

**SITE MANAGEMENT PLAN**  
**BEESHAZAR AND ASSOCIATED LAKES**  
**(RAMSAR SITE)**



**GOVERNMENT OF NEPAL**  
**MINISTRY OF FORESTS AND SOIL CONSERVATION**  
**DEPARTMENT OF NATIONAL PARKS AND WILDLIFE CONSERVATION**  
**CHITWAN NATIONAL PARK, CHITWAN, NEPAL**  
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# *Executive Summary*

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## **A. Background**

Wetland being the interface between terrestrial and aquatic communities is the most productive ecosystem on the earth. The term “wetland” is composed of two typical words; wet and land, and have contrast meanings. The word wet means something moist, referring the quality of being, or containing water or liquid. The word land means a solid or specific part of the Earth surface, not covered by water. Wetlands occur only where the water table is at or near the surface of the land or where the land is covered by shallow water. Wetlands often have unique soils that differ from adjacent lands, and support vegetation adapted to the wet conditions (hydrophytes) and conversely it is characterized by an absence of flood-intolerant vegetation.

## **B. Ramsar Convention and Ramsar Site**

Wetlands are multifunctional resources generating considerable social welfare. They provide many important services to human society, but are at the same time ecologically sensitive and adaptive systems. Wetlands are highly productive ecosystems supporting rich biological communities of high economic value and generating a wide range of ecological goods and services as well as income-generating opportunities to the wetland dependent populace. The Convention on Wetlands, signed in Ramsar, Iran, on 2 Feb 1971, is an intergovernmental treaty which provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. There are presently 159 Contracting Parties to the Convention, with 1847 wetland sites, totaling 181 million hectares, designated for inclusion in the Ramsar List of Wetlands of International Importance (RCS, 2009).

## **C. Ramsar Sites of Nepal**

Within small dimension of 147,181 km<sup>2</sup>, Nepal has many productive wetlands which are supporting rich biological communities of international importance. With the same time many of them are bearing sociocultural and historical values. The Convention on Wetlands came into force for Nepal on 17 December 1987. At present, Nepal has nine sites designated as Wetlands of International Importance, with a surface area of 34,455 hectare. They are Koshi Tappu wildlife reserve, Beeshazar and Associated Lakes, Ghodaghodi Lake, Jagadishpur Reservoir, Gyo,ko and Associated Lakes, Gosaikunda and Associated Lakes, Phoksundo Lake, Rara Lake and Mai Pokhari (RCS, 2009).

#### D. Beeshazar and Associated Lakes

Beeshazar is a surface and ground water fed natural fresh water/Khageri irrigation canal lake located in the buffer zone of Chitwan National Park. It is situated in the inner Terai valley (doon) of central Nepal in between the Mahabharat Mountain Range to the north and the Siwalik Range to the south. Direct precipitation during the monsoon and inflow of the Khageri irrigation Canal are major water sources. The lake water is supplied to the canal and the stream during the dry season. The catchment area of the lake helps to control flooding in the Khageri Canal and recharges the ground water or the streams.

Sal (*Shorea robusta*) forest is the dominant at terrestrial estate. The prominent associated species include Asana (*Terminalia alata*), Simal (*Bombax ceiba*) and Bot Dhainyaro (*Lagerstroemia parviflora*). The wetland vegetation consist of Sedge (*Cyperus spp.*), Common Reed (*Phragmites karka*), Morning Glory (*Ipomea carnea ssp. fistulosa*) and Mikania (*Mikania micrantha*). The aquatic vegetation is represented by extensive coverage of floating leafed species mainly water hyacinth (*Eichhornia crassipes*), Water Chestnut (*Trapa bispinosa*) followed by Evening Primrose (*Ludwigia adscendens*). The free floating species include Water Velvet (*Azolla imbricata*) and Duckweed (*Lemna spp.*). The abundant submerged species include Hornwort (*Ceratophyllum demersum*), Hydrilla (*Hydrilla verticillata*) and Water Nymph (*Najas minor*). In general, the vegetation is in floating leafed succession stage. Reed swamp formations are found in backwaters in finger like projections, characteristic of an ox-bow lake system. The area records 37 vascular plants: one pteridophyte, 26 dicots, and 10 monocots.

The globally threatened fauna include Royal Bengal Tiger (*Panthera tigris*), Great One-horned Rhino (*Rhinoceros unicornis*) and White-rumped Vulture (*Gyps bengalensis*). In total 17 fish species are recorded for Beeshazar including the threatened Swamp hurb (*Puntius chola*) and the endemic Asiatic knife fish (*Notopterus notopterus*) and Solmustuma bacoila (*Oxygaster bacoila*). The site supports the largest number of Marsh Muger Crocodiles (15-20 individuals). 273 bird species of 61 families are recorded, of which 60 are wetland species. The Barandabhar forest serves as an important corridor and refuge for wildlife migrations from the Churia to the Mahabharat range.

The current use by local population includes fishing, grazing, fuel wood and fodder collection, domestic use and supply of water for irrigation in surrounding cultivated land. Invasive species are manually removed by local communities with the help of Local NGOs, Buffer zone user committees/Management committee and Chitwan National Park. The District Irrigation Office manages the Khageri irrigation canal. Management committee exists at local level.

## **E. Significance, Approach and Methods**

This site management plan preparation work is financially supported by Nepal Government with technical assistance from DNPWC and in the involvement of local stakeholders. The methodology includes a four-pronged approach of (1) literature review, (2) consultation meetings, (3) sharing meeting, and (4) expert review. This plan will support the implementation of the Convention on Wetlands in the Beeshazar and associated lakes. Since there already exists Chitwan National Park and Buffer Zone Management Plan (2012-2016) implemented by the DNPWC/CNP and BZMC, this specific Site management plan should be used in conjunction with the management plan.

## **F. Priority Areas and Recommended Actions**

Based on the root causes analysis during consultation meetings, 11 priority areas have been identified that includes 7 at strategic level and 4 at site level. In order to address the pertinent issues for the conservation of Beeshazar and associated lakes, appropriate actions are recommended for each priority areas.

### **PRIORITY AREAS**

#### **At Strategic Level**

- I. Maintain healthy wetland ecosystem in and around Beeshazar lake
- II. Ensure the sustainable and perpetual water source
- III. Promote sustainable wetland based eco-tourism
- IV. Raise community awareness on wetland conservation
- V. Facilitate scientific research and monitoring

#### **At Site Level**

- VI. Take actions to control pollution of Beeshazar and associated lakes
- VII. Explore the alternative use of invasive species
- VIII. Discourage forest products harvest and stop poaching
- IX. Study the impact of invasive species in the area

## **G. Summary Cost**

This site management plan is proposed for five years and total budget is estimated to be NRs. 50 million, of which NRs. 34.8 million is proposed for the strategic level activities, NRs. 11.2 million for the activities at site level and NRs. 4 million for the managerial expenses.

## *Acronyms*

BCC	Biodiversity Conservation Center
BCF	Buffer Zone Community Forest
BF	Buffer Zone Forest
BLCC	Beeshazar Lake Conservation Committee
BLMB	Beeshazar Lake Management Board
BPP	Biodiversity Profiles Project
BZ	Buffer Zone
BZMC	Buffer Zone Management Committee
BZUC	Buffer zone Users Committee
CBD	Convention on Biological Diversity
CBO	Community Based Organization
CBS	Central Bureau of Statistics
CF	Community Forest
CFUG	Community Forest Users Group
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CNP	Chitwan National Park
DAO	District Agriculture Office
DDC	District Development Committee
DIO	Department of Irrigation
DNPWC	Department of National Parks and Wildlife Conservation
EIA	Environmental Impact Assessment
GIS	Geographical Information System
GO	Government Organization
GoN	Government of Nepal
Ha	Hectare
HAN	Hotel Association of Nepal
HDSS	Highly Degraded Sal Stand
HH	Household
HMG/N	His Majesty's Government of Nepal
ICIMOD	International Centre for Integrated Mountain Development

ICS	Improved Cooking Stoves
IGA	Income Generation Activity
INGO	International Non Governmental Organization
IUCN	International Union for Conservation of Nature
Km	Kilometer
NTNC	National Trust for Nature Conservation
LPG	Liquefied Petroleum Gas
LSGA	Local Self Government Act
MFSC	Ministry of Forests and Soil Conservation
MOEST	Ministry of Environment, Science and Technology
NBS	National Biodiversity Strategy
NBSIP	National Biodiversity Strategy Implementation Plan
NGO	Non Governmental Organization
NPWCA	National Parks and Wildlife Conservation Act
NTFPs	Non Timber Forest Products
NTB	Nepal Tourism Board
PRA	Participatory Rural Appraisal
RCS	Ramsar Convention Secretariat
SWOT	Strengths, Weaknesses, Opportunities and Threats
TALS	Terai Arc Landscape Strategy
UGs	User Groups
UNDP	United Nations Development Program
VDC	Village Development Committee
WBC	Wetlands and Biodiversity Conservation
WUG	Water User Group
WWF	World Wildlife Fund

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## Beeshazar & Associated Lakes: At A Glance

Name of Wetland: Beeshazar and Associated Lakes  
Ramsar Site No: 1313  
Designated Date: 13 August, 2003  
Ramsar Site Area: 3,200 ha  
Beeshazar Lake: 100 ha  
Latitude: 27° 37' 04.6" N  
Longitude: 84° 26' 11.3" E  
Elevation: 286 m (Average)  
Location: 7.2 km south from East-West Highway following Khageri Canal, in Gitanagar, Bachauli VDCs, Bharatpur and Ratnanagar Municipalities, 15 km far from Narayanghat Bazaar, Chitwan, Nepal

### Physiographic

Region: Inner Tarai

### Bio-geographical

Realm: Indo – Malayan

Wetland Type: Freshwater lake, lacustrine swamp and lacustrine marshes

Source of Water: Direct precipitation and inflow from Khageri Irrigation Canal

### Species Diversity

Mammals: 26 species

Birds: 273 Species

Fishes: 25 species

Herpeto-fauna: 18 Species

Insects: 37 Species

Plants: 131 species

### Globally Threatened & Endangered Fauna:

Royal Bengal Tiger (*Panthera tigris*), Great One Horned Rhino (*Rhinoceros unicornis*), White-rumped Vulture (*Gyps bengalensis*) and Elephant (*Elephas maximus*)

### Ramsar Criteria:

- I. An extensive, typical oxbow lake system of the tropical Nepal inner Tarai, lying inside buffer zone of Chitwan National Park, a World Heritage Site, providing excellent habitat conditions as a water hole and corridor for endangered wildlife species
- II. Assemblage of some rare and endangered large mammals, reptiles and monogeneric species that is important for conservation of genetic diversity

### Threats:

- Low level of awareness amongst local people about ecological importance
- Poverty or Traditional / Household dependency
- Unsustainable use of water resources
- Invasion of exotic species
- Leaching of inorganic fertilizer and pesticide from farmlands
- Development projects and industries
- Pollution
- Weak earthen embankment of reservoir

### Noteworthy Conservation Measure:

Invasive species are manually removed by local communities with support from Chitwan National Park, Buffer Zone Management committee, Buffer Zone User Committees and Local NGOs.



# *Chapter One: Introduction*

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## **1.1 Background**

1. Wetland is the interface between terrestrial and aquatic communities which is the most productive ecosystem on the earth. They are areas where water is the primary factor controlling the environment and the associated plant and animal life (Shrestha *et.al* Undated). The term “wetland” is composed of two typical words; wet and land, and have contrast meanings. The word wet means something moist, referring the quality of being, or containing water or liquid. The word land means a solid or specific part of the Earth surface, not covered by water. Wetlands occur only where the water table is at or near the surface of the land or where the land is covered by shallow water. Wetlands often have unique soils that differ from adjacent lands, and support vegetation adapted to the wet conditions (hydrophytes) and conversely it is characterized by an absence of flood-intolerant vegetation (Mitsch and Gosselink, 1986 cited in WBC Nepal 2006 unpublished).
2. Wetlands are multifunctional resources generating considerable social welfare (Costanza *et al.*, 1997). They provide many important services to human society, but are at the same time ecologically sensitive and adaptive systems (Turner *et al.*, 2000). Wetlands are highly productive ecosystems supporting rich biological communities of high economic value and generating a wide range of ecological goods and services as well as income-generating opportunities to the wetland dependent populace. That is why, an understanding “Ramsar Convention” was made on 2 Feb 1971 for the conservation and sustainable use of wetland resources. Ramsar Convention declares wetlands as Ramsar Sites by highlighting their biological, ecological, social and cultural values.

## **1.2 Ramsar Convention and Ramsar Sites**

3. The Convention on Wetlands is an intergovernmental treaty adopted on 2 February 1971 in the Iranian city of Ramsar, on the southern shore of the Caspian Sea. Thus the Convention’s informal nickname is “Ramsar Convention on Wetlands”. Ramsar is the first of the modern global intergovernmental treaties on the conservation and sustainable use of natural resources, but, compared with more recent ones, its provisions are relatively straightforward and general.

4. The Ramsar Convention (Ramsar Convention Secretariat 2006) has defined wetlands 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.”*
5. The wetlands included in the Ramsar List are known as Ramsar Sites. Ramsar Sites are the wetlands designated by the Contracting Parties for inclusion in the List of Wetlands of International Importance because they meet one or more of the Ramsar Criteria. List of Wetlands of International Importance (“Ramsar List”) refer to the list of wetlands which have been designated by the Contracting Parties in which they reside as internationally important according to one or more of the criteria that have been adopted by the Conference of the Parties. The Ramsar List was established in 1971.
6. Wetlands included in the list acquire a new status at the national level. They bear special characteristics which are realized by the international community for their significant values. These values are not only for the home ground, or the countries, in which they are located, but for humanity as a whole (Ramsar Convention Secretariat 2006). When a state signs the Convention and becomes a Contracting Party, it accepts three main commitments. The first of these is a requirement to designate suitable wetlands for inclusion in a List of Wetlands of International Importance (‘Ramsar sites’), according to fixed criteria. Parties are required to promote the conservation of sites in this List. Second, they must promote the ‘wise use’ (sustainable use) of all wetlands in their territory. Third, Parties must consult each other about implementation of the Convention, and endeavor to co-ordinate policies, which provide a legal basis for transboundary, regional and global cooperation. Over 240 important wetlands exist in Nepal (IUCN-Nepal 1998) nine wetlands of Nepal are enlisted as Ramsar Sites (RCS 2009).

### **1.3 Ramsar Sites of Nepal**

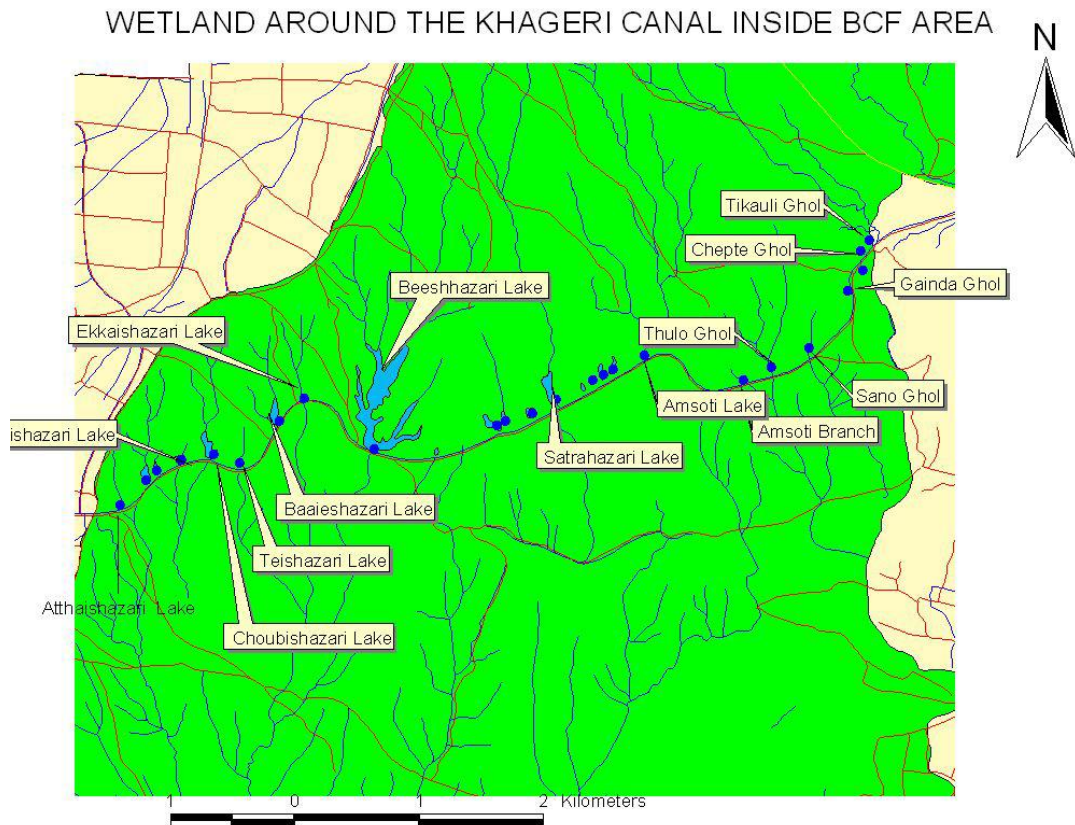
7. Nepal is rich in water resources and biodiversity. It has its own name and definition for wetlands. The Nepali term for wetlands is "Simsar", which means low grade land under water not suitable for cultivation lands. The Informal Wetland Group in Nepal has defined the wetlands according to country context as follows: 'Wetlands represent landmasses saturated with water due to high water tables through ground water, atmospheric precipitation or inundation. They may be natural, artificial, permanent or temporary, static or flowing, and freshwater or brackish' (Bhandari, et al., 1994).

8. National Wetlands Policy of Nepal (HMGN/MFSC 2013) has defined wetlands as: *“Perennial water bodies that originate from underground sources of water or rains. It means swampy areas with flowing or stagnant fresh or salt water that are natural or man-made, or permanent or temporary. Wetlands also mean marshy lands, riverine floodplains, lakes, ponds, water storage areas and agricultural lands.”*
9. The Convention on Wetlands came into force for Nepal on 17 December 1987. Within small dimension of 1,47,181 km<sup>2</sup>, Nepal has many productive wetlands which are supporting rich biological communities of high economic value and generating a wide range of ecological goods and services as well as income-generating opportunities to the wetland dependent populace. With the same time many of them are bearing socio-cultural and historical values. At present, Nepal has nine sites designated as Wetlands of International Importance, with a surface area of 34455 ha. They are Beeshazar and Associated Lakes, Gyoko and Associated Lakes, Gosaikunda and Associated Lakes, Phoksundo Lake, Rara Lake, Mai Pokhari, Ghodaghodi Lake Area, Jagadishpur Reservoir and Koshi Tappu (RCS, 2009). The Koshi Tappu wetland (17,500 ha) is the first Ramsar site of Nepal declared on December 17, 1987 (HMGN/MFSC, 2002). Beeshazar and Associated Lakes (3200 ha), Ghodaghodi Lake Area (2563 ha) and Jagadishpur Reservoir (225 ha) were added to the Ramsar list on August 13, 2003. Similarly, Gyoko and Associated Lakes (7770 ha), Gosaikunda and Associated Lakes (1030 ha), Phoksundo Lake (494 ha) and Rara Lake (1583 ha) were added to the list on September 23, 2007. Lastly, Mai Pokhari (90 ha) was also added in October 10, 2008 (RCS, 2009).

#### **1.4 Beeshazar and Associated Lakes**

10. Beeshazar and Associated Lakes is also known as Bishazari Tal. It was a water gorge/hole “ghol in Nepali” in the past. After the construction of Khageri Irrigation Canal, this ghol is changed into Lake which is at 20000 feet far from the khageri canal starting point that is why people named large water hole as “Beeshazar Tal” (Twenty Thousand Lake in English) and small holes as associated lakes.
11. It forms an extensive, typical oxbow lake system of the tropical Inner Terai area in Central Nepal within the buffer zone of the Chitwan National Park, a World Heritage site.

12. Water is received from direct precipitation during the monsoon and through inflow from the Khageri irrigation canal. Lake water is supplied through the canal and the stream during the dry season. The catchment area of the Lake helps control flooding in the Khageri Canal, and recharges the ground water and streams.



13. Situated between the Mahabharat mountain range to the north and the Siwalik range to the south, this forested wetland provides excellent habitat as a waterhole and corridor for numerous endangered wildlife species that include the critically endangered White rump Vulture (*Gyps bengalensis*), Royal Bengal tiger (*Panthera tigris*) One horn Rhino (*Rhinoceros unicornis*) and the vulnerable Smooth-coated Otter (*Lutra perspicillata*), *Melaurus ursinus*, Crocodile (*Crocodylus palustris*), Lesser adjutant (*Leptotilos javanicus*), stork Ferruginous Duck (*Aythya nyroca*) and Surrounding forest area (*Haileetus leucoryphus*.)
14. The lake bed is situated on laterite soil. Its oligotrophic state is indicated by the low content of Chlorophyll 'A' due to the rich growth of macrophytes; this prevents the penetration of sunlight needed for photosynthesis. However, with respect to nutrient

content and Sechi depth, and based on a one-time analysis during the summer season the Lake is considered to be eutrophic to hypertrophic.

15. Land use patterns; 30% open forests, 40% dense forests, 15% grass lands and 15% pasturelands. The area records 37 vascular plants: one pteridophyte, 26 dicots, and 10 monocots. *Sal* (*Shorea robusta*) is the dominant species whereas, *Saj* (*Terminalia alata*), *Simal* (*Bombax ceiba*) and *Botdhyero* (*Lagerstroemia parviflora*) are prominent associated species.
16. Wetland vegetation of the area includes sedge (*Cyperus* spp.), Common reed (*Phragmites karka*), and Morning glory (*Ipomea carnea* ssp. *fistulosa*). The aquatic vegetation is represented by extensive coverage of floating leafed species, primarily *Eichhornia crassipes*, *Trapa quadrispinosa*, and *Ludwigia adscendens*. Free floating species include the Water velvet (*Azolla imbricate*,) and duckweed (*Lemna* spp.). Abundant submerged species include the Hornwort (*Ceratophyllum demersum*), Hydrilla (*Hydrilla verticillata*), and water nymph (*Najas minor*)
17. Area Consists; 21 species of mammals, 13 species reptiles (including 2 endangered). Important waterhole for wildlife species such as the tiger, rhinoceros (*Rhinoceros unicornis*), among others. Thirteen species of reptiles are assumed to be in the area, including two endangered species
18. Records of 273 bird species of 61 families, of which 60 are wetland species. Bird species include the Grey heron (*Ardea cinerea*), Large cormorant (*Phalacrocorax carbo*), Darter (*Anhinga melanogaster*), Storkbilled kingfisher (*Halcyon capensis*), Ferruginous duck (*Aythya nyroca*), Painted stork (*Mycteria leucocephala*), Black-necked stork (*Ephippiorhynchus asiaticus*), Indian black vulture (*Sarcogyps calvus*), Black vulture (*Aegypius monachus*), Grey-headed fishing eagle (*Ichthyophaga ichthyaetus*), Blackbellied tern (*Sterna acuticauda*), and Great hornbill (*Buceros bicornis*).
19. Reptiles/amphibians Records of 17 fish species in Beeshazar include the threatened *Puntius chola*, and the endemic Asian knife fish, and Common water fish (*Oxygaster bacaila*). The site supports an estimated 20 Marsh crocodiles (*Crocodylus palustris*), the largest number of these animals in a single group in Nepal.
20. Tikauli forest serves as a critical corridor and refuge for wildlife migrations from the Churia to the Mahabharat foothills. Current checklists include 26 mammals, 273 birds, 18 herpetofauna and 25 fish species

21. The current use by local population includes fishing, grazing, fuel wood and fodder collection, domestic use and supply of water for irrigation in surrounding cultivated land.

## **1.5 Stakeholders**

22. The principal stakeholders of the Beeshazar Lake as Ramsar site and their relation with Beeshazar Lake are:
  - a. Chitwan National Park (CNP): Being a governmental authentic body, CNP is responsible for the conservation of biodiversity and management of protected areas from its establishment in 1973. The park has the mandate for the conservation and management of Beeshazar Lake after the declaration of this area as a buffer zone of CNP in 1996. Since Department of National Parks and Wildlife Conservation is the administrative authority for Ramsar Convention, CNP is the management authority for Beeshazar and associated lakes.
  - b. Buffer Zone Management Committee (BZMC): After the endorsement of buffer zone concept in 1996, BZMC was established and designated for sustainable biodiversity conservation and community development in buffer zone through participatory conservation modules in close coordination with CNP. This committee is responsible for conservation of Beeshazar lake and community development of the surrounding areas under buffer zone.
  - c. District Development Committee (DDC), Chitwan: It is responsible for promoting socio-economic development, natural resource management, and conservation within the district. DDCs have growing concern in conservation and sustainable management through a systematic shift towards decentralization of power under the local Self Governance Act of 1999. It is also responsible to promote the tourism throughout the district.
  - d. District Irrigation Office (DIO): In both period scarce and overflowing of water in lake, DIO is responsible for major maintenance of irrigation system and for providing technical backstopping to the Water Users' Committee and make system operational for the use of water resources for agricultural purposes.
  - e. Khageri Irrigation Users Committee (KIUC): It is major influencing stakeholder of Beeshazar Lake because availability of water in the lake directly depends on the water flow in Khageri canal.
  - f. Buffer Zone User Committees: Beeshazar and associated Lakes is surrounded by the area of Mirga Kunja, Barandabhar and Patihani Buffer zone User

Committees. Within umbrella shaped organizational structure of Bufferzone Management Committee, Buffer zone user committee is responsible to manage its area. That is why these committees are directly responsible to bridge out vertical hierarchy and create harmony to manage the Beeshazar Lake.

- g. Buffer zone Community Forest User Groups: - Buffer zone community forest user groups are managing the terrestrial vegetation and lake as per their knowledge and techniques. Local participation is essential for the sustainable management of natural resource that is why concerned forest user groups are real user and influencing stakeholder.
- h. NTNC/BCC: NTNC being a national NGO especially established for nature conservation has been supporting for the conservation of wetland ecosystem. NTNC/BCC has been closely working with CNP especially for Barandabhar corridor forest management. Thus, NTNC/BCC and other conservation support agencies can Support conservation of Beeshazar and associated lakes as well.
- i. Chitwan Tourism Development Committee: This is the main tourism promoting organization whose motive is; promoting tourism business and developing tourism attraction. It explores the local tourism attraction worldwide and creates the environment for lake visiting to interested parties.
- j. Hotel Association: Hotel association is a stakeholder especially for eco-tourism promotion in the area. Tourism is the most potential source of income generation or revenue collection of Beeshazar lake.
- k. Chamber of Commerce Narayangarh and Ratnanagar: This is a business promoting organization whose mission is also creation of sound environment to promote the all kind of business at local level. To promote the eco-tourism in the Beeshazar Lake and the surrounding area, this organization can play the role .
- l. Community Based Organizations (CBOs): To mobilize local resource i.e. human and natural, different organizations are involving in development and recourse management activities at local area. Their role will be vital for the management of lake in days to come.

## **1.6 Significance, Approach and Methods**

- 23. The peripheral and occupied zone of Beeshazar Lake and Associated Wetlands was designated as the Ramsar site in August 13, 2003 i.e. included in the List of Wetlands of International Importance. The criteria employed for its inclusion are large complex of oxbow lakes and scenic/aesthetic environment with representative of an oxbow ecosystem, supporting an appreciable assemblage of rare, vulnerable and

endangered wildlife species. The Beeshazar Lake is itself tourism destination and Chitwan National Park has also provided additional attraction.

24. To conserve lake from emerging problems, local people and community based organization use to form team to organize some activities to minimize then issues. And such *ad hoc* team dissolved after the completion of activities. By looking such unscientific and improper vision of management mechanism, DNPWC/CNP realized the gap of proper and authentic management plan. The motive of this management plan preparation is to formulate the management guideline and mainstream the management action with a clear picture and vision in sustainable basis. DNPWC/CNP has taken the initiation and local stake holders are actively involved to produce an effective and target based management plan.
25. Conservation of Beeshazar and Associated Lakes is concern of local and international community so that this management plan team has paid special attention to local context and international norms and values of Beeshazar and associated lakes (Ramsar Site) management. The following approach and methods were adopted to prepare the plan:
  - i. **Review of the literature:** A team of 5 members from different fields was formed. Team conducted the survey of the literature about the Ramsar Sites in general and Beeshazar and associated wetlands in particular. On the basis of the rapid review of the literature, major issues and problems were identified along with the factors affecting them.
  - ii. **Consultation meeting:** Consultation meetings; 3 at Buffer Zone User Committee level (Mirgakunja, Patihani and Barandabhar), and 1 at Park level, were conducted in the active participation of Chief Warden of CNP, Chairman of Buffer zone Management Committee, Chairman of concerned Buffer Zone User Committees, Representative of Hotel Association, Municipalities, Village Development Committees, Buffer Zone Community Forest User Groups and other stakeholders. The meeting discussed major issues regarding Beeshazar and associated wetlands conservation and identified external threats. Meeting also drew key measure to strike at the grass root level. See the list of participants in Annex.
  - iii. **Sharing meeting:** A one-day sharing meeting was organized at DDC, Chitwan in the chairmanship of Local Development Officer. The draft site management plan was shared and valuable comments and suggestions from the participants were noted and incorporated in the plan accordingly. Representatives of the District committees of the political parties, Chief Warden



of CNP, Chairperson of BZMC and other district level stakeholders were present in the meeting. See annex for the list of participants.

iv. **Expert review:** Draft site management plan was reviewed by a team of experts from technical and legal perspectives. Reviewed plan was approved from DNPWC for implementation in order to manage Beeshazar Lake in sustain basis.

## 1.7 Root Causes

Habitat destruction and degradation are the major disappointing threats to Beeshazar Lake biodiversity. Loss of ecosystem integrity and depletion of species through unsustainable use are equally important in this lake. Low level of awareness is not exceptional in this lake too. Threats to wetland biodiversity conservation are:

26. Beeshazar Lake was declared as Ramsar Site six years back but most of the local people are found unaware about the understanding of “Ramsar Convention” and management rule and regulation of Ramsar sites. They are unknown about the biodiversity status of their lake. They are less aware about ecological, biological and economical importance of Beeshazar Lake that is why they are extracting the resource for short-term benefit or direct use. They are not applying the sustainable/wise use concept in their locality. A lack of concern, awareness, and understanding of the values (e.g., ecological, scientific, aesthetic, economic) of native wetland species and healthy aquatic ecosystems and the human related impacts to them impedes the effective management of wetlands. Basic information is lacking for many aspects of wetland biodiversity within the Beeshazar Lake area with data holdings often fragmentary, out-dated, unavailable or under-used. There is currently little information on understanding of wetland values and functions, the principles of wise use of natural resources, and a lack of awareness of the global importance of the Beeshazar Lake, and only few people at decision making level are fully aware of the ecological and hydrological processes that make wetlands so important for mankind.
  
27. Majority of people are ethnic with traditional occupation of firewood selling, fishing and hunting which has led resource destruction. Poverty or Traditional/Household dependency is other major hinder factor in the sustainable management of Beeshazar Lake. Throughout the Beeshazar Lake area unsustainable use of wetland natural resources is prevalent. Low income group of people including 1281 households (high poverty clusters) inhabit all along the periphery of the forest and lake. These local communities have weak, un-diversified, and insecure livelihood based on the direct exploitation of natural resources. People have little or no options other than exploitation of natural resources in the vicinity of Beeshazar lake. Local people thus accustomed with using wetland products unsustainably. Lack of other alternatives means of livelihoods, ownership over the resources and lack of opportunities to develop sustainable management practices can be blamed for over exploitation and depletion of wetland resources.

28. Beeshazar Lake has not sustainable and enough water sources in one hand and sometimes people use to use lake water unsustainably for the irrigation purpose on the other. In the dry season, Lake's core area drops down due to unavailability of water sources.
29. Alien invasive, species can have a significant negative impact on biodiversity. Several alien invasive species are problematic in Beeshazar lake i.e. introduction and spread of alien invasive species such as *Eichornia crassipes* (Jal Kumbhi), *Ipomoea fistulata* (Besaram), *Leersia hexandra* (Karaute jhar), and also the lotus plant (*Nelumbium nucifera*). The rapid proliferation of these species in many of the lakes, ponds, marshes and swamps is accelerating the serial succession and led to drastic modification of wetland habitats, changing the wetlands into marshy land and can ultimately converted into dry land. Introduced species are responsible for many recorded species extinctions, especially on islands, and are second only to habitat loss as a global cause of extinction (Simberloff, 1995 cited in WBC Nepal 2006 unpublished). Much of the vegetation inside the riverine forest is infested with *Mikania micrantha*, reducing photosynthesis losing species as a whole. The problem can be seen very serious in the wetlands of the floodplain areas of Chitwan National Park.
30. Invasion of exotic species in terrestrial area has been replacing the local indigenous species and disturbing biologically to terrestrial vegetation and animals diversity which is promoting monoculture and pure forest. Similarly, huge encroachment in lake's core area has been severely disturbing Lake Ecosystem.
31. Excessive use of inorganic fertilizers and pesticides in upwards and surrounding farmlands is encouraging eutrophication, lake encroachment and pollution from which lake ecosystem is in vulnerable.
32. With the development/expansion of settlements around the lakes, the demand of natural resource is increasing. To fulfill the demand of growing population and development activities, Lake and its terrestrial zone is disturbed in some extent. The high poverty clusters at the periphery of Beeshazar Lake, remain dependent on their surrounding natural resource base for their livelihood. The unsustainable use of the resources for e.g. firewood, fodder, timber, grass, fish, snails, wild vegetables, and aquatic plant resources from the marsh, swamps and the lakes and rivers is still continuing leading depletion of the composition of the species

33. Due to the Visitors pressure and anthropogenic activities has increased pollution in the lake. There are not any rubbish bins and disposal sites visitor throw beverage bottle and snacks pack into the lake which is reducing the lake's depth. Pressure of engine vehicle is upholding the noise pollution there by disturbance to wildlife.
34. To reserve or re/store water in lake, there is earthen embankment but its stability is too poor and it is not technically suitable location. It can be burst out any time during the monsoon period. Embankment was constructed to reserve water but it has trapped massively soil and in/organic waste inside lake which has supported to reduce the lake depth.
35. Many fauna are experiencing population declines in the area due to illegal hunting and trapping for meat, trade and even persecution. People and children with local weapon "Guleli for bird hunting and Taro for fishing" can be seen in and around the lakes.
36. Insufficient coordination among existing and potential partners and stakeholders to wetland planning at national and local level impedes the conservation and sustainable use of wetlands. There is lack of an integrated multi-sectoral approach to planning at national and district levels, and a lack of a coherent, co-coordinated institutional framework for wetland management.
37. Invasive species such as water hyacinth and water chestnut from the water body are manually removed by local communities with the help of Local NGOs, Buffer zone user committees/Management committee, Local Volunteers and Chitwan National Park. But removed invasive species sail down back to the lake during the monsoon by the water flood.
38. Weak policy and legislative framework, and ineffective enforcement for Ramsar Site biodiversity conservation results Wetland degradation and Loss. Ramsar Convention has approved the site by referring its criteria but no actions or enforcement for monitoring and managing at local level. Although wetland policy exists and it does not support wetland conservation. No attempt has yet been made to adapt the national policy, requirements of Ramsar convention and Ramsar Strategic Plan on wetland conservation and management for the Beeshazar Lake.

39. Lack of options over natural resource use lead to a dependence on wetland resources by local communities causing resource overuse and Wetland degradation. Implementation of destruction based alternative income generating activities has uplifted the resource degradation and biodiversity loss in the lake.
40. Beeshazar and Associated Lakes have high potentiality of alternative income generation through ecotourism trade but no any effective action and investment have been made up to now to promote it. Security in and around lake is not satisfactory.
41. Because of these threats, this international renowned wetland is in vulnerable condition and some wildlife species are in the verge of extinction. If effective management action with proper plan and vision is not made, the existence of lake will not be for longer. With the loss of ecological, economical, biological and social/cultural values, the socioeconomic development of local people cannot be expected further more. That is why conservation and wise use is important for the welfare of both lake and people. These threats should be addressed in an organized way and should be done in collaboration with the relevant partners and interested parties. Therefore, the site management plan of "Beeshazar and Associated Wetlands" has been proposed here for the conservation and wise use of wetlands and their resources. It is a complimentary plan to the existing plans, programs and activities. It must be noted that this plan is a vital component of Chitwan National Park and Buffer Zone Management (2006-2011) which is already being implemented by DNPWC.
42. The vision of the Site Management Plan for the Beeshazar and Associated Lakes is **"the conservation and wise use of internationally important wetlands and their resources for achieving sustainable development"**. The mission is to enhance the Ramsar Convention's mission in the Beeshazar and Associated Lakes.
43. This Site Management Plan is expected to assure community ownership towards their natural resource management for long term conservation of Beeshazar and associated lakes.
44. The principal objective of the "Site Management Plan" toward achieving the above-mentioned vision is to facilitate the implementation of the Convention on Wetlands, Ramsar, Iran 1971 through participatory approach involving all stakeholders and sustain its resources for the benefit of the local communities on a long-term basis.

45. To achieve the principal objective, following specific objectives are set
- Identify relevant stakeholders and establish an effective management mechanism in the active participation of these stakeholders for sustainable conservation of Beeshazar and Associated Lakes
  - Make people aware about the understanding and potentiality of Ramsar Site “Beeshazar and Associated Lakes”
  - Support local communities through conservation based alternative income generating programs such as eco-tourism activities
  - Create opportunities for recreation, education and research
  - Ensure sustainable financial mechanisms for the conservation of Beeshazar and associated Lakes
46. This site management plan also provides a strategic approach for wetland resource management in Nepal's Ramsar site in accordance with the convention on wetlands of International significance (Ramsar convention). It has identified loopholes and constraints for wetland conservation. To propose specific conservation programs of priorities and actions to address the item wise issue, plan has recommended appropriate actions according to priority.

## 1.8 Priority Areas and Recommended Actions

47. This plan aims to create a conducive environment for all stakeholders to be involved in the programs with definite roles and responsibilities to manage wetland in sustainable basis. It is formulated and recommended for implementation with the active participation of all stakeholders. It has prescribed holistic approach in order to maintain the international standard and sustain local bio-physical, socio-cultural and economic environment values. It is expected that the proposed activities will help for the conservation of the wetland complex under consideration and will sustain for long period of time without any financial dearth. This plan is formulated for five years periods, which may emerge with amendment as necessary. Since existing institutional arrangement is found less effective to work smoothly, this plan has proposed an institutional arrangement for conservation of the wetland more effectively and in a sustainable basis. It is learnt from the field level experiences and success story form different places working in two level; strategic and site level, will be better options to achieve the motive of Ramsar Convention.

<b>Priority Areas</b>
<p><b>At Strategic Level</b></p> <ul style="list-style-type: none"><li>I. Maintain healthy wetland ecosystem in and around Beeshazar and associated lakes</li><li>II. Promote sustainable wetland based eco-tourism</li><li>III. Raise community awareness on wetland conservation</li><li>IV. Facilitate scientific research and monitoring</li><li>V. Ensure the sustainable and perpetual water source</li></ul> <p><b>At Site Level</b></p> <ul style="list-style-type: none"><li>VI. Take actions to control pollution of Beeshazar and associated lakes</li><li>VII. Explore the alternative use of invasive species</li><li>VIII. Discourage forest products harvest and control poaching</li><li>IX. Study the impact of invasive species in the area</li></ul>

## Recommended Actions

48. Actions recommended for issues identified at the strategic level are briefly presented below.

### I. Maintain healthy wetland ecosystem in and around Beeshazar and associated lakes

**Rationale:** Most of literatures have showed that area of Beeshazar and Associated Lakes is 3200 hectare where water/core area is 100 hectare but existing dimension of both core and peripheral zone is still doubt. Inadequate and unscientific designing of hydraulic structure (inlet, outlet and embankment), and influx of sediments and nutrients from catchment basin due to natural and anthropogenic factors have led to gradual subsidence of lake and affected the free circulation of lake water. Massive biomass growth of weeds and alien invasive species and high sedimentation of biomass or rain of the organic biomass to the bottom lowered depth of lake and affected the inflow and outflow relationship and storage of water within the wetland system. Their boundary needs to be delineated so as to ensure effective implementation of conservation and management activities.

#### Recommended actions

- i. Survey the locations/coverage of core (water zone) and peripheral zone
- ii. Prepare map of human intervention zone
- iii. Map, classify and manage each zone according to land use categories
- iv. Implement the zoning plan in close consultation with local communities and partners.
- v. Clean the Beeshazar and associated lakes manually in a regular interval

### II. Promote sustainable wetland based eco-tourism

**Rationale:** Tourism will remain a pre-dominant economic activity may increase if not regulated in the future. Tourism has brought forth miracles in the livelihood of the people in some communities and revenue collection in many countries. However, little has been done to diversify tourism activities in the area. One of the ways is to expand ecotourism activities in the wetland areas and engage people in the management of this enterprise and improve their livelihood based on wetland related activities.



### **Recommended actions**

- i. Strengthen existing three entry points (Tikauli, Bandevi and Dakshinkali BCF) and two more if deemed necessary (Navajyoti and Milijuli BCF)
- ii. Place green board for making attention to visitor from making disturbance
- iii. Promote skill training on handicrafts and other local products.
- iv. Provide tourist/nature guide training to local youth
- v. Develop nature trail around lake (50 m far from water line)
- vi. Build special shelters/sitting bulk and manage drinking water facilities
- vii. Keep rubbish bins near by shelter/sitting bulk/tap
- viii. Prohibit the entry of vehicle to the north of Khageri canal
- ix. Establish a mechanism of tourism marketing through website and publications having the coordination with Tourism board and other concerned stakeholders
- x. Encourage ethnic communities to develop socio-cultural tourism by organizing typical folksong, dance and village tour designing artifacts, handicrafts, homesteads and life staple of indigenous people.
- xi. Maintain the access road and construct wooden bridge

### **III. Raise community awareness on wetland conservation**

**Rationale:** People have misconception that the natural resources are god gifted prizes which never empty and reduce. They also have mystical belief that wetlands are perpetual resource for humankind and people do not need to pay attention toward its management. Due to such attitude, people are showing negligence in the wetland conservation. People are uneducated so they could not separate what is wrong and right. Therefore the management of Beeshazar Lake is lacking behind. Education and awareness foster the sustainable conservation approach because education is knowledge and knowledge is virtue. It is regarded as one of the most powerful tools to engage people in the management of natural resources. Sustainability cannot be expected until and unless people are unaware about importance of wetlands and its role in daily life of any living beings. However, not much attention has been given to raise public awareness about the Ramsar Sites and their values at local level. Existing capacity is not adequate to address the issue related to the Beeshazar Lake. There are highly potential human resources at local level which are unexplored in conservation arena. Without developing the capacity of

local people, it is not possible to manage and conserve wetlands as per needed. So, massive efforts should be made to enable local communities and emerge their internal capacity for the management of wetland resources.

**Recommended actions**

- i. Set up an information/eco-learning center for activities such as hands-on activities, demonstration, specimens etc.
- ii. Provide regular conservation training to trainers/facilitators on the wise use of wetlands and mobilize them on “Village to Village awareness programme”
- iii. Conduct capacity building and training to local communities at individual, institutional and system levels
- iv. Run cluster wise Adult Women Environment Education
- v. Design/develop/disseminate educational materials on the wise use of wetlands
- vi. Conduct family-based education to local communities and women
- vii. Aware guides not to pollute lakes by washing, taking bath or littering in the catchment
- viii. Scale up and scale down the achievement of conservation programme

**IV. Facilitate scientific research and monitoring**

**Rationale:** Wetlands are, in general, the biological complex or laboratory but little is known about the wetlands. Despite this fact, low priority is given on research in relation to management. Tradition of using research information at the decision-making levels is slowly improving. Therefore, there is a need of promoting scientific action research to solve the immediate problems. Action research, especially participatory, should also be emphasized to address the immediate problems of the Beeshazar Lake.

**Recommended actions**

- i. Conduct action research on flora, fauna including flagship species for baseline and trend thereof
- ii. Conduct participatory research on ethno-botany and ethno-zoology
- iii. Update social and biophysical database of Beshazar Lake
- iv. Monitor the ecological characteristics of lakes and its catchments
- v. Encourage local, National and international participation in research
- vi. Update the Ramsar Wetland Information Sheet (RIS) periodically

## V. Ensure the sustainable and perpetual water source

Water is major component of wetlands and its availability in sustainable/perpetual basis declares the sustainability of wetlands. Inappropriate designing of hydraulic structure (inlet, outlet and embankment), and influx of sediments and nutrients from catchment basin because of natural and anthropogenic factors have led to gradual subsidence of lake and affected the free circulation of lake water. This has resulted to the favorable environment to the proliferation of aquatic macrophytes and producing anoxic conditions in the lake system. Massive biomass growth of weeds and alien invasive species and high sedimentation of biomass or rain of the organic biomass to the bottom lowered depth of lake and affected water circulation and create water scarcity within the wetland system.

### Recommended actions

- i. Identify the water source and their yields and potentiality
- ii. Maintain the water depth through the maintenance of embankment as per need
- iii. Construct and maintenance inlet and outlet structure in appropriate size and place
- iv. Control sedimentation of organic biomass through mechanical cleaning and flushing during monsoon
- v. Make an agreement with Khageri irrigation to maintain water level in both seasons (monsoon and winter)
- vi. Create buffer zone of the lake around 50 meters away from water level and ban any operation inside this buffer zone to discourage the sedimentation

49. There are many circumstances but it can be broadly classified into two levels; site and strategic and it is better to address the existing and forth coming issues for their own level to adopt the sustainable concept in wetlands. There are some issues which should be addressed from site level. Plan has recommended some actions with its rationale to address identified issues at the site level are briefly presented below.

## VI. Take actions to control pollution of the Beeshazar Lake

**Rationale:** Few stakeholders have contributed to minimize the pollution but there is the gap of continuity with notable minimization activities. Some individual/organization use to organize lake cleaning programme as formality to celebrate or sometimes they do if can generate financial assistance. Besides these, prominent activities are not found at site

level. Garbage dumping site along the east-west highway and visitor misbehavior of throwing garbage of beverage and dry foods into the lake are the main problems. Besides this, encroachment of invasive plants is also considered to be biological pollutants. The existing efforts are not enough to address these issues to keep the existence of wetland as Ramsar site. So the first step should be to stop the activities that cause pollution of the lake and then prevent any activities that lead to the pollution of the lake.

#### **Recommended actions**

- i. Clean the lake regularly ensuring people's participation
- ii. Record the visitor's stuff at entry point to control pollution of beverage bottle
- iii. Ban the engine vehicle to control the sound pollution
- iv. Place the rubbish bins near by the shelter house / sitting bulk and tap
- v. Collect the rubbish weekly and utilize with solid waste management approach
- vi. Keep the notice board having the message of rule and regulation in different places i.e. highway, sitting bulk, foot trail
- vii. Enforce the existing law effectively that visitors can't leave garbage in the lake.
- viii. Charge the visitors for breaking rule and regulations
- ix. Consult with concerned stakeholders to prohibit the garbage disposing at the highway

## **VII. Explore the alternative use of invasive species**

Wetlands are the complex of biological diversity with the same time invasion of one biological species creates the harassment to whole member of that complex. Beeshazar Lake with other biological species including endangered/vulnerable/threatened species is suffering from the critical situation of invasion. Invasive alien species have created the low space for other important species. If these species is not controlled, there will be the high chance of pure forest in days to come. Therefore alternative use of these invasive plants should be searched.

#### **Recommended actions**

- i. Examine to use of the invasive plants to produce paper and fiber based products
- ii. Initiate to use these species to produce biogas
- iii. Scrutinize their potentiality to make vermi-compost
- iv. Encourage people to make decorative stuffs from these plants
- v. Enhance people capacity to make bio-briquette from these plants; like *Lantana camara* and others
- vi. Encourage the people to use water hyacinth for pig feeding.

### VIII. Discourage the forest product harvest and stop poaching

**Rationale:** Due to the rapid growth on human population, demands of forest products are increasing day by day. Pressure of wetland dependent people is also blooming up so that there is some possibility of involving people in poaching. It is utmost need to manage the lake by penetrating these emerging issues. Therefore, efforts should be supported from all sides such as formal, informal and non-formal level.

#### Recommended actions

- i. Encourage people to use alternative sources of timber, firewood and fishing
- ii. Facilitate local groups to establish lake's buffer zone and prohibit any operation on that zone
- iii. Facilitate people to impose legal and social discrimination to the poachers
- iv. Enhance security situation of the area with the provision of guard post near Beeshazar lake
- v. Motivate local people to adopt agroforestry activity
- vi. Conduct forest management training on sustainable concept to local people
- vii. Encourage people for plantation in waste or open areas

### IX. Study the impact of invasive species in the area

**Rationale:** A large number of alien invasive species are naturalized in Nepal as permanent denizens of the native flora and consider as the greatest threat to wetland biological diversity. Control of invasive species may run into serious problems to wetland biodiversity if early steps are not taken to resolve the problem. Invasive species are a current focus of interest of ecologists, conservationists and natural resources managers due to their rapid spread, threat to biodiversity and damage to ecosystems. Given the diverse ecological ground that Nepal holds, it has been crucial to assess the status and impact of alien plants in the Beeshazar Lake.

#### Recommended actions

- i. Inventory coverage of invasive species in and around the Lake
- ii. Study their impact to particular species or whole ecosystem
- iii. Search their potential alternative use or safely decomposition way
- iv. Encourage people to use *Mikania micrantha* for vermin-compost
- v. Make study to reduce their pressure through biological control

## *Chapter Two: Institutional and Financial Mechanism*

### **2.1 Institutional Setup**

Beeshazar and associated lakes located in the buffer zone of Chitwan National Park. Chitwan National Park is the management authority for conservation and management of buffer zone and Beeshazar and associated lakes.

Success and failure of the programme basically depends on institutional foundation and frame. Appropriate and effective institutions are fundamental to the implementation of plan, policies, legislation and international conventions relating to the conservation of biodiversity. Realizing the fact, two storey institutional body; Beeshazar Lake Management Board (BLMB) and Beeshazar Lake Conservation Committee (BLCC) is proposed for the conservation and management of Beeshazar and associated lakes.

#### **Beeshazar Lake Management Board**

In order to look after the overall management and providing guidance to the conservation and management committee, Beeshazar Lake Management Board (BLMB) will make arrangement for management actions. Moreover, the board will be responsible for fund raising and mobilizing it for the conservation of the Ramsar site and socio-economic development of the surrounding area. For the above-mentioned tasks, the institutional structure of the board will be as follows. Biodiversity/wetland Expert and conservation partner's will be selected by management board .

SN	Representation	Designation
1	Chief Conservation Officer, Chitwan National park	Chairperson
2	Representative, District Development Committee, Chitwan	Member
3	Representative, Bharatpur Municipality	Member
4	Representative, Ratnanagar Municipality	Member
5	Chair person of Khageri Irrigation User committee	Member
6	Barandabhar User Committee	Member
7	Mirgakunja User Committee	Member
8	Chairperson, Gitnagar VDC	Member
9	Representatives from conservation partner's-2	Member
11	Wetland expert/Biodiversity Expert-2	Member
12	Asst Conservation Officer, Kasara Sector, Chitwan National Park	Member-Secretary

## Roles and Responsibilities

- i. Prepare annual plan in accordance to approved management plan.
- ii. Raise and mobilize funds to implement plan.
- iii. Strengthen coordination and cooperation at all levels
- iv. Monitor and evaluate progress of the programme implementation
- v. Approval of financial and personnel guidelines of the committee

### **Bishazar lake Management and Conservation Committee**

This committee will be responsible for the implementation of approved programme activities in coordination with local level stakeholders. The committee will function as the sub-committee of Buffer Zone Management Committee. It will represent all the local stakeholders.

S.N	Representation	Designation
1	Assistant Conservation Officer Buffer Section	Chairperson
2	Chairperson of Barandabhar User Committee	Member
3	Chairperson of Mirgakunja User Committee	Member
4	Chairperson of Bandevi Barndabhar BZ CFUG	Member
5	Chairperson of Navajoti BZ CFUG-Member	Member
6	Chairperson of Dhachhinkali BZ CFUG	Member
7	Chairperson of Tikauli BZ CFUG	Member
8	Chairperson of Milijuli BZ CFUG	Member
9	Representative of Khageri Irrigation User committee	Member
10	Chief, Devnagar post, CNP	Member
11	Assistant Conservation Officer, Kasara Section	Member

## Roles and Responsibilities

- i. Prepare operational plan of Bishhazar and associated lake and approve from the management board.
- ii. Implement approved programme activities
- iii. Work under the overall guidance and supervision of the BLMB.
- iv. Work closely with concerned Buffer Zone User Committees and other local stakeholders.
- v. Identify needs and organize provision of specific training or technical inputs where appropriate
- vi. Prepare and up-date progress report and submit to BLMB
- vii. Prepare financial and personnel guidelines of the committee
- viii. Hire staffs for programme implementation as per need
- ix. Raise and mobilize funds to implement plan.
- x. Strengthen coordination at all levels for planning and implementation





## 2.3 Summary Cost

A total of 50 million NRs has been proposed for all the recommended actions for the period of five years. Out of which, NRs. 34.8 million is for the activities at strategic level, NRs. 11.2 million for the activities at site level and NRs. 4 million for the managerial expenses. The detail of the proposed budget is presented in Annex I.

Amount in thousand Rupees

SN	Description	Year					Total (,000)
		I	II	III	IV	IV	
<b>A. Strategic Level</b>							
1	Maintain healthy wetland ecosystem in and around Beeshazar and associated lakes	700	1000	500	500	500	3200
2	Promote sustainable wetland based eco-tourism	5050	4075	2875	2375	1675	16050
3	Raise community awareness on wetland conservation	750	550	500	550	500	2850
4	Facilitate scientific research and monitoring	600	600	600	600	600	3000
5	Ensure the sustainable and perpetual water source	1175	975	575	350	325	3400
<b>Total</b>		<b>8275</b>	<b>7200</b>	<b>5050</b>	<b>4375</b>	<b>3600</b>	<b>28500</b>
<b>B. Site Level</b>							
8	Take actions to control pollution of Beeshazari and associated lakes	920	570	520	520	470	3000
9	Explore the alternative use of invasive species	750	550	550	550	550	2950
10	Discourage forest products harvest and stop poaching	700	800	750	650	650	3550
11	Study the impact of invasive species in the area	500	300	300	300	300	1700
<b>Total</b>		<b>2870</b>	<b>2220</b>	<b>2120</b>	<b>2020</b>	<b>1970</b>	<b>11200</b>
<b>Sub total (A+B)</b>		<b>11145</b>	<b>9420</b>	<b>7170</b>	<b>6395</b>	<b>5570</b>	<b>39700</b>
<b>C. Management Cost</b>		<b>1000</b>	<b>1000</b>	<b>1000</b>	<b>500</b>	<b>500</b>	<b>4000</b>
<b>Grand Total (A+B+C)</b>		<b>12145</b>	<b>10420</b>	<b>9570</b>	<b>6895</b>	<b>6070</b>	<b>43700</b>

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**Annex I**  
**Budget Detail for the Recommended Actions**

**A. STRATEGIC LEVEL**

**1. Maintain healthy wetland ecosystem in and around Beeshazar and associated lakes**

SN	Description	Year					Total (‘000)
		I	II	III	IV	V	
A	Survey the locations/coverage of core (water zone) and peripheral zone	200	-	-	-	-	200
B	Prepare map of human intervention zone	-	100	-	-	-	100
C	Map, classify and manage each zone according to land use categories	-	100	-	-	-	100
D	Implement the zoning plan in close consultation with local communities and partners.	-	300	-	-	-	300
E	Clean the Beeshazar and associated lakes manually in a regular interval	500	500	500	500	500	2500
	<b>Total</b>	<b>700</b>	<b>1000</b>	<b>500</b>	<b>500</b>	<b>500</b>	<b>3200</b>

**2. Promote sustainable wetland based eco-tourism**

SN	Description	Year					Total (‘000)
		I	II	III	IV	V	
A	Strengthen existing five entry point (Navajyoti, Milijuli, Tikauli, Bandevi and Dakshinkali BCF)	500	500	-	-	-	1000
B	Establish a small visitors information center near Beeshazar Lake	1000	100	100	100	100	1400
C	Place green board for making attention to visitor from making disturbance	100	25	25	25	25	200
D	Explore the potential of home stay tourism concept and promote it	500	500	500	500	200	2200
E	Promote skill training on handicrafts and other local products.	200	200	200	200	200	1000
F	Provide tourist/nature guide training to local youth	200	200	200	200	200	1000
G	Develop nature trail around lake (50 m far from water line)	750	750	500	-	-	2000
H	Build special shelters/sitting bulk and manage drinking water facilities	500	-	500	-	-	1000
I	Keep rubbish bins near by shelter/sitting bulk/tap	100	100	50	50	50	350
J	Establish a mechanism of tourism marketing through Website and publications having the coordination with Tourism board and other concerned stakeholders	100	100	100	100	100	500
K	Encourage ethnic communities to develop socio-cultural tourism by organizing typical folksong, dance and village tour designing artifacts, handicrafts, homesteads and life staple of indigenous people.	100	100	100	100	100	500
L	Access road maintenance (Gravel and culverts)	500	1000	500	1000	500	3500
M	Construct and maintain wodden bridges	500	500	100	100	200	1400
	<b>Total</b>	<b>5050</b>	<b>4075</b>	<b>2875</b>	<b>2375</b>	<b>1675</b>	<b>16050</b>

### 3. Raise community awareness on wetland conservation

SN	Description	Year					Total (‘000)
		I	II	III	IV	V	
A	Set up an information/eco-learning center for activities such as hands-on activities, demonstration, specimens etc.	100	100	100	100	100	500
B	Provide regular conservation training to trainers/facilitators on the wise use of wetlands and mobilize them on “Village to Village awareness programme”	300	100	100	100	100	700
C	Run cluster wise Adult Women Environment Education	100	100	100	100	100	500
D	Design/develop/disseminate educational materials on the wise use of wetlands	100	100	100	100	100	500
E	Aware guides not to pollute lakes by washing, taking bath or littering in the catchment	100	100	50	50	-	300
F	Scale up and scale down the achievement of conservation programme	50	50	50	100	100	350
<b>Total</b>		<b>750</b>	<b>550</b>	<b>500</b>	<b>550</b>	<b>500</b>	<b>2850</b>

### 4. Facilitate Scientific research and monitoring

SN	Description	Year					Total (‘000)
		I	II	III	IV	V	
A	Conduct action research on flora, fauna including flagship species for baseline and trend thereof	100	100	100	100	100	500
B	Conduct participatory research on ethno-botany and ethno-zoology	100	100	100	100	100	500
C	Establish social and biophysical database of Beshazar Lake	100	100	100	100	100	500
D	Monitor the ecological characteristics of lakes and its catchments	100	100	100	100	100	500
E	Encourage local, National and international participation in research	100	100	100	100	100	500
F	Update the Ramsar Wetland Information Sheet (RIS) triennially	100	100	100	100	100	500
<b>Total</b>		<b>600</b>	<b>600</b>	<b>600</b>	<b>600</b>	<b>600</b>	<b>3000</b>

5.

6.Ensure the sustainable and perpetual water source

SN	Description	Year					Total (‘000)
		I	II	III	IV	V	
A	Identify the water source and their yields and potentiality	-	100	100	-	-	200
B	Maintain the water depth through the maintenance of embankment as per need	500	200	200	100	100	1100
C	Construct and maintenance inlet and outlet structure in appropriate size and place	500	500	100	100	100	1300
D	Control sedimentation of organic biomass through mechanical cleaning and flushing during monsoon	100	100	100	100	100	500
E	Make agreement with Khageri irrigation to maintain water level in both seasons (monsoon and winter)	25	25	25	25	-	100
F	Create Buffer zone around 50 meters away from water level and ban any operation inside the Buffer zone to discourage the sedimentation	50	50	50	25	25	200
<b>Total</b>		<b>1175</b>	<b>975</b>	<b>575</b>	<b>350</b>	<b>325</b>	<b>3400</b>

## SITE LEVEL

### 1. Take actions to control the pollution of the Beeshazar Lake

SN	Description	Year					Total (‘000)
		I	II	III	IV	V	
A	Clean the lake regularly in people participation	400	150	150	150	150	1000
B	Record the visitor’s stuff at entry point to control pollution of beverage bottle	20	20	20	20	20	100
C	Develop conservation code of conduct and disseminate through proper canal	100	50	25	50	25	250
D	Place the rubbish bins near by the shelter house / sitting bulk and tap	100	50	25	25	-	200
E	Collect the rubbish weekly and utilize with solid waste management approach	50	100	100	100	100	450
F	Keep the notice board having the message of rule and regulation in different places i.e. highway, sitting bulk, foot trail	100	50	50	25	25	250
G	Enforce rules effectively that visitors can't leave garbage in the lake	50	50	50	50	50	250
H	Charge the visitors for breaking rule and regulations	50	50	50	50	50	250
I	Consult with concerned stakeholders to prohibit the garbage disposing at the highway	50	50	50	50	50	250
<b>Total</b>		<b>920</b>	<b>570</b>	<b>520</b>	<b>520</b>	<b>470</b>	<b>3000</b>

### 2. Explore alternative use of invasive species

SN	Description	Year					Total (‘000)
		I	II	III	IV	V	
A	Examine to use these invasive plants to produce paper and fiber based products	200	100	100	100	100	600
B	Initiate to use these species to produce biogas	200	100	100	100	100	600
C	Scrutinize their potentiality to make vermin-compost	100	100	100	100	100	500
D	Encourage people to make decorative stuffs form these plants	100	100	100	100	100	500
E	Enhance people capacity to make bio-briquette from these plants; like <i>Lantana camara</i>	100	100	100	100	100	500
F	Encourage the people to use water hyacinth for pig feeding.	50	50	50	50	50	250
<b>Total</b>		<b>750</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>2950</b>

3. Discourage the forest products harvest and stop poaching

SN	Description	Year					Total (‘000)
		I	II	III	IV	V	
A	Encourage people to use alternative options of timber, firewood, fishing and hunting	100	100	100	100	100	500
B	Facilitate local groups to establish lake’s Bufferzone and prohibit any operation on that zone	100	100	100	100	100	500
C	Facilitate people to impose legal and social discrimination on the poaching	100	100	50	50	50	350
D	Enhance security situation of the area with the provision of guard post near Beeshazar Lake	100	100	100	100	100	500
E	Motivate local people to adopt Agro-forestry activity	100	100	100	100	100	500
F	Conduct forest management training on sustainable concept to local people	100	100	100	100	100	500
G	Encourage people for plantation in waste or open areas	100	200	200	100	100	700
<b>Total</b>		<b>700</b>	<b>800</b>	<b>750</b>	<b>650</b>	<b>650</b>	<b>3550</b>

4. Study the impact of invasive species in the area

SN	Description	Year					Total (‘000)
		I	II	III	IV	V	
A	Inventory coverage of invasive species in and around the Lake	100	50	50	50	50	300
B	Study their impact to particular species or whole ecosystem	100	50	50	50	50	300
C	Search their potential alternative use or safely decomposition way	100	50	50	50	50	300
D	Encourage people to use <i>Mikania micrantha</i> for vermi-compost	100	50	50	50	50	300
E	Make study to reduce their pressure through biological control	100	100	100	100	100	500
<b>Total</b>		<b>500</b>	<b>300</b>	<b>300</b>	<b>300</b>	<b>300</b>	<b>1700</b>

**Annex II**  
**Mammals Found in Beeshazar Lake Area**

<b>Common name</b>	<b>Species name</b>	<b>Habitat</b>
Royal Bengal Tiger	<i>Panthera tigris</i>	Dense Sal forest / mix forest with significant wetland
Common Leopard	<i>Panthera pardus</i>	Sal forest with understorey vegetation
Large Indian Civet	<i>Viverra zibetha</i>	Sal forest / grasslands adjacent to marshes
Small Indian Civet	<i>Viverricula indica</i>	Sal forest /grasslands adjacent to marshes
Asiatic Golden Jackal	<i>Canis aureus</i>	Open forest, adjacent to river courses
Indian Fox	<i>Vulpes bengalensis</i>	Open forest, adjacent to river courses
Yellow throated Marten	<i>Martes flavigula</i>	Sal forest
Common Hare	<i>Lepus nigricollis</i>	Grasslands
Palm Squirrel	<i>Funambulus pennanti</i>	Sal forest adjacent to water courses
Common Mongoose	<i>Herpestes edwardsi</i>	Open grasslands
Small Indian Mongoose	<i>Herpestes auropunctatus</i>	Open grasslands
Hanuman Langur	<i>Semenopithecus entellus</i>	Sal forest/Riverine adjacent to river courses
Rhesus Macaque	<i>Macaca mulatta</i>	Sal forest adjacent to water courses
Sambar Deer	<i>Cervus unicolor</i>	Sal forest/ Riverine forest with significant wetlands
Spotted Deer	<i>Axis axis</i>	Sal forest/ short grasslands
Barking Deer	<i>Muntiacus muntjac</i>	Riverine and Sal forest
Hog Deer	<i>Axis porcinus</i>	Lake grasslands adjacent to marsh, swamps & rivers
Wild Boar	<i>Sus scrofa</i>	Sal forest/ Riverine forests
Asiatic Elephant	<i>Elephas maximus</i>	Riverine forest
Jungle cat	<i>Felis chaus</i>	Sal forest/ Riverine forest
Great One Horned Rhinoceros	<i>Rhinoceros unicornis</i>	Riverine forest/ grasslands with significant wetlands
Sloth Bear	<i>Melursus ursinus</i>	Sal forest/ Riverine/ grasslands, caves adjacent to water courses
Indian Smooth Coated Otter	<i>Leutrogale perspicillata</i>	Marshes, swamps, lakes and rivers in forests

Source: ICIMOD/MOEST 2007 and Bhattarai 2003.



### Annex III

#### Globally threatened species birds found in the Beeshazar Lake Area

English Name	Species	Global Status	CITES Appendix
Lesser Adjutant	<i>Leptoptilos javanicus</i>	GT-VU	
Greater Spotted Eagle	<i>Aquila clanga</i>	GT-VU	2
Black bellied Tern	<i>Sterna acuticauda</i>	GT-VU	
Ferruginous Duck	<i>Aythya nyroca</i>	GT-VU	
Palla's Fish Eagle	<i>Haliaeetus leucoryphus</i>	GT-VU	2
OrienLake Darter	<i>Anhinga melanogaster</i>	G-NT	
Painted Stork	<i>Mycteria leucocephala</i>	G-NT	
Asian Openbill	<i>Anastomus oscitans</i>	G-NT	
Grey-headed Fish Eagle	<i>Ichthyophaga ichthyaetus</i>	G-NT	2
Red-naped Ibis	<i>Pseudibis papillosa</i>	G-NT	
Eurasian Black Vulture	<i>Aegypius monachus</i>	G-NT	2
Lesser Fishing Eagle	<i>Ichthyophaga haw</i>	G-NT	2
Asian White - backed Vulture	<i>Gyps bengalensis</i>	G-NT	
Long-billed Vulture	<i>Gyps indicus</i>	G-NT	2
Black Stork	<i>Ciconia nigra</i>	NT	2
Comb Duck	<i>Sarkidiornis melanotus</i>	NT	2
Black Baza	<i>Aviceda leuphotes</i>	NT	
Crested Goshawk	<i>Accipiter trivirgatus</i>	NT	2
Yellow legged Buttonquail	<i>Turnix tanki</i>	NT	
White necked Needle tail	<i>Hirundapus cochinchinensis</i>	NT	1
Great pied Hornbill	<i>Buceros bicornis</i>	NT	
Indian Pitta	<i>Pitta brachyura</i>	NT	2
Hill Mynah	<i>Gracula religiosa</i>	NT	
Eurasian Bittern	<i>Botaurus stellaris</i>	NT	
Black-necked Stork	<i>Ephippiorhynchus asiaticus</i>	NT	
Lesser-spotted Eagle	<i>Aquila pomarina</i>	NT	2
Changeable hawk Eagle	<i>Spizaetus cirrhatius</i>	NT	
Water Cock	<i>Gallicrex cinerea</i>	NT	
Banded/ bay cuckoo	<i>Cacomantis sonnerati</i>	NT	
Hooded Pitta	<i>Pitta sordida</i>	NT	
Rosy Minivet	<i>Pericrocotus roseus</i>		
Peregrine	<i>Falco peregrinus</i>		1
Common Kestrel	<i>Falco tinnunculus</i>		2
Eurasian sparrow Hawk	<i>Accipiter nisus</i>		2
Besra	<i>Accipter virgatus</i>		2
Shikra	<i>Accipiter badius</i>		2
Pied Hornbill	<i>Anthracoceros albirostris</i>		2
Steppe Eagle	<i>Aquila nipalensis</i>		2
Lesser Spotted Eagle	<i>Aquila pomarina</i>		2
Hen Harrier	<i>Circus cyaneus</i>		2
Western Marsh Harrier	<i>Circus aeruginosus</i>		2
OrinLake Pied Harrier	<i>Circus melanoleucos</i>		2
Eurasian Griffon	<i>Gyps fulvus</i>		2
Black Kite	<i>Milvus migrans</i>		2

<i>English Name</i>	<i>Species</i>	<i>Global Status</i>	<i>CITES Appendix</i>
Brahmy Kite	<i>Haliastur indus</i>		2
Osprey	<i>Pandion haliaetus</i>		2
Red breasted Parakeet	<i>Psittacula alexandri</i>		2
Plum headed Parakeet	<i>Psittacula cyanocephala</i>		2
Alexandrine Parakeet	<i>Psittacula eupatria</i>		2
Changeable Hawk Eagle	<i>Spizaetus cirrhatus</i>		2
Crested Serpent Eagle	<i>Spilornis cheela</i>		2
Collared Scops Owl	<i>Otus bakkamoena</i>		2
Common Scops Owl	<i>Otus sunia</i>		2
Egyptian Vulture	<i>Neophron percnopterus</i>		2
Brown Hawk Owl	<i>Ninox sactulata</i>		2

**Source: ICIMOD/MOEST 2007, Baral 1996, DNPWC 2004**

NOTE: GT-VU (Globally Threatened Vulnerable); G-NT (Globally Near Threatened); NT (Nationally Threatened)

**Annex IV**  
**Important Floral Species Found in Beeshazar Lake Area**

SN	Family	Local Name	Botanical name
<b>Pteridophytes</b>			
1	<i>Azollaceae</i>		<i>Azolla pinnata</i> = <i>A. imbricate</i>
<b>Dicotyledons</b>			
2	<i>Anacardiaceae</i>	Valayo	<i>Semecarpus anacardium</i>
3	<i>Bombacaceae</i>	Simal	<i>Bombax ceiba</i>
4	<i>Ceratophyllaceae</i>		<i>Ceratophyllum demersum</i>
5	<i>Combretaceae</i>	Saj	<i>Terminalia alata</i>
6	<i>Compositae</i>	Gandhe	<i>Ageratum conyzoides</i>
7	<i>Compositae</i>		<i>Ageratum houstonianum</i>
8	<i>Compositae</i>		<i>Caesulia axillaries</i>
9	<i>Compositae</i>		<i>Elephantopus scaber</i>
10	<i>Compositae</i>	Mikania	<i>Mikania micrantha</i>
11	<i>Convolvulaceae</i>		<i>Ipomoea carnea</i> ssp. <i>Fistulosa</i>
12	<i>Dilleniaceae</i>		<i>Dillenia pentagyna</i>
13	<i>Dipterocarpaceae</i>	Sal	<i>Shorea robusta</i>
14	<i>Euphorbiaceae</i>	Kashreto	<i>Euphorbia hirta</i>
15	<i>Euphorbiaceae</i>		<i>Jatropha curcas</i>
16	<i>Euphorbiaceae</i>	Sindhue	<i>Mallotus philippensis</i>
17	<i>Euphorbiaceae</i>	Amala	<i>Phyllanthus emblica</i>
18	<i>Euphorbiaceae</i>	Gutel	<i>Trewia nudiflora</i>
19	<i>Labiatae</i>	Rudilo	<i>Pogostemon benghalensis</i>
20	<i>Labiatae</i>		<i>Scutellaria repens</i>
21	<i>Leguminosae</i>	Tapre	<i>Cassia fistula</i>
22	<i>Leguminosae</i>		<i>Crotalaria alata</i>
23	<i>Lythraceae</i>	Botdhayero	<i>Lagerstroemia parviflora</i>
24	<i>Onagraceae</i>		<i>Ludwigia adscendens</i>
25	<i>Rhamnaceae</i>	Bayer	<i>Zizyphus mauritiana</i>
26	<i>Rubiaceae</i>	Karma	<i>Adina cordifolia</i>
27	<i>Rutaceae</i>	Bel	<i>Aegle marmelos</i>
<b>Monocotyledons</b>			
28	<i>Dioscoreaceae</i>	Githa	<i>Dioscorea bulbifera</i>
29	<i>Gramineae</i>	Siru	<i>Imperata cylindrica</i>
30	<i>Gramineae</i>		<i>Leersia hexandra</i>
31	<i>Gramineae</i>	Narkat	<i>Phragmites karka</i>
32	<i>Gramineae</i>	Kans	<i>Saccharum spontaneum</i>
33	<i>Hydrocharitaceae</i>		<i>Hydrilla verticillata</i>
34	<i>Hydrocharitaceae</i>		<i>Vallisneria natans</i> = <i>V. spiralis</i>
35	<i>Pontederiaceae</i>	Jalakumvi	<i>Eichhornia crassipes</i>
36	<i>Najadaceae</i>		<i>Najas minor</i>
37	<i>Trapaceae</i>		<i>Trapa quadrispinosa</i>

Source; ICIMOD/MOEST 2007

**Annex V**  
**LIST OF PARTICIPANTS**

Sharing Meeting

2066-03-22, DDC, Chitwan

SN	Name	Affiliation
1	Kumar Bahadur Khadka	Local Development Officer, DDC, Chitwan
2	Dr. Narendra M B Pradhan	Chief Conservation Officer, Chitwan National Park
3	Ganesh Pant	Assistant Conservation Officer, Chitwan National Park
4	Kritinath Paudel	Project Coordinator, NTNC/BCC, Sauraha
5	Yam Bahadur Pariyar	Chairperson, Buffer Zone Management Committee
6	Bishnu Hari Timsina	Chairperson, Beeshazar lake Conservation and Maintenance Committee
7	Ramprit Yadav	Terai Arc Landscape Programme
8	Devi Prasad Paudel	DFCC, Chitwan
9	Shankar Mahato	Chairperson, Patihani User Committee
10	Suman Bhattarai	Partnership for Rhino Conservation
11	Basudev Chapagain	Chairperson, Mirgakunja User Committee
12	Khemraj Adhikari	Energy and Environment Officer, DDC
13	Bamdev Adhikari	Vice Chair, Barandabhar User Committee
14	Anju Devi Sharma	FECOFUN, Chitwan
15	Puspa Kamal Subedi	Rastriya Janamorcha, Representative
16	Hari Prasad Paudel	Tikauli BCFUG
17	Laxman Prasad Paudyal	Senior Agriculture Development Officer
18	Kapil Pokharel	Representative, CPN (ML)
19	Dandapani Paudel	Representative, UCPN(Maoist)
20	Bhim Bahadur Gurung	Representative, Nepali Congress
21	Liladhar Acharya	Representative, CPN (UML)
22	Keshav Devkota	Former Chairperson, Buffer Zone Management Committee
23	Dhurga Bahadur Karki	Assistant Forest Officer, District Forest Office, Chitwan
24	Krishna Jayanti Paudel	District Development Committee, Chitwan
25	Rajendra Subedi	District Development Committee
26	Madhav Prasad Upreti	Infrastructure Development Officer, DDC, Chitwan

<b>SN</b>	<b>Name</b>	<b>Affiliation</b>
27	Nisha Neupane	Treasurer, Beeshazar lake Conservation and Maintenance Committee
28	Ram Dares Raya	District Development Committee
29	Durga Bhakta Sharma	District Development Committee
30	J N Thapaliya	Chairperson, Chitwan Tourism Development Committee
31	Purushottam Adhikari	District Development Committee
31	Bishnu Kumar Shrestha	District Development Committee
32	Ranjana Adhikari	District Development Committee
33	Bhima Bhattarai	District Development Committee

**Consultation Meeting, Barandabhar User Committee Level (2066-03-04)**

<b>SN</b>	<b>Name</b>	<b>Affiliation</b>
1	Yam Bahadur Pariyar	Chairperson , Buffer Zone Management Committee
2	Ganesh Pant	Assistant Conservation Officer, Chitwan National Park
3	Kritinath Paudel	NTNC/BCC
4	Laxman Poudyal	Assistant Conservation Officer, Chitwan National Park
5	Bishnuhari Timelsena	Coordinator, Beeshazar lake Conservation and Maintenance Committee
6	Shubhamsha Choudhary	Assistant Conservation Officer, Chitwan National Park
7	Bamdev Adhikari	Barandabhar User Committee
8	Suman Bhattarai	Partnership for Rhino Conservation
9	Suresh Thapa	Ranger, NTNC/BCC
10	Guna Raj Shrestha	Member, Ban Devi BCF
11	Harilal Kandel	Secretary, Mayur Men Group
12	Chandi Pd. Neupane	Buffer Zone Men Group
13	Guman Singh Dawadi	Buffer Zone Chure Men Group
14	Sadananda Dhakal	Bufferzone National Jana Morcha Party
15	Krishna Pd. Prajapati	Chairperson , Shree Bandevi BCF
16	Ramchandra Devkota	Secretary, Shree Bandevi BCF
17	Dhubraraj Khanal	Teacher, Shree Lowar Secondary School
18	Kamal Bahadur Rai	Teacher, Bharatpur Mun-8
19	Hiramani Gurung	Devnagar Shanti Purush Group, Gitanagar 4
20	Krishna Pd. Chapagain	Secretary, Annapurna Men Group, Gitanagear 2
21	Prem Prasad Dawadi	Member, Batuli Pokhari BCF
22	Krishnahari Prasai	Secretary, Batuli Pokhari BCF
23	Manu Maya Pariyar	Devnagar, Gitanagar-2
24	Ramana Pandit	Baranbhar User Group
25	Saraswati Timilsena	Baranbhar User Group
26	Hari Maya Gautam	Jana Jagriti BCF
27	Saraswati Mishra	BCF

SN	Name	Affiliation
28	Lok Bahadur KC	Bandevi BCF
29	Lila Ballav Neupane	Nawa Joti BCF
30	Som Bahadar Dhahal	Teacher, Sahid Smriti Secondary School
31	Bhuwanath Adhikari	Dev Jyoti Lower Secondary School
31	Man Bhadur Pariyar	Devnagar 4
32	Purna Prasad Krasai	Community Study Center, Gitanagar
33	Bamdev Adhikari	Member, Barandabhar User Committee
34	Bhagirath Timilsena	Member, Beeshazar Management Committee
35	Chetanath Bastola	Member, Batuli Pokhari BCF
36	Bel Bahadur Gurung	Chairperson, Khageri Irrigation User Group
37	Keshtra Kumari Pandey	Member, Kesharbahg Women Group
38	Ram Prasad Timilsena	Gitanagar 9
39	Nawaraj Neupane	Nawa Jyoti BCF
40	Krishna Pd. Rimal	Barandabhar User Committee
41	Bishnu Maya Neupane	User
42	Tek Bahadur Gurung	Dhakshinkali BCF
43	Puspa Raj Bhatta	User
44	Tek Bahadur Gurung	User
45	Sanad Shrestha	Bandevi Barandabhar BCF
46	Ramesh Rai	User
47	Santosh Sapkota	Media Person, Narayani FM
48	Damodar Timelsena	User
49	Bijaya Gurung	User
50	Rajiv Ghimire	User
51	Chiranjibi Gautam	User

**Consultation Meeting, Patihani User Committee Level (2066-03-05)**

<b>SN</b>	<b>Name</b>	<b>Affiliation</b>
1	Shankar Mahato	Chairperson, Patihani User Committee
2	Ganesh Pant	Assistant Conservation Officer, Chitwan National Park
3	Kritinath Paudel	Project Coordinator, NTNC/BCC
4	Laxman Poudyal	Assistant Conservation Officer, Chitwan National Park
5	Bishnu Hari Timelsena	Coordinator,
6	Suman Bhattarai	Partnership for Rhino Conservation
7	Shubhamsha Choudhary	Assistant Conservation Officer, Chitwan National Park
8	Ramlal Mahato	Former President, Patihani User Committee
9	Suresh Thapa	Ranger, NTNC/BCC
10	Bikram Mahato	
11	Durga Paudel	President, Jyoti Women group
12	Sabitri Acharya	Jyoti Women group
13	Mina Tamang	Jyoti Women group
14	Ambika Pariyar	Patihani User Group
15	Kedar Prasad Adhikari	Patihani User Group
16	Bishnu Ojha	Secretary, Women Jana Jagaran Group
17	Purna Kala Neupane	President, Women Jana Jagaran Group
18	Laxmi Adhikari	Milijuli Women Group
19	Kedar Prasad Adhikari	Secretary, Prajwal User Group
20	Kumari Maya	Patihani User Group
21	Sudha Tamang	Secretary, Women Development User Group
22	Bhawanath Adhikari	Secretary, Bageshwari User Group
23	Krishnalal Sapkota	President, Bageshwari User Group
24	Ramchandra Ojha	User
25	Gore Bahadur Bote	User, Patihani
26	Gore Bahadur Miya	User, Patihani
27	Shanta Bahadur Lama	User



<b>SN</b>	<b>Name</b>	<b>Affiliation</b>
28	Bir Bahadur Lama	Bikash User Group
29	Indra Bahadur Magar	Bikash user Group
30	Bishnu B. K.	Bikash user Group
31	Baburam Adhikari	Member, Sitamai User Group
31	Deepak Khati	Secretary, Shramik Men User Group
32	Somnath Sapkota	Chairperson, Shramik Men User Group
33	Mukta Bahadur Thapa	Member, Patihani User Group
34	Shovakar Adhikari	Chairperson, Belshahar BCF
35	Man Bahadur Gauatm	User
36	Ghanashyam Ojha	Member, Shahara User Group
37	Balaram Subedi	Vice Chair, Patihani User Group
38	Basudev Sapkota	Member, Belshahar BCF
39	Teknath Timilsena	Member, Belshahar BCF
40	Binod Mahato	Member, Development User group
41	Dharmendra Bote	Member, Development User group
42	Sukdev Mahato	Member, Development User group
43	Dilliraj Subedi	Member, Pragati Jana Akata User Group
44	Kamala Mahato	Member, Pragati Jana Akata User Group
45	Bishnu Baral	Mukunda Mai Women Group
46	Laxmi Tiwari	Mukunda Mai Women Group
47	Laxmi Sapkota	Chairperson, Shramik Women Group
48	Mangali B K	Chairperson, Chhahari User Group
49	Raghunath Dawadi	Member, Patihani User Committee
50	Sher Bahadur Bhujel	Member, Bikash User Group
51	Kaman Singh Lo.	Member, Bikash User Group
52	Sita Pun	Belshar BCFUG
53	Surya Prasad Mahoto	Secretary, Belshar BCFUG
54	Prakash Choudhary	Office Secretary, Belshar BCFUG
55	Krishna Bahadur Thakuri	Member, Hariyali User Group
56	Bhim Prasad Sapkota	User

<b>SN</b>	<b>Name</b>	<b>Affiliation</b>
57	Khemraj Khanal	Secretary, Ganga user Group
58	Bodhraj Ojha	Office Assistant, Patihani User Committee
59	Shubansha Pd. Choudhary	Chitwan National Park
60	Ganesh Gurung	Member, Hariyali Tal User Group
61	Gol Maya Bastola	Patihani User group
62	Lilaraj Tripathi	Secretary, Sharada User Group
63	Yadav Adhikari	Member, Pragati Akata User Group
64	Krishna Bahadur Sapkota	Member, Sitamai User Group
65	Ramkrishna Bote	Member, Hariyali Lake User Group
66	Milan BK	Member, Hariyali Lake User Group
67	Laxman Prasad Paudel	Chitwan National Park
68	Suman Bhattarai	Partnership for Rhino Conservation

**Consultation Meeting, Mirgakunja User Committee Level (2066-03-06)**

<b>SN</b>	<b>Name</b>	<b>Affiliation</b>
1	Basu Chapagain	Chairperson, Mirgakunja User Committee
2	Ganesh Pant	Assistant Conservation Officer, Chitwan National Park
3	Lal Bihari Yadav	Assistant Conservation Officer, Chitwan National Park
4	Kritinath Paudel	Project Coordinator, NTNC/BCC
5	Laxman Poudyal	Assistant Conservation Officer, Chitwan National Park
6	Suman Bhattarai	Partnership for Rhino Conservation
7	Santosh Adhikari	Ratnanagar Municipality
8	Hari Prasad Poudyal	Secretary, Tikauli BCFUG
9	Sandeep Thapa	Treasurer, Tikauli BCFUG
10	Bikram Kumal	Ratnanagar Municipality-6
11	Narayan Prasad Sapkota	Ratnanagar Municipality-1
12	Bhim Thapa Magar	Ratnanagar Municipality-7
13	Bhim Acharya	Member, Mirgakunja User Committee
14	Mohan Bahadur Praja	User
15	Buddhiman Biswakarma	Mirgakunja User Committee
16	Giridhari Choudhary	Regional Hotel Association, Chitwan
17	Sukai Mahato	Member, Mirgakunja User Committee
18	Youban Kumar Parajuli	Office Assistant, Mirgakunja User Committee
19	Mithumaya Thapa Magar	User
20	Shahadev Rimal	Office Assistant, Mirgakunja User Committee
21	Gayatri BK	Diyalo Women User Group
22	Kalpana B K	User
23	Basanti Malla	User
24	Jhagaru Mahato	Mirgakunja User Committee
25	Rajendra Mahato	Milijuli BCFUG
26	Ramarsi Choudhary	Joint Secretary, Milijuli BCFUG
27	Iswari Prasad Dhakal	Forum for Paryabaraniya Farmer
28	Fulendra Choudhary	Mirgakunja User Committee
29	Umitra Paudel	Ratnanagar Municipality 7

<b>SN</b>	<b>Name</b>	<b>Affiliation</b>
30	Gokarna Kumari Mahato	Mirgakunja User Committee
31	Sita Choudhary	Chairperson, Milijuli BCFUG
31	Tulsi Neupane	Milijuli BCFUG
32	Krishna Prasad Sharma	Office Assistant, Tikauli BCFUG
33	Ujwal Sharma Rimal	User

**Consultation Meeting, Chitwan National Park, Kasara (2066-03-07)**

<b>SN</b>	<b>Name</b>	<b>Affiliation</b>
1	Dr. Narendra M B Pradhan	Chief Conservation Officer, Chitwan National Park
2	Dr. Kamal Prasad Gaire	Senior Vet Doctor, Chitwan National Park
3	Lal Bihari Yadav	Assistant Conservation Officer, Chitwan National Park
4	Ganesh Pant	Assistant Conservation Officer, Chitwan National Park
5	Kritinath Paudel	Project Coordinator, NTNC/BCC
6	Laxman Poudyal	Assistant Conservation Officer, Chitwan National Park
7	Suman Bhattarai	Partnership for Rhino Conservation
8	Shubhamsha Choudhary	Assistant Conservation Officer, Chitwan National Park
9	Bhumiraj Upadhyaya	Assistant Conservation Officer, Chitwan National Park
10	Ram Bahadur Adhikari	Chitwan National Park
11	Chitra Bahadur Khadka	Chitwan National Park
12	Rameshwor Choudhary	Chitwan National Park
13	Subesh Prasad Choudhary	Chitwan National Park
14	Tham Narayan Sharma	Office Assistant, Nanda Bhauju User group
15	Basanta Gautam	Office Assistant, Amaltari User Group
16	Rajkumar Bhusal	Office Assistant, Meghauri sub-committee
17	Lokaraj Paudel	Panch Pandav User Group
18	Buddhi Raj Pathak	Assistant Conservation Officer, Chitwan National Park
19	Rabi Pande	Accountant, Chitwan National Park
20	Laba Jung Thapa	Chitwan National Park
21	Krishna Jnawali	Account Officer, Chitwan National Park
22	Rupak Maharjan	Ranger, Chitwan National Park
23	Shivakanta Suman	Assistant Conservation Officer, Chitwan National Park
24	Arabindra Yadav	Ranger, Chitwan National Park
25	Ishwori mahato	Chitwan National Park
26	Dhan bahadur Bote	Chitwan National Park
27	Ram Gulma Yadav	Chitwan National Park
28	Hom Bahadur Karki	Chitwan National Park
29	Mahesh Raj Lamichhane	Chitwan National Park

<b>SN</b>	<b>Name</b>	<b>Affiliation</b>
30	Basenta Devkota	Chitwan National Park
31	Bishnu Prasad Dhakal	Office Assistant, Buffer Zone Management Committee
31	Ramchandra Khatiwada	Assistant Conservation Officer, Chitwan National Park
32	Laxman Raya	Chitwan National Park
33	Lal Kishor Mandal	Chitwan National Park
34	Rajmani Choudhary	Chitwan National Park
35	Chij Kumar Shrestha	Chitwan National Park
36	Shukaram Darai	Chitwan National Park
37	Meghraj Giri	Chitwan National Park
38	Bal Bahadur Rai	Chitwan National Park
39	Ram Julum Yadav	Chitwan National Park
40	Dinesh Choudhary	Chitwan National Park
41	Jaya Bahadur Tamang	Chitwan National Park
42	Raj Bahadur Dhungana	Chitwan National Park
43	Deb Bahadur Kunwar	Chitwan National Park
44	Ramchandra Shrestha	Chitwan National Park
45	Shushil Jha	Chitwan National Park
46	Kedar Gurung	Chitwan National Park

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