

# Banko Janakari

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## **Conservation of wetlands in Nepal: potential and constraints**

Wetlands ecosystem cover about 6% of the total global land area. They are considered to be one of the most threatened of all major natural ecosystems and are argued to deserve a high priority for conservation.

Wetlands are crucial for human survival and economic well-being, for ecosystem functions and for earth's life support system. Wetlands are sometimes described as “the kidneys of the landscapes” because of the functions they perform in hydrological and chemical cycles and as downstream receivers of wastes from both natural and human sources. Apart from these, now the wetlands are described as carbon dioxide sink and climate stabilizers.

Nepal is a signatory of Ramsar Convention, 1987 and has 9 sites designated as Ramsar sites, totaling area of 34,455 ha. National Wetland Policy, 2003 has been endorsed by the Government of Nepal (GoN) with objective of involving the local people in the management of wetlands and to conserve wetlands biodiversity with wise use of wetland resources. The wetlands can be used for various income generating purposes. Eco-tourism is one of the uses of wetlands which can generate direct and indirect benefits to local people. Similarly, fishing or aquaculture is another potential income generating activity in the wetlands. The policy has given thrust in this aspect of income generation for rural poor people in reducing poverty in the country. The policy states that the legal arrangements to make the wetland management activities effective should be formulated.

Despite the policy instruments, there is still absence of rules, regulations and guidelines regarding wetland conservation and management in Nepal. In some cases, there are overlapping in some of the provisions of existing rules and regulations related to the wetlands. Focus has been given mainly for uses other than conservation of biodiversity and for sustainable use of the wetland for rural livelihood.

So, harmonization of those provisions are necessary on the one hand, and promulgation of new rules and regulations on wetland conservation and management is a must on the other.

There are some key issues which have to be addressed such as all streams and rivers are defined as wetlands in Nepal. There are thousands of streams and rivers in Nepal. So, here question arises that should we manage them for aquatic biodiversity conservation?. Similarly, artificial large area of water bodies such as reservoir created for other purposes such hydropower and irrigation be used for natural biodiversity conservation?

First of all we need to explore wetlands in Nepal. So far, wetlands in Terai region, Kathmandu valley and Himalayan region have been identified from various techniques such as direct counting, image analysis and from secondary sources. So a comprehensive inventory of wetlands in Nepal is necessary.

Legislation and regulatory instruments are important elements for conservation and sustainable use of the wetlands. Project like “Conservation and Sustainable Use of Wetlands in Nepal” supported by Global Environmental Facility and United Nations Development Programme could be implemented in other wetlands as well.

Ministry of Forests and Soil Conservation has formulated National Wetland Policy, 2003 and needs to initiate to promulgate legislation and regulatory instruments to implement the policy. Further, the ministry also needs to take lead role in coordinating with other concerned government agencies to harmonize existing 49 laws and strategies related to the wetlands in Nepal.

## Wetland Special

This special issue of *Banko Janakari* contains six papers on different thematic issues on wetlands. The thematic issues covered by the papers are

- Policy and legislation
- Current status of wetland in Nepal
- Ecological aspects
- Wetland as a habitat
- Wetland management projects

The paper on policy and legislation is “Wetland conservation in Nepal: policies, practices and possibilities”. It highlights on values of wetlands, reviews existing policy framework and legal mechanisms involved in wetlands. It also deals with issues and possibilities of wetland management in Nepal. Finally, it recommends for capacity building, wetland survey and inventory.

The paper “Wise use of wetlands in Nepal” presents common meanings of wetland that are in use around the world. It assesses importance of Nepal’s wetlands and also highlights major wetland activities in Nepal. Wetlands in the country by physiographic and spatial distributions are also presented. An overview of Ramsar sites in Nepal are also presented. Finally, challenges and opportunities of wetland conservation and management are outlined in the paper.

The paper “ Ecological study of Ghodaghodi lake” focuses on physiochemical contamination and their effect on aquatic flora and fauna. The paper concludes the most important challenge to be faced to strike a balance between sustainable human exploitation and maintaining the ecological character of a wetland ecosystem.

The paper “ Habitat mapping and conservation threats to river dolphin in Karnali river of Nepal” presents habitats of river dolphin, which is an endangered species. It focuses on conservation threats such as use of poison, commercial and domestic conservation of fishes, high dependency of people in the river, chemical fertilizer, etc. Finally, it prescribes measures to overcome the above mentioned conservation threats.

The paper “Updated status on of Nepal’s wetland birds” focuses on avian fauna of Nepal in the wetland. The paper discusses about conservation issues of wetland bird communities. Finally, wetland management of wetland bird communities is highlighted.

The paper “Sustainable wetland management for wildlife and people in Koshi Tappu Wildlife Reserve” focuses on livelihood issues of local people related to the wetland resource. It also highlights about the impact on wetland bird such as waterfowl due to the livelihood issues related to the wetland. The concept of community wetland management is discusses at the end.

Conservation and Sustainable use of Wetlands in Nepal is a joint undertaking of the Ministry of Forests and Soil Conservation (MFSC), Global Environmental Facility (GEF) and United Nations Development Programme (UNDP). Project goal, objective, expected outcomes, strategy and approach and management arrangement, which includes partners, demonstration sites (Ghodaghodi lake complex and Koshi Tappu Wildlife Reserve) are presented in the paper.