

Impact of Human Activity on Avifauna In and Around the Urpad Wetland (Beel) in Goalpara District of Assam (India)

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Abstract: The Urpad (beel) wetland in Goalpara district of Assam, India is situated 26⁰05.93' N lat. and 90⁰35.60' E long. covering an area of 7.780 sq.km. It is one of the inland natural wetland. The area of wetland is decreasing day by day due to human encroachment. The present study is aiming that the impact of human activities on the migratory avian fauna like Redwattled lapwing (*veellus indicus*), Bronzewinged Jacana (*Meopidicus indicus*), common Crane (*Grus grus*), small blue Kingfisher (*Alcedo atthis*), Black Ibis (*Pseudibis papillosa* (Temminck). The number of these migratory birds in and around Urpad wetland are decreasing. The main human activities are illegal hunting of the birds for pleasure use of wetland area for different purposes like constructions, agricultural practices, extensive fishing and domestic use leading food shortage and destruction of habitats of Birds.

Keywords: Migratory Avifauna, Urpadbeel, Goalpara, Assam

Introduction

Wetlands are amongst the most productive ecosystems on the earth (Ghermandi et al., 2008). A patch of land that develops pools of water after a rain storm would not be considered a "wetland" though the land is wet. Wetlands exhibit enormous diversity according to their genesis, geographical location, water regime and chemistry, dominant species, and soil and sediment characteristics (Space Applications Centre, 2011). It is increasingly realized that the planet earth is facing grave environmental problems with fast depleting natural resources and threatening the very existence of most of the ecosystems. The wetlands are sometimes described as "the kidneys of the landscape" for their functions they perform in hydrological and chemical cycles and as downstream receivers of wastes from both natural and human sources (Mitch and Gosselink, 1986). At present Assam has an

estimated area of 7, 64,372 ha under wetlands which is about 9.74 percent of the state's geographical area.

Urupad Beel (lake) is situated at Agia in Goalpara District, a natural lake. It is one of the biggest lake of lower Assam and also rich in natural resources. The villages surrounding the lake earn their livelihood by fishing in the lake. This wetland is important for bird habitats and uses them for breeding, nesting, rearing young. This lake is visited by number of migratory birds every year during October to March. Urpod Lake is the abode of water lily, water hyacinth, lotus and a number of weeds, water fowl, whistling teal, green pigeon, greater adjutant stork, lesser adjutant stork, egret, king-fisher, and fork-tailed shrike. Birds also use wetlands as a source of drinking water and for feeding, resting, shelter and social interactions (Stewart, 2007). Birds are among the most eye-catching of wetland animals and various species are extremely sensitive to large hydrological changes (Crowder and Bristow, 1988). The majority (about 84%) of these wetlands are formed by rivers and streams and riverine wetlands. Ramsar convention is the first modern global intergovernmental treaty on conservation and wise use of natural resources (www.ramsar.org). Ramsar convention entered into force in 1975. Under the text of the Convention (Article 1.1) wetlands are defined as: "areas of marsh, fen, peat-land or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six meters".

Wetlands locally known as beels are the most common and integral features of the fluvial landscape of Assam. The wetlands are on the floodplains of the rivers Brahmaputra and Barak and their tributaries. There are large number of beels, swamps and marshes, locally known as *jalah*, *doloni*, *hola* and *pitoni*. All these water bodies comprise a vast sheet of water with varying shape, size and depth with rich avifauna.

Materials and Methods

This study is focusing human activities and its impact on condition of wetland and the number of migratory Avifauna. The study is based on primary and secondary data collected from various sources such as Journals, Books, and other published work. The Urpad (beel) wetland is selected for the present study of physiography, biodiversity, support migratory birds, use for human welfare in different role in functioning of ecosystem, use of wetland area in different purposes like construction of road, agricultural land, etc.

Results and Discussion

On the account of bird diversity in the wetland, varieties of aquatic birds are found in the beel. It attracts large number of migratory birds in winter months specially from December to March. The birds found in the beel are Redwattled lapwing (*veellus indicus*), Bronzewinged Jacana (*Meopidicus indicus*), Greyheaded lapwing (*Vanellus cinereus*), White eyed pochard (*Aythya nyroca*), Shoemaker (*Anas clypeata*), Open bill stork (*Anastomus oscitans*), Gadwall (*Anas strepera*), Pintail (*Anas acuta*), Pintail snipe (*Gallinago sterura*), Garganey (*Anas quequedula*), Fereginus Marbale teal (*Marmaronetta*), etc. Three globally threatened species were recorded, such as oriental white ibis (*Threskiornis melanocephalus*), oriental darter (*Anhinga melanogaster*) and blacktailed godwit (*Limosa limosa*) are listed in the near threatened category (IUCN 2010). This habitat by supporting different food sources like fish, crustaceans, invertebrates, water plants and planktons further add to the diversity of wetland birds (Basavarajappa, 2004). Water birds, being generally at or near the top of most wetland food chains are highly susceptible to habitat disturbances and are therefore good indicators of general condition of aquatic habitats (Kushlan, 1992; Jayson and Mathew, 2002; Kler, 2002). From this study it is come to know that the different human activities affecting the condition of natural wetland and due to that the flow of migratory birds also decreasing day by day.

Conclusion

Presently the wetland is under various threats due to human practices in relation with excess utilization of water, inflow of pesticides and fertilizers from the surrounding agricultural practices, weed growth, extensive fishing, encroachment for constructions and poaching of birds unlawfully for pleasure are the foremost threats to the wetland and its avifauna. It is clearly indicates that the number of migratory birds in and around the Urapad Beel is reduced.

For conserving the Urapad Beel wetland and its Avian biodiversity, a management strategy should be prepared for the protection of wetland.

References:

1. Stewart R.E. Jr. (2007): Technical Aspects of Wetlands: Wetlands as Bird Habitat: *United States Geological Survey Water Supply Paper 24-25*
2. Mitsch, W.I. & I.G. Gosselink. 1986. *Wetlands*. Van Nostrand Reinhold, New York.
3. Ghermandi, A., van den Bergh, J.C.J.M., Brander, L.M., Nunes, P.A.L.D., 2008. The Economic Value of Wetland Conservation and Creation: A Meta-Analysis. [Working Paper 79]. Fondazione Eni Enrico Mattei, Milan, Italy.
4. Space Applications Centre (SAC), 2011. National Wetland Atlas. SAC, Indian Space Research Organisation, Ahmedabad.
5. Crowder, A. A., and J. M. Bristow (1988). The future of waterfowl habitats in the Canadian lower Great Lakes wetlands. *Journal of Great Lakes Research* 14: 115-127.
6. Basavarajappa, S. 2004. Avifauna of agroecosystems of Maidan area of Karnataka. *Zoos' Print J.* 21(4): 2217-2219.
7. Jayson, E.A. and D.N. Mathew 2002. Structure and composition of two bird communities in the southern Western Ghats. *J. Bombay Nat. Hist. Soc.* 99(1): 8-25.
8. Kushlan, J.A. 1992. Population biology and conservation of colonial water birds. *Colonial Water Birds* 15: 1-7