments and suggestions, which helped me to improve the quality of the manuscript.

<sup>&</sup>lt;sup>16</sup> Interview conducted on 10<sup>th</sup> July, 2016

### **References:**

- [1] About the Commons. (n.d.). *What are commons?*. International Associations for the Study of Commons. Retrieved March 18, 2022, from <a href="https://iasc-commons.org/about-commons/">https://iasc-commons.org/about-commons/</a>
- [2] Barik, N., & Sarma, K. (2006). Beel fisheries resource management and impact on livelihood status of people in Majuli Island of Assam. *Journal of Inland Fishery Society of India*, 38(1), 35-42.
- [3] Baruah, M. (2016). Suffering for land: Environmental hazards and popular struggles in the Brahmaputra Valley (Assam), India. [Doctoral Dissertations, Geography department, Syracuse University]. Dissertation –ALL. 558. <a href="https://surface.syr.edu/etd/558/">https://surface.syr.edu/etd/558/</a>
- [4] Baruah, M. & Mukherjee, J. (2018). River and Estuaries. In G. Baldacchino (Ed.), *The Routledge international handbook of island studies: A world of islands* (pp. 324-338). Routledge.
- [5] Bhaskar, B.P., Baruah, U., Vadivelu, S., Raja, P., & Sarkar, D. (2010). Remote Sensing and GIS in the Management of wetland resources of Majuli Island, Assam, India. *Tropical Ecology*, 51(1), 31-40.
- [6] Bhattacharjya, B.K., Bhaumik, U., & Sharma, A. P. (2017). Fish habitat and fisheries of Brahmaputra River in Assam, India. *Aquatic Ecosystem Health and Management*, 20(1-2), 102-115. <a href="https://doi.org/10.1080/14634988.2017.1297171">https://doi.org/10.1080/14634988.2017.1297171</a>
- [7] Census of India. (2011). *District census handbook, Jorhat*. Series-19-part XII –B. Assam: Directorate of Census Operation.

  <a href="https://censusindia.gov.in/2011census/dchb/1813\_PART\_B\_DCHB\_JORHAT.pdf">https://censusindia.gov.in/2011census/dchb/1813\_PART\_B\_DCHB\_JORHAT.pdf</a>
- [8] Doley, L. C. (2016). *Impact of flood on the Mishings of Dhemaji district, Assam: An anthropological study*. [Doctoral Dissertation, Anthropology Department, Guwahati University]. Shodhganga: A reservoir of Indian Thesis @ INFLIBNET. <a href="http://hdl.handle.net/10603/184020">http://hdl.handle.net/10603/184020</a>
- [9] Digital Library of the Commons. (n.d.). *Commons*. Indiana University. Retrieved March 20, 2022, from <a href="https://dlc.dlib.indiana.edu/dlc/contentguidelines">https://dlc.dlib.indiana.edu/dlc/contentguidelines</a>
- [10] Guinness World Records. (n.d.). *Largest River Island*. Retrieved March 20, 2022, from <a href="https://www.guinnessworldrecords.com/world-records/largest-river-island-">https://www.guinnessworldrecords.com/world-records/largest-river-island-</a>
- [11] Hardin, G. (1968). The tragedy of the commons. Science, New Series, 162 (3859), 1243-1248.
- [12] Hazarika, L. (2009). *The Mishing ethnic identity formation in Assam*. [Doctoral Dissertation, Arunachal Institute of Tribal studies, Rajiv Gandhi University]. Shodhganga: A reservoir of Indian Thesis @ INFLIBNET. <a href="http://hdl.handle.net/10603/205846">http://hdl.handle.net/10603/205846</a>
- [13] Hazarika, S. (2006). Living intelligently with flood (Background Paper no.5). Centre for Northeast Studies India. <a href="https://web.worldbank.org/archive/website01062/WEB/IMAGES/PAPER\_5\_.PDF">https://web.worldbank.org/archive/website01062/WEB/IMAGES/PAPER\_5\_.PDF</a>

- [14] Helfrich, S., Kuhlen, R., Sachs, W., & Siefkes, C. (2010). The commons prosperity by sharing. Heinrich Boll Foundation.
  <a href="https://www.boell.de/sites/default/files/assets/boell.de/images/download\_de/20101029\_Commons\_Prosperity\_by\_Sharing.pdf">https://www.boell.de/sites/default/files/assets/boell.de/images/download\_de/20101029\_Commons\_Prosperity\_by\_Sharing.pdf</a>
- [15] Kotoky, P., Bezbaruah, D., Baruah, J. & Sarma, J.N. (2003). Erosion activity on Majuli: The largest river island of the world. *Current Science*, 84(7), 929-932.
- [16] Laerhoven, F. V., & Ostrom, E. (2007). Traditions and trends in the study of the commons. *International Journal of the Commons*, *1*(1), 3-28. <a href="http://doi.org/10.18352/ijc.76">http://doi.org/10.18352/ijc.76</a>
- [17] Linebaugh, P. (2012). Enclosure from the Bottom Up. In D. Bollier & S. Helfrich (Eds.), *The worth of the commons: A world beyond market and state* (pp. 114-124). Leveller Press.
- [18] Nath, D. (2009). *Majuli Island: Society, Economy and culture*. Anshan Publication house in Association with MAKIAS.
- [19] Nonini, D.M. (2006). The Global idea of 'the Commons'. *Social analysis: The International Journal of Anthropology*, 50(30), 164-177. https://www.jstor.org/stable/23182116
- [20] Ostrom, E. (1990). *Governing the commons: The evolution of institutions for collective actions*. Cambridge University Press.
- [21] Sahariah, D., Sangha, K., B, D. Kr., Kundu, S., Das, T., Sen, S., Das, K., Mili, B., Baruah, J., Sarma, K., Saikia, M., & Saikia, A. (2013). Majuli at the crossroads: A study of cultural geomorphology. *Space and Culture, India*, 1(2), 12-20. https://doi.org/10.20896/saci.v1i2.26
- [22] Saikia, A. (2013). *Ecology, flood and the political economy of hydro-power: The River Brahmaputra in the 20<sup>th</sup> century* (NMML Occasional Paper, Perspectives in Indian Development, New Series 22). Nehru Memorial Museum and Library. http://hdl.handle.net/123456789/3138