

Conservation Booklet

Status and Conservation of
Ghodaghodi Lake
Kailali, Nepal



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Status: Ramsar Site, Important Bird Area, Unprotected

Ramsar Designation Date: 13-08-2003

Location: Kailali District of Seti Zone, Tropical Region.

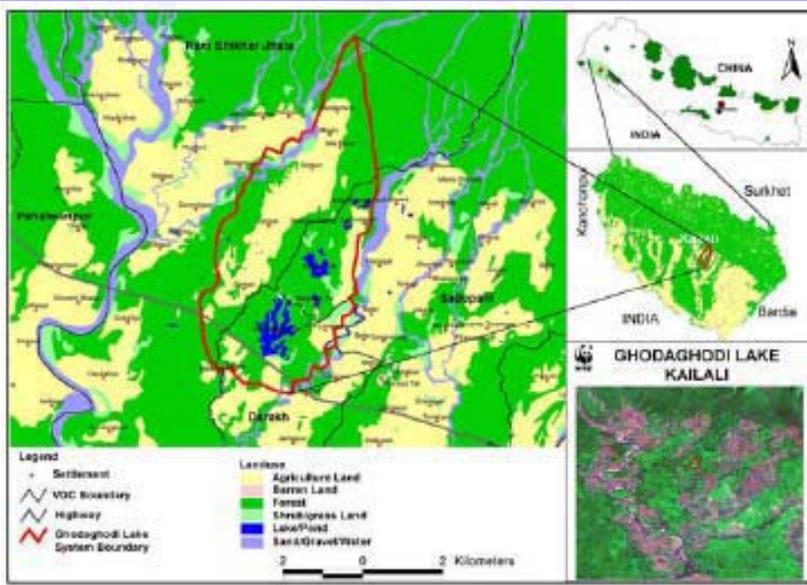
Coordinates: 28°41'03" N, 80°56'43"E

Altitude: 205 m

Area: 2563 hectare

Background

Ghodaghodi Lake Complex is a Ramsar Site and an Important Bird Area (IBA) of Nepal. It is situated in Kailali District of Far-Western Development Region of Nepal. It covers 2563 hectares with 14 lakes and ponds. The area circumscribes the Village Development Committees (VDCs) of Darakh, Sandepani and Ramshikharjhala of Kailali District. The area is bordered by Sandepani VDC in the east and north, Ram Shikhar Jhala VDC in the west and Mahendra Highway in the south. The area is remarkable for its rich biodiversity and connectivity between the Terai plains and the Siwalik of Nepal. There are several legends related to the origin of the lake area.



Habitat Types

It is a large and shallow lake with finger-like projections. It is characterized with various types of wetlands including a number of rivers and their floodplains, ox-bow lakes, swamps, marshes, reservoirs, ponds and paddy fields. It includes three types of tropical deciduous forests namely Sal *Shorea robusta* forest, Asna or Saj *Terminalia alata* forest and mixed deciduous riverine forest.

Fauna

It harbours several species of fish, amphibians, reptiles, birds and mammals. More than 30 mammal species have been recorded from the area including Endangered: Tiger *Panthera tigris* and Hispid Hare *Caprolagus hispidus*; Vulnerable: Smooth-Coated Otter *Lutra perspicillata*, Common Otter *Lutra lutra*, Dhole *Cuon alpinus*, Swamp Deer *Cervus duvaucelli*, Clouded Leopard *Neofelis nebulosa* and Sloth Bear *Melaurus ursinus*; Least Risk: Rhesus Macaque *Macaca mulatta* and Hanuman Langur *Semnopithecus entellus*; and Data Deficient: Bengal Fox *Vulpes bengalensis*. A total of 10 reptile species has been recorded from the area including Critically Endangered: Red-Crowned Roofed Turtle *Kachuga kachuga*; Endangered: Three-Striped Roof Turtle *Kachuga dhongka*; Vulnerable: Marsh Crocodile *Crocodylus palustris*; and Least Risk: Asiatic Rock Python *Python molurus*.



More than 25 fish species have been recorded from the lake including Threatened: *Puntius chola*; and the

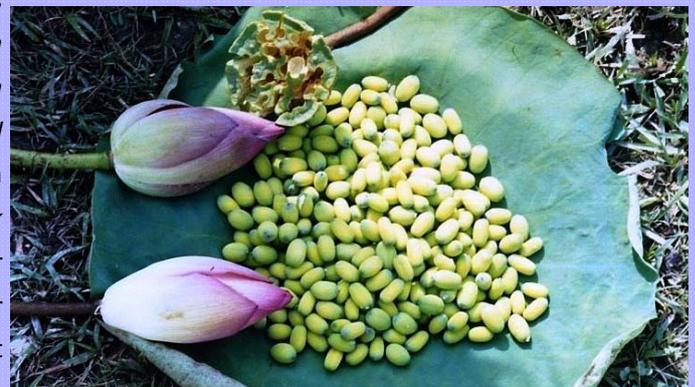


Endemics: *Notopterus notopterus* and *Oxygaster bacaila*. Much of the fish species of the lake area are still unidentified. More than 30 species of butterflies have been recorded from the area. There are some possibilities of occurrence of more insect species in the area. The status of amphibians is still unknown in the area. A total of 140 bird species has been recorded in the Ghodaghodi Lake and Nakhrodi Lake including the globally threatened White-Rumped Vulture *Gyps bengalensis*, Slender-Billed Vulture *Gyps tenuirostris*, Lesser Adjutant *Leptoptilos javanicus*, Ferruginous Pochard *Aythya nyroca*, Darter *Anhinga melanogaster* and Indian-Spotted Eagle *Aquila hastata*.

Flora

More than 470 plant species have been recorded in the area including Globally Vulnerable: Satisal *Dalbergia*

latifolia and Nationally Threatened: Vijaysal *Pterocarpus marsupium*, *Operculina turpethum*, Tatelo *Oroxylum indicum*, Kurilo *Asparagus racemosus*, *Butea monosperma*, *Curculigo orchioides*, Pipla *Piper longum* and Aap or Mango *Mangifera indica*. Four species recorded in this area namely Khair *Acacia catechu*, Simal *Bombax ceiba*, Vijaysal *Pterocarpus marsupium* and Sal or Sakhwa *Shorea robusta* have been protected under Forest Act 1993 of Nepal. The lake area is an excellent source of wild genetic material for cultivated varieties



namely Wild Mango *Mangifera indica*, Wild Rice *Oryza rufipogon* and Wild Perilla *Perilla frutescens*.

Local Communities

The inhabitants of Ghodaghodi Lake Area are the indigenous *Tharus*, hill-migrants and other caste groups. *Tharus*,



one of the most underprivileged tribes in the lowland Nepal, represent about half of the population of the area. *Tharus* are mostly involved in fishing and agriculture. Tharu women, who are shy and avoid outsiders, are involved in collecting snails, fish and other wetland resources. In general, those households that cannot produce enough food for annual subsistence are involved in wage earning (mostly agricultural or forestry), sharecropping, fishing, and collection and sale of Non-Timber Forest Products (NTFPs). The forest around the lake faces pressure from the intense activities of both *Tharus* and hill-migrants. In the catchment area

of Ghodaghodi Lake, more than 400 ha of forest have been converted into agricultural land since 1978, due to the increasing number of migrants from the adjoining hills.

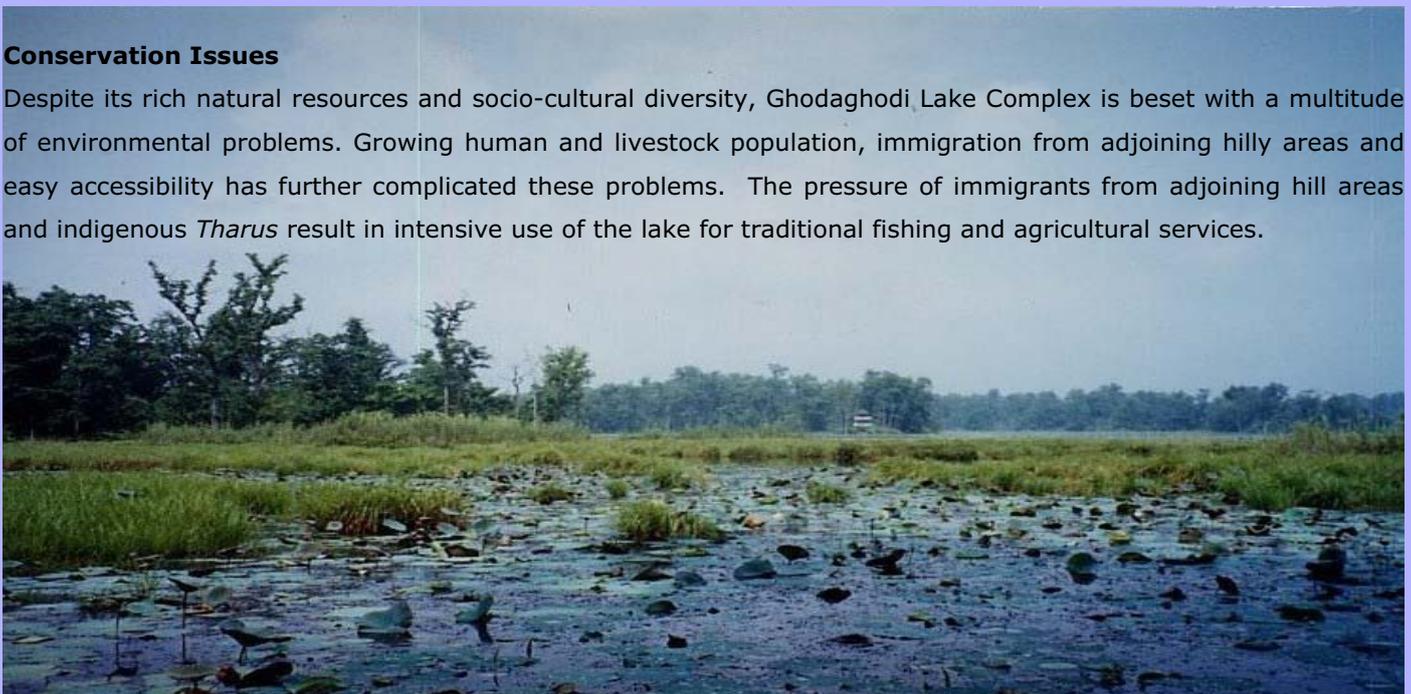


Conservation Importance and Opportunities

- It is designated a Ramsar Site in August 13, 2003 considering its rich diversity and diverse ecosystems. The area is also designated an Important Bird Area (IBA) by Bird Conservation Nepal and BirdLife International due to its rich avifaunal diversity.
- Around 140 species of birds have been recorded from Ghodaghodi Lake and Nakhrodi Lake representing over 16% of the national avifaunal species. Additional bird species can be expected from the remaining 12 lakes and ponds, and surrounding deciduous forest. Likewise, many species of mammals, reptiles, molluscs, fishes, terrestrial plants and aquatic macrophytes have been recorded.
- It regularly supports one percent of the Asian population of Asian pygmy-goose *Nettapus coromandelianus*. It supports six threatened bird species including Critical: White-Rumped Vulture *Gyps bengalensis* and Slender-Billed Vulture *Gyps tenuirostris*; Vulnerable: Lesser Adjutant *Leptoptilos javanicus*; and Near-Threatened: Ferruginous Duck *Aythya nyroca*, Oriental Darter *Anhinga melanogaster* and Indian-Spotted Eagle *Aquila hastate*. It supports substantial populations of migratory waterfowl in the winter months.
- The forest and wetlands serve as the wildlife corridor between the Terai plains and the Siwalik. The lake is an important transient site for migratory species that migrate between Dudwa National Park (India), Suklaphanta Wildlife Reserve and Bardia National Park (Nepal).
- Due to its strategic location between Bardia National Park and Suklaphanta Wildlife Reserve, it provides tremendous opportunities for developing ecotourism in the area, thereby generating income for local communities. Since the area is close to the Mahendra Highway, it is easily accessible to outsiders throughout the year. The area could be an excellent location for a small wetland information centre and indigenous Tharu cultural centre. None exists at present in the area.
- The lake is an important religious place with a shrine dedicated to Ghodaghodi deity. Indigenous Tharu people celebrate a traditional festival *Agan Panchami* during December by worshipping, offering animals and taking holy bath in the lake.
- The area is occupied by indigenous Tharu people and migrants from adjoining hilly areas. So the area would be an excellent location to enjoy the culture of both indigenous and migrant communities at a common place.
- It is the largest natural lake system in the Terai zone of Nepal. It is characterised with various types of wetlands including a number of rivers and their floodplains, ox-bow lakes, swamps, marshes, reservoirs, ponds and paddy fields.

Conservation Issues

Despite its rich natural resources and socio-cultural diversity, Ghodaghodi Lake Complex is beset with a multitude of environmental problems. Growing human and livestock population, immigration from adjoining hilly areas and easy accessibility has further complicated these problems. The pressure of immigrants from adjoining hill areas and indigenous *Tharus* result in intensive use of the lake for traditional fishing and agricultural services.



The major factors putting pressure on the site's ecology include:

- High dependency of local people on forest and wetland resources
- Increasing human encroachment along the lake shores and adjoining forests for settlements and agricultural expansion
- Proliferation of alien invasive species
- Natural eutrophication accelerated by religious and agricultural activities
- Erosion on upstream areas and lake sedimentation
- Drainage of lake water for irrigation
- Highway traffic at the southern edge
- Use of pesticides, herbicides and inorganic fertilisers on agricultural land and poisons for fishing on wetland areas
- Overgrazing on adjacent forest
- Smuggling of Sal or Sakhuwa *Shorea robusta* and Khair *Acacia catechu* timber
- Insufficiency of environmental education and awareness among local community on biodiversity value of Ghodaghodi Lake Complex

Thus the manifestation of continuous, unplanned and irrational human interventions occurring in the area could invite a conservation crisis in the area if we fail to intervene now. Integrated conservation and development programmes that benefit the community and help to maintain the biological diversity of the lake are necessary.

Conservation Efforts

Department of Forest is the management authority of the lake area and Kailali District Forest Office manages the area. Local communities and Community Based Organizations (CBOs) have been involved in the conservation process through community forestry and local institutional development programs such as eco-clubs and women groups. IUCN Nepal and WWF Nepal have been facilitating them for wise use and sustainable management of wetland resources of the area. A participatory community-centred management plan has been prepared for the conservation of the Lake Area. Eco-clubs, women groups and community based anti poaching group have also been formed in the area.

Collaborating Organizations

Institute of Forestry, Bird Conservation Nepal, WWF Nepal, IUCN Nepal, Department of National Parks and Wildlife Conservation, Ghodaghodi Area Conservation and Awareness Forum

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