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Social Taboos on Wetland Fauna

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ABSTRACT

Taboos play a significant role in conservation of biodiversity; they regulate practices of a community and reduce pressure on species. Wetlands of Bangladesh are diversified and rich with biodiversity. The objective of the study was to explore the potential of taboos in development and conservation planning of wetland fauna. To document the taboos in a wetland the biodiversity, conservation, social norms and practices of the Medir Haor under Nasirnagar sub-district of Brahmanbaria district were studied. Community consultations, key informant interviews and field observations were conducted between July 2022 and June 2024. Many fishes are not eaten. At least 15 species of animals were recorded undisturbed and respected because of religious and social norms. The sacred lands are protected habitat for fauna. The taboos on fauna have association with myth, tells, cultures and social values. Almost all the taboos are known to all age groups of the people even though the traditional knowledge is not documented and is transmitted verbally. Taboos associated with religious norms are being practiced without any deviation. Taboos help conservation. Taboos are very localized specific. Since there is a gap in knowledge management, a necessary attempt is recommended to include the values of taboos in environmental education and conservation education. Documentation of those taboos and exploring the links with science and history can help conservation efforts. Inter-disciplinary researchers may contribute to more comprehensive and rigorous study. Policy advocacy is necessary to make the policy makers understand the importance of taboos in conservation planning and implementation.

INTRODUCTION

Bangladesh is a land of wetlands; more than 60% of the country is wetland. The life and livelihoods of the people of the country is wetland dependent. The culture, customs, norms, tradition, etc., of the country is wetland driven. Human association with the wetland animals is very significant here. There are many dos and don'ts on the interaction of humans with animals. There are taboos on many animals. Such indigenous belief systems often play a significant role in the conservation of animals. Traditional knowledge lays the foundation of the social capital of a community and plays a significant role in conservation of biodiversity. Due to taboos many species are conserved. Harvesting or killing for consumption is a direct factor of population of a species. Interference in the food chain and habitat is also vital for a population of a species. 'Not be taken as food' or 'not be killed' because of the taboo is not sufficient enough for a species to service, but taboos reduce the threats to an animal. The current paper aims to document the taboos on wetland animals in the Haor basin of Bangladesh. Haor is bowl-shaped with a large tectonic depression. It receives surface runoff water by rivers and canals, and consequently, a Haor becomes a very extensive water body in the monsoon and dries up mostly in the post-monsoon period. Distribution of Haor is limited to the northeast of Bangladesh and some adjacent parts of India. In Bangladesh, Haor basin covers an area of approximately 24,500 km^2. There are 411 Haors comprising an area of about 8000 km^2 wetlands. Around 14% of the total paddy production in Bangladesh is produced in the Haor basin.

The objective of the study was to know the taboos on the wildlife of wetlands and the current state of practices of those taboos, so that the knowledge can be considered in the process of conservation planning and implementation.

MATERIALS AND METHODS

It was a semi-ethnographic study. The study was conducted in the Medir Haor, located in Nasirnagar sub-district under Brahmanbaria district. The author was from that community. To document the taboos, there were (a) Literature review, (b) Community consultations (c) Key-informant Interviews and (d) Direct observation. The in-depth study was conducted between July 2022 and June 2024. Following the International Society of Ethnobiology (2006)'s ISE Code of Ethics for this study the purpose of the study including objectives, methodology, data collection, and the dissemination and application of results were discussed in detail with the participants of community consultations and key informant interview.

Literature review

The folklores, stories and proverbs that were available in published books were studied to understand if there were any taboos noted. Only a few books were found in the folklores of the subdistrict. Some folk songs of Nasirnagar were also analyzed to find the animal association. A few grand-mother stories were listened to learn animal association.

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Community consultations

Community consultations were conducted both in formal and informal ways. There were 10 formal consultations that were conducted in a mixed group in house yards in different locations in the village Nasirnagar, Nasirpur, Monoharpur and Kistapur. Such consultations were conducted mostly during the evening and the participants were pre-selected and invited. The selection of the participants for the community consultations were identified based on their knowledge on the social practices. They were mostly community leader, elderlies and locally considered as knowledgeable. There were eight participants in a consultation on average. Non-formal consultations were conducted mostly on market places of Nasirnagar and Nasirpur. There was no specific selection process of participants for the non-formal consultations but everyone interested to sit in discussion were welcomed. Six non-formal community consultations were conducted. Such open group discussion was found used by Borah & Prasad (2017) in their ethnozoological study of medicinal use of animal in Assam, India and by Mengistu *et al.* (2024) in Ethiopia.

Key-informant Interviews

Key-informant interviews were conducted with elderly and scholarly community members. The interview was open-ended in a semi-structured questionnaire (Jaroli *et al*, 2010; Borah & Prasd, 2017). There were 16 Key-Informant Interviews conducted.

Direct observation

Direct observation includes understanding the field reality if the taboos are in practice. During the direct observation people present in the spots were randomly interviewed, talked, discussed, etc.

Study Area

The study area Medir Hoar is one of the small hoar of Bangladesh. The core Haor area is around 628 hectares. Major part of the Medir Hoar is located in Nasirnagar sub-district under Brahmanbaria district. There are seven perennial water bodies which are called as beel located inside the Haor, viz, Korati beel, Beel Balia Juri, Beel Gagutia, Beel Uttar Balla, Beel Bak Langon Atauri, Beel Kupa, Chachua Medi. The Langon is the prime river of the basin, but the Kulkulia, Bemali and Kainja are also the perennial rivers. There are twenty villages in the Medir Haor basin. Medir Haor is a vast water body for about five months during the monsoon season, May to September every year. During the winter season the land area becomes cropland; the major crop is rice but also there is cultivation of vegetables and groundnut in areas adjacent to villages. The Haor is subject to monsoon flooding every year. Medir Haor supports a population of around 25,000 individuals who rely on its resources.

There was a thematic analysis of the data and information recorded from the study.

RESULTS AND DISCUSSION

The study has recorded number of taboos on wetland fauna in the Medir Haor. There are taboos on all most all classes of animals. There are taboos on both invertebrates and vertebrates. The recorded taboos in different animal classes from the Medir Haor is a as below:

Invertebrate

The crab is not eaten because it is believed that consuming it will make the tongue feel thick. Students, who are Hindu, will not eat or kill crabs since it is associated with Goddess Saraswathi, the Goddess of education. There was no evidence found of association of Goddess Saraswathi with crab in iconography or any description but such a belief is widely practiced. Also, the centipede has such an association according to the local belief and the students do not usually kill any centipede. Since the spider protected Prophet Muhammad (SM) and Abu Bakr in the Cave of Thawr, all types of spiders, including water spiders too, are not killed. Regarding dragonflies, there is a taboo in which Gandhari, one of the characters in the Mahabharata, lost all her hundred sons because she made a necklace of 100 dragonflies in her previous life. The dragonflies are not killed. The butterflies bring the good news of the marriage ceremony, for that young girl must not kill them and allow them to go away. If the butterfly sits in the body of a girl at the age of marriage eligibility and the family is searching for a bridegroom for her, the butterfly will be decorated with vermillion on its forehead. The mud made nest of the house wasp will not be destroyed, it is believed that if someone destroys it his house will be lost shortly. No children will catch a fairyfly, if they do, they will have bedwetting.

Fishes

The Napter Pora Koi (Badis badis) is not eaten because it is a reborn fish. The myth is that an unlucky barber while washing it swam away into the river. In fact, this fish is very small and even not eaten by other fishes. Mrigal Fish (Cirrhinus cirrhosus) is not eaten by pregnant women. The Great Snakehead (Channa marulius) is not eaten by many people specifically by Muslim as it is associated with Hajrat Shahjalal and is considered holy. Helicopter Catfish (Wallago attu) is not eaten in the month of Kartik, mid-October to mid-November. Gaura fish (Clupisoma gaura) is not eaten since it eats human stool but many fishes do so. There is a common saying on blaming, "All fish eat stool, but only the Gaura fish is blamed." Men will avoid eating the head of Asian Stinging Catfish (Heteropneustes fossilis) because eating will cause their wife to die. Indian Chaca fish (Chaca chaca) is eaten by higher class of Hindus and Muslims, but it is used as a medicine for the babies to stop problems like teeth grinding and bedwetting. Catching fishes from canals in very early morning was found forbitten, specifically the spotted snakehead (Channa punctata). The ghost will disturb, even there is risk of being killed by Macho Bhut. Macho Bhut, literary meaning, Fish eating ghost, like the spotted snakehead very much.

Amphibians

The big bullfrogs have frog-stones. Frog keeps it in its mouth and when it takes food, they keep it in the ground and after having the food they take this in mouth again. Frog crossing a road in a group is a sign of possibility of high flood. Eating the heart of a toad (Duttaphrynus melanostictus) with a banana is a treatment of asthma; but toad is not edible and not being disturbed. Toad is considered as lucky and as inhibitors of a house. In Nasirnagar people are not usually cleaning, including sweeping their houses during the Bengali month Bhadra (mid-August to mid-September) to keep the toads undisturbed.

Reptile

Turtles are forbidden to eat for the Muslims. Turtles and their eggs are not consumed by Muslims. It is considered a serious sin for them. The skinks are the aunty of snakes. If she is disturbed, she will inform the snakes, the snake will take revenge by poisonous bite. will bite. Seeing snake-mate brings good luck. The Banded Krait will usually not bite, since it has two heads, two heads are uncle and nephew in relation; one asks the other to bite. Snake-stone is found in Cobra. It is believed that the common wolf snake is not harmful and it actually protects the house. The rat snake though is non-poisonous but its tail has poison and the snake hits by the tail. Calotes versicolor takes blood from a distance. The Bangla (local language) name of Calotes is Ratochusa, which means blood sucker. People usually stay away from them. The wall lizard calls like "Tik-Tik", "Tik" means right in Bangla. If in decision making discussion among family members or a group of people a wall lizard calls, people consider it as right. The wall lizard is very perfect in projection. According to a myth, Khana was a great lady who can read and assume the future and was famous for early warning of weather, her father-in-law was jealous of her and had cut her tongue, the wall lizard ate the tongue, from then the wall lizard can predict. Wall lizards are not killed. People trust that the monitor lizard can spit, so that they stay far from them.

Birds

The nesting trees of Pallas's Fish Eagle are not cut down because they carry dry twigs to holy Proyaga (a Hindu pilgrim site) for the funeral of their forefathers. If Pallas's Fish Eagle shows up in Medir Haor, a big flood is believed to be on the way. Having an Egret colony in a homestead or a nest in any trees in the backyard is a sign of getting wealth in the near future. Egrets flying to and fro in a normal blue sky is a sign of tornado or nor'easter (erratic rainfall with thunderstorm). Having a net of wild pigeons at home is good, believe that the wild pigeon has association with Hajrat Shahjalal, who introduced Islam in the Haor basin. The common name of this bird is Jalali Kabotar, the pigeon of Jalal. This pigeon is not also eaten. No carnivorous bird is eaten. Killing a nightjar bird may make someone blind or have night blindness. The oriel are good birds, they bring guests to home. The brine fever birds should not be killed because they are calling their beloved wife, their sound is like "Bou kotha kou", which means "wife, please talk". Usually birds are not killed, but for some birds even accidental killing will bring bad luck and sorrow. Birds like ducks and doves are taken as food, but not very common practice because of the law and social norms.

Mammals

Ganges River Dolphin (Platanista gangetica) is the carrier of the Goddess Ganga and considered holy, but its fat is used as medicine for arthritis.

Association with Religion

Animals associated with deities are considered holy. Bahana (vehicle) of Saraswathi is White goose (Anser anser domesticus), during the 80s of the last century goose meat was preferred by students but nowadays this is not in practice. Owl is the carrier of goddess Laxmi, so seeing an owl in the daytime is a sign of good luck. Among the owls, Barn owl is more holy and is named after the goddess Laxmi, it is called Laxmi Pencha, owl of Laxmi. The iconography of the carrier of Ganga describes Ganges River Dolphin (Platanista gangetica); worship of Ganga is very common among the fishermen of the Medir Haor. Carp fish is a must for the Jatra of Goddess Durga, the Jatra is the departure of the goddess Durga. Goddess Monosha is the goddess of snakes; she recovers people from pain. Crow is the Bahana of God Shoni, Shoni saves the believers from bad luck and brings good days. It was found that at least 15 wildlife species of the Medir Haor have association with religious faith and is protected in some extend.

Animals living in sacred lands or long years of fellow land are protected, no one enters the sacred lands without a very urgency. 'Anutpurer Mora' is a fellow homestead for many years located inside the Medir Haor. This land is known for many species of snakes including the Monocled cobra (Naja kaouthia). There are colonies of Egret and Pond Heron in this fellow homestead. The 'Dol Kandi' is located in the center of the Medir Haor. Earlier people avoided visiting this area because of the presence of the snakes. But nowadays during the rainy season this is a popular tourist spot. But the tourists avoided to disturbed any animals there, there is a good population of House Lizards, Hemidactylus brookii.

Knowledge Management

Almost all the taboos are known to all age groups of the people even though traditional knowledge is not documented and is transmitted verbally. The tradition of storytelling has been gradually fading away. The knowledge or norms of taboos are transferred from generation to generation by different tells, sayings, proverbs, folk songs and local festivals. The traditional knowledge of weather forecasts is being transferred to the young from the elderly by practice. If the egret flies

here and there in a normal good sky it will have a tornado; if they fly back to the village, it will have a nor 'wester. If the ant line moves towards high places, it will flood this year. Also floating ant colonies indicate an increase of water level during floods. If the broad bill kingfisher calls frequently, it will have heavy rainfall. If the catfish catch is comparatively less it will have drought next year. Young people are spending more time on mobile phones and social media, and time for interaction with other members is comparatively less now. The knowledge of nor'wester forecasts by seeing flying ergate is not well known to half of the children talked during the field visit of the study. During the early rainy season flogs are calling in the ponds and ditches. The calling frogs are not being disturbed. It is believed that the frogs are calling for rain to come.

Though it was found the knowledge on taboos is good among the young but the cause and origin of the taboos was not known to them. The process of intergeneration knowledge transfer is found interfered since storytelling time has been reduced because of the social media engagement of the young generation.

Conservation value

Taboos have significant conservation values. Some taboos are associated with religious norms and are being practiced without any deviation. Taboos not associated with religion are being deviated but very minutely. Because of the taboos at least 10 species of birds were found protected in the Medir Haor areas, viz., 1. Brain fever bird, 2. Oriol, 3. Owl, 4. Greater Crow, 5. Pied Myna, 6. Brahminy Kite, 7. Black Kite, 8. Pallas Fish-Eagle, 9. Harrier bird, 10. Drogo.

No evidences were found in the policy documents including National Biodiversity Strategy and Action Plan (NBSAP), Jalmohal Management Policy (2009), Wildlife (Conservation and Security) Act 2012, Bangladesh Wild Life (Preservation) Order 1973, Bangladesh Environment Conservation Act, 1995 has found considered the taboos and/or indigenous knowledge as a means of conservation of a species.

Taboos to Forget

Because of medicinal values some species are under threat or at risk especially those related to the treatment of sexual disease and arthritis. For example, the chick of a White Breasted Water Hen is eaten for lengthening the male time in intercourse. Such a belief is seriously harmful for the wetland fauna. White Breasted Water Hen are very rare nowadays, not because of its habitat loss but population loss.

Taboos for conservation' and 'Taboos to Conserve

Conserving biodiversity based on cultural and religious values is often more sustainable than based only on legislation or regulation. In an era where Earth's biodiversity is disappearing at the fastest rate in history, there is growing evidence that informal institutions such as taboos can be effective in promoting conservation. Efforts should also be made to educate young people about the importance of taboos. Taboos need to be documented for the conservation and betterment of the wetlands, and for the dissemination of knowledge.

Discussion

Taboos are informal institutions. According to Jones *et al.* (2008) such an Informal institution governing the use of wild species is present in many societies. Food taboos influence societal preferences, which affect the wider demand for a species. Importance of taboos in conservation and protection of wildlife is well recorded. Egwunatum and Okonta (2023) recorded it from the rainforest of Nigeria. They found that availability of communal interest expressed as taboo for these threatened species affords a safer protection route of migration. The complex cultural taboo of some communities has largely contributed to the sustenance of viable populations in the face of unperceived forest fragmentation threats due to the common relationship that exists between the species and host community.

Understanding of the relationships between human society and nature, including wetlands, as well as an understanding of human context was highly suggested by Kumar *et al.* (2023) for the conservation and protection of wetlands. Social components and interactions can be brought into the ecological concepts by adopting a more inclusive and comprehensive term 'wetland character' and using a social-ecological systems framework framing built around system entities, interactions, and system-level emergence phenomena. The current study also found that understanding the taboos and the process of traditional knowledge management can contribute to the conservation planning process of a wetland. Barman *et al.* (2025) has identified the importance of taboos in conservation and knowledge management. The knowledge systems have been preserved and transmitted through myths, taboos, and religious beliefs from one generation to the next. The traditional process of resource management only focuses on economic efficiency in favor of the state, and thus, the local communities become deprived of the rights to access their resources legitimately (Newaz & Rahman, 2019). The conservation planning and intervention by the government and development agencies needs to consider the social aspects of the wetland resources. The norms and taboos can play a very important role in conservation action design. In that case, effort to raise awareness is important. For that documentation of traditional and folk use of wetland biodiversity needs to be documented properly.

Taboos practiced by some tribal communities are documented in Bangladesh but no specific study on the taboos in wetlands were found. Taboos are mostly considered as a negative practice. Taboos on the use of biodiversity has a positive impact on the ecosystem. The current study has found that due to taboos many wetland species are being conserved by the community. Colding

& Folke (1997) found both endemic and keystone species that are important for ecosystem functions are avoided by specific-species taboos. Specific-species taboos have important ecological ramifications for the protection of threatened and ecologically important populations of species. They have recorded 70 species that were avoided by different human groups through specific-species taboos. About 30% of these taboos prohibit the use of threatened species, predominantly threatened reptiles and mammals. Ihinmikaiye *et al.* (2022) noted the use of myths and taboos in species conservation represent a sustainable in situ means to wildlife protection. Jimoh *et al.* (2017) recommended a strong need of assessing cultural practices, traditional laws and taboos in designing the conservation efforts. To understand how such practices could be strengthened and incorporated into natural resources management and conservation strategies there is a need to have a general overview of existing practices. It was found in the current study that there is a deviation in practice, and this was due to lack of knowledge on the taboos and norms.

For the management of the natural resources and conservation, all conservation strategies must deal with the question of human uses of natural uses (Begossi, 2006); the animal associated with religious faith and social pride and dignity has cultural values and services. Indirect interactions of humans with their environment have led to a contemporary concern for the conservation of fauna since humans have had an extensive impact on the biota, often with cascading effects on many of the components of ecosystems. Alves (2018) noted religion as an example of the indirect relation of humans with nature. Yet beyond being a biological issue, the challenge of conservation must also be viewed from a variety of other perspectives, including social, cultural, and economic contexts.

Species require attention by immediately addressing unsustainable harvesting and encouraging educational efforts directed at all stakeholders, from collectors to end users (Haq *et al.*, 2024). There is a serious lack of documentation of the taboos and indigenous knowledge. Talukder *et al.* (2009) recommended an indigenous knowledge database for wetland management. Indigenous resource management practices should be identified and tenure arrangements should be included in legislation dealing with resource tenure, ensuring these issues are kept on the agenda of policy-makers.

CONCLUSION

In society there are a number of taboos on consuming and using the animal diversity that support species population to survive. Taboos also contribute to the food web of the wetland ecosystem. Due to a gap in the knowledge transfer system the traditional knowledge has been declining. There is a lack of documenting the traditional practices and taboos. The study was conducted with a small number of people, more comprehensive and detailed study will be able to document more taboos. Taboos are very localized and area specific. Taboo has a history of origin. Interlinkage among the researchers from different disciplines, viz., zoologists, anthropologists, sociologists and conservationists may contribute to more comprehensive and rigorous study.

Knowledge transmission between the generations is recommended. Including the values of taboos in environmental education can contribute. The scope of social media in knowledge management could be explored. Documentation of those taboos and exploring the links with science and history can help conservation efforts. Policy advocacy is necessary to make the policy makers understand the importance of taboos in planning. Proactiveness of conservation activities is suggested to popularize the importance of taboos in conservation and protection. Publishing popular articles in newspapers can contribute to this effort.

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