

Comments on Deepor Beel Conservation

Dr. Pratap Jyoti Handique

Gauhati University

pjhandique@sify.com

Deepor Beel is one of the largest representative wetland type found within the biogeographic province, 'Burma Monsoon Forest'. It serves as habitat for diverse but interrelated and interacting communities and populations of plants and animals.

The beel houses a unique hydrophytic vegetation consisting of submerged and floating aquatic angiosperms, aquatic microflora including phytoplankton and bacteria. The marshy border line and peripheral ground area of the beel is rich in plant communities consist of trees, shrubs and grasses. The diverse plant communities as a whole interacting with the physical environment such as topography, soil and climate contributes in the development of a unique habitat arrangement for fish and amphibian species, avifauna and visitor wildlife. Both native and migratory birds are attracted to the area for availability of food and both resting and nesting components in and around the beel.

The hydrophytic vegetation of the deepor beel is consist of seven floristic elements:

1. Free floating Hydrophytes: *Pistia stratiotes*, *Eichornia crassipes*.
2. Sumbmerged suspended: *Ceratophyllum demersum*, *Utricularia aurea*
3. Submerged anchored: *Hydrilla verticillata*, *Potamogeton crispus*.
4. Floating leaves anchored: *Euryale ferox*, *Nelumbo nucifera*.
5. Floating shoot anchored : *Hygroryzha aristata*, *Ipomoea aquatica*.
6. Emergent anchored: *Alpinia nigra*, *Cyperasus compressus*
7. Swaamp and Marsh : *Acorus calamus*, *Alocasia fornicata*

Out of these a number of species are economically important and endemic plant species. Some of the prominent species are *Eurale ferox*, *Azolla pinnata*, *Nymphaea nouchali*, *N. pubescens*, *N. rubra*, *Nelumbo nucifera* and *Trapa natans*. These plant species is providing means of livelihood for a number of local families. Moreover, the local people collect wild plants as food, vegetable and fodder from the beel forest.

It is utmost important to protect the beel from all sort of degradation that rooted from encroachment and other destructive anthropogenic activities, dumping of domestic and industrial waste water, discarding of soild waste and developmental activities creating shrinkage of the water body. This unique ecosystem can be protected and developed only through an integrated approach incorporating all components of environmental health and management together with socio-political policies.

Social & Cultural Values

Deepor beel supports an important fishery, providing a means of livelihood for a number of local families and is used for domestic water supply. Nymphaea nuts, flowers, etc., are harvested for sale in the local markets and these constitute valuable natural crops. The seeds of giant waterlily, annually leased by the government revenue department, are also another major revenue earning source after fish.

Local people traditionally utilise the beel to collect fodder for domestic cattle, natural food, such as, vegetables, flowers, aquatic seeds, fish, molluscs and other essential requirements. Poor people inhabiting the vicinity of the beel ecosystem, collect their required protein in the form of fish and other animal meats. The people of southern boundary commute to the city through the beel water by country boats.

Threats

The past two decades have seen a lot of transformation in the ecological and social character of Chilika. Natural and anthropogenic problems include:

- Construction of railway line along the southern boundary of the Deepor beel;
- Industrial development within the periphery of the beel;
- Large scale encroachment within the Deepor beel area;
- Allotting the government vacant land to private party by Government settlement department;
- Brick making factory and soil cutting within the beel ecosystem;
- Hunting, trapping and killing of wild birds and mammals within and in the adjoining areas of Deepor beel;
- Unplanned fishing practice without controlling mesh size and using water pump, etc.

Conservation Measures

The Government of Assam declared 414 ha of the beel area as a sanctuary (Deepor Beel Sanctuary). Shooting and bird-trapping are prohibited by law, but enforcement is poor. The area is patrolled by the fishery department. A comprehensive management plan is under preparation and there is a proposal to declare the whole beel area as a protected area.

The conservation steps have made over 500 sq km area weed - free. The catch of fish has also shown significant improvement. Due to better management practices and significant improvement in the ecological condition of the Chilika lake, it has been removed from the Montreux Record in November 2002 .