

Concept Note

Workshop on

Wetlands of Assam in the context of hydrological connectivity, climate change, ecosystem services and livelihoods with reference to Deepar Beel, Kamrup (Metro) District, Assam

Venue: Indian Institute of Entrepreneurship, Basistha Chariali, Near Game Village, Lalmati, Guwahati-781029

Date: February 02, 2014, Time: 9.30 am-4.30 pm

Organised by Aaranyak

With support from IUCN under Ecosystem for Life - A Bangladesh-India Initiative

Wetlands are vital parts of the hydrological cycle and support exceptionally large biological diversity which make them the most productive ecosystems on the earth. Wetlands provided a wide range of ecosystem services and thereby facilitate livelihoods of many marginalised communities living near wetlands. In India about 5 percent of the country's geographical area is under wetlands supporting about one fifth of its known biodiversity. 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. The majority (about 84%) of these wetlands are formed by rivers and streams and riverine wetlands.

Similar to many parts in India, the wetlands of Assam are facing widespread degradation due to encroachment, land filling and conversion to other landuses, pollution, hydrological alterations, over exploitation of aquatic resources and siltation. Many ecologically, socio-economically and culturally important wetlands have disappeared or late succumbing to pressures of growth in settlement, agriculture and other development activities.

The Deepar beel a Ramsar Site (a wetland of international importance), an Important Bird Area (IBA) as well as a Wildlife Sanctuary (at the core), located near Guwahati has shrunk in its area by about 4 square km in last twenty years. This wetland, a repository of rich biological diversity especially of resident and migratory birds is under tremendous pressure from all sides due to development activities and unsustainable landuse practices. Discharge of pollutants and effluents, illegal encroachment, impact of brick kilns are major factors responsible for the degradation of the wetland's ecosystem. Siltation caused by accelerated soil erosion from the excessively denuded and quarried adjacent hills as well as sediment and solid waste materials carried by the inlet channels have reduced its capacity significantly leading to rapid depletion of its fish productivity. As a result many fishermen families have suffered from loss in income and livelihoods. Fragmentation of the beel into distinct water pools with overgrowth of water hyacinth is a signal of its ecological degradation.

A very important aspect of wetlands especially those formed in a flood plain (like most of the wetlands in Assam) is the hydrological connectivity to nearby rivers and streams- a feature which is often ignored in wetland conservation and management plans. Although Assam used to have many open wetlands having good connectivity to rivers directly or through feeder channels, in many cases the connecting channels have suffered from choking due to siltation, encroachment, and garbage dumping while pollution has spoilt their water quality. Many wetlands have completely lost their connectivity and become closed wetlands.

The connecting channels help wetlands to perform their normal ecological functions efficiently by maintaining natural standards of water quality and quantity. The feeder channels facilitate exchange of water (flow) and sediment fluxes, seasonal replenishment of fish stock, and flushing out pollutants by flood

pulses ridding the wetland of high turbidity, nutrient load and eutrophication. They act as conduits for the incoming and outgoing of flood waters thus helping in flood moderation for adjoining areas as well as sediment distribution.

Healthy feeder channels are essential for ensuring normal productivity and ecological services of wetlands on which local people depend to get various livelihoods. Many economically important and common edible fish varieties migrate to freshwater wetlands for spawning through the feeder channels from the rivers. If inlet channels are congested or polluted replenishment of fish stock suffers and livelihood of fisher folks is jeopardised. Therefore status of hydrological connectivity of a wetland is a crucial determinant of livelihood benefits to local communities. Maintenance and management of connectivity is vital for ecological health of wetland

On one hand there is an abysmal lack of enforcement of existing laws and polices related to protection and management of wetlands, on the other hand effective policies and institutions are also not available for wetland conservation at state level. In Assam there is almost no implementation of the provisions of the Wetland (Conservation & Management) Rules, 2010 framed by Government of India under the Environment Protection Act, 1986. Even in the existing policy instruments that relate to preservation and management of wetlands, the importance of hydrological connectivity has been largely ignored.

Aaranyak(www.aaranyak.org) is carrying out a study on *Status and trends in wetlands with reference to hydrological connectivity, climate change impacts and implications for biodiversity and community livelihood: a case study in Deepar Beel and Maguri-Motapung Beel in Assam, India* with support from IUCN(www.iucn.org) under Ecosystem for Life - A Bangladesh-India Initiative(www.iucn.org/e4l). The overall aim of the study is to assess the trend and status of connectivity of wetlands to transboundary rivers of Bangladesh and India and understand the linkages between hydrological regime, wetland ecosystem and human wellbeing in the context of climate change.

The objectives of the proposed workshop are to (i) Take stock of the conservation and management status of the wetlands of Assam in general (ii) Discuss the significance of good landscape connectivity of flood plain wetlands(iii) Share the framework and results of Aaranyak-IUCN study on the Deepar beel on wetland connectivity and modelling (iv) Examine the governance regime for conservation and management of wetlands at state and national level and (v) Recommend pathways for appropriate research, intervention and policy reforms for sustainable management of wetland resources of the state.

The key expected outcome of the workshop is an enhanced understanding of priorities for policy advocacy for conservation and sustainable management of wetlands with emphasis on connectivity issues. About 30 selected people drawn from academia, scientific community, researchers, practitioners, decision makers, and local communities will participate in the workshop. Officials of IUCN-India and IUCN-Bangladesh will also be present on this occasion. The World Wetland Day which is celebrated worldwide every year on 2nd February will also be solemnised in a befitting manner during this workshop.

For more information please contact:

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