

Community Fishing During *Magh Bihu* : An Age Old Practice in the Dimoria Region of Kamrup (Metro) District, Assam

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Received 21 April 2020 ; Accepted 13 June 2020 ; Published on 3 July 2020

ABSTRACT

A study was carried out on community fishing practiced in two beels (wetlands) of Dimoria region of Kamrup (Metro) District, Assam for three years. This is an age old practice, which has been traditionally performed in the beels on the day of *Magh bihu* 'Uruka' in Assam. The fishing activity starts only after the short customary ritual at the fishing sites i.e. Bomani and Jalikhora beel by the King of Tentelia and Dimoria respectively. Peoples from the neighbouring districts also participate in this historical event apart from the villagers from the peripheral villages. A total of 46 varieties of fish species were recorded catching in both the beels during this event. Highest number of fishers (28%) used *Polo* (a bamboo made falling gear) for fishing following by *Jakoi* (15%) and *Porongi jal* (11%) in the beels. It is suggested to create awareness among the villagers or fishers of the region on sustainable fishing in the beels.

Keywords Community fishing, Bomani beel, Jalikhora beel, Dimoria.

INTRODUCTION

The tradition of Community fishing is a unique feature in Assam, where fishing is done in groups of hundreds of people and thus the name (Baruah 2017). Each group consists of men, women and children, who participate in fishing activity in large numbers in the beels (wetlands) and other water bodies of the state. The entire community gathers together for fishing mostly during the special occasions like *Magh bihu* (the harvest festival) and *Bohag bihu* (the sowing festival). After everyone is done fishing, they go home to eat with their families with great pleasure.

There are about 1392 listed beels in Assam ; of which 423 are registered and remaining 969 are unregistered beels (Chandra 2007). Kamrup District has 20 numbers of registered beel (wetlands). Community fishing has been practiced in a number of wetlands of the state in different periods of time. However, as a part of *bihu* celebration specially in *Magh bihu* and *Bohag bihu*, traditional fishing is done only in some selected wetlands by the peoples coming from villages surrounding it.

In the eve of *Magh bihu* (on the day of *Uruka*), the historical community fishing is being practiced in two wetlands i.e. Bomani beel and Jalikhora beel situated in the Dimoria region of Kamrup (Metro) District. This paper deals with the traditions of community fishing, techniques of fishing, fishing gears, fish species catch along with conservation issues of both the wetlands of the region.

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Fig. 1. Fishing by cleaning of aquatic weeds using *ber jal*.

MATERIALS AND METHODS

Study area

Both the beels (Bomani and Jalikhora) are located in the Dimoria Development Block (latitude: 26°00' N to 26°11' N and longitude : 91°45' E to 92°00' E) under Kamrup (Metro) District of Assam. The block is situated on the South bank of the river Brahmaputra covering an area of 360 sq km with 162 villages (Malakar and Boruah 2017). The area is inhabited by the tribal communities like Bodo, Lalung, Mikir, Kosh, Garo apart from the non-tribals like Assamese, Bangali and the tea tribes. The main tributaries flowing across this region are Kolong and Digaru. Some of the wetlands of this region are—Bomani, Jalikhora, Duani, Borbeel, Etila, Tamulidova.

The Bomani beel is one of the historically important wetland of the region lies between the latitude : 26°03'17.2'' N and longitude : 92°09'43.9'' E. The area of the beel is 22.75 hectares. It is connected to Digaru river through a narrow channel 'Nagajan,' through which during the monsoon months the young fishes enter into the beel from river (Deka 2015). The beel is surrounded by the village : Chamata, Kapalkata, Gomoria pathar, Bejini, Sakuripara and Teteliguri.

The other wetland i.e. Jalikhora is a seasonal beel lies between the latitude : 26°09'18'' N and longitude : 92°04'48'' E. It is located between

Maloibari and Golap village. Unlike Bomani, Jalikhora is a close type wetland with no connection to any tributaries. It gets flooded by rain water during monsoon season and the water is mostly used in the paddy field surrounding it.

Collection of data

The study was carried out from 2017 to 2019 in the selected wetlands i.e. Bomani and Jalikhora beel of Kamrup (Metro) District, Assam. Information on the tradition of community fishing in the beels was collected through personal interview with the elderly persons and fishermen involved in this age old practice. The data on fishing technique, fishing gears used and fish species catch were collected at the fishing site through direct observation during the community fishing events in both the beels (wetlands). Fish species were identified using the keys of Talwar and Jhingran (1991), Jayaram (2010). Validity of the scientific name of fishes has been examined using the website www.fishbase.org.in. IUCN (2020) status of the fish species were assessed following www.iucnredlist.org.

RESULTS AND DISCUSSION

Community fishing—the tradition

The tradition of community fishing has been passing generation after generation in the beels from the



Fig. 2. Sal fish (*Channa marulius*) caught by a fisherman.

ancient times (Figs. 1—9). The adjoining Kamrup District used to be dotted with many Kingdoms and some places still have Kings, who have control over some ethnic subjects. On the day of fishing, traditionally the King of Tentelia (Telelia) is escorted to the bank of Bomani beel by some dancing troupes from some villages, while a leader of Lalilang troupes from villages like Deulguri, Senabor, Bhoragaon and Nowagaon is selected by the King of Dimoria to declare fishing at Jalisora beel (Bangthai 2015).

Community fishing starts only after the short traditional ritual at the fishing sites (Jalisora and Bomani). Before such ritual or without the permission of respective King, community fishing cannot be practiced. At the time of declaration of fishing by the King, the dancing troupes use to sing or dance ‘Lalilang’ – a folk song related to community fishing. Peoples from the neighbouring districts of the Dimoria region use to come to the beels for celebration of fishing festival on this historic day.



Fig. 3. Traditional ritual by the King of Tentelia at Bomani beel.

Fishing techniques

Fishing in both the wetlands during *Magh bihu* generally becomes easier because of low level of water in the winter season. If needed, dewatering is also done before the fishing day to keep the water level low and to make the area easily accessible to fishing. Peoples coming from different villages first gather on both the banks of the beels, waiting for the formal declaration by the respective Kings for fishing. They use varieties

of homemade fishing gears specially made for community fishing on *Magh bihu* 'Uruka'. They adopt various techniques to catch their target fish species. Some groups (with male and female members) were observed cleaning the aquatic weed (*Eichornia* sp.) to catch the fishes like kawoi (*Anabas testudenioides*), goroi (*Channa punctatus*), cheng (*Channa gachua*), shol (*Channa striatus*) and cuchia (*Monopterus albus*). The experienced fishers from the group first select a particular site for cleaning. The area will



Fig. 4. Polo fishing by the fishermen at Bomani beel.



Fig. 5. Dancing 'Lalilang' the folk songs at Jalikhora beel.

be surrounded by a wall net (*ber jal*) followed by cleaning the weeds of the encircling area slowly using *kachi* (sickle) or by hand. The fishes lodge under the weed or its roots can easily be caught through this method. In a different technique, a region of the beel is surrounded by a group of male fishers and practice polo (falling gear) fishing moving towards the center. The fishes inhabiting inside the area cannot escape easily in this method and catch by the fishers. Medhi

and Sharma (2015) opined that unscientific fishing methods and gears may cause degradation of wetland environment of Dimoria region. However, the fishing methods are adopted in the beels only on the day of community fishing.

Fishing gears

Varieties of fishing gears are practiced by the fisher



Fig. 6. Fishermen arranging gears and preparing for fishing at Jalikhora beel.



Fig. 7. Fishermen (both male and female) practicing *Porongi jal* (hand lift net).

during community fishing in the beels (Table 1). *Polo* (bamboo made falling traps) has been used (28%) by most of the fishers followed by the triangular bamboo made *Jakoi* (15%) and hand lift net- *Porongi jal* (11%). Among the fishing gears, *Khewali jal* (cast net), *Dheki jal* (lift net), *Juluki*, *Hana* or *Kosh* are used mostly by the male fishers, while *Jakoi* (triangular web), *Chalonnee* (sieve) are used mainly by the women fishers. At the start of community fishing highest *Polo* fishing was observed. *Jakoi*, *Chalonnee* and *Porongi jal* are operated mainly by the women

fishers, while male fishers use to operate *Khewali jal*, *Langi jal*, *Ber jal* and *Dheki jal* for fishing in selected area of the beels. *Thela jal* is very easy to operate and used to catch the fishes moving on the upper water column. On the other hand, *Juluki* and *Hana* is the falling gear mostly practiced at night.

Fish species catch

In the present study, a total of 46 varieties of fish spe-



Fig. 8. A fisherman using *Thela jal* (pushing net) at Bomani beel.



Fig. 9. A tribal women practicing *Jakoi* at Bomani beel.

cies were recorded catching in both the beels during community fishing (Table 2). Out of these, as per IUCN status maximum 37 fish species are categorized as Least Concern (LC) category, two species as Near Threatened (NT), one species as Vulnerable (VU) and another one as Data Deficient (DD) category. Only one species (*Channa marulius*) was found under the category Endangered (EN), while four species were Not Assessed (NA). Baruah (2017) reported small fish species (*Puntius* sp.), carnivorous catfish (*Wallago attu*), air-breathing species (*Anabas testudineus*),

murrels (*Channa* sp.) and featherbacks (*Notopterus* sp.) species from the floodplain wetlands of Kamrup (Metro) district of Assam. Similar observation was also made during this study. Deka and Sharma (2011) stated that Bomani is a good productive beel of Dimoria region. The catching of good number of fish species from the beels during community fishing indicates the similar trend. Apart from fishes, some other non-Piscean organisms like fresh water prawn (*Macrobrachium* sp.), giant water bug (*Belostoma* sp.), water scorpion (*Nepa* sp.), fresh water crab

Table 1. Fishing gears with main target species caught during community fishing. *Local names are written in *Italics*.

Category of gear	Name of the gear*	Main target fish species	% of use
Encircling gear	<i>Khewali jal</i> (cast net)	<i>Puntius</i> sp., <i>Rasbora</i> sp., <i>Salmostoma</i> sp.	3
	<i>Ber jal</i> (seine net)	<i>Channa</i> sp., <i>Clarius</i> sp., <i>Monopterus cuchia</i>	8
	<i>Langi jal</i> (gill net)	<i>Puntius</i> sp., <i>Anabas testudineus</i> , <i>Glossogobius</i> sp., <i>Labeo</i> sp.	4
Scooping gear	<i>Dheki jal</i> (lift net)	<i>Labeo</i> sp., <i>Cirrhinus</i> sp., <i>Gibelion catla</i>	7
	<i>Porongi jal</i> (hand lift net)	<i>Labeo</i> sp., <i>Nandus nandus</i> , <i>Mystus</i> sp., <i>Cabdio morar</i>	11
	<i>Jakoi</i> (triangular web)	<i>Trichogaster</i> sp., <i>Chanda</i> sp., <i>Parambassis</i> sp.	15
Falling gears	<i>Chalonnee</i> (sieve)	<i>Chanda</i> sp., <i>Amblypharyngodon mola</i> , <i>Rasbora</i> sp.	4
	<i>Polo</i>	<i>Channa</i> sp., <i>Wallago attu</i> , <i>Cirrhinus</i> sp., <i>Labeo rohita</i> , <i>Notopterus</i> sp., <i>Ctenopharyngodon idella</i> , <i>Sperata aor</i>	28
	<i>Juluki</i>	<i>Channa</i> sp., <i>Clarias</i> sp.	5
Push nets	<i>Thela jal</i>	<i>Esomus denrica</i> , <i>Pethia</i> sp., <i>Amblypharyngodon mola</i>	9
Hooks	<i>Nal barashi</i>	<i>Channa</i> sp., <i>Anabus testudineus</i> , <i>Mastacembelus armatus</i> , <i>Monopterus cuchia</i>	3
	<i>Sip barashi</i>	<i>Clarias</i> sp., <i>Mystus</i> sp.	1
Spears	<i>Hana</i> or <i>Kosh</i>	<i>Channa</i> sp., <i>Clarias</i> sp., <i>Sperata aor</i>	2

Table 2. Fish species caught with IUCN status during community fishing in the beels. Abbreviation : EN–Endangered ; VU–Vulnerable ; LC–Least Concern ; NT–Near Threatened ; NA–Not Accessed and DD–Data Deficient.

Sl. No.	Local name	Scientific name	IUCN status (2020)
1	Mua	<i>Amblypharyngodon mola</i>	LC
2	Kawoi	<i>Anabas testudineus</i>	DD
3	Dumni	<i>Badis badis</i>	LC
4	Rani		
	botia	<i>Botia dario</i>	LC
5	Borlia	<i>Cabdio morar</i>	LC
6	Gongota	<i>Cantophrys gongota</i>	NA
7	Chanda	<i>Chanda nama</i>	LC
8	Sengeli	<i>Channa gachua</i>	LC
9	Goroi	<i>Channa punctata</i>	LC
10	Shol	<i>Channa striata</i>	LC
11	Sal	<i>Channa marulius</i>	LC
12	Magur	<i>Clarias magur</i>	EN
13	Grass carp		
		<i>Ctenopharyngodon idella</i>	NA
14	Common carp		
		<i>Cyprinus carpio</i>	VU
15	Becha	<i>Danio rerio</i>	LC
16	Dorikona	<i>Devario aequipinnatus</i>	LC
17	Dorikona	<i>Esomus danrica</i>	LC
18	Bhakua	<i>Gibelion catla</i>	LC
19	Panimutura		
		<i>Glossogobius giuris</i>	LC
20	Singi	<i>Heteropneustes fossilis</i>	LC
21	Bata	<i>Labeo bata</i>	LC
22	Kolia-jhara		
		<i>Labeo calbasu</i>	LC
23	Rou	<i>Labeo rohita</i>	LC
24	Selkona	<i>Laubuca laubuca</i>	LC
25	Botikora		
		<i>Lepidocephalichthys guntea</i>	LC
26	Turi	<i>Macrornathus aral</i>	LC
27	Turi	<i>Macrornathus pancalus</i>	LC
28	Bami	<i>Mastacembelus armatus</i>	LC
29	Cuchia	<i>Monopterusuchia</i>	LC
30	Tengera	<i>Mystus tengara</i>	LC
31	Ajoli	<i>Nandus nandus</i>	LC
32	Folia	<i>Notopterus notopterus</i>	LC
33	Japani kawoi		
		<i>Oreochromis mossambicus</i>	NT
34	Bardia	<i>Pachypterus atherinoides</i>	LC
35	Chanda	<i>Parambassis lala</i>	NT
36	Chanda	<i>Parambassis ranga</i>	LC
37	Puthi	<i>Pethia conchoniuis</i>	LC
38	Tit		
	puthi	<i>Pethia ticto</i>	LC
39	Puthi	<i>Puntius chola</i>	LC
40	Jati		
	puthi	<i>Puntius sophore</i>	LC
41	Selkona	<i>Salmostoma bacaila</i>	LC
42	Ari	<i>Sperata aor</i>	LC

Table 2. Continued.

Sl. No.	Local name	Scientific name	IUCN status (2020)
43	Kholihona	<i>Trichogaster fasciata</i>	NA
44	Kholihona	<i>Trichogaster labiosus</i>	NA
45	Kokila	<i>Xenentodon cancila</i>	LC
46	Gongatop	<i>Leidon cutcutia</i>	LC

(*Barytetphusa* sp.) and water snail were also caught and used as food by the fishers.

Conservation issues

It has been observed that the water spread areas as well as depth of both the beels is decreasing because of increase of harvested area around it. The villagers cultivate paddy (Boro rice) within the beels, where chemicals i.e. pesticides and fertilizers are used for the better growth of the paddy. These fertilizers are flowing in to the wetland and degraded the natural water quality, thereby decreasing the fish and other aquatic organisms in the beels (Sarma 2016). Cement factory and brick industry growing near the Bomani beel is also a serious threat for these important wetlands of the region. According to Deka (2015), construction of embankments, irrigation canals, roads, railway lines, encroachment in the marginal lands of wetland, hunting of residential and migratory birds and unscientific methods of fishing, earth cutting are responsible for degradation of the Bomani wetland. Number of fishers coming for fishing has been increasing year by year, with more than thousand people participated in each beel in the year 2019. However, many complaints were made by the fishers about a decrease in fish catches. A large number of fishers were observed returning without any fish or with less number of fishes.

CONCLUSION

Community fishing is not only the festival of fishing ; it also helps to bring unity among the different communities in the region. Both the beels are connected with the feelings and emotions of the people of this region, which is reflecting in their folk literature. Jalikhara is also a vital water-submerged ground to

both terrestrial and water birds (Medhi and Sharma 2015). Therefore, it is suggested that (a) Community fishing should only be allowed in the peripheral areas of the beels to prevent mass killing of threatened fish species, (b) The growth of weeds and vegetation in the beels should be reduced for more fish production, (c) Scientific fishing techniques and sustainable fishing gears should be allowed in the beels for fishing, (d) Construction of cement and brick industry in the peripheral areas of the beels should be banned, (e) Awareness should be made among the local people on the sustainable use of wetland resources.

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