

**GLOBAL  
ENVIRONMENT  
FACILITY**

**Nepal**

**Biodiversity Conservation in Nepal**

---

Project Document

*This Project Document has been edited to facilitate public dissemination.  
The original is on file in the GEF Office at UNDP Headquarters in New York.*



## CONTENTS

A.	Context . . . . .	1
	1. Description of subsector . . . . .	1
	2. Host country strategy . . . . .	7
	3. Prior and ongoing assistance . . . . .	8
	4. Institutional framework . . . . .	10
B.	Project Justification . . . . .	11
	1. Problem to be addressed and the present situation . . . . .	11
	2. Expected end-of-project situation . . . . .	13
	3. Target beneficiaries . . . . .	14
	4. Project strategy and institutional arrangements . . . . .	14
	5. Reasons for assistance from UNDP . . . . .	17
	6. Special considerations . . . . .	18
	7. Coordination arrangements . . . . .	19
	8. Counterpart support capacity . . . . .	19
C.	Development Objective . . . . .	19
D.	Immediate Objectives, Outputs, and Activities . . . . .	20
E.	Inputs . . . . .	28
	1. Government of Nepal . . . . .	28
	2. UNDP . . . . .	28
	3. WMI . . . . .	29
	4. KMTNC . . . . .	29
F.	Risks . . . . .	29
	1. Internal risks . . . . .	30
	2. External risks . . . . .	31
G.	Prior Obligations and Prerequisites . . . . .	32
	1. Prior obligations . . . . .	32
	2. Prerequisites . . . . .	32
H.	Project Review, Reporting, and Evaluation . . . . .	33
I.	Legal Context . . . . .	34
J.	Budgets . . . . .	35
	Annex . . . . .	38

## ABBREVIATIONS

DANIDA	Danish International Development Agency
DNPWC	Department of National Parks and Wildlife Conservation
EPC	Environment Protection Council
FINNIDA	Finnish International Development Agency
HMTTC	Hotel Management and Tourism Training Centre
ICIMOD	International Centre for Integrated Mountain Development
IUCN	World Conservation Union
MBNPCA	Makalu-Barun National Park and Conservation Area
MW	Megawatt
NBAP	National Biodiversity Action Plan
NCRTC	National Conservation and Training Centre
NCS	National Conservation Strategy
NEPAP	National Environment, Policy, and Action Plan
NEX	National Execution
NGO	Non-governmental organisation
NPC	National Planning Commission
PCEGR	Plan for the Conservation of Ecosystems and Genetic Resources
PPM	Programme and Projects Manual
UNCED	United Nations Conference on Environment and Development
FAO	Food and Agriculture Organisation of the United Nations
UNEP	United Nations Environment Programme
USAID	United States Agency for International Development
WMI	World Monitoring Institute
WWF	World Wide Fund for Nature

UNITED NATIONS DEVELOPMENT PROGRAMME

GLOBAL ENVIRONMENT FACILITY

Project of the Government of Nepal

<b>Title:</b>	Biodiversity Conservation in Nepal
<b>Number:</b>	NEP/92/G31
<b>Duration:</b>	Five years
<b>Project Site:</b>	Country-wide and Makalu-Barun Region (Northeast Nepal)
<b>UNDP Sector:</b>	Natural Resources
<b>Subsector:</b>	National Parks and Wildlife
<b>Executing Agency:</b>	Department of National Parks and Wildlife Conservation (DNPWC), Ministry of Forests and Soil Conservation
<b>Implementing Agencies:</b>	Department of National Parks and Wildlife Conservation (Ministry of Forests), Woodlands Mountain Institute, King Mahendra Trust for Nature Conservation, and other non-governmental organisations (NGOs)
<b>UNDP Approval:</b>	July 1993
<b>Government Inputs:</b>	Nepalese rupees (NRs.) 135.69 million in kind (US\$ 2.7 million) <sup>1</sup>
<b>UNDP Inputs:</b>	US\$ 3.8 million

**A. CONTEXT**

**1. Description of subsector**

Nepal's diverse topography, its broad range of altitudinal and climatic zones, and its position on the junction of the Indomalayan and Palaearctic biogeographic realms all contribute to Nepal's great species diversity in flora and fauna, many of which are endemic. Ecosystem types range from

---

<sup>1</sup> The September 1993 United Nations exchange rate of US\$ 1 = NRs. 49 has been used for conversions throughout this document.

the subtropical monsoon forests of the Terai, to the deciduous and coniferous forests of the temperate regions, to the subalpine and alpine pastures of the Himalayas, to, finally, the cold desert of the trans-Himalayan zone bordering the Tibetan plateau.

The range of bio-climatic conditions in Nepal supports more than 35 forest types. These forests contain more than 5,400 species of vascular plants, including 245 endemics and 700 species used for medicines. This small country of 147,181 square kilometres is also home to over 175 species of mammals, 850 species of birds, 600 species of butterflies, 50 species of moths, 180 species of dragon flies, and 170 species of fish. Presently, 26 species of mammals, 9 species of birds and 3 species of reptiles are declared endangered and are protected by Nepalese law. Examples of endangered species are snow leopard, clouded leopard, tiger, Asian elephant, Greater one-horned rhinoceros, musk deer, barasingha, red panda, hispid hare, Gangetic dolphin, gharial, and python.

The variety of rare ecosystems and species assemblages, the large size of Nepalese protected areas, and the globally important large populations of endangered species, particularly tigers and rhinos, place Nepal among the world's most important areas for conservation. The broad genetic base of traditional crop cultivars and livestock breeds has been similarly threatened—a small number of hybrid crop varieties has largely replaced traditional varieties. Traditional varieties are, nevertheless, still used in remote parts of the Nepal Himalaya, making this area a repository of genetic resources that deserves special attention.

### Makalu-Barun

The Makalu-Barun National Park and Conservation Area (MBNPCA), in northeastern Nepal covers 2,330 square kilometres. The MBNPCA has biodiversity values of both national and international significance. Within a distance of 40 kilometres, elevations range from 435 metres at the confluence of the Arun and Sankhuwa rivers to the 8,000 metre summits of the Mahalangur Himal. Nearly all ecological zones—from subtropical forests to the arctic ecosystems of the high Himalaya—are found in the area. The valleys contain some of the few remaining tracts of pristine forest in Nepal not permanently inhabited by humans.

Providing funds for the MBNPCA will preserve a transect of the pristine Eastern Himalayan ecosystem that is a widely recognised biological "hotspot" in the global drive to preserve biodiversity. The region's situation at the interface of two major biogeographical provinces, enhanced by the juxtaposition of six bioclimatic zones within a 40 kilometre north-south distance, has fostered extraordinary species richness and direct support for interzonal, intrazonal, and international (Nepal-Tibet) interaction among numerous plant and animal species and communities. Moreover, few Himalayan regions have been as thoroughly researched as the MBNPCA. This research has revealed that the MBNPCA area is outstanding in terms of the documented (i) range of ecological conditions present, (ii) species richness and biological diversity, (iii) low human disturbance, (iv) presence of rare and endangered species, (v) existence of habitat not represented elsewhere in Nepal's other protected areas, and (vi) national and international watershed protection.

The Arun river originates north of the Himalayan massif in the Qomolongma Nature Preserve in China and cuts a deep gorge that runs north-south through the Makalu-Barun region to the lowland Terai jungles. The difficult terrain, low population density, and remoteness of the Makalu-Barun

region makes it one of the most relatively undisturbed ecosystems along the southern flanks of the Himalayas.

Research projects in MBNPCA have recorded more than 3,000 species of native plants, including 25 of Nepal's 30 varieties of rhododendron, 48 primrose species, 47 orchid species, 19 bamboo species, 15 species of oak, 86 species of fodder trees, and 67 species of medicinal and aromatic plants. The fauna is equally rich, with over 80 species of mammals. Among the rare and endangered mammals are the red panda, the musk deer, the clouded leopard, and the water shrew. Over 400 species of birds have been documented, including the Himalayan honey guide and the wren babbler. To this can be added about 30 reptiles and 16 frogs.

The 2,330 square kilometre MBNPCA, the 1,148 square kilometre Sagarmatha (Mount Everest) National Park, the 1,710 square kilometre Langtang National Park, and the 35,000 square kilometre Qomolangma Nature Preserve in China protect a vast area of over 40,000 square kilometres surrounding the Everest massif. This complex could be increased by 2,000 square kilometres when the proposed Milkedanda Conservation Area is established in Nepal.

### *Sociological context*

Approximately 32,000 people from a number of ethnic groups and castes live in the MBNPCA. These people have a traditional subsistence lifestyle, far from roads and other facilities, and they depend heavily on natural resources for their survival. They are poor and suffer from a perpetual food deficit that is partly reflected in the high rates of seasonal migration.

Firewood is the only source of household energy. In some areas, continued expansion of slash-and-burn agriculture into virgin forests has caused degradation and increased conflict with wildlife crop predators. The use of very steep slopes and shortening of the rotational cycle has increased soil erosion and fertility. Future populations may be forced to move upward to even more marginal slopes, or continue migrating towards the south in order to meet food needs.

Trampling by free-ranging livestock in forests and grasslands is believed to be largely responsible for the degradation of ecosystems in the MBNPCA. In some places, over-grazing has led to a loss of palatable plants, promoting the spread of less palatable species. The carrying capacity of these areas has consequently been reduced. In other areas of lesser grazing intensity, the introduction of herded flocks is contributing to changes in seasonal migratory patterns of wild animals and the trapping of rare bird species for food. The spread of diseases from cattle to wild ungulates is another growing concern.

Money to be earned encourages the local population to hunt illegally, trap, and sell wildlife products. The species most aggressively sought include the endangered Asiatic black bear, musk deer, and red panda. While the economic benefits of these activities to the hunter can be significant, they are minor in view of the ecological values being lost.

### Arun III Hydroelectric Project

The remoteness of the Makalu-Barun area will be significantly reduced by the proposed Arun III hydroelectric project and its access road. Arun III will be a run-of-the-river 402 MW project consisting of a dam that will impound a narrow reservoir about 4 kilometres in length, a tunnel, an underground power house and other associated structures. It is to be funded by a consortium of donors led by the World Bank. The site of the proposed power project immediately adjoins the Makalu-Barun Conservation Area, and thus is expected to have some impact on one of the components of this project.

Arun III is a run-of-the-river project, so its direct physical impact will be contained to a comparatively limited area. The indirect impacts will likely be the presence of a large workforce, migration to the area, and increased tourism use due to better road access. The impact of the power project on the MBNPCA must be taken into account in Arun III's planning and Arun III must be responsible for the implementation of environmental mitigation measures.

The Arun III project and the MBNPCA are independent projects designed to meet independent objectives. Nevertheless, close coordination between the Arun III Environmental Unit and MBNPCA management in the design, coordination, and implementation of mitigation measures will be critical to successfully achieve tandem goals in sustainable development and environmental protection.

### The National Parks and Wildlife Subsector

Nepal has sought to protect its biodiversity by establishing protected areas, National Parks, and, more recently, Conservation Areas. Fourteen protected areas have been established (seven National Parks, four Wildlife Reserves, two Conservation Areas and one Hunting Reserve), totalling approximately 15,931 square kilometres, or 11 percent of the land area of the country. Two of the parks, Sagarmatha and Royal Chitwan, are recognized as World Heritage Sites. Although Nepal has an impressive protected areas system, not all of the ecosystems naturally represented in the country are currently included in the system. There appear to be some critical gaps, especially in the mid-elevation zone, where little natural habitat remains.

To complement the protected areas system, the Government established the MBNPCA in 1991. A comprehensive management plan was prepared and has been endorsed by the Government. As part of its strategy for ecosystem and genetic resource conservation, the Government has signed a 12-year agreement with the Woodlands Mountain Institute, an international NGO based in the United States, to design, implement, and raise financial assistance for the effective management of this protected area. Within the overall project, GEF funding is sought to support those aspects of the MBNPCA most directly related to the protection of biodiversity. For example, since the MBNPCA includes a significant area within the mid-elevation zone, it partially addresses the gaps in protected area coverage in this elevation zone.

Thus, the establishment of a new 1,500 square kilometre national park and an adjoining 830 square kilometre conservation area in the northeastern Solukhumbu and northern Sankhuwasabha districts of eastern Nepal is part of the Government's continuing effort to conserve the country's

biodiversity and forestry resources. The Plan is to be implemented from 1991 to 2000. The objectives are to protect an area of unusual natural beauty and biological diversity, to improve the socio-economic conditions of the local people, and to develop models for sustainable conservation and development. The implementation model incorporates participatory approaches so that the experience, traditional management systems, and recommendations of local people are incorporated into project policies, strategies, and actions for land and resource management. The project marks a re-orientation in philosophical approach for the Department of National Parks and Wildlife Conservation (DNPWC).

Although Nepal has established important protected areas, its biological diversity is still threatened. Few areas of the unique Himalayan natural ecosystem remain intact. Over the last two decades, more than half a million hectares of forests and wildlife habitat have been destroyed, primarily in the Terai region. The underlying causes of this loss are livestock, agriculture, the increasing number of people, and their demands for fuelwood and timber.

Most of the biological diversity that still exists in Nepal is found within the protected areas, but even these are facing major threats, principally as the result of three factors: i) lack of adequate, trained personnel and resources available to the DNPWC, ii) increasing depletion of natural resources, particularly forests in areas surrounding protected areas, which has led to pressures to increase exploitation of the forests within protected areas (this pressure, in turn, has led to poor relationships between park authorities and local populations), and iii) the high concentration of tourists in only the few, most popular protected areas.

The National Parks and Wildlife Conservation Act (1973), with amendments enacted in 1975 and 1983, provides the basis for park and reserve administration and wildlife conservation in Nepal. Out of great concern over conservation of Nepal's natural assets came the government's current commitment to involve communities in conservation decision-making and to otherwise ensure their collaboration. Some specific mechanisms have been defined. Numerous plans and strategies based on detailed analyses of the problems and constraints have been elaborated. The most prominent among these are the 1988 National Conservation Strategy (NCS), the 1988 Plan for the Conservation of Ecosystems and Genetic Resources (PCEGR), prepared as part of the Forestry Sector Master Plan, and the 1992 UNCED Report. More recently, important policy changes have been made including the recent Bill which stipulates that between 30 and 50 percent of the revenues generated by any park must be returned to that protected area for use by the surrounding communities. In addition to this very promising initiative, there appears to be considerable scope for increasing fees for park entrance and trekking.

### *People and parks*

Park management in Nepal is in constant conflict with the people living in and around the parks because the people are denied free access to park resources. The wildlife protected by the park also damages their crops and livestock, losses for which local people are not compensated. Efforts to minimize human impacts on parks have historically focused on patrolling by guards and penalties to discourage encroachment and illegal activities. Now this kind of enforcement is being questioned. Many parks are islands surrounded by, or hosts to, rapidly growing populations that exert increasing pressure. Since that situation is not viable in the long term, successful management of the national



parcs must also involve management of the areas surrounding the parks with the support of local populations.

To date, the parks and their surrounding communities have not benefited significantly from revenues generated by the parks.

### *Tourism*

Tourism offers a potentially valuable source of funds for conservation which, so far, has not been realized. Of the visitors to Nepal who venture outside the Kathmandu valley (about half), the vast majority visit one of four protected areas (Chitwan, Sagarmatha, Annapurna, or Langtang).

Through their own initiatives, some local communities have benefited substantially from tourism in the Sagarmatha National Park, and to a considerably lesser extent in the Annapurna Conservation Area and Langtang National Park. Local benefits from tourism in other protected areas have been negligible.

### Role of this project

This project will address some of the most critical needs currently faced by the Nepalese government in its attempts to conserve its globally significant biodiversity. First, this GEF project will support the preparation of a National Biodiversity Action Plan (NBAP) that builds on existing conservation efforts.

This GEF project will also support the implementation of selected activities and programmes proposed by the NBAP, focusing on those activities most critical to protecting biological values of international significance. Implementation of the NBAP will promote the replication of innovative approaches to the conservation of biodiversity, whether these approaches are technical, institutional, or organisational. The strategy is to ensure that promising initiatives undertaken in the project catalyze other activities and contribute to the conservation of biodiversity not only in Nepal but in other countries.

Within the context of the NBAP, the MBNPACA will provide a vanguard to test the innovative approaches that the NBAP recommends, especially regarding the participation of local people in conservation efforts.

The Management Plan for the MBNPACA includes park management, tourism management, community resources management, and scientific research components. The objectives of the Management Plan are to protect an area of unusual natural beauty and biological diversity, to improve the socio-economic conditions of local people, and to develop models for sustainable conservation and development. It will also demonstrate how care for human concerns must, and can, be a central focus of biodiversity conservation. The plan takes a significant step towards strengthening Nepal's protected areas system.

This GEF project aims to support those elements of the overall MBNPACA programme that are most relevant to the protection of biodiversity. Since these elements are only part of an

integrated whole that includes a range of closely related activities, GEF support should also be viewed as a contribution to the total package.

There are various elements of the overall MBNPCA project to be funded from sources other than GEF, but which are nevertheless relevant to GEF objectives. Of particular importance are the various community-related activities. These include:

- Establishment of local user groups for forest and pasture management
- Support of community initiatives for small-scale village infrastructure projects
- Initiation and support of women's groups for increased productivity
- Programmes to improve sustainability and economic returns of natural forest products
- Programmes to improve local incomes through tourism
- Programmes to heighten the local people's interest and capacity for conserving their cultures.

Economic development activities of the MBNPCA will focus particularly on increasing women's income through the processing of natural resources. Group guarantee credit programmes will serve as a fundamental vehicle for enabling women to gain access to needed inputs, skills, and markets.

#### Enhancing capacity

This GEF project will provide training for DNPWC personnel in ecological monitoring and protected areas management, as well as in effective collaboration with local communities. Since the national capacity to protect and manage biodiversity cannot be achieved by the DNPWC alone—without broader community support and understanding—the project will also seek to enhance collaboration and cooperation between the public and private sectors and to encourage greater political support for conservation.

## **2. Host country strategy**

The national strategy for the conservation and protection of the environment, forestry resources, National Parks, and wildlife is outlined in the NCS (1988). In addition to defining policies for National Parks and Protected Areas, the NCS emphasizes that a protected area system must be truly representative of all existing geological, faunal, and floral formations and communities. It outlines selection criteria. The NCS also emphasizes the need for management planning of protected areas through a consultative process involving local communities and all other parties involved, and it identifies the need to define policies regarding tourism. At the request of the National Planning Commission, the highest policy-making body of the government, IUCN (The World Conservation Union) is currently updating the NCS.

A Task Force of the Government of Nepal, coordinated by IUCN, is preparing a National Environment, Policy, and Action Plan (NEPAP) with funding from the World Bank and the Ford Foundation. The NEPAP, scheduled for completion in June 1993, prioritizes environmental initiatives. Both the revised NCS and the NEPAP recognize biodiversity conservation as a top priority for Nepal.

The Government has also prepared a "Master Plan for the Forestry Sector (1988-2010)." Completed in 1988, it has been adopted by the Ministry of Forests and Soil Conservation as the principal policy and planning document for forestry and related sectors. The six primary programmes under the Master Plan are: (i) community and private forestry, (ii) national and leasehold forestry, (iii) forest-based industries, (iv) medicinal and aromatic plants and other minor forest products, (v) soil conservation and watershed management, and (vi) conservation of ecosystems and genetic resources.

The Master Plan's subsectoral PCEGR identifies biodiversity conservation as an important component of the forestry sector and emphasizes its interdependency with other sectors.

### **3. Prior and ongoing assistance**

UNDP/FAO has worked with the Government of Nepal on the development and management of protected areas in Nepal since 1968, when the Government requested it to assess the country's conservation issues. Since that first project for Trisuli Watershed Development, UNDP/FAO has served as a catalytic agent in the development and establishment of parks and reserves.

In 1970, UNDP funded the three-year assignment of a wildlife management advisor to the DNPWC to recommend future protection measures for the country's ecosystems and wildlife. These recommendations led to the first National Parks and Wildlife Conservation Project (NEP/72/002) which began in 1973 and ended in 1979. The objectives of this project were to help establish a separate, autonomous department for administration of protected areas and wildlife, to introduce and implement legislation and regulations, and to establish a network of National Parks and wildlife reserves along with the necessary management infrastructure and systems. A second-phase project (NEP/85/011), running from 1986 to 1989, strengthened the management of the protected areas system through training, expert support, provision of equipment, and initiating various park planning and management activities.

The Management System and Human Resource Development study, undertaken in 1988 as part of NEP/85/011, addressed the structural, organisational, and staffing constraints of the DNPWC and the impediments to effective human resource management. It outlined a plan to establish a new organisational structure, including staffing needs. The study also proposed operational research planning for publications, resource inventory, management planning, conservation education, manpower development, and field patrolling.

The Government also formulated a Forestry Master Plan Implementation Programme aimed to assist the Ministry of Forests and Soil Conservation in its forestry sector programme. UNDP provided support for the preparation of this document and is currently involved in a programme to

channel UNDP resources to several components of the Master Plan. One important component is the "Parks and People" initiative with three immediate objectives:

- To develop and implement effective mechanisms for resolving people/parks conflicts in the Terai
- To improve the capability of the DNPWC to manage existing parks and wildlife reserves in the Terai
- To upgrade the institutional framework for protected area management in Nepal.

The Parks and People initiative focuses on the Terai, the lowland region of Nepal, but the institution-building component will be aimed at the DNPWC as a whole.

Other important areas of the proposed UNDP assistance in the forestry sector are community forestry, watershed conservation, farming, herbal medicines and essential oils, and other forest-based industries.

As of March 1993, tenders had been called for the construction of the first stage of the Arun III hydropower project and the associated access road. Environmental impact assessments have been undertaken in conjunction with project planning and design. To complement these assessments, UNDP funded the "Arun III: Management of Basinwide Environmental Impacts Study," which was executed by the World Bank and conducted by the King Mahendra Trust for Nature Conservation (KMTNC). This study examined the broader environmental, economic, social, and cultural implications of the project, with particular reference to the planned access road. It proposed a broad-ranging programme of complementary activities, costed at approximately US \$14 million, to ensure that benefits of the Arun III project are maximized and negative impacts are minimized. The World Bank anticipates funding an environmental mitigation programme of approximately US\$ 7 million (with assistance from other donors not yet identified). This programme has not yet been elaborated.

The "Establishment of National Biodiversity Profiles" project, to be funded by the government of the Netherlands, will be the first step in a systematic approach to ensure that Nepal's rich biodiversity is adequately represented within the protected areas system. Over a one year period, the Biodiversity Profiles project will refine the existing biogeographic classification system for Nepal, identify any gaps in the existing protected areas system, and describe potential sites for new protected areas to fill the gaps. Profiles will specify investment needs for these areas. The project may also involve a computerized biodiversity database to facilitate monitoring of the protected areas system.

A separate effort is currently underway to determine the most appropriate biodiversity database models (hardware and software) for the needs of end-user groups in Nepal. This initiative is being undertaken by the United States Agency for International Development (USAID), IUCN, and the World Monitoring Institute (WMI). It is expected that the Biodiversity Profiles project will accept the recommendations of the USAID/IUCN/WMI undertaking. The Biodiversity Profiles project will respond to the anticipated concerns of local people in the setting up of new protected areas, and it will suggest specific measures to reduce conflict and to promote acceptance by the

people. This Dutch-supported initiative will thus be complementary to the UNDP-supported "Parks and People" initiative described previously and will provide an essential foundation for follow-up activities in the National Biodiversity Action Plan (to be funded by this GEF project).

WMI, the implementing agent for the Makalu-Barun component of the GEF project, is a non-profit scientific and educational organisation that signed a 12-year agreement with the Government in 1988 to jointly design, establish, and implement the Makalu-Barun National Park and Conservation Area. Approximately US\$ 3.6 million has been secured by WMI from sources other than the GEF to fund the implementation of various components of the Makalu-Barun Management Plan. These complementary funds are being used to pay for community development activities, applied socio-economic research, and some project personnel, office management, and WMI administrative costs. These funds from other sources complement the activities to be funded by the GEF for the Makalu-Barun, and likewise, GEF funding will complement activities being funded in the MBNPCA by other donors.

The Makalu-Barun project is part of WMI's larger Mount Everest Ecosystem Conservation Programme, which has assisted the governments of Nepal and Tibet Autonomous Region of China and associated NGOs in developing adjoining nature preserves and conservation areas in the Mt. Everest region (the Makalu-Barun National Park and Conservation Area in Nepal and Qomolongna Nature Preserve in Tibet).

IUCN is carrying out environmental surveys at Manasalu Himal for the Ministry of Tourism and at Kanchenjunga for DNPWC.

The Annapurna Conservation Area project, implemented by KMTNC, parallels the Makalu-Barun project in its commitment to involve local people in conservation. Close liaison will be maintained between the two projects. The KMTNC also undertakes other wildlife conservation projects, mostly for protection and rehabilitation of endangered wildlife species.

Other agencies including the World Bank, Asian Development Bank, Finnish International Development Agency (FINNIDA), Danish International Development Agency (DANIDA), USAID, IUCN, and the International Centre for Integrated Mountain Development (ICIMOD) are also involved in various activities within the concept of a broad national programme for forestry and natural resources.

The Koshi Hills Development Programme, undertaken with British support, operates in the area generally south of the Makalu-Barun project area. Its aim is to help farmers and their families to improve the productivity of their land and labour and to raise their income levels through the sustainable management of the area's forests and other resources.

#### **4. Institutional framework**

Several Government agencies are responsible for aspects of environmental protection and management. The Council of Ministers at the apex holds the ultimate responsibility for coordinating all policy issues and administrative matters. The National Planning Commission (NPC) is expected to integrate environmental considerations in the formulation of national development plans.

The Environment Protection Council was established in October 1992. The Council is chaired by the Prime Minister and comprises representatives of nine sectoral ministries, representatives from the NPC and technical experts from the university and other non-governmental organisations. It is mandated to formulate policies and plans related to environmental conservation and protection and to coordinate environmental programmes. The Council is supported by an Environment Protection Division within the Secretariat of the NPC. The Council has met several times to date and has formed a subcommittee on urban environmental issues and other subcommittees to address specific aspects of environmental policy and management. The establishment of a subcommittee on biodiversity is expected.

The DNPWC is one of the four departments under the Ministry of Forests and Soil Conservation. It has a mandate for *in situ* conservation of ecosystems and genetic resources in Nepal. The Department has some 1,050 approved staff positions, of which about 970 are in the field. Actual staff numbers are well short of the approved positions, with 10 to 50 percent long-term vacancies in technical posts, as well as temporary vacancies due to secondments and overseas training courses. A large proportion of the field staff (255) run the elephant camps (hatisars) and the elephant breeding centre in the Terai.

Each protected area is the responsibility of a Chief Warden, who is directly responsible to the Director-General of the Department. The Wardens are assisted by a staff of Assistant Wardens, rangers, veterinary officers, game scouts, and administrative staff.

The Army protection units operating in the parks are funded from the Department's annual operating budget, and they absorb a high proportion of it (84 percent in 1990-91). Thus DNPWC's effective annual operating budget is substantially less than \$US 1 million.

## **PROJECT JUSTIFICATION**

### **Problem to be addressed and the present situation**

Nepal's biodiversity is threatened as a result of degrading natural ecosystems found in the country, loss of indigenous species of both flora and fauna, and loss of genetic variability within many of these species. This situation has resulted from numerous factors.

- There is no overall national framework that outlines a plan of action to conserve biodiversity in Nepal. Most of the biodiversity that has survived remains within the protected area system, so the level of representation within this system is vital to biodiversity conservation. The current protected areas system does not appear to include representative samples of all ecosystems that occur in the country, but no comprehensive gap analysis has been conducted to identify specific areas to be included. Thus, important areas in need of conservation are still left completely unprotected.
- Even those areas that are included in the protected areas system are not effectively protected because the DNPWC does not have sufficient personnel and equipment.

- New concepts in reducing conflicts with communities living close to or within protected areas need to be implemented, particularly those that involve local people in park management and allow them to meet their fuelwood needs in a manner compatible with conservation.
- There has been poor coordination, and not much collaboration, between various sectors that depend on natural resources, resulting in increased pressure on biodiversity.

Although various strategies like the National Conservation Strategy exist and others are being developed (NEPAP), there is no comprehensive action plan to implement the individual strategies. The risk is that the strategies will remain strategies only and not be implemented. A concrete action plan that describes the specific activities to be pursued for biodiversity conservation is needed.

From preliminary gap analysis (Hunter and Yonzon, in press), it appears that the mid-elevation zone (from 1,000 to 3,500 metres) is under-represented in the existing protected areas system. This information will be confirmed or rejected by the end of Step 4 of the Biodiversity Profiles project (within a period of three months after project initiation). As Hunter and Yonzon correctly point out, protecting habitat in this elevation zone is likely to be problematic because of relatively high human populations and because the remaining forests, although substantial in area, are severely degraded.

A new park or reserve, though needed to preserve mid-elevation ecosystems, will also generate less income from tourism because it would lack the great scenic appeal of the high-altitude parks and the presence of exotic endangered species such as tigers and rhinos in the low-altitude parks of the Terai. Furthermore, high population densities increase the need for rehabilitation and restoration efforts, which cost more compared with protection of pristine environments. High population densities also mean that the traditional National Park or Buffer Zone concepts may not work in these areas, and that other arrangements with communities such as "Conservation Agreements" may be more appropriate. This would be a new approach to conservation in Nepal and would require a great deal of thought and innovative planning.

If the gap analysis does identify mid-elevation areas, these are not likely to attract follow-on funding from donors, who are traditionally more concerned with protecting pristine environments, nor are these areas likely to receive funding from the Government, as critically limited resources must be spent in those areas that generate revenues. It will therefore be important for the GEF project to pay particular attention to the mid-elevation areas within the framework of the NBAP.

Although efforts in the Annapurna Conservation Area have effectively involved local communities in conservation efforts, more efforts must be made in other areas, especially those designated as National Parks.

Since the Makalu-Barun area has both a designated National Park and a Conservation Area, it provides an ideal site for further testing and application of new approaches. The core area, the National Park, provides a control site to compare with the Conservation Area where managers can test the outcomes of their management decisions.

At present, DNPWC lacks the authority and the resources to effectively undertake the necessary conservation activities. The department has virtually no power to regulate the numbers or activities of tourists in the parks because the permits are issued by the Department of Immigration or the Ministry of Tourism for mountaineers). Even within the Parks, the DNPWC has only limited control, because the Royal Nepal Army is responsible for park security.

Nepal has 17 well-qualified professionals at the PhD and MS levels practicing conservation in the country, but there are proportionately many fewer trained personnel to implement basic conservation activities. The lack of well-trained park rangers and game scouts is an increasing constraint in light of both the planned conservation work within existing protected areas and the expansion of the entire protected areas system. Collaboration with local communities on conservation efforts is becoming increasingly important in Nepal given the relatively high and increasing human population density, yet few field conservation workers, such as park rangers, are currently qualified in these techniques. And even if the DNPWC had a sufficient number of trained personnel, they would still lack basic equipment such as binoculars, tents, spotting scopes, and vehicles.

Although there is a seemingly broad scope for private and public sector collaboration to conserve and restore biodiversity in Nepal, this relationship has not solidified. It does not seem to have been pursued at any significant level.

The DNPWC, local NGOs, the Army, communities near and within protected areas, and the tourism industry have not always worked collaboratively to promote protection of the environment. Recently a few promising initiatives have begun, but they must be built upon to ensure that inter- and intra-sectoral discussions do not simply take place on an ad-hoc basis (only after a problem is perceived). These divergent groups must meet regularly to establish a solid and long-lasting rapport that will allow them to work together for a common good. There is also a need to ensure adequate political and community support for biodiversity protection.

#### **Expected end-of-project situation**

A National Biodiversity Action Plan will be formulated and formally adopted as the overall framework for biodiversity activities undertaken in Nepal. A standing committee, building on an existing committee, will have been established to coordinate efforts organized under this framework. Any gaps in the existing protected areas network will have been identified and appropriate actions outlined. Certain activities of particular relevance to the GEF objectives outlined in the Biodiversity Action Plan will have been initiated, including the effective protection of the MBNPCA. Implementation of the NBAP will have been initiated and areas appropriate for follow-on activities will have been identified.

The MBNPCA will be operating, with the appropriate staff, infrastructure, facilities, institutional arrangements, and park management systems in place. The MBNPCA will serve as a model for protected area management based on participatory planning and implementation in cooperation with local communities as environmental stewards. The economic gains made through tourism will have been recycled back into local communities in the project area, with forethought as to possible negative impacts.



A multi-disciplinary applied research programme in the MBNPCA will have resulted in a better understanding of biodiversity, ecosystem dynamics, wildlife populations, farming systems, indigenous ethnic groups, and natural resource use. This understanding will benefit the MBNPCA and other protected areas as well. The project will encourage traditional forms of natural resource management that are compatible with biodiversity conservation. Information on the systems developed and the experience gained will be shared with other parts of Nepal's protected areas system for possible replication.

The capabilities of the DNPWC will have been enhanced, enabling its personnel to play a more effective role in conserving biodiversity. All officers, park rangers, and game scouts employed by the DNPWC will have received training in techniques for community participation and wildlife techniques, whereas other training will have been provided for nature guides, community foresters, and hotel and lodge management personnel.

Positive actions will have been taken to enhance inter- and intra-sectoral collaboration and to generate greater community and political support for conservation.

### **3. Target beneficiaries**

In addition to the people benefiting from UNDP-supported projects, a wide variety of plant and animal species in Nepal will persist into the next century, particularly those that must cohabit with humans.

Immediate beneficiaries of the MBNPCA component of the project will be the 32,000 local inhabitants of the Conservation Area, a population composed of diverse ethnic groups dominated by the Rai, Sherpa, and Bhote. They will receive considerable income, community development, and social service inputs.

The DNPWC and project staff will benefit from the training and from having the necessary equipment to put training into practice. The DNPWC will also benefit by having a working model for other conservation areas in Nepal.

There will be broad benefits to the international community as a whole, as well as to the people of Nepal. The biodiversity values of Nepal will be preserved, particularly in the Makalu-Barun area, and a model for balancing conservation and development interests will be available for possible replication elsewhere.

### **4. Project strategy and institutional arrangements**

The DNPWC will be the Executing Agency for the project and the Director General of DNPWC will be the Project Director. A Nepali Administrative Officer will be hired by the project to be located in the DNPWC to assist in project administration and to assist the Director General of the Department to ensure that all parties, especially UNDP, are kept fully informed about the project.

The DNPWC will amend its current agreement with WMI so that it can enter into a partnership agreement with WMI to undertake the Makalu-Barun component of the GEF project.

Likewise, the DNPWC will enter into a formal agreement with KMTNC to undertake the training component of the project. The requirement for competitive bidding for this training component will be waived, as the KMTNC has the existing facilities and proven experience to undertake this type of training in Nepal. The KMTNC can bring to the training programme its relevant experience in the Annapurna Conservation Area Project, which has acquired a worldwide reputation for its innovative approaches to community support and involvement.

The DNPWC will implement the GEF National Biodiversity Action Plan component and the other capacity-building activities, but will seek the support of international NGOs (such as IUCN and WWF), national NGOs, and other organisations and consultants as appropriate and required, using GEF funds. The supporting organisations will be chosen as specific needs become apparent.

This GEF project will adopt a flexible approach because revisions and modifications to the project are anticipated as the situation evolves. The flexibility should be used to reduce administrative requirements associated with unexpected changes and to promote adoption of change in the programme as appropriate throughout the project life.

Opportunities will be sought to enable two-way sharing of experience with similar and related activities in other developing countries in the region. For example, it is already planned for Bhutanese women to visit the MBNPCA project to study allo weaving. Other Technical Cooperation Among Developing Countries Programme (TCDC) opportunities are being pursued.

#### Makalu-Barun component

The strategy for the Makalu-Barun component of the project is to develop participatory approaches for managing the MBNPCA. These approaches will be used to set up a Conservation Area controlled by the DNPWC where the local population participates in managing the MBNPCA's natural resources. This strategy focuses on the single biggest problem currently faced by protected areas in Nepal—the pressure on park resources from surrounding populations who currently have no take in the success of the National Park system.

The grassroots approach promoted by the project will support the development of legally registered community Users Groups in the Conservation Area. These will include village groups organised to manage forest and grazing areas, women's groups organised for entrepreneurial development (credit, inputs, and marketing), and village-initiated project user groups. Plans for the Conservation Area rely on women as key economic actors and resource users. The project also plans to institute a participatory monitoring and evaluation system which will complement traditional methods.

A small Executive Committee for the Makalu-Barun component of the project, chaired by the Director General of DNPWC, will be responsible for continuous supervision, monitoring, and evaluation of this project component. The other members of the Committee will be the Chief Warden of the Makalu-Barun Park and the WMI Advisor. UNDP will be an observer as required to monitor the use of GEF resources, and the World Bank will be invited to participate in an advisory role as appropriate.

The DNPWC has deputed a Chief Warden to the Makalu-Barun who has already set up his office in Khandbari, in the Makalu-Barun area. The Chief Warden will serve as Project Manager for the Makalu-Barun component of the GEF project and will be responsible for overall planning, administration, and supervision of the MBNPCCA, including personnel administration, financial oversight, law enforcement, and public relations. He will be responsible for ensuring compliance with project objectives and outlined activities and will also function as Member-Secretary of the Executive Committee.

The Executive Committee will have access to two advisory committees. The District Advisory Committee will ensure that project activities are being carried out in a manner compatible with local needs and capacities. The Scientific Review Committee will screen all research proposals and monitor their implementation.

The Woodlands Mountain Institute will be contracted to act as Implementing Agency for this component of the GEF project. The requirement for competitive bidding for this task will be waived, as there is no practicable alternative to using Woodlands in this case. As outlined previously, Woodlands has a contractual agreement with the DNPWC to implement the whole MBNPCCA project, for which partial funding will be provided by the GEF under this project. It is not desirable or practicable to separate the GEF-funded activities from the broader MBNPCCA programme for the purposes of implementation and management. Woodlands has demonstrated its commitment and ability during the earlier investigatory phases of the MBNPCCA programme. The overall MBNPCCA project is in fact already under field implementation by Woodlands and DNPWC and key elements of infrastructure, staffing, and start-up activities are already in place, all based on a participatory approach.

GEF funds will pay for a WMI Project Manager, who will serve as Co-Manager and Environmental Advisor of the Makalu-Barun project component. He or she will be based in MBNPCCA. In addition to advising the Chief Warden on aspects of project management, he or she will have joint responsibility for financial oversight and WMI inputs with funding from GEF. The project will provide support for the National Park Management staff deputed to the project from the DNPWC or recruited for this purpose. This staff will include officers for conservation education, community forestry, and if deemed necessary, biodiversity. At each of the four field sites, Assistant Wardens will be supported by a park ranger and four game scouts (locally recruited) for park management. The GEF will also fund the park headquarters' administrative and accounting staff currently located in Khandbari. To provide coordinated support for park management in the community resources component, the GEF will also provide two person-years of technical assistance to this component.

#### Non-governmental organisations

Where international and national NGOs have special expertise, special effort will be made to coordinate with them in the implementation of project activities. A number of NGOs have already been identified and generally involved in some Makalu-Barun project activities.

## 5. Reasons for assistance from UNDP

The Himalayan ecosystems have been described as a priority action area for the GEF in the Chairman's Report to the May 1991 GEF Participants Meeting, so GEF funding for Makalu-Barun would be timely and appropriate. Research conducted in Makalu-Barun has confirmed that its ecosystems have biodiversity values of international significance. At the local level, loss of biodiversity would have serious consequences for people who depend on wood or cultivated medicinal or food plants for their livelihood. Conserving these ecosystems provides a reservoir of genetic resources, protects watersheds, and gives a baseline for scientific studies, all of which contributes substantially to meeting the goals of other forest-based income generation. At the same time, successful conservation of ecosystems and genetic resources requires sustainable forest extraction elsewhere, so that resource pressures on protected areas are reduced. Thus, biodiversity conservation and sustainable development must be approached as tandem efforts.

Though threatened, Makalu-Barun has an intact ecosystem, making it a high priority for GEF funding. For the same reasons, the Makalu Barun-Sagarmatha-Qomolungma protected area complex was selected as the Asian example for a "Regional Reviews" plenary session at the Fourth World Congress on National Parks and Protected Areas in Caracas, Venezuela, in February 1992. It received a very favorable reaction.

Makalu-Barun has another unique characteristic: the area contains gene pool resources of traditional crop cultivars and livestock breeds, many of which have been seriously depleted in the Indian Sub-continent. These genetic resources may one day play a great role in scientific research, in the discovery of new drugs for incurable diseases, and in the development of alternative food sources.

It is no secret that over the last two decades Nepal has lost more than half a million hectares of forests, along with a loss in biodiversity, an increase in soil erosion and downstream sedimentation, and a loss of agricultural productivity. Increasing population threatens ecosystems, including those in Makalu-Barun. Only through alternative income-generating activities and community development activities—health, education, water, and sanitation—will people put less pressure on the forests for their livelihoods. In fact, they will protect ecosystems and forests only if these are seen as a means of income and sustenance for them.

The Nepalese Government has considered the national concerns for preserving its ecosystems, taken part in international fora on sustainable development, including the United Nations Conference on Environment and Development (UNCED), and shown their commitment to conservation. In its decision to protect this critical area, the Government agreed in September 1991 to establish the MBNPCA. The UNDP/GEF project will use this key area as a pilot project for protection of biodiversity through sustainable development. The project will facilitate credit access to local people, provide training to natural resource users to improve their production, design, and marketing skills, and foster activities such as horticulture, dairy farming, and tourism. Thus, the project's objectives and strategy are completely in keeping with the June 1992 Convention on Biodiversity.

The UNDP/GEF's involvement in the Makalu-Barun project is not only in keeping with the June 1992 Non-binding Forestry Principles, but is a logical extension of UNDP's role in the Forestry

Master Plan Implementation Programme and in various projects in the forestry/natural resource sector. GEF funds, which have catalyzed additional resources raised by Woodlands Mountain Institute, will be used to implement the entire Management Plan for the MBNPCA.

Once the results on conservation and development issues are available from the project and from the Dutch-supported Biodiversity Profile Project, further insights and proposals for biodiversity protection in Nepal, and elsewhere in the world, would be available for funding from future tranche of the GEF or from other funding mechanisms set up as a follow-up of UNCED.

## **6. Special considerations**

There is a perpetual food deficit and a lack of off-farm economic opportunities in the Makalu Barun area. This, combined with a rising population, will increasingly put pressure on the natural resources and biodiversity of the National Park area. To improve this situation, MBNPCA will have special provisions for private enterprise development (including initiatives by women and other income-generating activities) and for essential infrastructure, particularly rural electrification and improved accessibility to this remote tract.

Specifically, these provisions include education on conservation for local inhabitants and tourists to increase awareness; support for promising household enterprises like training in production, design, and marketing; construction and support of production, distribution, and marketing centres for local cottage industries using natural resources; job training for Conservation Area residents to qualify them to participate as tour guides and other local industry employment; local recruitment and training as National Park staff; support for national and local NGOs; special support for women user groups for managing natural resources and for entrepreneurial activities; and literacy and non-formal education as part of user group formation, especially for women. It is expected, as has been the experience in other countries, that sustainable development activities will encourage people to protect their ecosystems and forests for dependable livelihoods.

### Women in development

The community development activities under the project, such as education, health, sanitation, and potable water supplies will benefit the women in the Makalu-Barun area, including their children. Many of the income-generating activities to be developed under the project are presently undertaken by women, such as weaving, paper-making, dairy farming, and handicraft work. Improved products, credit, and access to markets will increase women's income and their standard of living.

### Non-governmental organisations

A special effort will be made to encourage the input of NGOs with pertinent expertise and coordinate work with them in the Conservation Area. For instance, the British Nepal Medical Trust has expressed interest in extending its present work in basic literacy and other social services from the lower Arun into the Conservation Area, and Woodlands is working with them, expanding its efforts beyond natural resources management alone. Likewise, CARE is currently working in two village areas of the Conservation Area in Solokhumbu to improve agriculture and agroforestry.

The role of the TCDC is also a special consideration because it links Nepal's biodiversity protection efforts with those of the Qomolongna Nature Preserve in China, as well as other developing countries.

#### **7. Coordination arrangements**

A senior-level Coordinating Committee for the project, chaired by the Ministry of Forests and Soil Conservation, will provide overall direction and guidance to ensure coordination with the biodiversity projects undertaken by the agencies listed below. UNDP will be a member of the committee along with relevant government agencies, donors, and NGOs.

The Environment Protection Council (EPC) may decide to establish a smaller, more focused, technical Task Force on Biodiversity. Should the EPC establish such a sub-committee, this sub-committee could serve as the core of the Project Coordinating Committee and could be complemented by representatives of DNPWC, UNDP, the Netherlands Government, IUCN, WMI, KMNTC, and the World Bank. Awaiting the decision of the EPC, a temporary Coordinating Committee will comprise representatives of the DNPWC and the various agencies and organisations actively participating in biodiversity conservation in Nepal, including all those listed above.

#### **8. Counterpart support capacity**

The DNPWC has insufficient professional staff because a number of staff members have been seconded to the KMTNC and others are outside Nepal working towards advanced university degrees. There are, however, more well-qualified professionals at the PhD and MS levels involved in conserving biodiversity in Nepal than trained personnel to implement basic conservation activities. The lack of a sufficient number of well-trained officers, rangers, and game scouts is becoming an increasingly critical constraint in light of increasing conservation work within existing protected areas and the planned expansion of the protected areas system.

Especially lacking is training in the techniques for effective collaboration with local communities in conservation efforts. This is becoming increasingly important in Nepal given the relatively high and increasing human population. Few field conservation workers such as park rangers and game scouts are currently qualified in these techniques. In addition to training in this area, training in wildlife management techniques, ecological monitoring, conservation education, and park administration is needed. Training is also needed for people who reside in villages close to parks who could gain a livelihood as park guides.

The insufficient counterpart support capacity is recognised in the project design. Staff training and capacity-building is provided for at the national level and at the MBNPCA.

### **C. DEVELOPMENT OBJECTIVE**

The development objective of the project is to promote the conservation of ecosystems and genetic resources with the involvement of local people. The goal is to provide economic benefit to the people from conservation so that they are part of the process, rather than alienated outsiders.

The Government has stated its intention to pursue this development objective in the Eighth Five-Year Development Plan (1992-1997).

## **D. IMMEDIATE OBJECTIVES, OUTPUTS, AND ACTIVITIES**

### **IMMEDIATE OBJECTIVE 1**

To provide a systematic and strategic approach to biodiversity protection in Nepal by formulating a National Biodiversity Action Plan (in accordance with the Convention on Biodiversity) and to implement selected priority activities of the Plan that will protect Nepal's globally significant biodiversity.

#### **Output 1.1**

The NBAP which identifies needs and constraints for biodiversity protection and provides a specific programme of priorities and actions to conserve representative samples of Nepal's range of ecosystems and species assemblages.

#### **Activities for Output 1.1**

- 1.1.1 Convene a meeting of the Biodiversity Protection Committee of the Environment Protection Council (or an equivalent body nominated by Government) to discuss the approach to be adopted in the development of the NBAP.
- 1.1.2 Identify matters that should be included in the NBAP to fulfill the requirements outlined in the Global Convention on Biodiversity and in the Terms of Reference for these plans outlined by the United Nations Environment Programme (UNEP).
- 1.1.3 Identify existing reports and plans that could fulfill any of the requirements for the NBAP, while avoiding unnecessary duplication of effort.
- 1.1.4 Determine the best mechanism for communication between the Dutch-funded Biodiversity Profiles project and the GEF project, then closely collaborate.
- 1.1.5 Provide the necessary technical and other inputs to ensure that Nepal's NBAP meets the requirements outlined above.
- 1.1.6 Identify and mobilize the expertise and skills required to formulate the NBAP and establish an appropriate participatory and consultative process for its preparation.
- 1.1.7 Establish two-way contacts with other developing countries in the region to share ideas and experiences on biodiversity conservation, including possible interchange of personnel.

- 1.1.8 Formulate and draft the NBAP in accordance with the guidelines and requirements of the Convention on Biodiversity.

## **Output 1.2**

The protection, management, and enhancement of key biodiversity values as required to meet the objectives of the GEF.

### Activities for Output 1.2

- 1.2.1 Using critical sites as defined by IUCN and the preliminary assessments from the Biodiversity Profiles, identify the most appropriate sites for GEF support and confer with the local communities to confirm their support and participation.
- 1.2.2 Identify innovative, acceptable, and practical techniques for protection of the critical biodiversity values.
- 1.2.3 Identify, with community input, appropriate incentives to encourage community participation in conservation efforts.
- 1.2.4 Set aside new protected areas where necessary and practical.
- 1.2.5 Where appropriate, establish formal agreements with communities and with individual land owners when conservation efforts are necessary on publicly or privately held land.
- 1.2.6 Convene meetings with local communities and individuals to exchange information on techniques used in basic ecological monitoring, rehabilitation, and restoration (such as agroforestry techniques), using local expertise whenever possible (not a traditional one-way training activity, but one that recognizes both parties as having relevant expertise).
- 1.2.7 Engage in monitoring, rehabilitation, restoration, and other conservation efforts in the selected areas, employing local people in these endeavours.
- 1.2.8 Define viable mechanisms for the establishment of a trust fund for either individual protected areas or the protected areas system, then pursue the legal establishment of this trust fund, coordinating with other pertinent organisations.
- 1.2.9 Document successes, failures, and the reasons for each and share this information with those concerned with conservation and community development in Nepal. Share this information with other countries through UNDP headquarters.



## **IMMEDIATE OBJECTIVE 2**

To build the MBNPCA as a vanguard project using a management approach that recognizes the interdependence of development and biodiversity conservation and that can be used as a model for efforts in other areas.

### **Output 2.1**

A sustainable, innovative, and effective management system with participatory mechanisms for protecting the biodiversity of the MBNPCA.

#### **Activities for Output 2.1**

- 2.1.1 Establish management zones and develop management plans for biodiversity and natural resource management with local people.
- 2.1.2 Establish, publicize, and enforce park regulations on the extraction of timber, firewood, and non-timber forest products and on the utilization of grazing lands in consultation with local people.
- 2.1.3 Establish, publicize, and enforce prohibitions and/or regulations on hunting.
- 2.1.4 Recruit and train local people as game scouts to protect wildlife and vegetation and to implement park management.
- 2.1.5 Promote and conduct applied research that directly facilitates management objectives, including key indicator species and ecosystems such as forests and alpine pastures.
- 2.1.6 Provide advice and assistance in park and conservation area management.
- 2.1.7 Develop an integrated monitoring and evaluation system for biodiversity and local socio-economics.

### **Output 2.2**

A sustainable grazing management system compatible with biodiversity conservation that halts park grazing and rehabilitates alpine and sub-alpine ecosystems in consultation with local people.

#### **Activities for Output 2.2**

- 2.2.1 Conduct livestock inventories and survey rangeland conditions and traditional management systems.
- 2.2.2 Coordinate with Northern Area Pasture Development Programme to halt introduction of exotic species into the park area.

2.2.3 Establish a grazing permit system within the park.

2.2.4 Compensate herders and pasture users in areas where grazing is prohibited.

### **Output 2.3**

An effective and sustainable ecotourism programme that maximizes benefits to local people and minimizes negative environmental and cultural impacts.

#### Activities for Output 2.3

2.3.1 Prepare management plans for upper Barun (Makalu Base Camp trail) and other tourist routes.

2.3.2 Improve trails between Mumbuk, Ramara, and Tamku, Deurali and Saisima, and construct small bridges where necessary.

2.3.3 Designate and develop campgrounds with supporting facilities in special sites and trails.

2.3.4 Prepare information materials addressing park regulations, natural history, appropriate environmental and cultural behavior, and so on.

2.3.5 Establish kerosene sales outlets at appropriate locations as a substitution for fuelwood (primarily to be used by visitors).

2.3.6 Participate in efforts to increase MBNP/CA's control over mountaineering and tourism in protected areas to ensure that they are in keeping with the maintenance of biodiversity.

### **Output 2.4**

An effective long-term management strategy that offers alternative sources of income with low impact on biodiversity for the two small settlement enclaves within the park.

#### Activities for Output 2.4

2.4.1 Prepare management plans for the small monastery settlement at Saisima and the summer herding settlement in the Inkhu valley in consultation with settlers.

2.4.2 Promote concessions, training, and assistance in obtaining credit for local residents to establish tourism facilities and services.

2.4.3 Provide other inputs as designated in the management plans.

## **Output 2.5**

An effective conservation education programme developed in consultation with the local people that results in an increased awareness of the benefits of biodiversity protection, sustainable natural resource use, and human resource development.

### Activities for Output 2.5

- 2.5.1 Prepare materials and conduct introductory programmes to inform local residents about the approach and goals of the MBNPCA.
- 2.5.2 Develop easily understood audio, visual, and printed education materials and information about the MBNPCA, using local languages and incorporating local concepts about resource conservation where appropriate, for adult and school groups.
- 2.5.3 Develop stationary and mobile exhibitions of conservation information at appropriate meeting places including schools, local markets, and festivals, using them as fora for discussion.
- 2.5.4 Conduct workshops and special programmes for local school teachers and promote regular visits by project personnel to schools for conservation education.

## **Output 2.6**

Generation and utilization of information on critical conservation areas (including threatened habitats), key indicator species (including endemic, threatened, and endangered species), and ecosystem dynamics.

### Activities for Output 2.6

- 2.6.1 Map vegetation, habitat, and land use for transect studies and prepare updated maps for management.
- 2.6.2 Enter species data into a national protected areas database.
- 2.6.3 Conduct applied research on key indicator species and interactions between wildlife and people (such as crop depredation, predation on livestock).
- 2.6.4 Develop management strategies for specific ecosystems and species that include training in biodiversity management and ecosystem monitoring.

## **Output 2.7**

Appropriate field equipment and support facilities for MBNPCA management.

### Activities for Output 2.7

- 2.7.1 Equip park management staff with appropriate field equipment.
- 2.7.2 Procure vehicle for DNPWC.
- 2.7.3 Provide radio communications.
- 2.7.4 Equip MBNPCA with adequate scientific research equipment.
- 2.7.5 Establish park entrance stations and offices for MBNPCA staff.

### **Output 2.8**

All national MBNPCA staff and related DNPWC staff trained in technical skills, management, leadership, team building, and community relations for the effective conservation of biodiversity with the involvement of local people.

### Activities for Output 2.8

- 2.8.1 Conduct in-service training for MBNPCA and DNPWC staff in protected areas and project management.
- 2.8.2 Conduct local and international study tours for national MBNPCA, DNPWC, and NGO staff to engage in dialogue and learn about innovative park management.
- 2.8.3 Provide short- and long-term training and educational opportunities to national MBNPCA and DNPWC staff in park management, biodiversity conservation, and conservation area management.
- 2.8.4 Establish exchanges and linkages between MBNPCA, DNPWC, associated NGOs, and similar institutions in other countries.

### **Output 2.9**

Published articles and information related to MBNPCA's new strategies for biodiversity conservation.

### Activities for Output 2.9

- 2.9.1 Hold regular workshops and meetings with DNPWC, NGOs, and interested institutions and individuals to assess and discuss the new strategies being tested in MBNPCA.

2.9.2 Prepare papers and articles on project activities, issues, and the results of applied scientific research and publish them in project papers as well as in appropriate external periodicals.

2.9.3 Establish and disseminate results of the monitoring and evaluation system.

### **IMMEDIATE OBJECTIVE 3**

To enhance Nepal's national capacity to protect and manage its unique biodiversity through institutional support and the building of greater consensus on biodiversity protection priorities.

#### **Output 3.1**

DNPWC field management staff adequately trained and equipped.

#### **Activities for Output 3.1**

- 3.1.1 Outline a work plan for conducting the various training activities.
- 3.1.2 Provide training courses for game scouts, park rangers, and officers on "Promoting Community Participation in Conservation."
- 3.1.3 Provide training courses on "wildlife techniques" for officers and park rangers.
- 3.1.4 Provide nature guide training courses for people living close to parks and other protected areas.
- 3.1.5 Provide training to managers and staff of hotels and lodges to minimize the negative effects of those businesses on the surrounding environment and in protected areas.
- 3.1.6 Provide training courses on "Community Forestry" for a small number of game scouts and park rangers who will subsequently act as trainers in the local communities where they work.
- 3.1.7 Make a complete list of all field equipment owned by DNPWC and the National Conservation and Training Centre (NCRTC).
- 3.1.8 Assess and describe needs for field equipment (tents, vehicles, sleeping bags, binoculars, spotting scopes, backpacks, books, and other reference materials), providing precise specifications for all equipment needed by DNPWC and the NCRTC.
- 3.1.9 Procure necessary equipment for DNPWC.

- 3.1.10 Draft matching funds agreement between DNPWC and KMTNC for Training Centre Enhancement, and stipulate specific use of funds for infrastructure enhancement of NCRTC.
- 3.1.11 Determine the best mechanism for holding funds in trust so that interest is generated on the fund or, at least, that the funds are not diminished in value over time.
- 3.1.12 Disperse funds according to the matching funds agreement and use funds for infrastructure development of the Training Centre.

### **Output 3.2**

Greater consensus and collaboration on the conservation and restoration of Nepal's biodiversity within the traditional conservation and protected areas management sector and between the private and public sectors.

#### Activities for Output 3.2

- 3.2.1 Bring parties together that do not normally associate (Ministry of Forests, Ministry of Tourism, carpet industry, handicrafts industry, tourism industry, and religious and cultural groups) in an initial workshop to discuss mechanisms for mutual support that will maximise opportunities to conserve Nepal's natural and cultural heritage.
- 3.2.2 Create a regular forum for communication between the DNPWC, the Army, and the Ministry of Tourism to promote partnerships in conservation.

### **Output 3.3**

Greater political support for conservation activities in Nepal, including stronger provisions for biodiversity protection in legislation and national policy, and improved coverage of conservation issues in education curricula.

#### Activities for Output 3.3

- 3.3.1 Quantify and document the costs and benefits (both monetary and other) of conserving and of *not* conserving biodiversity in Nepal (such as the effects of air quality changes on the environment and on tourism, or a photographic series to document changes in the natural environment that will be readily apparent to scientists and the general public).
- 3.3.2 Engage policy-makers in active, field-based activities and discussions to determine follow-on actions based on study results. Promote the use of this information as a decision-making tool and recommend specific policy actions to be taken.

## **E. INPUTS**

### **1. Government of Nepal**

The Government, through the DNPWC as the Executing Agent, will provide the following inputs to the project:

- The Director General of the DNPWC will assume the responsibility of Project Director. As chairman of the Project Executive Committee and Project Director, the Director General will give substantial time to the project's execution and implementation.
- The Chief Ecologist of the DNPWC will provide substantial input to the project as required.
- A full-time Chief Warden will be located in Khandbari. He or she will serve as Project Manager for the Makalu-Barun and be responsible for the day-to-day management of the MBNPCCA component of the project. Other staff to be provided by the Government will include Wardens, Assistant Wardens, and rangers for park management.
- All documentation relevant to the project, including reports, maps, photographs, and imagery will be provided.
- Access to all areas of the country required as part of project activities will be provided.
- Managerial, administrative, and office support through the DNPWC Headquarters will be provided, as well as facilities for the Kathmandu Liaison Office for the MBNPCCA component.
- The Government will provide visas for foreign advisors and representatives to the project as needed.

The expected Government contribution in kind to the project is approximately NRs 135.69 million.

### **2. UNDP**

UNDP, through GEF financing, will provide the following inputs to the project:

- Funding for the specific implementation activities of the MBNPCCA Management Plan. The total amount of funds to be channeled to this component is US\$ 2.6 million.

- Funding for the sub-contract between the DNPWC and KMTNC for the implementation of the DNPWC capacity-enhancing activities. The total amount of funds for this activity, including the establishment of the matching funds agreement, is US\$ 190,000.
- Funding for agreements undertaken between the DNPWC and other NGOs or consultants (to be identified) for the preparation of the NBAP and implementation of select activities from it. The total amount of funds to be channeled to this component is US\$ 361,000.
- Funding for national capacity-building activities to be undertaken by the DNPWC for the conservation of biodiversity with the assistance of NGOs or consultants as required. The total amount of funds to be channeled to this component is US\$ 95,000.
- Funding for equipment for the DNPWC totals US\$ 95,000.
- Funding for project monitoring by UNDP and partner GEF agencies, administrative support, and contingencies. The total amount of funds for this component is US\$ 459,000.

The total GEF contribution to the project is estimated at US\$ 3.8 million.

### **3. WMI**

WMI will provide an overall context within which the Makalu-Barun component of the GEF project will be implemented. Through its 12-year agreement with the Government of Nepal, signed in 1988, WMI is responsible for working with the DNPWC to implement the MBNPCA, which was designed with WMI's assistance. Through other sources of funding, WMI will be providing approximately US\$ 3.6 million in funding for Conservation Area management, applied multi-disciplinary research, and technical and administrative support services.

### **4. KMTNC**

The KMTNC will provide qualified professional trainers and appropriate facilities to train DNPWC personnel in the various aspects of biodiversity conservation.

In keeping with its commitment to maintain the NCRTC, the KMTNC will actively engage in fund-raising for this purpose, and it will take full advantage of the matching fund established by this project to complement those efforts.

### **F. RISKS**

This project has been designed to eliminate or reduce risks as much as possible. It is acknowledged that considerably greater risk is to be assumed in this GEF project compared to traditional UNDP projects. The risky nature of the project should not disqualify it. Rather, this



aspect of the project even better qualifies the project for GEF funds, as GEF is intended to fund innovative projects which, because of their nature, test untested grounds with the hope of yielding great benefits. Governments and donors may not be financially able to assume these risks, and therefore would be less likely support risk-taking outside of traditional boundaries. Using GEF funds, which are additional resources over and above resources normally provided for development and environment activities, governments and donors have much greater flexibility to assume these risks. In addition to the above considerations, the specific risks and their mitigation activities are outlined below.

## **1. Internal risks**

### Lack of cooperation by local communities

Local communities may not cooperate with the project based on their perceptions of past national park management interactions undertaken elsewhere in Nepal. This non-cooperation will be particularly likely if MBNPCA & BAP implementation curtails forestry, grazing, hunting, or other income-generating activities without adequate compensation.

The risk of non-cooperation will be minimized by involving communities from the preliminary stages of the project, providing regular fora for community members to share their opinions and suggestions, conferring with local people to determine which incentives would be most meaningful to them, and providing these incentives in a way compatible with conservation. The project will also recruit local staff as much as possible, training local people to serve on the Park's security force and conservation staff and employing local hunters as game scouts.

### Continuation of follow-on project activities at end of project

Difficulties will arise in the transfer of the management and administration of the MBNPCA from the project to the DNPWC because of either (i) inadequate resources (both financial as well as trained personnel) to maintain or, as suggested in this project, significantly expand their roles or (ii) cumbersome government regulations and procedures. This risk is lowered due to the capacity that the project builds into DNPWC by providing some equipment and staff training.

### Filling of established posts for MBNPCA

A number (66) of new posts are to be established in the MBNPCA through project funds. The Government has indicated that it will formally establish these posts within the DNPWC by adding new budget headings, and that they will subsequently fill the newly established posts by deputing staff (transferring personnel already employed by Government) to MBNPCA. As only the Forestry Department or the DNPWC is likely to have appropriately qualified staff, the risk is that the staff will be deputed from another protected area to MBNPCA, detracting from the effective management of that area. Moreover, currently up to 50 percent of the DNPWC posts for protected areas are vacant, and the DNPWC is undergoing a 30 percent cut in its administrative headquarters staff. The Government is now outlining a new organizational structure for the Department.

To reduce this risk, UNDP will closely monitor the establishment and filling of new posts for the DNPWC by the Government and its performance will be directly linked with the project's commitment to add new posts to the MBNPCA. That is, the initial work plan may be revised and inputs for staffing in the MBNPCA redirected at an agreed upon time if Government does not fill these posts with its own resources or allow for the filling of these posts through NGOs or other organisations. This clause is to prevent the establishment of a substantial number of project-funded posts that might go unfilled at the end of the project.

### Human population

On the one hand, if local people are deprived access to the natural resources in MBNPCA, they will not contribute to conservation efforts. They may even detract from them. On the other hand, by meeting development needs of communities surrounding protected areas, these areas will become attractive to persons living elsewhere, causing migration and increased pressures on the protected areas. Without careful policy planning and implementation related to human settlements, and without effective population management, even if local peoples' needs are accounted for, there will be environmental degradation from increasing human population levels.

Working to reducing this risk, three NGOs (The British Nepal Medical Trust, the Himalayan Trust, and the Johns Hopkins University group) are providing health services, including family planning, in the MBNPCA. The GEF project, through the Makalu-Barun component, will coordinate closely with these groups. In addition, Government will try to elaborate a forward-looking human settlement plan for the MBNPCA by considering various possible scenarios and trying to avoid or mitigate potentially negative impacts. The plan will be discussed with the input from the local communities.

## **2. External risks**

### Arun III

With the construction of the Arun III power project in the immediate vicinity of the project, there will be significant migration into the area as a result of improved roads, the availability of electricity, and employment opportunities. Given this influx, any development assistance that the GEF project provides within existing communities would become insufficient to meet the needs of a much bigger population and would thus no longer provide significant enough incentives for the number of people living in the area. Increased population levels may even force people into unsustainable management of natural resources.

GEF will not fund any specific mitigation activities, as this is the responsibility of those undertaking the Arun III power project. Nevertheless, it will be important for the GEF to be fully informed of these activities because of their impact on the MBNPCA project site. UNDP and the Project Director will keep themselves apprised of the situation as it evolves and will share this information with those concerned. It will be suggested to Government that environmental impact measures as well as tender documents designed to carry out the work of the power plant will be shared with the DNPWC for review and comment.

## The Biodiversity Profiles project

If the Netherlands-funded profiles are not completed on time or if the results are not as comprehensive in scope as anticipated, the formulation and implementation of the NBAP to be supported by this GEF project may be either delayed or may not meet all the requirements for BAPs outlined in the Global Convention on Biodiversity.

Discussions have already taken place with the Dutch Government to determine the status of the Dutch-funded project and to communicate the importance and relevance of this project to the GEF project. The Netherlands Government has indicated that the project has been approved from their side and is now en route to their representative in Nepal to be submitted to the Government for final approval.

## KMTNC training for DNPWC staff

The current Director of the NCRTC is going abroad for graduate university studies and will not return to Nepal for at least one year. No replacement for him has yet been named. Oversight and coordination of the training activities will require a very dynamic, energetic, and organized individual. Secondly, KMTNC does not possess all the necessary expertise to directly provide the training, therefore additional expertise will be needed for some of the training activities.

These risks have been discussed with the KMTNC and they have indicated a strong commitment to ensure that these risks are minimized. Two potential candidates for the replacement of the current Director of the NCRTC have already been identified. KMTNC will fill this post with a permanent and full-time Director before funds will be released for any training activities.

The matching fund arrangement will provide the KMTNC with significant incentives to engage in fund raising for the enhancement of the Centre. In the event that the KMTNC does not raise outside funds for the purpose of enhancing the infrastructure of the Centre by the end of the first two years of the project, the amount to be reserved in the fund would be decreased by \$10,000 for every year in which no outside funds have been raised by KMTNC for the Centre. These funds would then be transferred for use in adding more training courses within this GEF project.

## **G. PRIOR OBLIGATIONS AND PREREQUISITES**

### **1. Prior obligations**

None.

### **2. Prerequisites**

The following requirements are to be fulfilled by the Government over the course of the project:

- All continuing MBNPCA posts will be approved by the Government over the first three years of the project, and the Government will take full administrative and financial responsibility for the necessary posts and fill these posts by the end of the fifth year of the project.
- Government will create a budget line item for Government counterpart funding for Makalu-Barun to be incorporated in the 1993-94 fiscal budget.
- The DNPWC will establish its own security arrangements and will have exclusive responsibility for security in the MBNPCA. This will serve as a model for DNPWC assuming exclusive security responsibility for other protected areas.
- The DNPWC will prepare detailed regulations for Conservation Area management in consultation with local people to manage these areas under existing Acts within the first year of project implementation. These regulations will also seek to introduce mechanisms for direct revenue generation to the MBNPCA from visitor fees.
- Government will consult the DNPWC as procedure when periodically establishing limits on the numbers of trekking and mountaineering permits to be issued for protected areas.
- Government will establish procedures whereby DNPWC is regularly consulted to establish policies on hotels and lodges within the general vicinity of protected areas, and will establish a policy on minimum standards for environmental impact of hotels and lodges.

## **H. PROJECT REVIEW, REPORTING, AND EVALUATION**

Regular monitoring and periodic evaluation will be an integral part of the administration of the project. The project will submit six monthly and annual reports to the Government and the donors. In addition, an inception report will be presented to the Executing Agency three months after the date of effectiveness of the contract with WMI, and a final report will be submitted to the Government and donors at the completion of the project.

A Monitoring and Evaluation Unit responsible for the ongoing monitoring and evaluation for the Makalu-Barun project component will be set up in the Park Headquarters, reporting directly to the Chief Warden. Key biophysical and socio-economic indicators will be measured on a regular basis according to appropriate time frames. For example, hydrological and sediment data will require daily measurement, whereas a repeat socio-economic baseline survey will only be conducted after five years. The project will institute an innovative and participatory monitoring system with local people also evaluating project progress.

At the end of the third year of implementation, the Government and the donors will jointly appoint an independent team to assess the MBNPCA component. The team will be multi-disciplinary, impartial, and well-acquainted with the project functions. The team will assess how

effectively the Management Plan of the MBNPCA is being implemented, determine reasons for any implementation difficulties, and review the original assumptions and project design for validity. They will submit a detailed report, which will include suggested revisions in the Management Plan or its implementation, if required.

Approximately six months prior to the end of the project, an end-of-project evaluation will be conducted by an independent team to assess the project's overall effectiveness and achievement of its goals, including adherence to any revisions recommended by the third-year evaluation team. The end-of-project evaluation will include participation by local people.

Annual tripartite meetings will be held, and the GEF partner organisations—the World Bank and UNEP—will be invited to participate in regular reviews of project progress.

UNDP's biodiversity experts will closely monitor the performance of the project and ensure timely corrective measures towards the achievement of the outputs as appropriate.

The use of GEF funds will be subject to UNDP audit procedures, and arrangements will be made to conduct them independently, using non-project funds. An annual audit report will be prepared by the concerned agency or firm designated to conduct the audits and presented to the UNDP Resident Representative.

The formal establishment of new posts for the DNPWC and the filling of these posts by Government will be closely monitored by UNDP, and will be directly linked with the project's commitment to add new posts to the MBNPCA. This linkage is to prevent the establishment of a substantial number of project-funded posts that might go unfilled at project-end if the situation is not carefully monitored along the way.

All mitigation measures identified in Section F will be monitored and reported with particular care throughout project implementation, and appropriate measures will be taken to address any identified shortcomings.

All monitoring and evaluation reports related to the larger, multi-donor MBNPCA project (being implemented by WMI) will be shared with UNDP and with the Project Manager of the GEF project.

## **I. LEGAL CONTEXT**

This Project Document shall be the instrument referred to as such in article 1, paragraph I of the Standard Basic Assistance Agreement between the Government of Nepal and the United Nations Development Programme, signed by the parties on 23 February 1984. The Government Implementing Agency shall, for the purpose of the Standard Basic Agreement, refer to the Government Cooperation agency described in that agreement.

The following types of revisions may be made to this project document with the signature of the UNDP Resident Representative only, provided he or she is assured that the other signatories of the project document have no objection to the proposed changes:

- i) Revision in or addition to any of the annexes of the project document (with the exception of the Standard Legal Text for non-SBAA countries which may not be altered and the agreement to which is a pre-condition for UNDP assistance)
- ii) Revisions which do not involve significant changes in the immediate objectives, outputs, or activities of a project, but are caused by the rearrangement of inputs already agreed to or by cost increase due to inflation
- iii) Mandatory annual revisions which rephrase the delivery of agreed project inputs or increased expert or other costs due to inflation or take into account agency expenditure flexibility.

The executing agent designated on the cover page of the project document (DNPWC) has been duly delegated by the Government coordinating authority, the Foreign Aid and Coordination Division of the Ministry of Finance, to carry out this project and accordingly will follow the National Execution (NEX) accounting, financial reporting, and auditing procedures set forth in the following documents as may be amended by UNDP from time to time:

- i) The Accounting and Financial Reporting procedures set out in UNDP Programme and Projects Manual (PPM), section 30503, Subsection 6
- ii) The UNDP Audit Requirements set out in PPM Section 30503, Subsection 8.0
- iii) Guidelines on national/Government execution.

The above documents are an integral part of this project document although incorporated herein only for reference.

The officially appointed auditors shall undertake periodical management and financial audits of the project in accordance with UNDP auditing procedures for nationally executed projects, pursuant to the Government's overall national execution responsibilities under the project document and as set out in the documents listed above.

In addition, all accounts maintained by the Government for this UNDP project will be audited by UNDP Internal Auditors and/or the United Nations Board of Auditors or by public accountants designated by the United Nations Board of Auditors.

## **J. BUDGETS**

The project budgets are attached.

**1. PROJECT BUDGET COVERING UNDP CONTRIBUTION (in US dollars)**

Project Components	Total Amt	1993 Amt	1994 Amt	1995 Amt	1996 Amt	1997 Amt
<b>PROJECT PERSONNEL</b>						
Admin. Support Personnel	32,775	5,700	6,175	6,650	7,125	7,125
Official Travel	16,150	950	2,850	2,850	4,750	4,750
Mission Costs	88,500	9,500	10,000	29,500	10,000	29,500
National Consultants	114,000	22,800	22,800	22,800	22,800	22,800
<b>COMPONENT TOTAL</b>	<b>251,425</b>	<b>38,950</b>	<b>41,825</b>	<b>61,800</b>	<b>44,675</b>	<b>64,175</b>
Subcontract - WMI	2,600,000	406,000	651,000	653,000	571,000	319,000
Subcontract - KMTNC	190,000	38,000	38,000	38,000	38,000	38,000
Subcontracts (BAP implementation)	361,000	24,700	72,200	119,700	72,200	72,200
<b>COMPONENT TOTAL</b>	<b>3,151,000</b>	<b>468,700</b>	<b>761,200</b>	<b>810,700</b>	<b>681,200</b>	<b>429,200</b>
Training	95,000	28,500	19,000	19,000	19,000	9,500
<b>COMPONENT TOTAL</b>	<b>95,000</b>	<b>28,500</b>	<b>19,000</b>	<b>19,000</b>	<b>19,000</b>	<b>9,500</b>
Equipment	95,000	61,750	19,000	4,750	4,750	4,750
<b>COMPONENT TOTAL</b>	<b>95,000</b>	<b>61,750</b>	<b>19,000</b>	<b>4,750</b>	<b>4,750</b>	<b>4,750</b>
<b>MISCELLANEOUS</b>						
Operation and Maintenance	4,750	950	950	950	950	950
Reporting	1,900			950		950
Sundry	200,925	39,900	40,375	40,375	40,375	39,900
<b>COMPONENT TOTAL</b>	<b>207,575</b>	<b>40,850</b>	<b>41,325</b>	<b>42,275</b>	<b>41,325</b>	<b>41,800</b>
<b>BUDGET TYPE TOTAL</b>	<b>3,800,000</b>	<b>638,750</b>	<b>882,350</b>	<b>938,525</b>	<b>790,950</b>	<b>549,425</b>
<b>UNDP TOTAL</b>	<b>3,800,000</b>	<b>638,750</b>	<b>882,350</b>	<b>938,525</b>	<b>790,950</b>	<b>549,425</b>

**2. PROJECT BUDGET COVERING GOVERNMENT CONTRIBUTION (in NRs. '000)**

	FY	FY	FY	FY	FY	Total
Budget Item	92/93	93/94	94/95	95/96	96/97	
Salary	1,000	1,100	1,150	1,380	1,656	6,286
Local Allowance	500	500	575	633	658	2,915
TA & DA	100	100	100	100	100	500
Service (Electricity, Water, Telephone)	2	2	2	3	3	12
Postal & Other Misc. Services	25	25	25	30	30	135
Rent	100	100	50			250
Maintenance	10	10	10	15	15	60
Office Goods	20	25	30	35	40	150
Magazine/News	5	5	5	5	5	25
Fuel for Vehicles						
Other Fuel	15	15	15	20	20	85
Uniform	530	550	575	600	625	2,880
Ration	1,180	1,200	1,225	1,250	1,300	6,155
Other Misc. Expenses	25	30	35	40	45	175
Medical Equipment						
Food for Prisoners and Feed for Animals	10	15	20	25	30	100
Subsidy Grants	15	20	25	30	35	125
Contingency	10	10	10	10	10	50
Furniture	25	25	10	10	10	80
Vehicles						
Mach. Equipment	25	25	10	10	10	80
Construction	5,335	4,065				9,400
Other & Repair	13,822	29,185	25,255	17,127	20,834	106,223
<b>TOTALS</b>	<b>22,754</b>	<b>37,007</b>	<b>29,127</b>	<b>21,323</b>	<b>25,426</b>	<b>135,686</b>



## **Annex**

### **Training Programme**

#### **Promoting community participation in conservation**

Game Scouts, Park Rangers, and Officers will be given a two-week course on how to promote community participation in conservation, including aspects of conservation education and natural resource management as related to communities surrounding protected areas. The course will be conducted in part at the NCRTC at Sahura in Royal Chitwan National Park (1 week) and in Annapurna Conservation Area (1 week). Training for each of these groups will be done separately, i.e., game scouts will have their own course, as will park rangers and officers. As the needs for each group will vary somewhat, the courses will be specifically designed to meet these needs. For example, officers will be given one day of training (within the two week period) on administration, whereas game scouts would receive special training on such things as anti-poaching, patrolling, and first aid.

#### **Wildlife techniques**

This course will be provided to both officers and park rangers. Training for each of these groups will be done separately. The course for officers will be three weeks. The course for park rangers will be two weeks. Separate courses will be developed for each, but each will receive training in fundamental wildlife techniques, including wildlife censusing, sampling, ecological monitoring, trapping, and immobilization. The course will be conducted at NCRTC in Chitwan and/or Bardia National Park.

#### **Nature guide training**

Training will be provided for people living close to parks and other protected areas to promote effective collaboration in conservation efforts. In particular, training will be provided for people working with local lodges as nature guides. The objectives of the training will be (i) to develop conservation-oriented nature guides to ensure a minimum impact from tourists, (ii) to make nature guides aware of park rules and regulations so that they can convey messages to the tourists, (iii) to provide them with general ideas on animal behavior and safety measures, (iv) to develop their skills to analyze animal tracks, and (v) to develop their skills to identify plants and animals.

These courses will last two weeks and will be conducted at NCRTC (one course will be given at Chitwan and one at Bardia).

#### **Hotel and lodge management**

KMTNC will collaborate with the Hotel Management and Tourism Training Centre (HMTTC) to provide training for managers of hotels and lodges located nearby protected areas. The training will focus on minimizing the negative effects of hotels and lodges on the environment surrounding and within protected areas. The KMTNC will provide all registered hotels and lodges

(through the Ministry of Tourism and the HMTTC) and all prospective hotels and lodges (identified by the Ministry of Tourism) with the IUCN Environmental Education Resource Packages developed in collaboration with the HMTTC, and it will also provide training for those responsible so that they will understand how to use the materials and how to develop their own environmental plans. The training will demonstrate to managers how their establishment can account for negative environmental impacts and how they can promote a positive impact.

### **Community forestry development and management**

Training will be provided in community forestry (including agroforestry) for a limited number of Game Scouts and Park Rangers to train them as trainers for others, especially local people living close to the protected area.

### **Strategy**

There are approximately 30 Officers, 70 Park Rangers, and 340 Game Scouts employed by the DNPWC. With this number of people to be trained, it will not be possible for all of them to be trained at the same time. Therefore, the following tentative training plan will accommodate appropriate group sizes.

#### **1. Promoting Community Participation in Conservation**

Officers	3 courses of 10
Park Rangers	7 courses of 10
Game Scouts	11 courses of 30

#### **2. Wildlife Techniques**

Officers	3 courses of 10
Park Rangers	7 courses of 10

#### **3. Nature Guides**

2 courses of 25 participants

#### **4. Hotel and Lodge Management**

3 courses at 3 different National Parks (Chitwan, Sagamatha, and Langtang)

#### **5. Community Forestry**

2 courses of 25 participants

### Matching Fund Agreement

KMTNC is being requested to provide the above outlined training services because of their training experience and because they have the best training facility in Nepal for this purpose, the NCRTC. Instead of establishing its own facility, the DNPWC wishes to take advantage of the existing facility. The Centre, although the best in Nepal, is still limited in its infrastructure. It consists of one classroom to seat approximately 35, housing facilities for 35, and limited equipment (such as three pairs of binoculars, 1 four-wheel drive vehicle, one spotting scope, two computers, one printer, one dissecting scope, and so on). Currently there is no laboratory at the Centre. As the KMTNC is an NGO and is permitted to engage in fund-raising activities within and outside of Nepal (unlike the DNPWC), the DNPWC wishes to avoid the possibility that the Department would pay for infrastructure upkeep or enhancement of the NCRTC. They see this as the responsibility of the KMTNC. Yet, the Department recognizes that they would also benefit from enhancement of the Centre as long as they use the Centre for training for their own personnel. The strategy is therefore to provide the KMTNC with direct incentives to pursue fund-raising to enhance the infrastructure of the Centre by a matching fund arrangement whereby the GEF project will provide the equivalent of \$.50 for every \$1.00 raised by the KMTNC for this specific purpose. The total amount to be set aside for the matching fund should not exceed US\$ 40,000.

In the event that the KMTNC does not raise outside funds for the purpose of enhancing the infrastructure of the Centre by the end of the first two years of the project, the amount to be reserved in the fund would be decreased by US\$ 10,000 for every year in which no outside funds have been raised by KMTNC, and these funds would then be transferred to adding more training courses within this GEF project.

### Dispersal of Funds

The DNPWC will release funds to the KMTNC on a task-by-task basis (once a task has been successfully completed, funds for the next task outlined in the work plan will be released). Monitoring of the training activities will be done by the DNPWC together with the UNDP/Kathmandu.