

**UNITED NATIONS DEVELOPMENT PROGRAMME
GLOBAL ENVIRONMENTAL FACILITY**

Proposal for a Block B Grant

Country:	Nepal
GEF Operational Programs:	#3: Mountain Ecosystems & OP #4: Forest Ecosystems
Project Title:	Linking biodiversity conservation in protected areas and productive landscapes in Nepal's lowland Terai and eastern Himalayas.
Funding Requested:	\$237,400
Co-Funding:	UNDP \$39,000; NEDA \$17,000
Country Eligibility:	Convention on Biological Diversity ratified September 1993. Participation in the restructured GEF in August 1994.
Requesting Agency:	United Nations Development Programme
Executing Agency:	Ministry of Forests & Soil Conservation, His Majesty's Government
Project Type:	PDF Block B
Block A Grant Awarded:	No
Duration:	8 months
Estimated Starting Date:	February 2000
GEF Operational Focal Point:	Ministry of Finance, His Majesty's Government (HMG)
Estimated Project Size:	\$6-8 million in GEF, \$14-16 million co-financing

SUMMARY DESCRIPTION

The objective of the full project is **to conserve globally significant biological diversity in three priority areas (landscape complexes) of Nepal**. The project would strengthen the management of priority protected areas and extend biodiversity conservation into the productive landscape bordering these areas by leveraging significant co-funding to develop sustainable, biodiversity-friendly community-based development. Nepal's policy priorities have pointed in this direction for a number of years and many successes have been achieved in establishing protected areas, buffer zones and conservation areas. However, much remains to be done operationalizing buffer zones and corridors, safeguarding the biological wealth of Nepal outside formally protected parks and reserves. In fact, the recent final evaluation of UNDP-GEF's pilot phase biodiversity project in Nepal concluded that a strategic opportunity for UNDP-GEF support could involve demonstrating in the Nepali context how to create and maintain landscape-level biological corridors to meet the conservation needs of area-sensitive and seasonal altitudinal migrants species.

This project has been designed to demonstrate an appropriate approach to expanding the focus that biodiversity conservation has traditionally had on protected areas, to include the productive landscape in the form of operational corridors and buffer zones. To date, at least three important aspects of biodiversity conservation have emerged in efforts to conserve Nepal's biodiversity. First, Nepal's protected areas, particularly in the low-lying Terai area, are too small by themselves to maintain viable populations of large, threatened mammal species. Second, long-term conservation requires that efforts be made to expand conservation beyond protected areas to adjacent habitats and multiple-use areas to create biodiversity conservation landscapes. Third, Nepal's human population density is one of the world's highest, so that extending conservation efforts over larger areas requires the incentives for and the active participation of local communities (Wikramanayake *et.al.* 1998, Maskey 1996).

The approach of the full project is characterized by the following three components:

- **Component 1:** Strengthening the linkage between protected areas and the surrounding productive landscape.
- **Component 2:** Enabling a sustainable community-based approach to biodiversity conservation and sustainable development in the productive landscape surrounding priority protected areas.
- **Component 3:** Strengthening Policy, Building Awareness, and securing a sustainable Finance Framework

BACKGROUND

Nepal's biological diversity is globally significant by nearly any measure. Nepal's biodiversity is a reflection of her unique geographical position, and altitudinal and climatic variations. Within Nepal's 147,000 km² is to be found the greatest range of altitude on Earth, from the lowlands of the Terai (100 m. a.s.l.) to the highest point on earth (Mt. Everest 8,848 m). Nepal's location in the central sector of the Himalayas places it in the transitional zone between the eastern and western Himalayas. The Palearctic and the Indo-Malayan biogeographical regions merge in Nepal and the major floristic provinces of Asia (the Sino-Japanese, Indian, western and central Asiatic, Southeast Asiatic and African Indian desert) overlap to create a unique and rich terrestrial biodiversity. Although it covers only 0.1% of the earth's land area, Nepal is home to more than 2% of all the flowering plants, 8% of all birds, and 4% of all mammals.

The extreme altitudinal gradient of Nepal's topography allows for the occurrence of 10 bio-climatic zones from tropical to nival that occur within a horizontal span of less than 50 km making Nepal a virtual treasure house of biological and genetic diversity. A total of 118 ecosystems, 75 vegetation and 35 forest types have been identified. The country's flora contains more than 6,500 species of flowering plants, more than 1,500 species of fungi, 600 species of lichens, and about 200 ferns. Of the flowering plants, 370 are considered to be endemic and about 570 species of plants are thought to have medicinal values. Endemic flowering plant species number 246. Equally diverse is the range of fauna. Nepal is home to 181 species of mammals, 844 species of birds, 186 species of fish, 100 species of reptiles, 43 species of amphibians, 635 species of butterflies, and more than 1,000 moths.

Nepal is also one of the world's poorest and most densely populated countries. The 1996 census estimated the population of Nepal to be 21.1 million people with an annual growth rate of 2.66. At this rate, Nepal's population will double in the next 26 years. More than half of Nepal's population lives at or below the absolute poverty line (MOPE, 1998). Over 90% of its people rely on the primary production of the nation's land and water as cultivated by small, family-owned farms, and as harvested from rivers and state and community-owned forests and grasslands. In this social and economic context it is essential for Nepal to develop an approach to enable her parks to survive and flourish in the midst of human-altered landscape. The buffer zone concept is seen in Nepal as a way to develop such an approach and relieve anthropogenic pressure on Parks by providing people in adjoining areas with alternative livelihood options.

The project will follow an integrated approach to conservation by working with local communities and PA Staff, who as for many protected area staff in developing countries, are expected to work effectively with extremely limited resources and training. Therefore, these local communities will be empowered to direct their own development agendas while benefiting from increased and more sustainable livelihood options. Not only will they benefit from capacity building in the GEF-funded component of the project, but measurable growth in populations of endangered wildlife will provide strong motivation to support such innovative approaches.

THREATS TO CONSERVATION OF BIODIVERSITY IN NEPAL

The conservation and sustainable use of biological resources have emerged as a major challenge in Nepal. Degradation of natural resource base and the corresponding loss of biodiversity in mountain ecosystems is an issue of primary concern. In the past twenty years, environmental degradation and deforestation in the Himalaya have increased. Forests have become more degraded and habitats more altered by conversion into farmland isolating many protected areas from their surrounding landscapes. Though encouraging trends have been seen in Nepal's emphasis on community forest management, the country's economic stagnation has actually increased the forest-dependent population and the depletion of forest resources has continued. There has been no substantial reduction in deforestation rates and habitat degradation and the demand for forest resources (fuelwood, fodder and timber) continues to increase.

The following are the primary threats to conservation of biodiversity in Nepal. They will be further elaborated on a site basis under the Block B.

1. Habitat destruction/degradation
2. Unsustainable use of forest resources
3. Unsustainable use of grassland resources
4. Poaching
5. Unregulated, unsustainable tourism
6. Human-wildlife conflict through recurrent wildlife-crop/livestock damage

Associated Root Causes

The main causes underlying biodiversity loss in forests of mountain and lowland protected areas (PA) range from inadequate park management/regulation to insufficient cross-sectors coordination and stagnant and even declining national economic growth rate. From an analytic perspective the following can be pointed out as root causes.

1. Lack of effective property management regimes in the productive landscape;
2. Lack of alternative livelihoods for local residents.
3. Unfamiliarity with participatory management practices; lack of staff trained in biodiversity management methodologies;
4. Lack of community involvement in conservation measures; lack of integrated PA/farmer/NGO/community forest approach to conservation in the productive landscape;
5. Lack of experience with farming practices to improve conservation of biodiversity;
6. Law and policy gaps; lack of incentives for farming systems that enhance biodiversity;
7. Lack of incentives on constructive involvement of private sector
8. Lack of knowledge and awareness on the importance of conservation of biodiversity;
9. Lack of knowledge on how to sustainably manage tourism.

The threats and associated root causes described in the previous paragraphs act on a landscape inherently susceptible to fragmentation due to dramatic altitudinal and ecological gradients. Consequently, while substantial areas of high quality habitat remain in Nepal, the major threat to many keystone species is the loss of habitat connectivity. This has the effect of reducing previously extensive populations into genetically isolated sub-populations, many of which fall below the threshold of population viability.

In response to this trend, UNDP has promoted the adoption of an ecoregional approach to environmental conservation in the Himalaya-Hindu Kush ecoregion. In the GEF context, this has taken the form of promoting projects strongly focused on the creation, conservation, and strengthening of habitat corridors

linking, and the buffer zones surrounding the remaining high quality habitats found predominantly in protected areas. For example, in Bhutan, a MSP proposal from WWF will serve to strengthen wildlife corridors throughout the country, with Thrumshing La National Park as the linchpin. In central Nepal, a MSP proposal from KMTNC will extend wildlife corridors to the north and east of Royal Chitwan National Park. A MSP proposal from the Mountain Institute for Sikkim (India) will strengthen the management of the Kanchenjunga Conservation Area adjacent to the Nepal border. Further details of these projects can be found in Annex C.

In the longer term the Nepal Trust Fund for Biodiversity (NTFB) is being designed by the World Bank, with support of the GEF. The creation and capitalization of the NTFB is proving to be a complex process, and it is unlikely that the NTFB will be in a position to support more than very modest interventions for several years, and will probably not be fully operational for many more years. Given the inherent fragility of Nepal's ecosystems, and the existing severe threats, interventions are required now in order to ensure that Nepal's biodiversity is conserved.

PROJECT DESCRIPTION

The project will focus on conserving biodiversity in three landscape complexes in Nepal. The three sites have been selected both to cover the extremes of Nepal's ecosystems – from the high Himalayas to the low Terai – and to reflect different challenges in linking protected area management to the surrounding productive landscape. The three sites present the following challenges:

- Linking two protected areas via a wildlife corridor,
- Linking management of a protected area with its buffer zone, and
- Strengthening the management of a protected area, including the establishment of a buffer zone.

a) Linking two protected areas by a wildlife corridor.

The first complex is located in the western lowland Terai of Nepal. Protected areas (PAs) in the Terai are considered too small to maintain home range of population of wildlife in the long term. The project will demonstrate how to effectively expand these areas by linking two protected areas via a forest corridor. The two protected areas are the Royal Bardia National Park (RBNP) and the Royal Shuklaphanta Wildlife Reserve (RSWR). The connecting corridor zone of Siwalik forest includes both community-owned forest and state-owned forest (see map in Annex D).

b) Linking management of a protected area with its buffer zone

The second complex is located in the Eastern Himalayan mountain region and is comprised of the Makalu Barun National Park and its Buffer Zone (MBNP-BZ). The project will complement the GEF pilot phase activities undertaken here by strengthening biodiversity conservation activities in the buffer zone. UNDP-GEF's pilot phase project was entitled "Biodiversity Conservation in Nepal." The project completed its work at the end of 1999. The final evaluation of the project concluded that there is a real opportunity in Nepal for HMG and UNDP-GEF to develop a strategic next phase that focuses on demonstrating sustainable park and buffer zone management, building upon HMG's developing emphasis on the integrated management of parks and buffer zones. An element of this integrated management could involve demonstrating in the Nepali context how to create and maintain landscape-level biological corridors to meet the conservation needs of area-sensitive and seasonal altitudinal migrants species.

Nepal's mountainous regions are home to an ethnically diverse human population that is quite different from the lowland Terai communities. One lesson learned during the pilot phase project was that management of Nepal's high mountain parks will require a different approach from that used in the lower elevation Terai parks. A significant investment has been made in Makalu-Barun during the GEF Pilot Phase to establish a park management system and the necessary infrastructure. There is a real opportunity

to follow it up with a project focused on making the project-inspired programs sustainable within the HMG context and prove real biodiversity impact. There is also the opportunity to focus on expanding and testing a localized participatory management approach through the integration of community forest user groups and grazing user groups into a sustainable buffer zone biodiversity management program, increasing the cultural diversity of the warden staff, and building the capacity of lower-level, locally-based staff without the support of the Nepalese Army in the protection of biodiversity in the MBNP.

The Makalu-Barun National Park and Buffer Zone complex includes the Eastern Himalayan temperate broadleaf forest that is highly fragmented and under-represented in Nepal. The physical setting of Makalu-Barun is unique as it encompasses 1,500 square kilometres of pristine ecosystems of the eastern Himalayas and 830 square kilometres of conservation area with 32,000 residents of different ethnic groups. The MBNP-BZ encompasses 1.5% of the country's land area and yet harbors 60% of the country's total flowering plant species. The park and conservation area harbours 27 types of forests with 3,128 species of flowering plants. Of these 56 are rare and threatened species. Over 88 species of mammals are reported including musk deer, red panda, snow leopard, clouded leopard, black bear, Himalayan tahr, serow and goral. With 421 bird species, 78 species of fish, 43 species of reptiles, 16 species of amphibians and 315 species of butterflies, this area is biologically rich.

c) Strengthening buffer zone management, including establishment of a buffer zone.

The third landscape complex is located in the Far Eastern high Himalayan region and is comprised of Kanchanjunga Conservation Area (KCA) and the bordering lower elevation forest areas. Nepal's higher mountain protected areas do not encompass the lower elevation forest areas, effectively limiting the ability of birds and other species to move up and down the altitudinal gradient. The project is designed to enable these species to move up and down the altitudinal gradient by operationalizing biodiversity conservation activities in the lower elevation buffer zones and demonstrate how to effectively expand the conservation capacity mountain protected. While the challenges of linking high elevation protected areas with lower elevation buffer zones in order to permit altitudinal migration of many species are similar for both MBNP-BZ and KCA, the context is very different. The two protected areas have different designations (National Park versus Conservation Area) and are therefore governed by a different regulatory regime. Also, MBNP has already benefited from a GEF project to strengthen protected area management, while KCA still has relatively weak infrastructure.

Kanchanjunga Conservation Area comprises intact and increasingly threatened habitats such as Sal-Schima mixed forest through mixed broadleaved forest, and at higher altitudes Larix-Juniper forest. The Himalayan larch and extensive juniper forests found here are unique to this part of Nepal. These habitats are home to endangered species such as the snow leopard, blue sheep, musk deer, red panda, Himalayan black bear, and the grey wolf. (Please see Annex B for more detailed area descriptions).

Both Makalu and Kanchanjunga protected areas are comprised of sparsely populated higher altitude core protected areas surrounded by lower altitude, more densely populated buffer zones or multiple use areas. Several species of mammals (e.g. blue sheep and snow leopards) and many species of birds (Brooks's leaf-warbler, chestnut breasted partridge and some insects like butterflies) exhibit seasonal altitudinal migrations. These seasonal habitat requirements must be protected in a complex larger than a protected area.

BASELINE SITUATION

Nepal began emphasizing the conservation of biodiversity in protected areas and related endangered wildlife in the 1970s with the enactment of National Parks and Wildlife Conservation Act (1973), that provided a legal basis for the management of protected areas. Gradually the emphasis expanded to include the productive landscape. Completed in 1988 after a three-year strategic planning effort, the

Master Plan for the Forestry Sector (MPFS) states that forest resources will be managed and utilised on a long-term basis according to their ecological capability so as to conserve forests, soil, water, flora and fauna. Furthermore, the MPFS recommends the establishment of an independent national authority for the protection of the environment to facilitate intersectoral co-ordination among the sectors that utilise natural resources.

Later the emphasis was shifted to community oriented conservation, and in 1993, passed the Buffer Zone Management Act, legally mandating integrated conservation and development. In 1996, HMG issued the "Buffer Zone Management Regulation 2052" requiring that 30-50% of park revenue would be transferred to community-level organizations for livelihood development in the buffer zones. HMG has also implemented a policy of returning up to 40% of mountaineering fees in community development and environmental conservation in the alpine regions. In this perspective, despite enormous challenges of underdevelopment, Nepal has adopted innovative approaches to strengthen its commitment to and the effectiveness of its biodiversity conservation initiatives.

The Nepal Environmental Policy and Action developed in 1998 (NEPAP II) addressed biodiversity conservation concerns under the forestry sector. Biodiversity conservation is one of six major program areas of the forestry sector action plan. The focus of this plan is the conservation of ecosystems and genetic, plant and animal resources and protection of special areas for their ecosystem and/or genetic resource value. Key actions for protected areas include conserving biodiversity both within and outside protected areas, ensuring that all major ecosystems are under some kind of special management status. Nepal's current "Ninth" five year development plan (1997-2002) and policy of Department of National Parks and Wildlife Conservation (DNPWC) focuses on conservation of habitat improvement of rare and endangered wildlife species and the participation of local people in conservation activities.

Protected areas system of Nepal

The conservation of biological diversity is an integral part of national policy of Nepal. Over the past two decades, government of Nepal has developed an extensive protected area system, including eight national parks, four wildlife reserves, three conservation areas and 1 hunting reserve along with five gazetted buffer zones and covering an area of 19 % of country (DNPWC, 1998). The MoFSC's Department of National Parks and Wildlife Conservation is responsible for managing these areas. The Nepalese Army has also been assigned to patrol inside the terrai park boundaries to bolster enforcement of park-oriented conservation. There are promising instances of openness and cooperation between the DNPWC and the army in park management. However, to date this has depended more on personalities than policies and army personnel are transferred frequently. DNPWC is typically under-staffed and under-funded.

HMG's official policy places emphasis on the full participation of local communities in protected area management and sharing park revenues with buffer zone communities. HMG issued "Buffer Zone Management Regulation 2052" in 1996 to guide the implementation of its 1993 Buffer Zone Management Act." However, the implementation of these regulations in the field is still under development in most of Nepal's parks and reserves. Currently, there is a lack of sufficient incentive to encourage park managers and personnel expertise to enhance management productivity via cooperative arrangements with communities in the surrounding landscape. Little to no work has been undertaken in monitoring and measuring the impact of ongoing buffer zone-related activities on biodiversity in the Park.

Essential operational infrastructure in many parks is still inadequate. DNPWC has developed some useful experiences with the establishment of an appropriate research and monitoring program for the parks. A GIS system is nearly complete and Chitwan and Makalu-Barun have developed some extensive baseline information. Biodiversity research isn't conducted so much by DNPWC as it is by academic institutions in Nepal in cooperation with DNPWC. For example, the Department of Plant Resources is currently

preparing a “Flora of Nepal” study and would be a suitable stakeholder in the biodiversity mapping of plant resources of protected areas. This cooperation, however, is not so much proactive and strategic as it is opportunistic. The capacity to effectively utilize this information through adaptive management needs more development within DNPWC. Biodiversity-related public awareness and education initiatives have not kept pace in Nepal with HMG’s increasing emphasis on community-oriented biodiversity conservation. A simple and effective program needs to be implemented at local levels.

Conserving biodiversity in landscapes outside protected areas

Nepal has emphasized participatory buffer zone management for the past 5 years, but the concept of managing within a landscape context for connectivity (via corridors) is quite new and little practical experience exists in Nepal. All of the threads are there for this kind of management approach – the protected areas, buffer zones, sustainable farming programmes, community forest management programmes and supportive official plans and priorities – but they have yet to be woven together to create biodiversity landscapes.

A fundamental strategy of the Ninth Five-Year Plan (1997-2002) is to foster sustainable and biodiversity friendly economic growth targeted at the alleviation of poverty in the forestry and agriculture sectors. More specifically, the plan includes the following biodiversity-related priorities:

- 1) all stakeholders and sectors in natural resources management should be involved in biodiversity conservation and appropriate policy and legislative measures should be developed to support this participation;
- 2) biodiversity conservation should be managed on an ecosystem basis and priority given to remote areas;
- 3) critical biodiversity in forest, wetlands, and agriculture should be identified and conservation plans developed to conserve and sustainably use these biological resources.

In addition, the Ninth Five-Year Plan’s forestry sector emphasizes its policy of increasing people’s participation in the implementation of buffer zone management plans to increase incomes through biodiversity friendly agriculture, forest-based micro-enterprises, and ecotourism.

With the support of UNDP-Nepal, the DNPWC has been implementing an innovative Parks and People Program (PPP) in the buffer zones of seven protected areas including all five lowland Terai PA and two PA in the of middle hills of Western Nepal. The project has been working to demonstrate how the development of CBOs as partners in self-reliant economic development is an effective way to improve the management of biological resources in the productive landscape and hence in the nearby protected areas. CARE, The Mountain Institute/NEDA, IUCN and WWF are providing catalytic support to local communities in buffer zone areas.

The PPP advocates community based approach to conservation of park resources by forging partnership arrangements between village based User Groups, User Committees and local administrative entities in buffer zone areas. While many successes have been achieved, much more work remains to be done in making these groups self-sustaining and replicating. In addition, these programs have tended to focus more on sustainable development-related issues and less on linking sustainable development and empowerment work with biodiversity conservation in a meaningful and measurable way. The programs have done an excellent job of building-in education and self-financing incentives for people to be active participants in the user groups. This experience will be applied to the full project to be developed under this Block B. Some conservation-related successes have been achieved by these programs, but more attention needs to be paid to developing a community-based biodiversity conservation regime supported by community-generated capital.

HMG has recognised community forestry as a strategy to simultaneously improve the condition of the country's forests, fulfil the rural population's basic needs for forest resources, and conserve biodiversity. Indeed, Nepal has one of the most progressive policies for community forestry in the region and about 61% of Nepal's forest area (5.52 million ha) is considered to have community forest potential. There is a trend towards increasing local control on forest resource management. Local management and ownership has been formalized and strengthened through a combination of technical support and traditional knowledge existing in the communities. Over 6,000 FUGs are now involved in protecting and managing some 350,000 ha of community forests. Many FUGs have expressed preference for extracting resources from natural forests, rather than plantations, because of the diversity of products provided by natural forests and the fact that FUGs do not have to wait for the forests to grow as they do with forest plantations (Shrestha, 1997). Hence, community forestry management could provide a biodiversity benefit especially in the Mid-Hills where it has been shown that biodiversity increases or is stabilised in areas of ongoing community forestry management activities (Rijal, 1997). The Block B project development process will link into and build upon all of this experience.

HMG has been more progressive than most countries in establishing policy and management linkages between protected and productive landscapes. However, these linkages need to be strengthened in practice and in the field. They also need to be expanded to include not only buffer zones as defined legally, but also community forest areas and appropriate farming areas. PPP and other related efforts to date have focussed on recording volume and number-oriented results. This is useful and necessary, but inadequate to the challenge of landscape management. To justify and support the adaptive management of community-based initiatives, a rigorous impact measurement initiative needs to be developed to produce measurable indicators of livelihood development and improved biodiversity conservation.

The KMTNC has gained very valuable experience managing the different conservation "zones" of the Annapurna Conservation Area. IUCN, WWF and ICIMOD have begun preparatory steps to develop an integrated conservation and development regime in the KCA. Links between this project development effort and existing, relevant efforts have been established and will be broadened under the Block B development process. These links will take the form of consultations on lessons learned, collaborative planning, and joint field work.

Nepal is still adapting to the relatively new institutional context brought about with the advent of democracy here nine years ago. Despite all the emphasis placed upon community-oriented management of resources, there are still some gaps to be filled with respect to the institutional context of these initiatives. Work on a national biodiversity trust fund has been ongoing for several years. Supported by the World Bank-GEF, extensive consultations have been undertaken in Nepal on whether and how to develop a trust fund here. Currently, progress on work to formulate this Trust Fund is slow due to a lack of commitment from key stakeholder groups – a lesson already noted by this Block B effort.

GEF PROJECT ALTERNATIVE

The full GEF project will build upon this baseline scenario with a co-financed sustainable development baseline component and GEF-supported incremental component. The GEF project will be designed to incorporate lessons learned and build upon previous germane work in Nepal. For example, the PPP has been very successful to date in organizing local community members into self-help, buffer zone user groups. The programme has been less successful in effectively linking this work with biodiversity conservation in the buffer zone, nearby forest areas or in the protected areas. The effective linking of these will be a major emphasis under the current project.

The objective of the full project is to conserve globally significant biological diversity in three priority landscape complexes. The project would be designed with the support of this Block B to demonstrate appropriate and sustainable biodiversity conservation by integrating biodiversity conservation between the protected and productive landscapes -- protected area management with community-based sustainable development and conservation in the adjoining productive landscape. The project would effectively operationalize HMG's community-based priorities for biodiversity conservation.

There are three components envisioned under the full GEF project, each of which will include GEF-eligible incremental activities and co-financed sustainable baseline activities.

Component 1. *Enabling strengthened protected area conservation in a landscape context.*

The activities under this component will address park people conflict and unsustainable tourism. The most important root causes of these threats are: 1) unfamiliarity with participatory management practices, lack of staff trained in biodiversity management methodologies and 2) lack of knowledge on how to sustainably manage tourism.

This component has the following objectives:

1) strengthen the institutional park management capacity of the protected areas (except MBNP) in a sustainable, appropriate manner; 2) demonstrate effective implementation in priority parks of Nepal's "Buffer Zone Management Regulations 2052"; 3) establish essential operational infrastructure; 4) build upon existing partial baseline material to establish an effective research and monitoring program; and, 5) create a renewed sense of local pride through biodiversity education programs in local schools and adult outreach programs.

GEF-eligible activities:

i. Training: In Nepal, perhaps more than in any other country, "park management" is "people management." This component will develop staff capacity in the priority protected areas to think and act in their official roles from this perspective without losing sight of more "traditional" biodiversity conservation work. Staff training would be undertaken in different topics related to biodiversity conservation to provide staff with relevant knowledge to assist with their respective tasks. Training topics would include: participatory management approaches; biodiversity management; integrated conservation and development; economic valuation of biodiversity; data collection and use; environmental law and policy; lessons learned from different countries; tourism management; patrolling and enforcement.

ii. Developing practical and specific buffer zone management guidelines based upon the latest buffer zone management regulations issued in 1996 and best practices from other GEF and non-GEF projects in other countries. Questions such as "How should protected area officials interact with buffer zone user groups and user committees?" would be answered in clear, simple detail.

iii. Building conservation coalitions: Building on the training described above, this activity would further develop human resources and skills that are necessary to conserve biological diversity using a participatory approach. It would do this by assisting DNPWC staff in building grass roots level conservation coalitions among government agencies, non-governmental organizations, private companies, and local communities. These coalitions will differ for each of the protected areas, as their social/economic contexts are vastly different. Emphasis will be placed upon applying lessons learned from successful initiatives in other parts of the world.

iv. Development of participatory management plans. The project will conserve biodiversity through an improved, more participatory management approach in the selected PAs and adjoining lands. Innovative

management plans for the priority PAs will be developed and implemented. PA management practices will be improved by providing training and equipment to PA officials. Tourism management will be strengthened in the priority areas; the definition and development of public use areas and trails within PA will be completed.

Local community input to protected area management will be formalized in the establishment of a public comment process and community advisory committees for each protected area. This process will be exercised under the project to enable a participatory learning approach to take place in which stakeholders cooperatively identify problems related to biodiversity conservation issues and identify workable solutions for those problems to be implemented in cooperation with the local and national authorities.

v. Park infrastructure such as guard posts, trails, and field shelters would be bolstered where needed and appropriate. Where feasible, protected area borders would be more specifically demarcated on-the-ground. Equipment would be provided to the protected areas to support basic park operations (enforcement, monitoring, visitor management).

vi. Long-term targeted research and monitoring programmes would also be strengthened to support conservation activities. Targeted research will be conducted to identify priority habitats (e.g., intact forests), develop long-term monitoring programmes, and describe and quantify the current situation to enable project implementers to monitor and measure the success of biodiversity conservation management activities. A targeted re-habilitation program will be implemented in specific priority areas.

Component 2. Enabling a sustainable community-based approach to biodiversity conservation and sustainable development in the productive landscape surrounding priority protected areas.

This component will be supported mostly by non-GEF funds and will address habitat destruction and unsustainable land-use. The most important root causes of these threats are: 1) poverty and the lack of know-how in developing viable alternative livelihoods in areas near priority protected areas; and 2) the lack of information and knowledge on how to pursue more sustainable land-use methods.

This component will focus on sustainable development and alternative livelihoods enabling community-based organizations (CBOs) and local level administrative entities to become valued and integrated partners in biodiversity conservation in Nepal. More specifically, the component would build upon HMG (His Majesty's Government), UNDP, and NEDA's "Parks and People" experiences to:

1) establish an appropriate community-based sustainable development regime that is self-sustaining and replicating by enabling CBOs to pursue appropriate economic activities in part by generating their own capital through a group savings account; 2) establish a complementary community-based biodiversity conservation regime funded by community-generated capital (sustainable forest, water, and farm management, and; 3) establish a rigorous impact measurement program to produce indicators of livelihood development and improved biodiversity conservation.

Co-financed, sustainable baseline activities:

i. Development of sustainable social organizations and livelihoods:

Under this Block B, HMG, UNDP, NEDA and other partners will develop activities to promote self-help *community-based organizations* and sustainable development in the productive areas of the project's three priority landscape complexes. Under the full GEF project, HMG, UNDP, NEDA and other co-funders would enable communities to develop the capital and institutional requirements to support the sustainable development baseline in the long-term. Stakeholders would be empowered to develop *alternative livelihoods* in the productive areas between Shuklphanta and Royal Bardia and in the buffer zones of Makalu-Barun and Kanchanjunga protected areas. Support for the development of such alternative livelihoods would provide a strong financial incentive to develop and maintain a public-private

partnership to conserve biodiversity. In so doing, the root causes of these primary threats would be removed and biodiversity conserved. For example, the co-funded activities under the full project would extend and build upon existing HMG, UNDP and other donor-supported efforts to improve livelihoods and forest management by empowering a more proactive, effective community forest management in rural Nepal.

GEF-eligible activities:

ii. Demonstration of biodiversity friendly agriculture systems:

Another major threat to biological diversity in Nepal is the ongoing problem of human-wildlife conflict outside of protected areas. This usually takes the form of wildlife destroying crops. It is widely held that such conservation measures will be most effective when local farmers are cognizant of, and involved in, their planning and implementation. GEF funding would be requested to support the dissemination of demonstration activities on how to raise less wildlife-palatable commercial crops in areas prone to these problems. Lessons learned would be disseminated in a systematic and effective manner, helping to replicate these demonstrations in other areas of Nepal. Co-funded CBO development work would then act to overcome barriers to replication and support the expansion of these demonstration programs. A program will also be developed to support the strengthening of conservation within traditional agricultural systems. The project will also take in account the ecological and socio-economic differences between the high mountains and the Terai.

iii. Enabling biodiversity-friendly community forest management.

Building upon the baseline community forestry management programs in Nepal, this incremental activity would demonstrate how community forest user groups can manage their forests in a biodiversity sustainable way. This demonstration would involve forest user groups in the corridor area between Shukla Phanta and Royal Bardia and in the buffer zones of the Makalu and Kanchanjunga. The demonstration would focus on enabling community-level user groups to develop informal, low-input approaches to managing and conserving Nepal's biodiversity landscapes.

Component 3. *Developing an overall policy and financial support framework and public awareness.*

The activities under this component are designed to address: 1) law and policy gaps; lack of incentives for farming systems that enhance biodiversity; 2) lack of incentives on constructive involvement of private sector 3) lack of knowledge and awareness on the importance of conservation of biodiversity.

This component will strengthen the sustainability of conservation outcomes by strengthening the capacity of Nepali institutions and other stakeholders to continue a dynamic conservation process. The component will include activities to bolster the adaptive management capacity of parks and community forestry user groups as well as establishing a policy and finance framework for biodiversity conservation and raising awareness among target populations. More specifically, this component will: 1) establish direct policy and management linkages between protected and productive landscape management; 2) develop a supportive regulatory, institutional, and financial framework to support these management regimes; 3) develop a sustainable monitoring and evaluation program to support adaptive management.

GEF-eligible activities:

i. Conservation policy, legal mechanisms and awareness raising.

The project will focus on strengthening the law and policy framework to facilitate the cross-sectoral management outside of buffer zones that will be crucial to the successful management of conservation landscapes. It will also seek ways to better attract the private and business sector in investing for biodiversity conservation and clarify and further establish property issues related to biodiversity. In terms of awareness, the project will build on the on going work by NGOs and government agencies and create an organized public awareness program that reaches local schools and adult education programs. The

project would do this by: 1) curricula and teaching-aid materials will be developed for schools and teachers trained in their use; 2) develop awareness-raising printed media as well as audio and video materials for local consumption; 3) testing innovative ways to raise awareness; and 4) building the capacity of NGOs to sustain public awareness activities.

ii. Monitoring and evaluation capacity will be established both in the four protected areas and in community forest areas to support adaptive management and learning over the long term.

iii. Financing for long-term biodiversity conservation must be effectively addressed in order for any conservation effort in Nepal to achieve sustainability in the next 10 years. The annual recurrent cost of the project is not significant since it is only for capacity building enabling environment. By institutionalizing community-based management, and linking income generation with conservation by enabling people to save and utilize their own capital, the project will be designed to minimize recurrent costs. The government will assume these few costs and it is envisioned that for the sustainable management of biodiversity conservation landscape the government will use the funding from the Nepal Biodiversity Trust Fund now under development as planned as well as by the Government's Buffer Zone Development Fund, populated by entrance fees for Nepal's popular national parks. Through this fund HMG channeled Nrs 2.5 million to users committees/users groups in 1998 under the Operational framework of the Buffer Zone Development Regulations where the funds are being utilized in various development/conservation works initiated by the users groups. The buffer zone development fund will be generated every year an increasing rate out of the Government Park revenue to cost-share local development initiatives in the buffer zones and the National Parks. This Block B project would request GEF resources to assist in the development of an options paper on clarify this issue and recommend steps to ensure that these resources support biodiversity conservation landscapes upon completion of the project.

GLOBAL BENEFITS AND INCREMENTAL COSTS

The full GEF project will generate a variety of global benefits. Each of the three landscape complexes represent one of WWF's Global 200 ecosystems. Nepal's diverse landscape is recognized worldwide as being the harbinger of an extraordinary diversity of life. As the world's population continues to grow, the innovative approach being developed under this full project will yield useful and practical lessons in biodiversity conservation in a landscape context. The project will be designed to generate the "global benefits" of biodiversity conservation in partnership with co-funded sustainable development activities to provide the necessary sustainable development "foundation" for successful biodiversity conservation efforts.

ELIGIBILITY

The Government of Nepal ratified the Convention on Biological Diversity (CBD) in November 1993 and notified the GEF of its participation in the re-structured GEF on 10 August 1994. Nepal is a recipient of UNDP technical assistance and as such is eligible for GEF funding. The approach to be developed under this PDF B will be consistent with the guidance developed by GEF for its Mountain Ecosystems Operational Program and its Forest Ecosystems Operational Program.

Degradation of natural resource base in mountain and forest ecosystems is an issue of primary concern in Nepal and in the international community, including GEF. Globally significant mountain areas and forested lands are suffering substantive land degradation in the form of deforestation and desertification. This project will be designed to support pilot activities that prevent deforestation and promote sustainable use and management of forests and forested areas at risk in order to conserve their biodiversity. Fragile mountain ecosystems have suffered severe land degradation. This project will be designed to prevent

degradation of mountain ecosystems by focusing on the conservation of ecosystems and integrated land-use and to rehabilitate and manage degraded community forest areas.

National Level Support

The conservation of biological diversity is an integral part of national policy of Nepal. This project concept stems from the key principles enunciated in these national conservation and sustainable use priorities as they are expressed through recent legal, policy and planning initiatives. The project would effectively operationalize HMG's strategic community-based biodiversity conservation policies in the new millennium.

The goal of Ninth development plan (1997-2002) of HMG of Nepal is to ameliorate poverty -- the major national challenge -- through strategic framework of integrated agriculture and forestry sector development. The Plan also emphasizes the sustainable utilization of natural resources and empowering local level organizations and community-based organizations take the lead in rural development. The priorities of HMG's Ninth Plan cover several relevant issues, including: the establishment of buffer zones around National parks, endangered species habitat improvement, conservation of genetic diversity and life support systems, application of 30-50% of protected area income to community development; conservation and management of cultural heritage, infrastructure development for ecotourism in PA, special program for conservation of biodiversity in remote mountain areas; and a revision of economic and financial policy to complement environmental policy.

The National Biodiversity Action Plan is in final draft form and the time of this proposal writing and the MoFSC has committed to producing the final version in May 2000. The guiding principles that have informed the strategies, policies, suggested actions and implementation modalities of the NBAP are:

1. Biodiversity conservation cannot be achieved apart from alleviating poverty of resource users.
2. The conservation and sustainable use of biodiversity can only be achieved if equitable access and distribution of benefits derived from Nepal's biological resources is guaranteed and traditional knowledge is respected.
3. User groups will remain central actors and beneficiaries in biodiversity conservation.
4. Public support of biodiversity conservation is created by effective environmental education to create awareness of biodiversity's importance to Nepal's development and the welfare of her people.
5. Nepal's biodiversity is best-conserved *in-situ*.
6. Individual and institutional capacity building is essential to effectively conserve and manage biodiversity.
7. Identifying and monitoring the status and value of Nepal's biodiversity are central components to developing biodiversity conservation and sustainable use management plans.
8. Biodiversity conservation and sustainable development must be promoted across all sectors.

HMG also supports the full project to be developed under this Block B because it furthers one of the Government's key strategic aims -- to decentralize control and management of Nepal's natural resources in the productive landscape. This aspect of the project also speaks also to the question of whether HMG has sufficient absorptive capacity to adequately implement the resulting full project. The full project's decentralized approach will minimize reliance on centralized HMG institutions and staff, working instead with the much greater collective absorptive capacity of local government, institutions, and community groups.

JUSTIFICATION FOR PDF GRANT

In order to develop and implement a successful biodiversity conservation program in Nepal, it is necessary to have the active support and participation of the key stakeholder groups. This Block B will provide the structure and time for eliciting and receiving this input to the project development process. In addition, the development of a biodiversity conservation landscape will be somewhat complex. Additional information needs to be gathered, stakeholder groups consulted, and issue analysis done. Developing an eligible, incremental cost approach will require detailed discussions with HMG and partner co-funding institutions.

The full project will complement UNDP-Nepal Country Cooperation Framework, which is comprised of four areas of focus: Gender, Governance, Employment, and Environment. The following is a list of UNDP's ongoing environment/natural resource-related projects in Nepal: Parks and People Project (\$3,072,350); Capacity 21 (\$1,228,713); GEF Small Grants Programme (\$272,600); Quality Tourism III (\$702,160); Sericulture for Rural Development (\$2,272,979); Hill Agriculture Development (\$2,896,236); Rural Energy Development Project (\$4,650,000); and the Eco-Tourism Programme (\$499,920). These projects are all working in subject areas that are germane to areas of concern that invariably come under a GEF co-financed project. Recognizing this, UNDP-Nepal has committed to providing significant co-financing to sustainable baseline-related activities under the full project.

Justification of including Makalu-Barun as a site under this project.

The MBNP-BZ was a site under the UNDP-GEF pilot phase project, "Biodiversity Conservation in Nepal." The final evaluation of the project concluded that the work conducted at MBNP-BZ warrants a second phase of targeted work in order to complete the task of establishing a sustainable biodiversity management and conservation system for the Park's buffer zone area. This Block B proposes to include MBNP-BZ as one of the three project sites under the proposed full project to be developed for GEF and co-funding support.

A significant investment has been made in Makalu-Barun during the GEF Pilot Phase to establish a park management system and the necessary infrastructure. There is a real opportunity to follow it up with a project focussed on making the project-inspired programs sustainable within the HMG context and prove real biodiversity impact. There is also the opportunity to focus on expanding and testing a localized participatory management approach through the integration of community forest user groups and grazing user groups into a sustainable buffer zone biodiversity management program, increasing the cultural diversity of the warden staff, and building the capacity of lower-level, locally-based staff.

Complementarity between this project and the proposed WB-GEF "Nepal Trust Fund for Biodiversity"

The World Bank-GEF has been working with HMG to develop a "Nepal Trust Fund for Biodiversity." According to the Fund's design working group, the Fund's "primary objective is to provide financial support for the conservation of Nepal's biodiversity, focussing on management of protected areas including buffer zones as well as conservation-related activities outside protected areas. To this end, the fund will support conservation, restoration, enforcement, training and research, conservation education, and sustainable income generating activities." The project to be developed under this Block B would provide an excellent working model for future activities to be supported by the Nepal Trust Fund for Biodiversity. The development of the Trust Fund is currently stalled, due in part to lack of stakeholder support of and commitment to the concept. This Block B project has made provisions for support and collaboration when the Trust Fund development work is able to begin moving forward again. Consultations between UNDP and the World Bank were conducted during the development of this Block B project and are normally conducted on a regular basis at the highest, in-country levels. This frequency and intensity of consultation and coordination will be increased under the Block B process.

Stakeholder consultation in support of the Block B formulation: This Block B proposal is built upon a solid foundation of stakeholder consultations and support. The Terai area where the project proposes to work is an area where UNDP has been working for two years with local governments and institutions developing grass-roots level, community-based user groups among the poor and the dispossessed. In the Royal Bardia area, the PPP has formed 185 Users' Groups (87 male UGs and 82 female UGs and 16 mixed group), covering nearly 7,000 out of a total of 10,000 households. The project has involved 55,621 people out of a total of 76,462 people in the bufferzone areas of RBNP. In Sukla Phanta Wildlife Reserve, PPP has formed 358 Users Groups (174 male UGs, 175 female UGs and 9 mixed UGs), directly benefiting 63,000 people out of the total 96,000 people living in the bufferzone area in and around the wildlife reserves.

Stakeholders in the Makalu area have made clear in several different consultations in the past eight months their support for expanded work linking the buffer zone and the protected area. This support is well known and documented in the final evaluation of this project. Stakeholders in the Kanchanjunga Conservation Area have been working closely with IUCN, WWF and ICIMOD in developing an integrated conservation and development regime in the buffer area around KCA and have expressed full support for increasing the level of activity in this area.

In addition, UNDP-Nepal funded a Block A-style preparation process for this Block B proposal during which time consultations were held in the proposed Terai area with nearly 100 user group leaders representing thousands of local community members. Resounding support was expressed for this project during those meetings with local residents. The UNDP-supported, Block A-level consultations also involved discussions with key institutions (HMG's MoFSC, DNPWC, MoF, MoA, NEDA, WWF-Nepal, IUCN-Nepal, WB).

DESCRIPTION OF DETAILED PDF B ACTIVITIES BY COMPONENT

This PDF will lay the groundwork for the full implementation of the proposed full project. Specifically, it will define the institutional mechanisms for coordinating its implementation, establish a process for multi-stakeholder participation in project design, undertake initial studies and analyses, and formulate a full project brief, which will describe the framework, strategy, scope and activities to address the objectives as defined.

The PDF B will be carried out in such a way that each proposed activity of the proposed full project will complement baseline activities. In this respect, the additional (or incremental) cost of those measures to achieve global environmental benefits will be determined. Existing national and sustainable development plans and activities will be reviewed. The incremental cost will depend on the choice of alternative GEF activities, which delivers the equivalent domestic benefits as well as additional global benefits over and above those achievable in the baseline. Activities would be technically, economically and environmentally feasible, yet consistent with social and political constraints. Financially realistic GEF contributions will be distinguished from the non-GEF contributions designed to address the threats to biodiversity conservation. The Ministry of forests and Soil Conservation will establish a project office and appoint national staff to work on the project

Activity 1: *Assessment and analysis of existing information*

A considerable amount of scientific data and baseline information currently exists for the region, and the project team will compile and consolidate this information. Sources of information could include the Ministry of Forests and Soil Conservation, DNPWC, IUCN, WWF, UNDP, NEDA, TMI. The

information should then be made accessible to all interested stakeholders. The following are types of existing information to be included in the analysis:

- Studies and reports on flora and fauna
- Vegetation and habitat maps of the area (satellite images, political, topographic, etc.)
- Studies and reports on PA (management plans, development plans, etc.)
- Assessment of quality and relevance of existing maps/studies/reports and scientific data

Deliverable: Analysis of existing scientific data on selected PA and related landscape complexes for use in project development.

Activity 2: *Socio-economic surveys in the three landscape complexes (Western Terai, Makalu-Barun and Kanchanjunga) and stakeholder consultations*

Conduct stakeholder/issues analysis and consultations with stakeholders at the national, district, and local level in the three landscape complexes. These meetings will be organized by the Block B Director and will be conducted during the first two months of the project. The purpose of these meetings is to provide stakeholders with an opportunity to provide input into the project development process. Information should be gathered on the outstanding issues associated with each specific area:

- Root causes to the biodiversity loss in the landscape complexes;
- Problems encountered in management of biodiversity conservation areas;
- Possible solutions to these root causes and problems including awareness programs and institutional capacity building;
- Future development needs and options for sustainable alternative livelihoods;
- Determination of socio-economic and cultural impacts of current land use.

This stakeholder consultation will be supported by site-based biological and socio-economic surveys, which will serve to complement data on biodiversity and threats, and complete a social assessment for each area. The social assessment will result in identification of:

- Description of all major stakeholder issues
- Assessment of management framework in the priority areas. What are the gaps & the needs?
- Assessment of socio-economic context for each landscape complex (population, economy, culture, opportunities/constraints).
- Assessment of the legal framework for biodiversity conservation
- Assessment of existing public awareness and education baseline
- Assessment of how to encourage local farmers/stakeholders to support biodiversity conservation.

Deliverables: Data and information needed for formulation of plans and strategies required for the full project.

Activity 3: *Conduct two analyses 1) Analyze practical corridor areas and how to establish the corridors in a meaningful, measurable way in the three LCs. This work will need to work closely with the socio-economic assessment. 2) Analyze how best to establish the multi-sectoral partnerships needed to manage productive landscape corridor areas for biodiversity values.*

Deliverables: Complete analysis with maps and suggested approaches in each LC.

Activity 4. *GEF Project Formulation*

A full proposal for GEF funding will be prepared, based on the results of components 1-3. The project brief will be circulated to STAP for review, and presented to the GEF Secretariat and Executive Council for approval as part of the GEF Work Programme. Recommendations made by STAP, GEF Sec/ Executive Council and other Implementing Agencies will be addressed. Finally, the Brief will be converted into a UNDP project document, with detailed Terms of Reference for Technical Inputs, an Inputs Budget, Work Plan, details of risks and mitigation measures and other information, as per standard UNDP requirements. The process of preparing the Project Brief will require:

- An incremental cost analysis of the project to differentiate between baseline and incremental activities. PDF funds will be used to collect information on the baseline scenario, identify and cost incremental activities necessary to conserve biodiversity, and foster joint programming of baseline and incremental activities.
- Confirmation of co-financing for project components not eligible for GEF funding.

Deliverables: Co-financing will be secured for the sustainable development. A consensus regarding the project strategy will be obtained. The main body of the Brief will clearly present the following information:

- A summary of the global significance and unique biological and ecological attributes of each of the project sites, and the global benefits that would accrue from conservation intervention
- Details of the ecological, social and economic attributes of the sites
- A description of the threats facing each site and their root causes
- A clear strategy for mitigating all threats and their underlying causes using an incremental costs approach
- An account of the realistic baseline
- Identification of the sustainable development baseline (comprising additional activities required to address threats that may be justified in the domestic interest)
- Identification and justification of the incremental costs of activities needed to generate global conservation benefits, over and above the sustainable development baseline.
- Details of monitoring and evaluation measures
- Details of execution and implementation measures, with an accompanying organigramme

The following annexes will be attached to the Brief:

- Incremental Cost assessment describing global and domestic benefits, and justifying incremental costs for each output
- Logical Framework Assessment, with quantifiable indicators to measure impact, a list of sources of verification, and an outline of the assumptions and risks that underpin the project
- Details of the biodiversity values of each of the project sites, to supplement information provided in the main body of the Brief
- Assessment of the risks affecting project implementation and outline of mitigation measures
- Summary of the Stakeholder Assessment and Social Feasibility Study, defining the roles and responsibilities of different groups in design, implementation, monitoring and evaluation
- Maps of the project areas
- List of reference materials

Activity 5. *Development of Monitoring and Evaluation Plan:*

Impact and output indicators will be selected, and baseline data obtained as a basis for measuring project outcomes. An M&E Plan will be developed, clearly articulating the objectives of monitoring, and specifying the periodicity of monitoring and evaluation activities, and how they will be orchestrated.

Deliverables: M&E Plan, with clear performance indicators

Output-based Block B Budget (US\$)

Item	GEF	UNDP	Co-funding
Stakeholder consultations/local travel	72,000	15,000	
Assessment and analysis of existing information on mountain & forest biodiversity	15,000		
Field verification surveys including maps of priority areas and subsequent report and threat/root cause analysis for areas	15,000		
Corridor analysis; assessment of corridor management milestones/ success indicators.	19,500		
Socioeconomic survey and analysis	15,700	4,000	
Recommendation on how to proceed in establishing sustainable LC management partnerships.	15,000		
Co-funding agreements with donors/long-term financing recommendation.	9,000	8,000	12,000 ¹
Complete programmatic recommendations for developing alternative livelihoods	10,000	12,000	5,000 ¹
Preparation of full GEF project brief and project document (expert time & travel costs, incl. expert review of final project brief)	48,000		
Printing/reporting/distributing/auditing	16,200		
Total:	237,400	39,000	17,000

¹NEDA

IMPLEMENTATION ARRANGEMENTS AND WORKPLAN

A PDF B project steering committee (PSC) will be created to provide general project guidance. The PSC will include one person from the Ministry of Finance, one from DoF, one from DNPWC, one from Ministry of Agriculture, one from UNDP, one from NEDA, two NGO representatives, and two from Academia.

The PSC will provide guidance to project development activities. It will serve as the primary channel for substantive stakeholder input. It will meet three times over the course of the Block B to review and approve the different iterations of the project brief as it is developed. A Block B Manager will be required to contribute to and direct the process for the development of the detailed plans for the full GEF project. The UNDP-GEF officer in Kathmandu will identify candidates and the PSC will approve the competitively selected Project Manager to manage the day-to-day operations of the PDF B project.

The Manager will be responsible for supervising the project and will assist in the final production of a GEF project brief (with the assistance of a GEF expert). The Manager will provide expert input in his/her area of expertise and coordinate all expert surveys, analyses, and assessments necessary for project development and organize all consultations and meetings. He/she will be responsible for keeping steering committee members informed of the project's progress on a regular basis both in written form and through informal conversation. He/she should also actively solicit the participation of relevant groups including government (especially MoFSC/DNPWC and PPP), scientists, NGOs, local farmers, and the private sector. The experts will be selected through UNDP's standard, open, competitive hiring process.

Workplan

Activity	Month	1	2	3	4	5	6	7	8
Convene Steering Group Meetings/Recruit expert consultants		x							
Assessment and analysis of existing information		x	x						
Socio-economic surveys			x	x	x				
Stakeholder/issue analysis and consultations			x	x	x				
Conduct analysis of corridor options and multi-sectoral partnership approaches needed			x	x	x	x			
Logical framework/conceptual approach for project established					x				
Baseline assessed; Incremental approach established				x	x	x			
Co-funding consultations		x	x	x	x	x	x	x	x
Project brief drafted						x			
Steering committee meeting to review draft project						x			
Finalize project brief						x	x	x	
Steering Committee approves final draft and proposal submitted									x

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ANNEX A: ABBREVIATIONS

CBOs	Community Based Organizations
DNPWC	Department of National Parks and Wildlife Conservation
GEF	Global Environment Facility
GUG	Grazing User Groups
HMG	His Majesty's Government
IUCN	The World Conservation Union
KCA	Kanchanjunga Conservation Area
KMTNC	King Mahendra Trust for Nature Conservation
MBNP-BZ	Makalu-Barun National Park – Buffer Zone
MPFS	Master Plan for the Forestry Sector
MoFSC's	Ministry of Forests & Soil Conservation
MOPE	Ministry of Population and Environment
NEDA	Netherlands Development Assistant
NEPAP	Nepal Environmental Policy and Action Plan
NGO	Non-governmental Organizations
PPP	Parks and People Program
RBNP	Royal Bardia National Park
RCNP	Royal Chitwan National Park
RSWR	Royal Shuklaphanta Wildlife Reserve
UNDP	United Nations Development Programme
WWF	World Wildlife Fund

ANNEX B: SITE DESCRIPTIONS

I. *Western Terai Landscape Complex:*

Royal Bardia National Park (RBNP)

RBNP is the largest relatively undisturbed wilderness area of Nepal's lowland Terai, rich in both natural and cultural heritage. The area is covered extensively with sal forest, grasslands and riverine forests and harbors over 264 bird species, tiger, elephant, rhino, and five species of deer. Small populations of Nepal's two crocodile species and some resident Gangetic dolphin are found in the Karnali River system. The habitat diversity of protected area of RBNP is dominated by Tropical hill Sal forest (60%), followed by Tropical Terai Sal forest Terai mixed Sal forest, Upper Siwalik Chir pine-Oak forest, limited patch of Khair-Sissoo forest and cultivated areas (3%). The buffer zone corridor zone consist of different types of forest mainly dominated by Tropical Hill Sal (*Shorea robusta*) forest, followed by Chir pine (*Pinus roxburghii*) forest and stands of mixed broad leaf and conifer species in the transition zones at around 1,000 m altitude. The buffer zone of the park area on the southern side merges into farmlands, whereas the forest cover is maintained at the edge of the Chure/Siwalik hills and extends up to the Royal Suklaphanta Wildlife Reserve.

The RBNP is implementing the UNDP Parks and People Program (PPP) with an emphasis on reducing conflict between parks and people and strengthening locally-based biodiversity conservation in ten village development committees. The project is working with 80% of the local population in park management, empowering local sustainable community development in the buffer zone, and empowerment of community forest user groups outside the buffer zone. In relation to institutional development for buffer zone management, 184 user groups (UG) have been formed, including 81 women's UG and 42 cooperatives based on micro enterprises such as herbal farming and biogas generation. Relevant works include development of energy efficient "smart" villages in which the energy needs of every household are met by biogas as an alternative to fuelwood. Also, the PPP program empowers people to implement appropriate flood water management and to plan non-palatable crop demonstrations in areas bordering forests (lemon grass cultivation), thus ensuring a double benefit of reducing cases of wildlife crop damage and generating income by selling to a herbal processing industry.

Royal Suklaphanta Wildlife Reserve

Although the area of the Reserve is small, it supports a wide range of biodiversity. The vegetation types primarily include sal forest and sal savanna landscape complex maintained by the natural processes of flooding and fire. Prominent wetlands are Rani Taal, Sikari Taal, Tarapunal, and Kalikitch. The Reserve has the world's largest population of Swamp deer (about 2500), and about 30 tigers, some 47 elephants, over 50 nil gai, hispid hare, and several more common ungulate species. The Reserve also supports 268 species of birds.

The RSWR consists of four broad vegetation types; Tropical Sal Forest; savannah grassland, Khair-sissoo forest, and lakes/wetlands. There are eight villages within the reserve area including four each on northern and southern sides. The RSWR is bordered on the west by the floodplain of Mahakali river, a major tributary to the river Ganges, by agricultural lands on the south and east and the forested Siwalik hills on Northeastern side. The proposed corridor constitute linkage of two ecozones; extension from Terai to Siwalik ecozone. The linkage to transboundary conservation area include Dudwa national park and Corbett national park of India famed for Tiger and elephant population on southern and western sides respectively. The surrounding land-use mainly consists of agriculture.

RSWR is implementing UNDP's PPP program for sustainable development and conservation. The program has worked with local people to establish 57 UG (26 men and 29 women), and public confidence has grown measurably in terms of being able to work with greater mobilization of local resources. This last year, the project provided only 38% of the cost and the village user groups 62% support from the PPP. To promote micro-enterprises, PPP has extended relevant training on technical "know-how". It is expected that this provision will reduce park-people conflict.

Government resettlement of local residents from the extension of the reserve (planned eight years ago) is not completed due to various reasons such as lack of land, weak political commitment and influx of illegal settlers. In addition, the development of an irrigation channel in the reserve area has created additional threats to wildlife. Poaching activities also create conservation problems for the tiger and ungulate species. Indian poachers have been known to enter the reserve from its southern boundary. Livestock grazing has become a potential threat in the eastern part of the reserve. Most of the lands around the reserve are under cultivation.

Corridor linking Shukla Phanta and Royal Bardia – the Siwalik/Chure foothills corridor zone: The proposed Siwalik/Chure foothills corridor links Royal Bardia with Royal Shukla Phanta Reserve. The hills are the most wooded in lowland Nepal, with highest (70%) coverage of forest. In addition, the hills have the relatively least population pressure due to scarcity of surface drinking water.

The corridor zone between Royal Bardia National Park (RBNP) and Royal Sukla Phanta Wildlife Reserve (RSWR) is characterized by an extensive block of Terai Sal (*Shorea robusta*) forest along the foothill of Siwalik zone or lesser Himalaya, representing an old travel route of wild elephant. The area of concern is least populated drained by several traversed a north-south highway and exist a few discontinuous patches of cultivated lands on northward side of both PAs. The selected area comes under one of the potentially important area of conservation from national perspective, as supported by proposition of establishment of a corridor zone by the DNPWC (DNPWC, 1998) and under research priority area of the WWF/Nepal (WWF).

The intervening forest area does not possess any threat of high magnitude at present but does hold the potential of an increase in threats such as overgrazing and logging from more human pressure after the completion of the east-west highway. This can be managed by more effectively promoting sustainable livelihoods. The conservation activity in the selected area will be cost effective, as there is no need of major infrastructure development and local community are already exposed to environmental awareness due to several UNDP and other agencies funded ongoing and sustainable conservation and development related projects. A successful ongoing UNDP Parks and People project in the local area bodes well for increasing this kind of intervention in the area.

II. Makalu-Barun National Park and Buffer zone (MBNP-BZ)

The physical setting of Makalu-Barun is unique as it encompasses 1,500 square kilometres of pristine ecosystems of the eastern Himalayas and 830 square kilometres of conservation area with 32,000 residents from over 10 ethnic groups. Within 40 km, the altitude varies from 435m at the confluence of the Arun and Shankhuwa Rivers to the 8,463m summit of Mt. Makalu. It shares a border with Sagarmatha National Park in the west and with Qomolangma Nature Preserve of China in the north. All ecological zones ranging from tropical to alpine occur. The area receives the highest rainfall in the country (over 4,000 mm). The MBNP-BZ covers only about 1.5% of Nepal's land surface, harbours 60% of the country's total flowering plants, 45% of mammals, 50% of birds, 43% reptiles and 37% amphibians in its 17 types (27%) of iso-potential vegetation zones ranging from tropical to nival zones (Joshi, 1999). The park and conservation area harbours 27 types of forests with 3,128 species of flowering plants. Of these, 56 are rare and threatened species. Over 88 species of mammals are reported including musk deer,

red panda, snow leopard, clouded leopard, black bear, Himalayan tahr, serow and goral. With 421 bird species, 78 species of fish, 43 species of reptiles, 16 species of amphibians and 315 species of butterflies, this area is biologically rich. The Makalu-Barun southern extension belonging to MBNPBZ represent one of the WWF's globally significant biodiversity hotspot site recommended for conservation in the regional protected area network of the Himalayas from an ecoregional perspective.

Wildlife poaching is under control and there are several cases where poachers have been arrested with the help of the local community. Livestock and crop depredation by wildlife is persistent. High cattle population and over-grazing are problematic. As grazing is a major issue, formation of Grazing User Groups is under process and consultation has been initiated with herders. The management staff are moderately trained and educated. External disturbances often influence management because of frequent changes in the political situation of the country and of the impact of varying amounts of annual funding. Traditional slash and burn practices and cultivation on steep slopes creates environmental problems threatening biodiversity. Traditional use of wildlife for ritual purposes (poaching and hunting), the Arun III hydro-dam, inadequate tourism infrastructure and services are other key threats to biodiversity.

The successful completion of the GEF pilot phase "Biodiversity Conservation in Nepal" project has established a solid infrastructure and programmatic foundation upon which this project will build. This includes financial support for bio-diversity conservation, the formation of 73 community forest user groups, 28 women's income generating groups, formation of an innovative Grazing User Groups (GUG), publication of more than 30 scientific reports and development of eco-tourism. There are no major unmanageable threats. Existing threats such as overgrazing, poaching and slash/burn cultivation are under process of mitigation. Keeping in view several previous conservation-related studies and projects and exposure of local community in conservation issues, the likelihood success in tackling the root causes of biodiversity loss is high and will prove cost effective and sustainable. The site affords logistical /transportation/communication facilities. The social/political context for long term sustainable development holds conducive to project implementation and stakeholders' concern.

III. Kanchanjunga Conservation Area (KCA)

Kanchanjunga comprises intact and increasingly threatened habitats that are home to endangered species such as the snow leopard, musk deer, Himalayan black bear, and wolf populations. Himalayan larch and extensive juniper forests found here are unique to this part of Nepal. The KCA (780m-8,586m) exhibits a great diversity of flora and fauna including pristine forests and with representative of all major ecosystems within a relatively limited area. It covers an area of 2,011 sq.km but records 2/3rd of Nepalese flora and adjoins 850 sq.km. Kanchenjunga national park of Sikkim (India). This easternmost conservation area of Nepal having the world's third highest peak, features predominance of eastern Himalayan flora characterised by a relatively higher diversity of oak, rhododendron, orchids, ferns, moss and bamboo spp., compared to central and western parts of Nepal. Also occurring here are rare endangered species and species of high bio-prospect value exemplified by *Magnolia campbelli*, *Tetracentron sinense* and *Taxus baccata* respectively. The leaves of at least one species yields Taxol, a potent anticancer drug, hence in very high demand and need commercial propagation to conserve the wild stocks. The faunal diversity includes a rich assemblage of many nationally protected, endangered mammal species such as snow leopard (*Panthera uncia*), Red Panda (*Ailurus fulgens*), musk deer (*Moschus Chrysogaster*), Assamese monkey (*Macaca assamensis*) and 180; 1/5th of bird species of Nepal.

The area is also rich in cultural diversity and age-old traditional environment friendly practices. These have proven attributes for a steady increase of eco tourism in this area and its declaration as a tri-national (China-India-Nepal) international peace park, the first of its kind in the south Asian region. Despite the richness in biodiversity, so far there has been no comprehensive inventory work, hence the status of

endemic plant species and species threatened to extinction is not known and this herald data gap on the issue of biodiversity conservation of global significance through community participation.

KCA does not have an officially designated buffer zone, as it is a conservation area instead of a national park. However, the southern part of Kanchanjunga Conservation Area (KCA) acts like a buffer zone to the core area and is characterized by deciduous mixed broadleaf forest/shrub cover intermixed with farmlands and small villages. Community forestry user groups have been formed in some of the populated areas of KCA to ensure a sustainable supply of fuelwood, fodder and timber for local people.

The Kanchanjunga complex comes under one of the WWF's globally significant but under represented important biodiversity conservation landscapes in a regional protected area network of the Himalayas from an ecoregional perspective. The site already declared as a WWF "Gift to the Earth" site and proposed trinational (Nepal-China-India) peace park holds potential of successful demonstration site. The KCA faces a relatively manageable low threat level (loss of forest cover, forest fire). In addition the area faces relatively minimal problems of encroachment and park-people conflict. WWF has been working in the Kanchanjunga Conservation Area to establish a field station and conduct some public awareness activities. IUCN/Nepal's has conducted some research in the adjacent Mikejaljale Rhodoendron reserve.

ANNEX C: SUMMARY OF OTHER UNDP/GEF WILDLIFE CORRIDOR PROJECTS IN THE HIMALAYA-HINDU KUSH ECOREGION

1. Landscape-scale conservation of endangered tiger and rhinoceros populations in and around Chitwan National Park (Nepal)

The main objective of the project is to develop and maintain suitable landscape for the conservation of some important and endangered species found in lowland of Nepal which are categorized under seriously threatened animals of the world. This objective will be met by protecting the only remaining corridor forest (Bharandabhar forest) between the lowlands and mid-hill forests in Nepal and by rehabilitating Kans (*Saccharum spontaneum*) grasslands which is a critical habitat for endangered species like tiger and greater one-horned rhinoceros. This objective is also integrated with various grass root level activities that address the needs of local people by promoting various biodiversity oriented economic incentives. The concept proves to be a successful practice in neutralizing dependencies of local people on forest resources to a large extent in many projects launched by the Trust and once again adopted here to prevent habitat loss resulting from excessive utilization of resources.

The project is targeted for three years period to allow sufficient time to materialize the concept and prepare enough background to sustain it in future. At the end of the project, the following outcomes are expected.

1. Protection and management of only remaining corridor forest for wildlife dispersal that joins two critical ecosystems including an important wet land;
2. Restoration of kans grassland that falls under very few grassland systems supporting the tallest grass species in the world including comprehensive plan for long term management;
3. Establishment of community based conservation model with capable governance structures ensuring long term management goal
4. Grass root level integrated programs that not only reduce local pressure on resource but also address their basic needs by providing various opportunities for economic development,
5. Scientific assessment of biodiversity

2. Linking and enhancing protected areas for ecosystem conservation (Bhutan)

Bhutan has set aside approximately one quarter of its land area under the national protected areas system and has further committed to maintaining a minimum of 60% of its land under forest cover in perpetuity. Linking and enhancing the protected areas network will bring an additional 7-10% of the country under the conservation mandate and secure the protection of forest and mountain ecosystems of critical global importance through prevention of species population isolation and ecosystem fragmentation and loss. Conservation of these ecosystems will accrue further global benefits, as forests play a critical role in regulating the world's climate, safeguarding watersheds, and harboring plant and animal species of not only significant commercial value, but of tremendous medicinal and cultural worth.

The overall goal of the project is: to maintain viable populations of species of global biodiversity significance through the sustainable conservation of essential forest and mountain ecosystems, by maintaining a network of protected areas and linking corridors. To achieve this goal, it is necessary to achieve the following objectives:

- Remove threats to identified essential corridors in a sustainable way.
- Substantially strengthen management of Thrumshing La National Park, recognizing it as a linchpin in the protected area network.

- Implement measures to monitor the effectiveness of conservation interventions, including the sustainable management of corridors and other protected areas, both in terms of conservation of biodiversity and socio-economic well-being, in order to enable continuous improvement.

3. *Mountains, Markets and Biodiversity in the Sikkim Himalaya (India)*

Sikkim is listed among the world's ten most critical centers for biodiversity and endemism with 81 species of mammals, 550 species of birds, 650 species of butterflies, 33 species of reptiles, 16 species of amphibians, 48 species of fishes (9 families, 23 genera), 550 species of orchids (95 genera), 36 species of rhododendrons (45 varieties), 4000 species of flowering plants, 9 species of conifers, 300 species of ferns and allies, and 175 species of wild edible plants including cash-crops such as cardamom. Sikkim is widely acknowledged as India's most significant biodiversity "Hot Spot", along with the nearby state of Arunachal Pradesh as it has almost as many plant species in only a tenth of the land area.

The establishment of protected areas alone will not preserve adequate landscape-level linkages for ensuring continued viable populations of globally-significant species, especially in the case of seasonal and area-sensitive species. In the Himalaya, mountain protected areas are usually located at higher elevations where biodiversity is lower and coverage of permanent snow and ice is higher. Species-rich lowland areas are under greatest pressure from human activities, but have received little attention. In addition, "Business as usual," relying upon prescriptive top-down governmental regulation and enforcement will not reverse biodiversity loss for it fails to adequately address the basic resource management needs, costs of management, land tenure and access rights of rural communities and enlist their support for conservation. The most promising strategy lies in testing new models of community-based forest management which are deeply imbedded with the lessons learned from collaborative community and protected area co-management projects.

Primary direct threats to Sikkim's unique biodiversity and that at the project site in Western Sikkim (see Figure 1), are land conversion and degradation, and landscape fragmentation. However, the biodiversity values of these forest areas and their importance as extensions and corridors of protected area ecosystems have rarely, if ever, been incorporated within the operational/microplanning process. In addition, the potential for increasing the linkage between locally harvested products and markets has been neglected. The results are forests and associated agro-forestry systems that neither fulfill their potential for biodiversity conservation nor generating economic benefits for local populations.

Goal: Cost-effective and sustainable participatory conservation of globally significant biodiversity in the forest ecosystems of the Kanchanjunga region in the Sikkim Himalaya.

Objectives

1. Increase the forest area in KBR management zones under active participatory conservation management for biodiversity values;
2. Increase biodiversity values of indigenous agro-forestry systems in KBR buffer zones and adjacent areas, with a focus on cardamom, in three aspects: tree species diversity; microbial nutrient-recycling; genetic diversity within native species.
3. Improve economic returns (linked to conservation) to marginal populations from products in mid- and low-elevational forest and agro-forestry areas, primarily non-timber forest products (NTFPs) such as medicinal and aromatic plants, and native cardamom;
4. Support generation of long-term conservation and economic benefits through enabling policy, local governance mechanisms and participatory monitoring.
5. Promote the adoption of similar models of biodiversity management and income generation within Sikkim, other Indian states and the region.