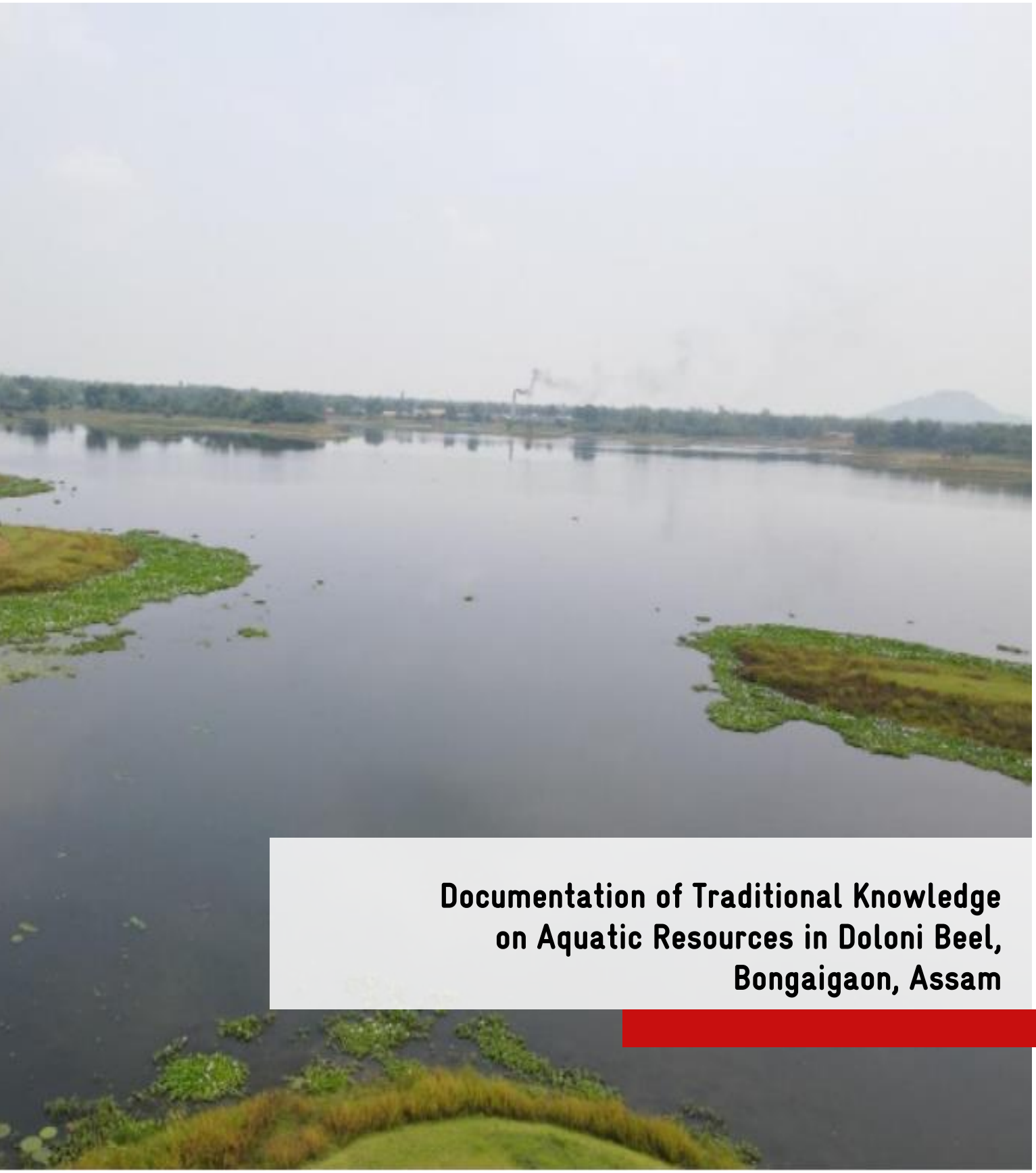

Documentation of Traditional Knowledge on Aquatic Resources in Doloni Beel, Bongaigaon, Assam

Ministry of Environment, Forest and Climate Change

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Documentation of Traditional Knowledge on Aquatic Resources in Doloni Beel, Bongaigaon, Assam

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Introduction

Image 1: Doloni Beel

The *Doloni* Beel is an important inland natural freshwater wetland of the Bongaigaon District. 'Doloni' in Assamese means a low-lying marshy land with the presence of grasses. The wetland, having an area of about 7 km square, is directly connected to the Brahmaputra River through a channel. There are several other wetlands in the vicinity of the Doloni Beel that are hydrologically connected in the backdrop of a hilly landscape. The geographical combination of four wetlands viz. Doloni, Tamaranga, Konora, and Paropota along with an isolated hillock called Bhairab *Pahar* are referred to as the Doloni -Tamaranga-Bhairab Complex. The nearby Bhairab Reserve Forest is a rocky hillock covered with degraded Tropical Moist Deciduous Forest dominated by Sal and Bamboo brakes. The hillock is a habitat of golden langur, an endemic primate.

Residents around the Beel rely on it for their livelihood and sustenance, primarily through fishing. The indigenous Rabha and Garo Tribes predominantly inhabit the surrounding villages of Doloni Beel. Additionally, a significant Muslim community from neighbouring regions, who rely on fishing and brick kiln work, also reside in this area.

The Rabha and the Garo communities have been living in the villages around Doloni for generations and are dependent on the Beel for their livelihood and survival. Although the lease

system has restricted the villagers from fishing in the Beel, most villagers continue to fish in the Beel as their primary source of food sustenance. Many villagers are still using traditional tools and methods of fishing.

This report is a documentation of the traditional knowledge about fishing and related activities of the indigenous Rabha and the Garo communities. The report also includes information related to the use of fish in daily life, that is, traditional cuisines and traditional medicines made from fish. An attempt has been made to provide detailed documentation of the traditional knowledge of the Rabha community. However, there is limited information on the Garo community as the entire community converted to Christianity and most of their traditional practices and beliefs including festivals and food preferences related to religion got lost. These festivals and beliefs could have been an important source of traditional knowledge.

Study Area:

The Doloni Beel region comprises 12 smaller villages, four of which predominantly house Muslim communities from other locations. The remaining eight villages - Kumarkata, Shankarghola, Majpara, Gonokghuli, Swargduar, Kherpuji, Borjuli, and Manikjhora - are inhabited by the native Rabha and Garo communities. Research documentation was carried out within these eight villages. Participants were selected both on the basis of purposive sampling and convenience sampling. 39 participants from both communities were interviewed. The participants included 11 women and 13 men from the Rabha community and 8 women and 7 men from the Garo community.

Methodology:

This study followed the traditional knowledge documentation process outlined in the *Methods Manual: Documenting Traditional Knowledge of Aquatic Resources in NE India* (Puri 2023). The steps included in this study:

- **Free listing:** This involved interviewing villagers to compile a list of local fish species in Beel. The villagers also provided insight into non-available species, fishing methods, and other related topics free lists had questions about the number of fish species known, fish that are available in the *Beel* and fish species that are no longer found in the Beel according to the community.
- **Specimen identification:** With villagers' help, many fish species were identified from the free lists. Names of fish derived from the free lists were brought from a local market and villagers were asked to identify the samples. Scientific names of the identified samples were provided by the Aaranyak team.
- **Personal interviews**: Interviews were conducted at various stages to learn about traditional fishing practices, seasons, beliefs, customs, superstitions and fish-based traditional medicines.
- **Resource Mapping:** The resource mapping exercise was also conducted with the villagers. The maps were prepared by two groups of villagers, one of the men and the other of women with 8 and 11 participants respectively. The groups included participants from both the Rabha and Garo communities. The participants marked all the important places on the map.
- **Seasonal Calendar:** Finally, an in-depth seasonal calendar was created, outlining fishing and farming seasons, as well as annual festivals.

List of Fishes found in the Beel according to the villagers:

Following is a list of fishes found in the Beel according to the villagers. The list has been curated by the free listing process at the beginning of the documentation. The language from which the local names of fishes originate is difficult to establish but both the Rabha and the Garo communities use the same local name.

1. Gosoi
2. Dorikona (*Esomus danricus*)
3. Singi/Hingi (*Heteropneustes fossilis*)
4. Puia/Bhutiya
5. Kokila (*Xenentodon cancila*)
6. Puthi (*Puntius chola*)
7. Baila
8. Chanda (*Chanda nama*)
9. Goroi (*Channa punctata*)
10. Bangna (*Labeo bata*)
11. Bhedai
12. Gulsa
13. Borali/Buwali (*Wallago attu*)
14. Isla
15. Damkoi
16. Khulsa
17. Korti (*Gudusia chapra*)
18. Tengena (*Mystus vittatus*)
19. Kuchiya (*Monopterus cuchia*)
20. Magur (*Clarias batrachus*)
21. Koi (*Anabas testudineus*)
22. Mua (*Amblypharyngodon mola*)
23. Phoila (*Notopterus notopterus*)
24. Chitol
25. Bheka
26. Chela
27. Sal (*Channa marulius*)
28. Sol (*Channa striatus*)
29. Bangi
30. Kokil
31. Botiya (*Lepidocephalichthys guntea*)
32. Baus/Kola Maas (*Labeo calbasu*)
33. Kholihona (*Trichogaster lalius*)
34. Khaksi
35. Mirika (*Cirrhinus mrigala*)
36. Rou (*Labeo rohita*)
37. Catla (*Labeo catla*)
38. Silver Carp (*Hypophthalmichthys molitrix*)
39. Grass Carp (*Ctenopharyngodon Idella*)
40. Komal Kat
41. Cheng (*Channa gachua*)

42. Kursa (*Labeo gonius*)
43. Pani Mutura (*Glossogobius giuris*)
44. Birket (*Hypophthalmichthys nobilis*)
45. Cheni Puthi (*Puntius sarana*)
46. Patta
47. Ritha
48. Sekobeko

According to the community, *Patta, Ritha, Sekobeko* and *Kursa* fish are no longer found in the Beel. Why not?

Traditional fishing methods and tools:

Since both the Rabhas and the Garo communities have been living together in the villages for generations, the traditional fishing methods, and tools of both communities are the same with some differences in the *names* of some tools. Traditionally, there were many different languages spoken by the villagers as different sub-tribes of the Rabha Community spoke different languages. But these languages are no longer spoken. The Garo community also no longer communicates in the Garo language. Thus, the villagers have different names for some tools but they do not know the languages from which the names come (the language spoken by the villagers is a mix of Assamese dialects spoken in Lower Assam with few words taken from Rabha and Garo languages. This language can be easily understood by any Assamese speaker while the original Rbha and Garo languages are completely different from Assamese. According to villagers, only a few old people in the village can speak the Rabha language. Garo children, however, are learning the Garo language as tribal gatherings with the Garo tribe of Meghalaya organised by the Christian missionaries are often attended by the villagers)

- **Katal:** Katal is a traditional method of fishing practised by both indigenous communities. Every year before winter when the water level of the Beel decreases, an artificial habitat is created with *Meteka* (water hyacinth) and bamboo sticks in the parts of the Beel where the depth is deeper. This artificial habitat is known as Katal. As the water around the Katal decreases during the winter, all the fishes come to the Katal. The fish in the Katal are then caught using large fishing nets. The *Meteka* and bamboo that are stuck in the nets are left in the place where the Katal was formed. After a week or two, fish are again trapped in these nets. Traditionally, a sustainable fishing practice where fish eggs were able to get out of the nets, is now being practised unsustainably by the lessee as the fish eggs are also caught with the nets used by the lessee. Also, this method was traditionally practised only during the winters, but the lessee uses the method during other seasons including the breeding season, leading to excessive fishing.

Image 2: A Katal

- **Puta Mara:** Puta mara (*Puta* mans Banana stem and *Mara* means to catch) is an old traditional fishing technique no longer in use. Even old villagers have not used the technique themselves. They know about this technique as they have seen their fathers using it for fishing. The younger generation has no idea about it. It is a technique where a boat made from one tree trunk is used to fish. Large sheets made of banana stems are tied to both sides of the boat in a way that the sheets don't sink but are a little below the waters. The fisherman only needs to sail through the waters and the fish automatically jumps to the sheets. The fisherman then collects the fish. This activity is performed only during the night-time and cannot be practised on full moon night. People say that if there is a lot of moonlight, fish do not jump to the sheets. However, the reason behind it is unknown to people. They say their ancestors knew about it through experience.. Many villagers say that only one type of fish, *Korti,* can be caught this way. However, a few people also said that many other fishes are also caught, but the major catch is always of *Korti* fish. Why this fishing technique is no longer in use is not known to the people. However, the fact that both the Rabha and Garo communities believe that eating *Korti* fish is not good for health might be a reason for it.




Image 3: Various Types of Jaals

- **Saabi Jaal:** This is a traditional fishing net (*jaal*) used for catching small and medium-sized fish. It is used only by men. These nets are small in size and are not used for commercial fishing. Since the villagers are prohibited from using large nets under the terms of the lease agreement, local people mostly use *saabi jaal* for fishing, and so they can be found in almost every household.
- **Dhormo Jaal:** This is a triangular fishing net used by men only. Traditionally it was the most commonly used fishing net by the Rabha and the Garo fisherman. But after their access to the beel has been restricted, the use of *dhormo jaal* has declined, and very few people left who still use dhormo jaal.
- **Paka Jaali/Thela Jaal:** This is a unique fishing net that looks similar to a fishing scoop. It is commonly known as *paka jaali* but some people also call it *thela jaal*. *Thela* means to push. It is a unique way of fishing in which the fisherman keeps pushing the *jaal* in the water. The villagers say that this type of fishing was once very common but now it is hard to find. However, many people still have them in their homes.
- **Bhaari:** *Bhaari* is a big Bamboo basket-like fishing trap that is placed in the water. The fish cannot come out once they enter the bhaari. Bhaari can be seen placed in Doloni beel almost everywhere near the villages.

Image 4: Bhaari

Image 5: Bhaari II

- **Jakoi:** This is a bamboo scoop most commonly used by the women of Rabha and Garo communities. *Jakoi* is almost no longer in use today as the women don't fish in Doloni Beel anymore. The imposition of the lease system and its consequences for the local fishermen, such as police cases and the kidnapping of fishermen by the lessee, has forced women to leave fishing ever since. Many women also said that *jakoi* can be used only when there are abundant fish in the beel. Since the fish population has significantly declined, fishing with jakoi is no longer practised. Many old women say that fishing with jakoi was a daily activity for them. They also didn't need to go too far from home for fishing. Fish was in abundance, so much so that they used to fish in the water nearest their homes.
- **Chaloni and Khorahi:** These are fishing tools no longer in use. *Chaloni* is a dish made of bamboo and *khorahi* is a large bamboo basket. These were the simplest fishing tools used by both men and women. Fish was once available in abundance and these tools could be used to simply take fish out of the water. People say that these fishing tools were very common at one point in time, but now they are no longer used as the fish population has declined.
- **Polo/bahu/chaka:** Known by different names among the community, this is a fishing cage made of bamboo sticks. It is long with a large mouth and a small hole on the other end. It is used as a trap to hold the fish and catch it with the hands inserted from the hole on the other end. These tools are also no longer in use according to the community; however, many people still have *polo* in their homes.

Image 6: Polo

- **Tepa:** This is a very commonly used fish trap made of bamboo. Once the fish comes inside the trap, the water comes out but the fish cannot come outside the trap. These traps are common all over Assam and are mostly known as *Sepa* in Assamese.

Image 7: Tepa

Image 8: Tepa

- **Hana:** Hana is a traditional fishing tool made of bamboo used for fishing mostly during night time. Hana is used to directly stab fish in the water.

Image 9: Hana

- **Pundhoro Jaal:** This is a fishing net used to catch small fishes such as *Moa, Puthi, Chanda, Botiya,* etc.
- **Ekon Jaal:** This is a fishing net used to catch small fish. The most common fishes caught in this *Jaal* are *Puthi*, *Khulsa* or *Kholihona*, *Tengena* and smaller varieties of *Singi* and *Korti* fishes.
- **Suan Jaal:** This fishing net is used to catch larger varieties of *Puthi*, *Khulsa, Goroi* and Hingi fishes.
- **Duion Jaal:** Big varieties of *Koi*, and *Khaksi* and smaller varieties of *Mirika*, *Silver Carp*, *Grass Carp* and *Komal Kat* fishes are caught in this *Jaal.*
- **Sayon Jaal:** Big-sized *Mirika, Rou, Silver Carp, Grass Carp* and *Komal Kat* fisher are caught in this Jaal.
- **Saaton, Athon and Doson Jaal:** These fishing nets are used to catch very big varieties of fish. The villagers no longer use these nets as they are not allowed to catch large fish. Only the ones who work for the lessee use these nets.
- **Baron Jaal:** This is a net used to catch very large fish. Usually, fish varieties weighing 5 to 6 kg are caught using this net. *Rou* and *Catla* are the most common fishes caught.. This net is also no longer in use among the villagers. Only people working for the lessee use this net.

Image 10: Man with his Jaal

Resource Mapping:

Two groups of villagers- one of men and the other of women- from both communities mapped the area covered by the Doloni Beel and surrounding villages. They were told to mark all the natural resources and other areas they consider important to them. The participants marked roads, bridges, villages, paddy fields, ponds, streams, hills, markets, schools, primary healthcare centres, temples, and churches.

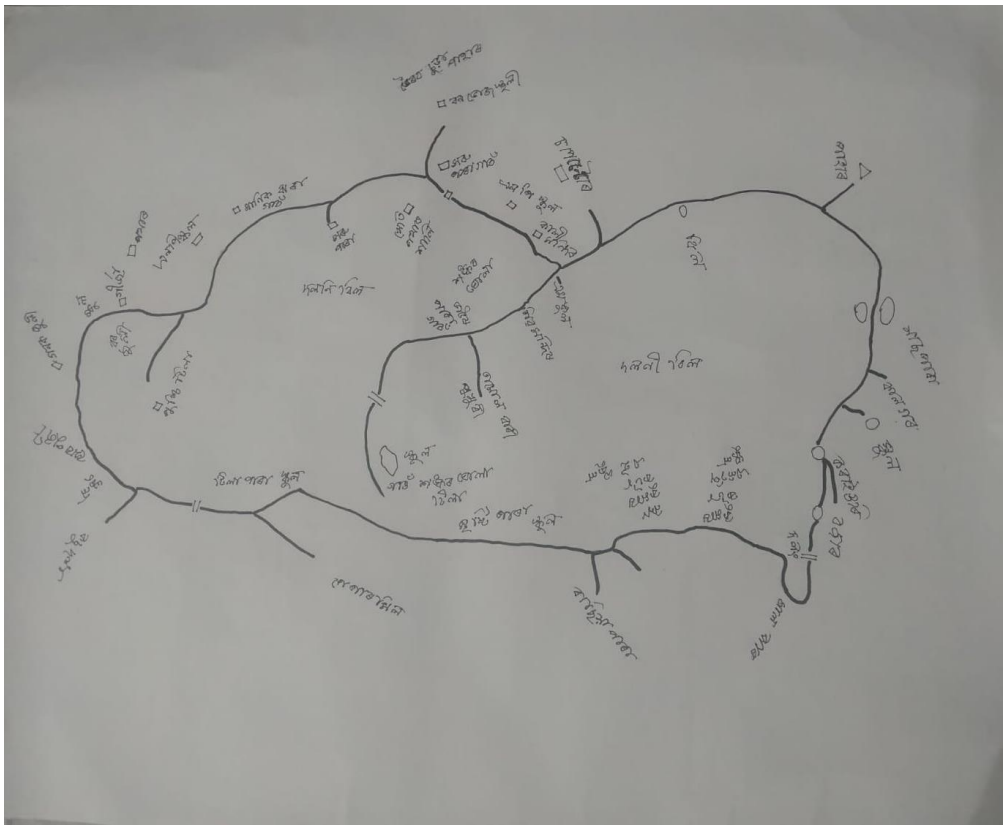

Image 11: Map by men

The map made by the men indicated the location of all the villages around the beel. They marked the location of the paddy fields, schools, temples, churches, and the primary healthcare sub-centre. They also marked the *Bhairab Chura Pahar*. However, it was not a very detailed map of the area and not many important natural resources were marked.

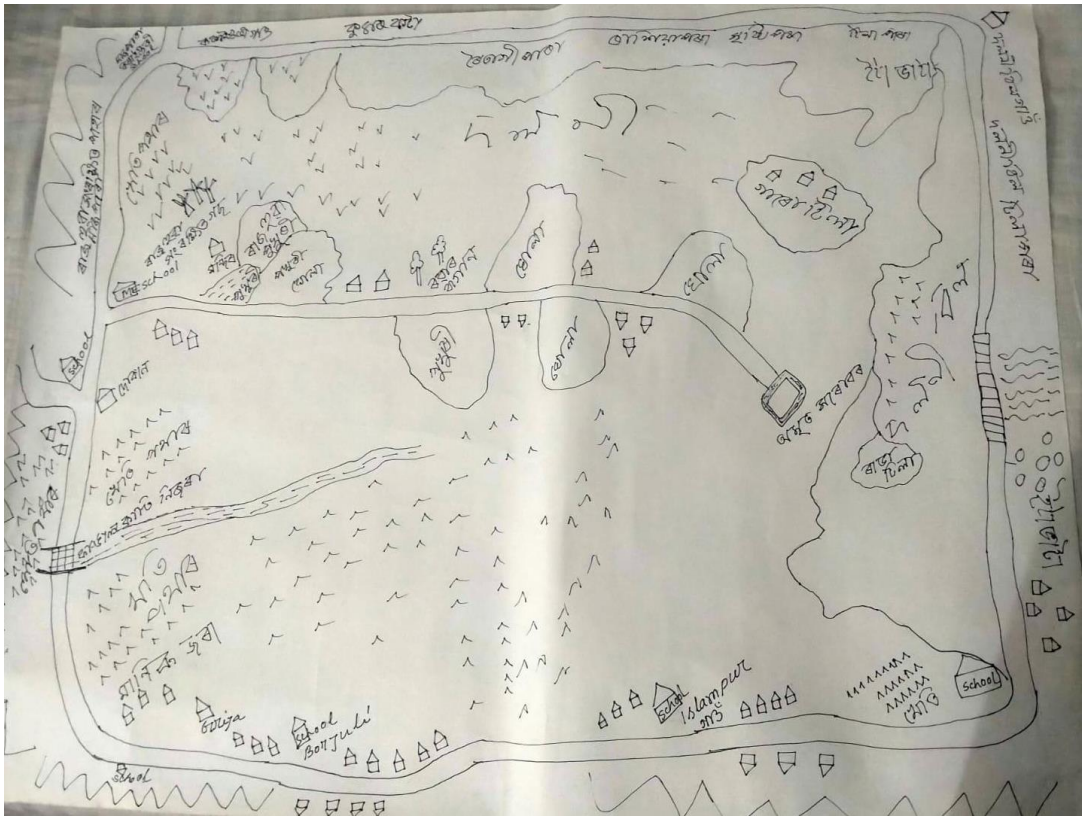

Image 12: Map by women

The Map made by the women was much more detailed than the one made by the men. The women started making the map by marking the place from where water comes out of the Beel. Apart from marking the villages, paddy fields, schools, temples and churches, the map also indicated the location of ponds and the *Kangal Kati Nijora* (stream) that flows into the Beel. The women also marked the location of the Amrit Sarovar. The location of the brick kilns was also indicated on the map. However, the most important marking on the map was the location of the community-conserved hill and the community-conserved area covered by *Sal* trees.

The mapping exercise revealed that women are more conservation-minded and have a better knowledge of the natural resources around them. Women marking community-conserved areas when asked to mark important resources indicates their possible involvement in community-conserved areas. Women locating bricklins on the map also indicates their awareness of the threats to the wetland.

Seasonal Calendar

Table 1: Seasonal Calendar

Month	**Bohag** (mid-april – mid-may)	**Zeth** (mid-may – mid-june)	**Ahar** (mid-june – mid-july)	**Xaun** (mid-july – mid-August)
Fishing Seasons	The monsoon starts and no fishing happens. Sometimes small fishes are caught that come with the water	As the water level increases a lot of fish come riding the water currents. During this period fish is not caught in deep waters but near the banks of the wetland till where the water flows. Only small fishes are caught.	The floods start this month. Fishing happens but not in large quantities	Flood water increases and not much fishing happens
Farming Seasons	Seeds Ahu paddy are sown. Nowadays the community has stopped cultivating Ahu paddy.	The seeds of Haali paddy are sown. Eri paddy is harvested.	Ahu paddy is planted. Eri paddy is harvested.	Haali paddy is planted.
Festivals	Rabha community worships different hills on different days in the Bohag month. Bamuni Pahar is worshipped on the 2nd Bohag. Bhairab Pahar is worshipped on the 5th & 6th Bohag. A mela is also organised on Bhairab Pahar day	No Festivals in Jeth. However in this month no farming takes places for four days during Ambubachi Mela		

Table 1: Seasonal Calendar

Month	**Bhado** (mid- august – mid-september)	**Ahin** (mid- september – mid-october)	**Kati** (mid-october – mid-november)	**Aghun** (mid-november – mid-december)
Fishing Seasons	The entire beel is convered by devastating floods. Not much fishing happens. Few small fishes are caught by the villages near their homes where fish come with flood waters.	As flood water decreases fish that come to the beel during floods cannot move too far. Fishes in large quantities are caught in this period. Mostly korti fish is found.	Fishing in large quantities continue	Fishing continues till the end of of Ahgun. Large fishes are found during this month. The period starting from Ahin till the end of Aghun is an important season for fishing.
Farming Seasons	Ahu paddy is harvested. Haali paddy is planted.			Haali paddy is harvested. Seeds of Eri paddy are sown.
Festivals			Kati Bihu is celebrated by the Rabha Community.	

Table 1: Seasonal Calendar

Month	**Puh** (mid-december – mid-january)	**Magh** (mid- january – mid-february)	**Fagun** (mid-february – mid-march)	**Sot** (mid-march – mid-april)
Fishing Seasons	Large fishes are caught	Large fishes are caught. During this period some villagers manage to catch large fishes for the Magh Bihu hiding from the lesse. But most villagers buy fish from the market for the bihu celebrations.	Not many fishes are found in the beel in this month. In this month not much restrictions is imposed by the lessee on the fishing by the villagers. But villagers also do not go fishing in this period as not many fishes are found in the beel.	No fishing by the community takes place as it ist he breeding season. Many of the villagers also farm fishe seeds in their privately owned ponds.
Farming Seasons	Haali paddy is harvested. Seeds of Eri paddy are sown.	Eri paddy is planted.	Eri paddy is planted.	The seeds of Ahu paddy are sown.
Festivals		Magh Bihu is celebrated.		

The seasonal calendar indicates that the community is well aware of the fish-cycle. They do not fish in the month of *Sot* which is considered the breeding season. The fishing seasons mostly align with the seasonal floods occurring every year. The festivals celebrated throughout the year throw light on unintended conservation practices such as the religious and cultural importance of the hills. although non-vegetarian food is prohibited amongst the Rabha community during religious festivals, large fish is an essential component of the Uruka feast observed in mid-January. The calendar also outlines the farming seasons which can be further researched along with the fish cycle to analyse the prospects for a fish-cum paddy cultivation in the future.

Use of Fish in daily diet:

Image 13: Chaloni – Used to dry fish in the sun

Both the Rabha and Garo communities incorporate fish into their daily meals, often cooking it with vegetables for lunch and dinner. However, large fish is typically reserved for special occasions like the *Uruka* feast, celebrated by the Rabhas before *Magh Bihu* in mid-January. Traditional dishes often feature small fish paired with fermented bamboo shoots or *Khaar*. Dry fish is favoured over fresh due to its ease of preservation and the difficulty of daily fishing imposed by leasing restrictions. The Garo community also regularly consumes a dry fish powder called *Nakham.* The scarce consumption of large fish can be attributed to a preference for small fish, rooted in generational culinary traditions, and the limited availability enforced by the lessee, who typically catches and sells large fish.

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Use of fish in traditional medicine of the Rabha and Garo Communities:

Dry fish powder is traditionally used as a medicine for the treatment of Malaria by the Garos. Small fishes are sun-dried and a powder is made from it which is stored in bamboo known as *Sunga.* This powder is still in use by the community for treating malaria. Both Rabha and Garo communities do not take any other treatment for malaria. The powder is traditionally known as *Nakham* in the Garo language and the Garo community claims it to be their traditional knowledge. However, the Rabhas also consume this powder. The Rabha tribe and a few other people such as Bengalis living in the area call it *Sidol.* Rabhas and other communities consume the powder only as a medicine as according to them it doesn't have a pleasant taste and smell. But, for the Garos, it is an important part of their traditional diet, and they consume it almost regularly. According to the Garos, it can be also used for the prevention of Malaria which is a common disease among the communities. People's claims of using this medicine even today instead of any modern medicine indicate its effectiveness.
An important aspect of the traditional knowledge of both the Rabha and the Garo communities is that certain types of fish are considered bad for health. *Korti* is a local variety of fish found in the beel which is not considered good for health. People from both communities believe that it can cause many different diseases. According to the community, people often feel sick after eating *Korti* fish. Some say it causes fever and body aches. Some people also believe that consumption of *Korti* can lead to the reoccurrence of the symptoms of diseases previously caused to a person in the past and are already cured. Pregnant women are also not allowed to eat *Korti* fish.

The Garo community also believes that eating *Kola Maas* or *Baus* fish can also make people sick. Old and sick people are not allowed to eat *Kola Maas*. The community also believes that previously cured diseases can reoccur if this fish is consumed. However, this belief is not as prevalent as the ones related to *Korti* fish.

Image 14: Kolika fish teeth

Bruises are cured by puncturing the affected area with the teeth of Kokila fish Borali fish is also consumed by both communities to cure body marks caused by smallpox. However, the Kama Rabhas, a sub-tribe of the Rabha community do not consume *Borali* fish.

People from both Rabha and Garo communities also believe that fish with large scales are not very good for health. Women after giving birth are not allowed to eat fish that have scales. But fish that do not have scales are consumed in large amounts after giving birth as they believe that it is good for new mothers and that it helps them regain strength after delivery. Fishes such as *Sinngi*, *Magur*, *Kuchia* and *Tengena* are mostly consumed when people feel weak while recovering from any disease.

Traditional beliefs among the Rabha communities:

There are many traditional beliefs among the various sub-tribes of the Rabha communities related to food habits. Some of these beliefs are also related to fishes. Every Rabha tribe living in the villages is associated with a particular aquatic species or vegetable that they are not allowed to eat. The Kama Rabhas does not eat *Borali* fish. Banda Rabhas do not eat cabbage. Dolpa Rabhas do not eat *Cheng* fish. The Lembrai Rabhas are not allowed to kill or even look at snakes. The origins of these practices were not known by the participants of the study, yet still believed. Whether these practices are associated with religion or any traditional knowledge or some kind of fear associated with a particular species based on experience is hard to tell. People say they have been following these practices only because they have seen their ancestors following them. However, it remains to be investigated whether these prohibitions have had, as a byproduct, positive impacts on these animal and plant populations."

Analysis of Findings:

The above findings of the report can be analysed under the following headings.

- **Sustainable fishing practices:** the documentation of traditional fishing techniques and tools of the Rabha and Garo communities suggests that both the indigenous communities have been fishing sustainably for generations. They never fish during the breeding season. Fish eggs are never caught in the traditional fishing nets and fishing tools made of bamboo. The Rabha and the Garo communities also do not sell fish in the market. They fish only for domestic consumption.
- **Use of Fish in both regular diet and traditional medicine:** the conservation of fish in Doloni Beel is of utmost importance for the community as fish is not only used in their regular diet but also in traditional medicine. As most people in the community do not have high incomes, fish is an important source of nutrition for them. Malaria and smallpox are very common in the community and fish is used in traditional medicine for the treatment of both diseases.
- **Traditional conservation practices:** the documentation process also revealed that there are many prevailing beliefs among the Rabha community that do not allow some sub-tribes to eat certain kinds of fish. Although the origins of these practices are not known, they might have unintended conservation outcomes as a byproduct, but further research is needed to test this proposition. The practice of worshipping different hills in the month of Bohag, which prohibits human activities there, also suggests that religious practices may have unintended benefits for these areas and their natural resources, again further research is needed here.
- **Community women's awareness for conservation of natural resources:** the resource-mapping exercise reveals that the women from both communities are more aware of the natural resources available in the area and their importance. They are also aware of the pollution caused by the brick kilns and its impact on the wetland. The discussions with the women also revealed that they play an important role in maintaining the community-conserved areas around the wetland.

Recommendations for IWMP:

1. The documentation shows women are typically more conservation-minded, a fact to consider in designing an Integrated Wetland Management Plan (IWMP). Incorporating community-led wetland conservation into the IWMP should make involving women easier and more effective.
2. The community's current beliefs such as their food preferences and hill-worshipping traditions may not align with science but could still contribute to conservation efforts and should be considered in IWMP development
3. The fact that the community is completely dependent on fishing as it is their primary source of sustenance, an important source of nutrition and traditional medicine for treating common diseases in the community, also needs to be considered while making IWMP.
4. Since traditional fishing techniques and tools are all sustainable fishing practices, encouragement for the use of these tools and techniques should find a place in the IWMP.
5. The seasonal calendar should be considered while preparing the IWMP. The entire IWMP needs to be in accordance with the seasonal calendar.

Conclusion:

In summation, both the Rabha and Garo communities show how they intertwine sustenance, traditional medicine, and cultural practices with the local aquatic life, particularly around the extensive use of fish. Particularly interesting are the various dietary restrictions prevalent among the Rabha tribes. These practices not only define their food habits but may also positively impact fish populations.. However, the process behind why the community follows these food habits— whether they are religious, economic or perhaps ecological— remains obscure and deserves further investigation. Community women's awareness, expertise and role in conservation efforts have also been highlighted in this report; and they need to be consulted more regularly in research and policy-making for the Doloni Beel.

The most important finding is that sustainable fishing has been traditionally practised by both communities using traditional fishing techniques and tools and that many of these are still practised today despite limitations to access imposed by the existing system of governance. This suggests that future policymakers should take seriously local knowledge, practice and belief in designing, more collaboratively, a future IWMP.

Appendix 1.

Pictures of fish caught in Garo and Rabha communities during the field study.

Image 15: Catla (Scientific name)

Image 16: *Damkoi*

Image 17: *Isla*

Image 18: *Gulsa*

Image 19: *Kholsa*

Image 20: *Bangna*

Image 21: *Goroi*

Image 22: *Bhedai*

Image 23: *Chanda*

Image 24: *Baila*

Image 25: *Puthi*

Image 26: *Kokila*

Image 27: *Bhutia/ Puia*

Image 28: *Hingi/ Singi/ Jial*

Image 29: *Dorikona*

Image 30: *Grass Carp*

Image 31: *Gosoi*

Image 32: *Chital*

Image 33: *Catla*

Image 34: *Silver Carp*

Image 35: *Rou*

Image 36: *Grass Carp*

Image 37: *Mirika*

Image 38: *Right side lower two: Kursa*

Image 39: *Middle: Cheniputhi*

Image 40: Top: *Mirika,* Middle: *Birket or Bighade,* Bottom: *Grass Carp*

Image 41: *Moa & Chanda*

Image 42: *Mirika*

Image 43: *Pani Mutura*

Image 44: *Buali*

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