United Nations Development Programme

Project of the Government of Pakistan

and the

Global Environmental Facility

Pakistan Mountain Areas Conservancy Project (MACP)

1999- 2006

(February 1999)

Project Document

1. Identifiers

Project Number	PAK/98/G31/A/1G/99
Name of Project:	Pakistan Mountain Areas Conservancy Project (MACP)
Duration:	Seven Years
Implementing Agency:	UNDP
Executing Agency:	Ministry of Environment, Local Government and Rural Development (MELGRD)
Requesting Country:	Pakistan
Eligibility:	Ratified Convention on Biological Diversity in 1994
GEF Focal Area:	Biodiversity
GEF Programming Framework:	Operational Programme Four: Mountain Ecosystems

2. Summary: The MACP aims at protecting the rich biological heritage of the Karakoram, Hindu Kush and Western Himalayan mountain ranges, advancing a comprehensive package of interventions to address threats to biological diversity. The focus is on empowering local communities to manage ecosystems and wild resources, making them accountable for the quality of their stewardship. A representative sample of biomes will be protected through the creation of four Conservancies [Managed Resource Protected Areas]. Within the Conservancies, activities will engender the *in-situ* conservation of habitats and species and promote sustainable uses of biological resources.

3. Costs and Financing (US$):

GEF Project:	8,100,000
[of which administration costs	660,000]
PRIF:	2,500,000
Subtotal GEF	**10, 600,000**
CO-FINANCING	
UNDP	1,500,000
Govt. of Pakistan:	750,000
Local Communities	250,000
IFAD/UNDP	300,000
European Union (IUCN)	800,000
AKRSP	3,500,000
WWF	500,000
SDC (IUCN)	450,000
IUCN SSC/SUI	100,000
UK	100,000
Total Project Cost:	**18,850,000**

4. Associated Financing: Baseline of US$ 91,763,260

5. Operational Focal Point Endorsement:

Name:	Sikander Hayat Jamali	Title:	Secretary
Organisation:	Ministry of Environment, Local Government and Rural Development	Date:	September 24, 1997

6. IA Contact: Tim Boyle: Regional Coordinator, UNDP/RBAP GEF Unit, Telephone [1 212] 906 6511; Fax: [1 212] 906 5825; email Tim.Boyle@undp.org

The Global Environment Facility and United Nations Development Programme, in sponsoring this project, are not making any judgement on the legal status of any territory

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List of Acronyms

ADB	Asian Development Bank
AKES	Aga Khan Education Services
AKRSP	Aga Khan Rural Support Programme
AKDN	Aga Khan Development Network
APR	Annual Project Report
CBD	Convention on Biological Diversity
CBO	Community Based Organisation
CCS	Chitral Conservation Strategy
COP	Conference of Parties
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
DCC	District Conservation Committees
DOA	Department of Agriculture
EU	European Union
FHIES	Farm Household Income and Expenditure Survey
FAO	Food and Agriculture Organisation
FPAP	Family Planning Association of Pakistan
FMU	AKRSP Field Management Unit
GEF	Global Environment Facility
GOP	Government of Pakistan
HWP	Himalayan Wildlife Project
IFAD	International Fund for Agricultural Development
IUCN	The World Conservation Union-Pakistan
IUCN/SUI	Sustainable Use Initiative of IUCN
IUCN/SSC	Species Survival Commissions of IUCN
MELGRD	Ministry of Environment Local Government and Rural Development
NA	Northern Areas
NACS	Northern Areas Conservation Strategy
NCS	National Conservation Strategy
NGO	Non-Governmental Organisation
NRM	Natural Resource Management Programme of AKRSP
NWFP	North West Frontier Province
PA	Protected Area
PAMP	Protected Areas Management Project
PCOM	UNDP-Pakistan's Project Cycle Operations Manual
PFI	Pakistan Forest Institute
PMC	Project Management Committee
PPI	Productive Physical Infrastructure (AKRSP)
PRIF	GEF Pre- Investment Facility
PSC	Project Steering Committee
SDC	Swiss Agency for Development and Co-operation
SGP	GEF Small Grants Programme
SSC	Species Survival Commission
SUI	Sustainable Use Initiative
TOP	Terms of Partnership
TOR	Terms of Reference
TPR	Tri-Partite Review
TRC	Teachers Resource Centre
UNDP	United Nations Development Programme
VCF	Valley Conservation Fund
VMP	Valley Management Plan
VO	Village Organisation
VWG	Village Wildlife Guide
WWF	World Wide Fund for Nature-Pakistan

OVERVIEW

The Pakistan Mountain Areas Conservancy Project (MACP) aims at mitigating threats to biological diversity in the Western Himalayan, Karakoram and Hindu Kush mountain ranges of northern Pakistan. With several peaks reaching over 8,000 metres, this region contains some of the world's highest mountains. The landscape is dissected by narrow valleys (at a mean altitude of 1,500- 2,500 metres) carved by the Indus River and its tributaries. The region has a dry temperate climate with great variation in temperatures, which range from extreme cold at and above the snowline (e.g. –17º C) to highs of 45º C in summer at lower elevations. Rainfall is sparse as the region lies outside the monsoon belt and a dry alpine environment predominates. However, spatial rainfall patterns vary and some areas receive sufficient precipitation to support moist alpine meadows and dry temperate forests.

Vegetation types vary from xeric communities to alpine heaths and meadows, stands of oaks and birch, and conifer forests (see annex VII). The region is characterised by high alpha, beta and gamma diversity and harbours many globally threatened species. While low human population densities have historically limited anthropogenic impacts on the natural environment, the present situation is typified by a gradual acceleration of threats to habitats and species spurred by demographic, economic, and technological change. Proximate threats to biological diversity include over-hunting, the unsustainable harvest of wildlife, rangeland degradation by domestic livestock, habitat fragmentation, and forest loss.

Biodiversity management programmes in Pakistan have traditionally excluded local communities from decision making and activity implementation. Such exclusion has alienated communities from conservation efforts. The MACP is based on the premise that in the long run, conservation interventions are unlikely to mitigate threats to biological diversity unless communities are actively involved. The project has three principle thrusts: first, to empower, organise and boost the capacity of local communities to conserve biodiversity at an ecological landscape level; second, to enhance the relative values of wild resources (as a conservation incentive) by promoting their sustainable use; and third, to create a conducive policy, legislative and financial framework for community-based conservation.

A focus on ecological landscape management in the mountain areas is of the essence in order to protect biological diversity. While a number of Protected Areas (National Parks and Wildlife Sanctuaries) have been established in the region, these are generally too small and fragmented to guarantee species survival, especially of wide-ranging fauna such as the Snow Leopard, Himalayan Lynx, and Markhor. Conservation will need to be extended in scale and scope to ensure that viable populations of globally threatened species are protected, and in order to maintain biological corridors between prime wildlife habitats, thus enabling the transfer of genetic material between animal populations.

The project is based on a successful, field-tested approach to biodiversity conservation, building on the activities of the GEF Pre-Investment Facility project (PRIF): Maintaining Biodiversity in Pakistan with Rural Community Development. The PRIF tested the viability of community-based approaches to conservation management, focusing on mountainous areas in the Northern Areas (NAs) and North West Frontier Province (NWFP). Implementation commenced in early 1995 and concluded in 1998.

The objective of the Government of Pakistan (GOP) in soliciting GEF investment for the PRIF was to continue and expand efforts initiated under it by spearheading an operational phase project[1]. An Independent Evaluation of the PRIF phase was completed in April 1997 with the aim of determining its efficacy. In summary, the Evaluation Mission concluded that the approach piloted under the PRIF phase had yielded very positive results in a short period, and would, if continued, provide a strong foundation for achieving stable biodiversity conservation in a cost-effective manner (Garratt et al, 1997). The MACP was developed following the Mission's endorsement and builds on the lessons learned during the PRIF, particularly those relating the methods of social engagement (see annex XIV).

The PRIF established a process for engaging communities in conservation efforts through awareness raising, piloting participatory planning methodologies, identifying local concerns, needs, and priorities, and challenging community members to rethink their development strategies. The aim was to ensure the compatibility of these strategies with the objectives of conservation and sustainable use of biological diversity. The approach has been applied in 15 valleys, each comprising a project site, and has been modified as necessary to reflect different socio-economic and institutional circumstances.

The MACP will strengthen conservation management in the PRIF sites, plus sponsor the extension of conservation efforts to new areas, contiguous to the existing sites. Such extension is vital to provide for the long-term ecological viability of conservation (i.e. to ensure that sufficient habitat is protected), plus to ensure that a representative sample of biomes is protected. Project sites would be clustered, with a single cluster comprising a number of valleys, harbouring significant biodiversity and constituting a viable ecological unit. Each unit would form a Conservancy (or Managed Resource Protected Area), managed by local communities in partnership with government as multiple-use areas.

Four Conservancies have been identified, using a range of biological, socio-economic and other criteria, with two sites in North West Frontier Province, and two in the Northern Areas. The Tirichmir and Qashqar Conservancies, both in NWFP, lie in the Hindu Kush. In the Northern Areas, the Gojal Conservancy lies at the point of intersection of the Karakoram range with the Pamirs in Afghanistan and China. The Nanga Parbat Conservancy, also in the Northern Areas, lies in the Western Himalaya. The Tirichmir and Gojal Conservancies are characterised as cold deserts, dominated by a dry alpine environment, although alpine meadows are found at higher elevations. Much of the landscape in these areas is treeless, with permanent snowfields found above 4,000 metres. In contrast, Nanga Parbat and Qashqar Conservancies harbour ecologically important tracts of dry temperate forests.

The sites have been selected so as to maximise alpha, beta, and gamma diversity, so capturing a representative sample of the biodiversity of the region. All of the Conservancies are contiguous to existing National Parks and Wildlife Sanctuaries, serving to buffer them from threat emanating from surrounding landscapes. The Conservancies cumulatively span an area of some 16,300 km^2, (the mountain region covers a total area of approximately 90,000 km^2). A brief description of the sites is provided below (a map of the region, showing the locations of the 4 Conservancies is provided on page 6):

[1] A feasibility phase was deemed to be necessary prior to inception of a full-scale project because community-based approaches to conservation remained untested in the Pakistani context when the project was conceptualised.

Qashqar Conservancy (Area of Interest: 3,050 square kilometres): This site harbours a great range of flora, including dry temperate conifer forests, oak scrub and dry alpine meadows. Threatened fauna include the Himalayan Black Bear, Musk Deer, and Himalayan Ibex. The oak forests are utilised by the largest sub species of Markhor (*Capra falconeri cashmirensis*), whose survival hinges on protection of this habitat type. Predators include several species of small cats, the Himalayan Yellow Throated Marten, and Snow Leopards at higher elevations (NWFP, 1994). The bird fauna includes the Himalayan Snowcock, Chukar, Koklas Pheasant, Himalayan Monal Pheasant, and Snow Partridge, plus a number of seasonal migrants. The Conservancy abuts two game reserves, namely Goleen Gol (497 sq. kilometres) to the west, and Mahudand (220 sq. kilometres) to the east. Both sites presently lack protection and face moderate to severe anthropogenic pressures that would be mitigated through this project.

Tirichmir Conservancy (Area of Interest: 3,580 square kilometres): This region comprises mainly dry alpine habitats. Flagship species include the Himalayan Lynx, Wolves, and the Snow Leopard. Small carnivores include the Stone Marten, Ermine, and Pallas's Cat (NWFP 1994). The site comprises part of an important flyway for birds migrating to the Indian sub continent. The flora has unique Irano-Turanian affinities, but more than 19 species of Himalayan origin are also found here. The Conservancy envelops the highest peak in the Hindu Kush, Tirichmir (7,700 masl). The site abuts the Chitral Gol National Park, a small reserve of some 77 square kilometres, the ecological viability of which hinges on the management of contiguous ecological landscapes in the Conservancy.

Nanga-Parbat Conservancy (Area of Interest: 4,905 sq. kilometres): This site encompasses dry alpine habitat and dry temperate coniferous forests in the vicinity of Nanga Parbat, one of the world's highest mountains (8,126 masl). The area is famous as a storehouse of medicinal plants and spices. The higher valley slopes provide a good supply of black cumin and endangered kut (costus roots) grows in pockets. Nearly 250 species of medicinal plants and spices have been identified in the area. The valleys also support populations of Flare-horned Markhor. Lying on the northern edge of the monsoon zone, the high reaches of the valleys are vegetated with pine forests with broadleaf trees such as oak and birch found at slightly lower elevations. The Conservancy is contiguous to the Deosai Plateau National Park (3,636 square kilometres), abuts the Satpara Wildlife Sanctuary (310 square kilometres) to the east, and surrounds the Astore Wildlife Sanctuary (414 square kilometres). The MACP will accord protection to these sites by attenuating threats stemming from resource-uses in the Conservancy.

Gojal Conservancy (Area of Interest: 4,830 square kilometres): This site includes permanent snowfields, alpine meadows and dry alpine habitat, and is contiguous to Khunjerab National Park (2,269 square kilometres). Three rare ungulate species are found, namely the endangered Marco Polo Sheep, Tibetan Wild Ass and the Blue Sheep. Population of these species (restricted to high grounds above 4,000 metres in elevation) use seasonal home ranges and drift between the Conservancy and neighbouring areas in Afghanistan and China. The area supports a healthy population of Snow Leopards and other predators, including the Himalayan Lynx and Wolf. Among large birds, the Lammergeier, Himalayan Griffon Vulture, Golden Eagle, Himalayan Snowcock and Chukar are found.

Initial dialogue has occurred with communities in the sites to determine their receptivity to biodiversity conservation and sustainable use management of biological resources. An organic approach to conservation management will be effected that can be adapted in line with community responses to interventions, addresses social conflict, and that enables fine tuning based on biological impact.

Lessons learned under the project will be documented and disseminated to conservation practitioners and policy makers working elsewhere in the region to sensitise them to the approach and highlight best practice methods.

ELIGIBILITY UNDER THE CONVENTION ON BIOLOGICAL DIVERSITY (CBD)

The MACP is fully congruent with the objectives and principles of the Convention on Biological Diversity and policy guidelines set by the Conference of Parties. It fulfils provisions of the CBD related to *in situ* conservation (Article 8), the sustainable use of biological diversity, and the equitable sharing of benefits that derive from conservation and sustainable use (Article 10). The four Conservancies will provide for the *in situ* conservation of biological diversity – with project interventions geared towards ensuring effective and sustainable long-term management. A number of demonstration initiatives will be implemented to test the viability and management modalities of sustainable uses of wild flora and fauna (Articles 16 and 18). The results of these field-tests will be disseminated to local communities residing within the Conservancies, with baseline funding leveraged to enable their broader application.

The project also includes an awareness raising element to impart conservation values to key stakeholders, as is provided for under Article 13 of the CBD. Finally, the project includes a strong training component to strengthen institutional and human capacities at the local and provincial levels to execute and ensure the sustainability of conservation measures (Article 12).

GEF ELIGIBILITY

The project meets the eligibility requirements for GEF funding as detailed in the GEF Operational Strategy, Operational Programme number 4: Mountain Ecosystems and other policy advice. In short, the project

- will generate substantial global benefits, protecting economic and intrinsic values that derive from biological diversity and by contributing substantively towards the conservation of globally threatened species and races, including components of wild agrobiodiversity. The project region is listed in paragraph 4.9 (a) of the GEF Operational Programmes as a high global conservation priority.
- is country driven— being fully consistent with National Policies and Strategies for the Conservation of Biological Diversity (as articulated in Pakistan's Biodiversity Action Plan and National Conservation Strategy) and based on extensive consultations with stakeholder groups nationally.
- will be sustainable beyond its life time, as a consequence of institutional and human capacity building and the establishment of a financial mechanism to fund field level activities; A time period of 7 years has been selected for implementation, allowing for conservation to be placed on a sustainable footing[2].
- includes a strong monitoring and evaluation programme aimed at institutionalising monitoring within an adaptive management framework, raising biological monitoring capacities at the local level.
- co-financing to address the underlying causes of biodiversity loss in the region, and in particular, to address rural livelihood needs (thus improving the climate for conservation).

[2] Given this, no follow-up extensions requiring GEF resources will be necessary.

- addresses technical comments made by STAP and GEF Executive Council members on the Project Brief.

INCREMENTAL COSTS

The GEF would fund the agreed incremental costs of activities required to secure global environmental benefits associated with the conservation and sustainable use of biological diversity. The business as usual situation, without the project, would result in the continued quantity and quality erosion of conservation values. Baseline initiatives, as currently formulated, will be insufficient to arrest these trends because they are not tuned to specific conservation management needs. Under the alternative strategy, some components of the baseline will be substituted with funding mobilised from several initiatives to achieve broader project objectives. In other words, equivalent expenditures to those that would otherwise have been incurred in the baseline have been leveraged to fund the alternative.

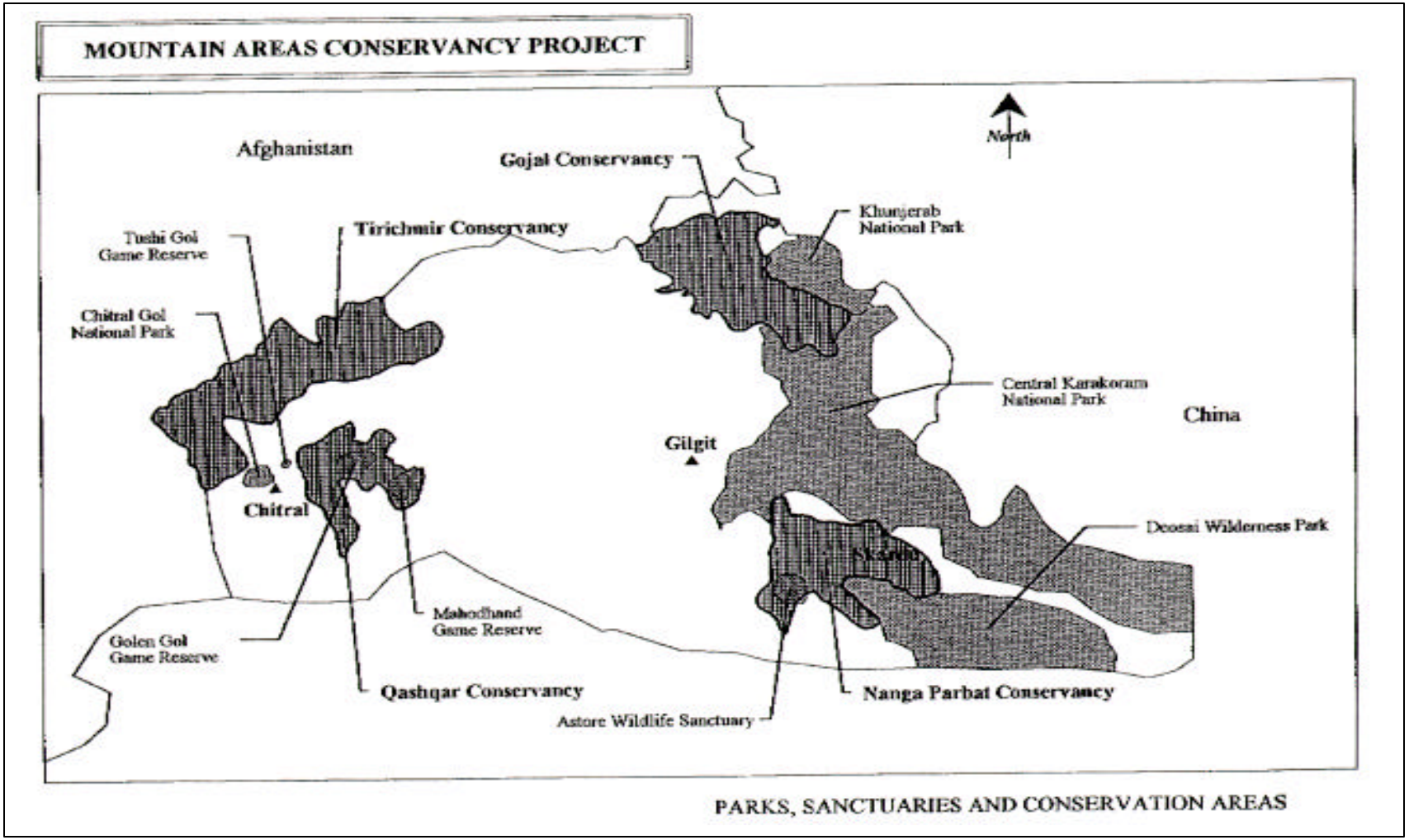
The project has forged a series of partnerships with other development agencies, including government institutions, donors, and NGOs. These agencies will take primary responsibility for activities addressing the root causes of biodiversity loss under a holistic management framework. Such activities, aimed at meeting the basic needs of local communities, can be justified in Pakistan's own sustainable development interests and are not eligible for GEF financing based on the incremental cost criterion. Nevertheless, they are necessary to protect biodiversity.

Incremental Costs to be funded by the GEF amount to US$ 8,100,000. UNDP will provide co-financing equal to US$ 1,500,000, and the Government of Pakistan US$ 750,000. Financing from other sources, committed in parallel to UNDP/GEF resources, totals US$ 6,000,000. The GEF investment represents a modest increment to Pakistan's own commitments to sustainable development. A full estimate and justification of baseline and incremental costs is given in Annex V, which also reports on the global benefits that will accrue as a result of project implementation.

The co-funding captured by the project includes both complementary and substitutional elements (in all cases linked directly to achievement of the GEF alternative). The former includes the inputs of UNDP, the Government of Pakistan, the UK, Swiss Development Corporation/ IUCN, IUCN SUI and WWF, while the latter includes the inputs of the EU, IFAD and AKRSP. Local communities will provide cash inputs to the project drawing on existing savings and returns from sustainable use initiatives (communities will provide substantial sweat equity inputs that are not factored into co-financing, but which reflect domestic benefits accruing from improvements in long-term ecological security).

Map of the Conservancy Areas

The information depicted on this map does not imply any judgement on the part of the Global Environment Facility nor the United Nations regarding the legal status of any territory, or any endorsement or acceptance of boundaries



CONTEXT

CONSERVATION SIGNIFICANCE

A wide range of natural environments are represented in Pakistan, including globally significant wetlands, mangrove systems, alluvial plains along the Indus River, arid deserts in the hinterland, temperate forests and alpine meadows in the north. The country lies in an important species mixing zone with a biogeography characterised by a blending of the Palearctic, Oriental and Ethiopian regions. Great altitudinal and climatic variations influence the type of vegetation and associated fauna. Ten out of the 18 known orders of mammals are represented in Pakistan with at least 174 species listed as occurring (GOP/IUCN/WWF, 1998). There are six endemic mammal species, including the little known and endangered Woolly Flying Squirrel found only in the northern mountains. Some 668 bird species have been recorded, the avifauna list containing a mixture of Palearctic and Indomalayan forms. The Reptile life also consists of a blend of Palearctic and Indomalayan forms, with 177 species reported to date including at least 13 species endemic to Pakistan. With large tracts of arid and semi-arid habitat, Pakistan has a relatively impoverished amphibian fauna with only 22 species recorded in the country as a whole. Of the 198 species of freshwater fish, 29 are endemic. Finally, of the nearly 6,000 species of vascular plants, almost 400 species, or 7% of the total, are known to be endemic.

The species tally for Pakistan's northern mountain areas includes 45 species of mammals (Roberts 1997), 222 species of birds (Roberts 1991), 32 of reptiles, 6 of amphibians, and some 1,000 species of vascular plants (Stewart 1972). A range of globally threatened species are found including the Snow Leopard, Himalayan Lynx, Himalayan Ibex, Marco Polo Sheep, Blue Sheep, Ladakh Urial, Markhor, Musk Deer and the Woolly Flying Squirrel. The Western Himalaya is classified as an Endemic Bird Area (EBA) by Birdlife International. Mountain passes in the Hindu Kush serve as flyways for migrating birds, with a range of species frequenting the area during spring and autumn migrations. The resident avifauna includes the Himalayan Monal Pheasant, Snow Partridge, Himalayan Snow Cock and several birds of prey, including the Lammergeier. The invertebrate fauna has been poorly catalogued, but includes several endemic species of butterflies. The flora is diverse, with a number of progenitors of economically useful crops represented, including wild cumin, thyme, pine nuts, apricots, and walnuts, plus a host of medicinal plants with potentially useful pharmaceutical applications. Approximately 80% of the 300 or so species of plants known to be endemic to Pakistan are found in the mountains. The four Conservancies capture a broadly representative sample of the region's biota.

Biogeographical Overview of the Conservancies

Conservancy	**Tirichmir**	**Qashqar**	**Gojal**	**Nanga Parbat**
Mountain Range	Hindu Kush	Hindu Hush	Karakoram	W. Himalaya
Important Biomes (see Annex VII for description)	Dry alpine zone/snowfields; alpine steppes.	Scrub oak; dry temperate forest.	Dry alpine zone/ snowfields; alpine steppes.	Alpine meadows; subalpine scrub.
Zoogeographic Importance	Flyway for migratory birds; rare plants.	Transitional zone between Palearctic and Oriental realms. Cedar, Juniper and Birch forests (critical habitat for the Musk Deer). Pine forests (crucial for growth of morel mushrooms).	Habitat of globally significant species: Marco Polo Sheep, Snow Leopard and possibly, Woolly Flying Squirrels.	Transition zone between alpine and moist temperate biomes. Medicinal plants.

Conservancy	**Tirichmir**	**Qashqar**	**Gojal**	**Nanga Parbat**
Species Numbers[3] Mammals Birds Rare Plants	 21 114 64	 21 184 20	 18 66 17	 23 131 39
Key Flora	*Juniperus communis, Salix denticulata, Pseudomerten-sia spp. Polentilla spp.*	*Picea smithiana, Pinus willachiana, Cedrus deodara, Quercus balloot, Taxus baccata*	*Poa attenuata, Draba trinervia, Polygonum affine, Saxifraga sibirica, Euphorbia spp.*	*Betula utilis, Juniperus communis, Sorbus acuparia Alopercus,carex spp., Poa grasses, Anemone, Kobresia and Aconitum spp.*
Agro-biodiversity (wild races)	Apricot *(Prunus armeniaca);* Walnut *(Juglans regia);* Acorn *(Quercus balloot);* Pine Nut (*Pinus gerardiana*); Cumin (*Bunium persicum*); Wild Rose (*Rosa webbiana*); Sea Buckthorn(*Hippo pi rhamnoides*); Ephedrine (*Ephedra sp.*)	Walnut *(Juglans regia*); Acorn (*Quercus balloot*); Horse Chesnut (*Aesculus indica*); Pine Nut (*Pinus gerardiana*); Wild Rose (*Rosa webbiana*); Hippopi (*Hippopi rhamnoides*); Morel Mushroom (*Morchella conica*); Ephedrine (*Ephedra sp.*)	Apricot (*Prunus armeniaca*); Walnut (*Juglans regia*); Wild Rose (*Rosa webbiana*); Sea Buckthorn (*Hippopi rhamnoides*); Ephedrine (*Ephedra sp.*)	Apricot (*Prunus armeniaca*); Walnut (*Juglans regia*); Acorn (*Quercus balloot*); Pine Nut (*Pinus gerardiana*); Costus Root (*Sassurea costus*); Thyme (*Thymus lineavis*); Cumin (*Bunium persicum*); Wild Rose (*Rosa webbiana*); Sea Buckthorn (*Hippopi rhamnoides*); Ephedrine (*Ephedra sp.*)
Key Fauna	Snow Leopard, Pallas Cat, Grey Wolf, Himalayan Ibex, Long-tailed Marmot, Eurasian Scops Owl, Goshawk, Booted Eagle, Himalayan Pied Woodpecker	Himalayan Black Bear, Brown bear, Common Otter, Musk Deer, Striped Hyena, Markhor, Greater Horseshoe bat, Koklas Pheasant, Monal Pheasant, Golden Eagle, Common Kestrel	Snow Leopard, Himalayan Lynx, Himalayan Ibex, Grey Wolf, Marco Polo Sheep, Blue Sheep, Bobak Marmot, Himalayan Griffon Vulture, Lammergier, European Sparrow Hawk, Himalayan Snow Cock, Snow Partridge	Snow Leopard, Alpine Weasel, Musk Deer, Markhor, Chinese Birch Mouse, Royle's High Mountain Vole, Bluethroat, Himalayan Snowcock, Marsh Harrier, Northern Eagle Owl

THE SOCIO-ECONOMIC LANDSCAPE

Human populations are concentrated in the valleys although high pastures in upland regions are used in summer months for the purposes of grazing livestock, hunting, and gathering wild resources. The project region contains a rich mix of peoples, languages and cultures. Major ethnic groups include the Shin, Yashkun, Balti, and Pathan peoples. Minority groups include Kalash, Dom and Gujar communities. All these groups are represented within the Conservancies and their social interrelations will have implications for conservation management. The three major sects of Islam – Shia, Sunni and Ismaili –are almost equally represented in the project region.

The comparative population figures in the project region and Conservancies are as follows:

[3] The four Conservancies collectively harbour a total of 45 species of mammals, 222 of birds (including 86 species of breeding birds) and 109 rare plants.

Population Data

Project Region	Pop.	Conservancies	Pop.	Pop. Density
Gilgit/Asotre	643,542	Gojal	31,827	6.5
Baltistan	68,414	Nanga Parbat	25,000	5
Chitral	500,000	Tirichmir	15,000	4.1
		Qashqar	23,000	7.5

Village Institutions: Strong organisational structures at the community level are fundamental to the success of community-based conservation. Several rural support programmes have facilitated the development of Village Organisations/Womens Organisations (VOs/WOs) as well as supra-village networks. Simultaneously, other village level institutions are also autonomously developing, based on communities' needs. Local-level leadership is provided through several vehicles. The Numberdar, representatives of erstwhile Rajas', play a major role, albeit informally, in local conflict resolution. Jirgas or village councils are an important centre of village level decision making with membership determined by age, wealth, education and occupation. VO/WO structures have also evolved over the last decade as important forms of village level decision making and resource management. The role of religious leaders is also being redefined and in some places such leaders play an increasingly important advisory function. The Union Council and District Council representatives comprise another important leadership group, using their political standing to bring outside resources into the village economy.

Land Tenure: Cultivated land in the region is privately owned whereas pasture areas are generally communal, with grazing rights being accorded to all villagers. Forest areas fall into two categories - one, forests "owned" by villagers who may exploit the resource, subject to approval from the Forestry Department, and two- "protected" forests, which are owned and managed by Forest Departments, although they are used by forest-edge communities for grazing and collecting firewood. Property rights on most barren land are not clearly defined; in cases where barren lands have been reclaimed (i.e. by constructing irrigation channels) local residents often claim ownership. Holding patterns for agricultural land are generally equitable with very few landless farmers or large landowners.

Livelihoods: Per capita incomes vary spatially, ranging from Rs 4,000- 6,000 (US$ 100-150, Malik, D. 1996). Agricultural and livestock production provide the main source of livelihood for communities, accounting for some 60% of household income. Remittances from migrant labour account for approximately 15% of net income. A roughly equal proportion of income is derived from employment in or ownership of small enterprises, e.g., small roadside shops, hotels, and tourist outfits. Employment in the public sector and NGOs accounts for less than a tenth of total income.

A number of rural support programmes have augmented government development initiatives aimed at diversifying livelihoods. Significant progress has been made in this regard, particularly in the fields of poultry production, manufacture of homespun cloth, and fruit marketing, and there is a growing interest in the cultivation of high value orchard products. A number of non-timber forest products are marketed locally, including cumin seed, honey, medicinal herbs, and mushrooms. Women work in the fields and undertake virtually all farming activities (except ploughing and harvesting) in addition to their regular household chores and livestock and poultry keeping. Women and children are also responsible for fuelwood collection and for tending irrigation channels. There is a growing tendency amongst young males to seek employment outside of the region (in urban centres or the Gulf States).

Agriculture and Livestock: Livestock rearing has traditionally been more important than farming, with the high pastures playing a central role in resource-use patterns. Livestock are released in the high pastures during the summer months, being permitted free grazing. Goats predominate in the transhumant cycle, while carefully differentiated interbreeding between yaks and cows (only in Gojal and Nanga Parbat Conservancies) has created hybrids adapted to narrowly defined altitude zones.

The average landholding per household rarely exceeds one hectare, with the most widely sown crop being maize, followed by wheat and millet, barley, buckwheat, and rice. Alfalfa is the main fodder crop, while the area under potato (particularly seed potato) cultivation is increasing. Virtually all cultivated land is terraced to facilitate irrigation. Cropping patterns are dependent on altitude, with two crops normally being harvested in (lower lying) valley areas and only one at higher elevations). Rural development programmes in the area have undertaken a number of campaigns aimed at introducing high-yield crop cultivars of both food and cash crops. Land is mostly owner cultivated, but is also leased out to tenants under various share cropping arrangements.

Social Forestry: Natural forests in the mountain areas are spatially scattered and vulnerable. These forests are used to meet village fuel, fodder, and timber needs, but demand outstrips supply. Several rural development programmes are addressing this situation by supporting the establishment of fuelwood/fodder tree plantations in valley areas through intensive social forestry initiatives. This work includes the development of irrigation systems, development of nurseries, provision of seedlings, promotion of agro-forestry, provision of training to village specialists in silviculture techniques, and research into disease control measures. AKRSP has been a major catalyst of social forestry endeavours. During 1996 alone, some 1,180 hectares were planted in the mountain areas as a whole with fast growing tree species such as Black Locust, Sea Buckthorn, and White and Black Mulberry.

The cumulative area planted in the Gojal and Nanga-Parbat Conservancies since 1991 is estimated at 929 and 764 ha respectively, while some 701 hectares have been planted in Tirichmir and Qashqar Conservancies. These results are impressive, though work needs to be continued. An important point to note in this context is that, in many areas, social forestry programmes have evolved into self-help initiatives, with villagers developing forestry nurseries and plantations to meet needs on their own accord.

INSTITUTIONAL FRAMEWORK FOR BIODIVERSITY CONSERVATION

The Ministry of Environment, Local Government and Rural Development (MELGRD) is responsible for overall policy and planning, interprovincial co-ordination and international liaison, for all matters related to the natural environment. Within the Ministry, a Director General of Environment serves as the focal point for international conventions related to the environment, including the CBD. A Biodiversity Working Group has been formed to oversee preparation and implementation of the National Biodiversity Action Plan and to act as a multi-stakeholder advisory forum for conservation initiatives. For the PRIF phase, the GoP focal point has been the Deputy Secretary (Land/Water) assisted by a Section Officer.

The office of Inspector General of Forests (IGF) in MELGRD looks after all policy co-ordination, research and education, and liaison matters related to forestry, rangelands, and wildlife management. The IGF also supervises federal institutions such as the Pakistan Forest Institute, the Zoological Survey Department and the National Council for the Conservation of Wildlife (NCCW). The NCCW plays an important role in co-ordinating conservation policy efforts at the federal level with provincial wildlife departments and relevant NGOs. NCCW also liaises with international agencies engaged in wildlife

conservation and serves as the Management Authority for the CITES Convention. The Zoological Survey Department conducts wildlife surveys in different ecoregions of Pakistan, and maintains records of specimens. The Pakistan Forest Institute is the primary institution for forestry education and research, and consists of 4 Divisions: Forestry Education, Forestry Research, Biological Research and Forest Product and Logging. In addition to MELGRD, other federal Ministries have conservation related functions, including the Ministries of Food, Agriculture and Livestock, Water and Power, and Science & Technology.

The provincial Forestry, Wildlife and Fisheries departments are responsible for the management of wildlands (both within and outside Protected Areas). The institutional mechanisms for field implementation, however, vary. NWFP has a separate Wildlife Department headed by a Conservator of Wildlife under the jurisdiction of the Secretary of Forests, Wildlife and Fisheries. In Northern Areas, wildlife conservation responsibilities were until recently vested with the Forest Department (headed by a Conservator of Forests) within the Department of Food, Agriculture, Forestry and Fisheries. With support from the PRIF, there is now a separate directorate of Parks and Wildlife headed by a Chief Conservator of Forests. The Department has been re-designated as the Department of Forests, Parks & Wildlife.

At the NGO level, the most prominent conservation organisations are IUCN-Pakistan and WWF-Pakistan. The global Sustainable Use Initiative of IUCN is in the process of establishing regional networks and has facilitated the creation of a Central Asia Sustainable Use Specialist Group (CASUSG). The CASUSG will be an important resource in implementing sustainable use demonstrations under this project.

HOST COUNTRY STRATEGY

The Government of Pakistan has taken a number of substantive measures to protect biological diversity. An extensive system of Protected Areas has been established, comprising 14 National Parks, 99 Wildlife Sanctuaries, and 96 Game Reserves. Collectively, these sites cover some 10% of the country's land mass. Government strategies to protect biological diversity have a multiple thrust, first to improve management capacity of agencies responsible for conservation management, including NGOs, second, to provide for the participation of local communities in conservation efforts, and third to increase the relative values of wildlife as an incentive measure. Together, these strategies aim at finding and executing cost-effective solutions to conservation dilemmas. There is an explicit recognition that command and control measures, alone, will be insufficient to protect species and habitats, and that application of a participatory management paradigm, involving local communities, will be necessary to realise stable conservation.

A raft of legislation exists – the NWFP alone has eight forest ordinances and Northern Areas, four. Wildlife policies and legislation, inherited from pre-Independence days, have tended to focus on the management of game species and control of predators. A number of moves were made to strengthen legislation in the 1970s, following establishment of a Wildlife Enquiry Committee at the Central Government level. This led to the preparation of a Model Wildlife Law and, later, to the enactment of legislation in the Provinces and Federally Administered Areas. The North West Frontier Province Wildlife (Protection, Preservation, Conservation and Management) Act, and Northern Areas Wildlife Preservation Act, were both enacted in 1975. Under current legislation, wildlife remains the property of the State, and hunting was, until recently, prohibited (except in the NWFP, where it is permitted on private property). Despite the legislation, hunting pressures are widespread throughout the country.

Forest land mainly falls under two categories: land owned and managed by Forest Departments, and Guzara land, community forests managed by Forest Departments. Just under 20% of forests come under communal management (GOP 1991). Enforcement of forestry regulations is weak in many areas, and there is little public awareness of the provisions of law. The main strategies for the forestry sector are to increase the area under forest cover— to provide a source of wood products for energy, household and industrial needs, and to protect indigenous forests to ensure their sustainable use, protect biodiversity, and stabilise watersheds.

Pakistan ratified the Convention on Biological Diversity in 1994, and is also a signatory to the CITES Convention, the Convention on the Conservation of Migratory Species of Wild Animals (Bonn), World Heritage Convention and Ramsar Convention. The Government prepared a National Conservation Strategy (NCS) in 1991 (GOP 1991). The Strategy reports on the state of the environment and articulates objectives, instruments and operating principles for environmental protection—placing these within the larger global context. It covers a wide range of issues from wildlife conservation and coastal, rangeland and forest management to pollution control, emissions management, mineral prospecting and extraction, institutional strengthening, and environmental awareness raising. The Strategy was formally endorsed by the Government in 1993. As a follow up to this, a number of regional and district conservation strategies have been prepared (e.g. the Sarhad Provincial Conservation Strategy adopted by the NWFP Government in 1996) or are being developed (e.g. the Northern Areas Conservation Strategy and the Chitral Conservation Strategy).

A National Biodiversity Action Plan (GOP/IUCN/WW, 1998) has recently been completed with funding from the GEF. The Plan aims at fulfilling provisions of the CBD and was developed through a participatory process involving extensive consultations with major stakeholders. It provides an integrated framework for biodiversity conservation, prioritising interventions and setting targets for implementation. The various activities that will be supported under the MACP are accorded a high priority under the Plan, as a cornerstone of the Government's efforts to protect biodiversity.

A Wildlife Policy for Pakistan is currently being drafted by Government through a participatory process. A Discussion Paper was prepared in 1996 following a consultative workshop held in Islamabad and sponsored by the NCCW. This contains a number of guiding principles, which have dictated development of the MACP. The main principles, which have been framed based on promising conservation solutions, are as follows:

- The existence of wildlife is a key indicator of environmental health;
- Conservation management actions need to be moulded based on sound ecological principles, scientifically valid information, and the knowledge base of local communities;
- Conservation must entail management of populations at sustainable levels based on the biological carrying capacity of habitats, and must include protection, enhancement and sustainable use;
- Uses of wild resources need to be managed to optimise economic returns and ensure sustainability;
- Partnerships need to be engendered between the government and rural communities through a joint management framework to enable villagers to become custodians of wild resources and beneficiaries of their sustainable use;
- A cross-section of government departments, NGOs and institutions of civil society need to be involved in achieving conservation objectives;
- Wildlife management is a provincial responsibility with authority affirmed under the Constitution;
- Wildlife conservation objectives need to be balanced with agricultural, forestry, fisheries and other natural resource-uses;
- Though the State is accountable for the conservation of biodiversity, all Pakistanis have stewardship responsibilities for the country's wild heritage.

The Paper also elicits a number of Policy Goals for the ownership and use of wildlife:

- The State has the right to ownership of wildlife in the public interest;
- Private landowners may manage wildlife on their land for their own direct benefit subject to conformation to policies and enforceable laws that promote conservation and sustainable use;
- Rural communities will be empowered to manage wildlife for their own direct benefit and government will actively promote development of appropriate mechanisms and institutions to achieve this, including the establishment of communal conservation areas where use is regulated by approved management plans;
- Government will provide secure tenure for the management of wildlife in areas where communities or individuals have usufruct or ownership rights;
- Government will use the legislation at its disposal to intervene wherever it considers that wildlife is not being adequately conserved or properly managed;
- Government will regulate through appropriate rules, all hunting, shooting and trapping of wildlife;
- Government will take all necessary measures for the implementation of the CITES Convention, and will ensure effective co-ordination between departments to facilitate the licensing and export of lawfully obtained wildlife and the temporary import of firearms in the case of alien sport hunters;
- Government regards the illegal killing of wildlife and trafficking in its products as serious offences and will prevent it by all means possible.

Several policy goals are articulated as regards community participation in conservation:

- Government will ensure public participation prior to making major policy decisions affecting the management and use of wildlife;
- Government will create appropriate institutional infrastructure to enable community participation, including Community Based Organisations, District Committees, Provincial Boards and others as necessary;
- Government will grant appropriate authority to local communities, District Committees and Provincial Boards as a matter of principle provided that arrangements for managing wildlife by such bodies are satisfactory;
- Government will establish a fee structure for permits/licenses required to use wildlife;
- Economic benefits for the use and enjoyment of wildlife should be equitably allocated, and, wherever possible, used towards the cost of conservation.

PRIOR AND ONGOING ASSISTANCE

UNDP Projects

UNDP initiatives in Pakistan are guided by the Country Co-operation Framework (1998-2003) and the Country Strategy Note prepared to co-ordinate UN system programmes. The MACP builds on and supports these various initiatives.

Northern Areas Development Project (NADP): This project, which is being jointly financed by IFAD and UNDP aims at improving the quality of life of villagers in Chilas and Tangir sub divisions of Diamer District, Northern Areas. The project will support a number of interventions, aimed at social mobilisation, establishing Community Organisations and Women's Development Groups, and developing village infrastructure including link roads and micro-irrigation systems. Implementation commenced in July 1998. The Tangir valley harbours extensive tracts of indigenous forests with an extensive species endowment. The area has been excluded from the geographical scope of the MACP

because it presently lacks an enabling social and structural framework. Such a framework is essential as a baseline upon which to build conservation efforts. However, opportunities exist for advancing conservation in Tangir at a future stage, drawing on financial and technical resources from other funding sources, and applying the organic processes developed under the PRIF and MACP.

The NADP will provide parallel financing to implement the alternative strategy proposed under this project by strengthening agricultural services. The project will build institutional capacities for farm and livestock extension services, and support some field activities that will be fully integrated with those of the MACP. Agricultural services in the NAs are weakly developed. Capacity building will be essential in order to improve the productivity of farming and livestock management systems and thus mitigate anthropogenic pressures on wild resources. The project will support the training of NAs Department of Agriculture (DOA) staff in technical disciplines, supply extension, demonstration and veterinary kits, undertake demonstration projects to test new farming and livestock husbandry methods, provide vehicles and ancillary equipment, and meet some of the recurrent costs of extension.

GEF Small Grants Programme (SGP): The SGP provides small grants of up to US$ 50,000 to NGOs and community groups to implement micro-projects in the GEF focal areas. A total of six grants have been provided to NGOs working within the mountain areas, aimed mainly at strengthening local-level capacities for biodiversity conservation and supporting broad-based advocacy efforts.

Himalayan Eco-Regional Initiative: This programme, which has recently been initiated, aims at improving co-operation between the countries of the Himalayan region, namely, Pakistan, India, China, Bhutan, Nepal, and Myanmar, in order to address common conservation concerns. The objective is to ensure that representative samples of the region's lifezones are protected; strengthen PA management; improve land use planning systems and methods to take on board conservation values; develop sustainable agricultural systems in support of conservation; support tourism development and management activities; and develop information networks. The initiative will build on national Biodiversity Action Plans and on-going conservation-focused interventions in the region, including the MACP.

Gender Programme Initiatives: UNDP has a strong Gender Programme in Pakistan, aimed at improving the status of women and ensuring that development initiatives are targeted towards meeting their needs. By necessity, the MACP has an in-built "Women in Conservation" focus, to ensure the full involvement of women – key stakeholders in wild resource management— in the design, micro-planning and implementation of project activities. Strong linkages exist between the MACP and Gender Programme initiatives, and a cross fertilisation between projects of experiences and lessons will be facilitated.

Non-Governmental Organisations:

Aga Khan Development Network (AKDN): The AKDN, supported by the Aga Khan Foundation and bilateral and multi-lateral donors[4] is an umbrella grouping of several NGOs working within the geographic scope of the MACP. These include the Aga Khan Rural Support Programme (AKRSP), and Aga Khan Education Services (AKES). Established in the 1940s, AKDN has mounted an extensive social and economic action programme to facilitate community development.

[4] Funding bodies include the Netherlands, European Union, UK Department for International Development, CIDA, Norad, GTZ, and the World Bank.

Aga Khan Rural Support Programme (AKRSP): Established in the Northern Areas in 1982, and in Chitral district two years later, AKRSP's primary aim is to empower local communities to facilitate their own economic development. The programme has its head office in Gilgit, with sub offices in Baltistan, Chitral, and Gilgit, and Field Management Units (FMUs) scattered throughout the districts. It is operative in all four of the proposed Conservancy areas, except in Dir/Swat districts of Qashqar Conservancy. AKRSP has an extensive staff, including specialists in agriculture and livestock management, human resource development, gender issues, and micro-credit. The Programme has developed a time-tested approach comprising a number of elements, including social mobilisation and community organisation, development of productive physical infrastructure, human resource development, natural resource management, enterprise support, and micro-credit schemes. Together, these comprise a substantial and holistic set of interventions aimed at improving rural livelihoods.

The first stage of the approach involves the formation of Village and Women's Organisations (VOs and WOs) at a village level that serve as a framework for spearheading community development and for capturing financial and technical assistance from outside agencies. Since its inception, the Programme has established 2,065 VOs and 980 WOs. Community mobilisation efforts are followed by providing local Productive Physical Investments (PPI) in a range of infrastructure from link roads, to bridges and irrigation systems. The scope of each PPI is determined through a participatory planning process engendered at the village level. AKRSP provides financial and technical assistance for the development of infrastructure, while villagers provide some financial resources, sweat equity and other inputs in kind, and also take responsibility for operations and maintenance. The organisation will in future focus its productive investments at the cluster level (clusters, comprising several VOs are referred to as Super Village Organisations or SVOs).

The Natural Resource Management Programme (NRM) was developed in recognition of the key role of the natural resource sectors in providing for local livelihoods. The approach has centred on the development of agricultural, livestock and forestry packages comprising demonstration initiatives, the supply of inputs, and provision of technical advice. Extension is provided by training village trainers, who act as specialists[5] and provide advice to smallholders on demand. AKRSP has also developed an input supply scheme, providing improved seed varieties for food and livestock feed, to enhance farm productivity. For livestock, the NRM programme focuses on improving animal nutrition, enhancing the genetic base and reducing stock losses (by improving animal health). A key aim— and one that is congruent with the objectives of the MACP— is to maintain livestock numbers within the carrying capacity of the natural environment.

Social forestry activities aim at providing for the energy and other household needs of communities, in addition to providing income generating opportunities. This in turn is critical to mitigate pressures on natural forest stands. The Programme focuses on training and providing villagers with seedlings of fast growing local tree species. AKRSP has served as a strong catalyst of social forestry with villagers undertaking their own forestry schemes drawing on their own resources. Some 4,300 hectares have been planted since the Programme's inception – a significant achievement. The NRM programme also includes a small environmental education component (implemented in conjunction with IUCN and AKES), aimed at sensitising local communities to the adverse welfare consequences of ecological capital depletion, including deforestation. The focus has been on raising environmental awareness amongst school children.

[5] Specialists include nursery managers, plant production and protection advisers, vegetable production and protection, and livestock and social forestry extension workers.

The Marketing and Enterprise Development Programme, established initially with the aim of assisting VOs with co-operative marketing, has played a large role in expanding livelihood opportunities. The various support programmes are melded together through a Credit and Savings Programme. Savings are compulsory, and a portion of wages provided by AKRSP for each PPI must be deposited in a savings account in local banking institutions as a conditionality of support. The aim is to mobilise community funds for local development purposes. [The current balance in the savings accounts is some Rs. 310.48 million rupees]. These funds provide an avenue for village co-financing of sustainable development initiatives fostered as part of the MACP's alternative conservation strategy.

AKRSP is widely acknowledged to be highly successful, stimulating local development and catalysing a multiplier effect that has greatly increased living standards and narrowed the welfare differential between the target communities and those in other areas of Pakistan (World Bank OED report, 1994). There are strong programmatic linkages between AKRSP and the MACP, and AKRSP will be key contributor towards the realisation of the project's broader objectives, focusing on removing some of the ultimate causes of biodiversity loss in the mountain areas. AKRSP monies would be drawn upon to finance productive investments in physical infrastructure and social forestry called for under Conservation Plans. The Enterprise Development Programme will support the wider application of sustainable use demonstration projects, and the credit scheme will provide villagers with access to financing for conservation-enabling development schemes.

Aga Khan Education Services (AKES): The focus of this NGO, established in 1946, is on providing quality education geared to the needs of communities. A field based Teacher Development Programme has been initiated with the idea that teaching skills are best acquired on-the-job, i.e. in classrooms, where trainers and trainees work together. The activities of AKES are mainly concentrated in Gilgit, Ghizer and Chitral districts, although services, such as the field based Teacher Development Programme, are gradually being extended to other areas. 900 teachers have so far been trained through the programme. Conservation education has been a component of the AKES programme for the last 5 years, initially through nature clubs. Recently, an environmental education component has been introduced, in collaboration with IUCN's Education Unit, in a "training of trainers" programme. This programme is organised annually for instructors of field based teacher development centres in the Northern Areas and Chitral.

World Conservation Union (IUCN): IUCN has an extensive programme in Pakistan, with a head office in Karachi and sub-offices in Islamabad, Quetta, Peshawar and Gilgit. Programme priorities are defined by the National Conservation Strategy and Biodiversity Action Plan, which the agency assisted the Government of Pakistan in preparing. The focus is now on integrated resource planning to assist Government in the implementation of the NCS, and on advancing community-based conservation endeavours. IUCN was also the Implementing Agency for the PRIF phase of the MACP.

At the provincial level, IUCN has been active in establishing regional Conservation Strategies, including the Chitral Conservation Strategy which aims at implementing provisions of the National Conservation Strategy in Chitral district. Activities include the integration of environmental considerations into the District Development Plan, strengthening of government environmental planning and management capacities, and environmental awareness raising. IUCN is also preparing the Northern Areas Conservation Strategy (NACS) with funding from the Swiss Government and NORAD. The NACS will focus on the development of enabling policies and legislation for environmental protection in the Northern Areas, and strengthen the institutional capacity of the Northern Areas administration to support conservation. This initiative is an important source of parallel financing for the MACP.

IUCN has a strong presence in Northern Areas and Chitral. It has supported several natural resource management initiatives through scientific and social channels, in collaboration with AKRSP. This interaction has transformed into a continued unique co-operative relationship that extends to Chitral. In the social sector, the first initiative was the establishment of nature clubs for school children. Presently the focus has been largely on formal education, and an MOU has been signed with the Education Department of NAs for capacity building of teacher educators. The NACS will proactively interact with the Northern Areas Education Programme (a World Bank funded project, that aims at overhauling the formal education system and supporting community education outreach services). IUCN has been a major actor in greening the media in NAs, and has held training workshops for journalists in which representatives of print and electronic media from the project region participated.

World Wide Fund for Nature (WWF): WWF has a large presence in Pakistan, with a head office in Lahore and regional offices in Gilgit, Karachi, Quetta, Peshawar, Muzaffarabad, and Islamabad. The NGO has made sizeable investments in conservation education in the Northern Areas and Chitral. A number of environmental clubs have been established in local schools, with debating competitions sponsored and training workshops organised for school teachers. The education initiative has developed a number of teaching aids for use in schools in addition to publishing brochures on economically valuable flora and fauna— highlighting their ecological importance and relevance to the needs of local communities. A Conservation Centre is being established in Gilgit to promote conservation and environmental education activities and to provide a training facility for conservation workers. With funding from WWF-Sweden, WWF is involved in the conservation of migratory birds in the Chitral valley. These efforts strongly complement the education and awareness component of the MACP.

WWF has also been active in promoting and managing ecotourism in the Northern Areas, developing a number of pamphlets for tourists on the area's ecology. A guide to the Khunjerab National Park (contiguous to the proposed Gojal Conservancy) has been prepared as part of this initiative. WWF has also sponsored a study on options for introducing alternative energy use methods into project areas, including fuel-efficient stoves. The NGO is supporting community-based conservation in the Northern Areas in the Gilgit and Hunza areas, with funding from WWF-UK and other donors. Attention has focused on areas to the south west of the Gojal Conservancy (comprising mainly dry alpine habitat) and complements efforts to protect biodiversity at that site. WWF was instrumental in developing a Management Plan for the Khunjerab National Park and has also played a catalytic role in piloting trophy hunting (of Himalayan Ibex) as a sustainable use activity in the mountain areas.

Himalayan Wildlife Project (HWP): This initiative aims at improving protection of Deosai National Park and has received funding from the GEF Small Grants Programme and technical assistance from the US Fish and Wildlife Service and Kruger National Park, S. Africa. The project works closely with local communities, the Northern Areas Wildlife Department, and District Administrations. The main focus is on strengthening park management systems, conservation advocacy, and the study and management of Himalayan Brown Bears.

Belour Advisory and Social Development Organisation (BASDO): This is a local NGO involved in social development work and environmental and conservation activities in the Northern Areas. With a head office in Gilgit, BASDO has a number of field based projects in Astore, Sai Valley and Hunza.

Multilateral Donor Agencies:

European Union: The EU is funding the Dir Kohistan Upland Rehabilitation and Development Project in NWFP, implemented jointly by the GOP, IUCN and EU technical advisers. Implementation of this project (which forms one of three sub-projects under the EU's

Environmental Rehabilitation in NWFP and Punjab Programme) commenced in 1995 and is scheduled to be completed in 2002. Components include social organisation, natural resource management, agricultural support, social forestry, human resource development, infrastructural development, and monitoring and evaluation. The project operates within areas of the Qashqar Conservancy that are not covered by the activities of AKRSP. It provides important parallel funding[6] for the MACP, addressing some of the ultimate causes of biodiversity loss. The activities are as follows:

- Social mobilisation efforts follow the approach established by AKRSP in developing VOs and WOs. Communities are being organised to form co-operative groups aimed at engendering self-help and spearheading local development initiatives. A participatory planning process will be effected, using methods such as PRA, to identify local development needs and constraints.
- The natural resource management component aims at improving the productivity of rangelands through introducing rotational grazing practices and testing recovery regimes. This will be supplemented by a village livestock husbandry programme aimed at improving fodder availability, animal health, and breed stock quality.
- The agricultural programme aims at enhancing food security by improving farming methods, training village extension workers (along the lines established by AKRSP), and facilitating access to inputs such as seeds for improved crop varieties and fertilisers. Support will be provided for the marketing of traditional crops, walnuts, fruits and vegetables. To widen livelihood options, a demonstration project investigating the viability under local conditions of cold water aqua culture will be established. A small micro-credit scheme has been established, initially focused on the needs of WOs. Subject to further assessment, this may be extended to include other groups.
- The social forestry component aims at developing plantations of fodder and fuelwood trees on communal lands, including now-barren areas. Village nurseries, to be managed by the VOs, will be established. Activities would further complement the activities of the MACP by financing forest enrichment in degraded areas of ecological significance.
- The infrastructure component aims at supporting the agriculture programme by building irrigation channels, establishing feeder roads to main road arteries, providing access to potable water, and building micro-hydro schemes. Parallel efforts will protect link roads and irrigation channels from land slips by planting trees and restoring grasslands to stabilise slopes.
- The capacity building component aims at strengthening village level institutions by training village leaders, and improving agricultural and forestry extension services. Training will be provided to government staff in community mobilisation and development techniques.

The World Bank: The World Bank, with financing from the GEF, is supporting implementation of the Pakistan Protected Areas Management Project (PAMP). This project, scheduled to commence in 1999, aims at strengthening park management at three sites. One of these, Chitral Gol National Park in NWFP, is contiguous to the proposed Tirichmir Conservancy. The focus of the PAMP will be to strengthen park management through formulation of a Management Plan, improving park infrastructure, providing training to park staff, and strengthening enforcement and policing capacities. The geographical focal areas of the PAMP and MACP are separated by a high mountain ridge that serves as a rainfall barrier and ecological divide. Both efforts are required in order to protect biodiversity in the region. Support is needed to strengthen Chitral Gol National Park to enable application of an intensive regime of ecosystem management. But these interventions alone will be insufficient to protect biodiversity. The park, with an area of 77 square kilometres, protects an insufficient quantity of habitat to provide for the survival needs of many species. Conservation of the wider ecological landscape in Tirichmir (as will be effected through the MACP) is critical to maintain the long-term integrity of the PA. The two projects are thus highly synergistic.

[6] Under the Terms of the Project Agreement between the EU and the GoP (Environmental Rehabilitation in NWFP and Punjab Programme, Agreement no. ALA/92/25).

The GEF Operational Strategy distinguishes between a traditional protected/conservation areas approach (focusing on preservation) and a landscape approach to conservation. "*The success of biodiversity conservation efforts will depend on how well the overall landscape is managed. It is simply not possible to conserve all species in a region by using conservation areas alone. Biodiversity conservation and sustainable use must also be achieved outside the designated conservation areas, including protected areas, and must be integrated into the management of the natural and modified surrounding areas. A range of uses is possible—from full protection on strict reserves through various forms of multiple use, with conservation easements*" (p18). Both projects include community participation, institutional building and awareness elements (these are cross cutting issues that must be part of a project whether dealing with preservation or sustainable uses). The focus of interventions is, however, different (the MACP proposes institutional arrangements and activities that are not applicable for PAMP and vice versa). Administrative mechanisms will maximise information exchange.

Pakistan Poverty Alleviation Fund (PPAF): Supported by the World Bank, the PPAF project aims to reduce poverty by providing poor rural communities with access to resources and services. This multi-sectoral, countrywide project will be implemented over five years, commencing in 1999. The Fund has the following components:

- Community Infrastructure Schemes: small scale projects (average USD10,000) selected based on productivity and sustainability;
- Micro-Credit: small loans to establish a permanent income-base and micro-enterprise; and
- Capacity Building: support for strengthening the institutional capacity of PPAF, partners and communities.

The MACP will explore opportunities for securing co-financing from the PPAF for community infrastructure and micro-credit schemes during the process of implementation.

PROJECT JUSTIFICATION

PROBLEM TO BE ADDRESSED: THE PRESENT SITUATION

The conventional approach to protecting biodiversity in the mountain areas has centred on the establishment of traditional protected areas such as National Parks, Wildlife Sanctuaries and Game Reserves. Several PAs have been established in the Northern Areas, namely the Khunjerab, Karakoram and Deosai National Parks, plus 2 Wildlife Sanctuaries (Satpara and Astore). In the Hindu Kush region of NWFP, one National Park (Chitral Gol), and 3 Game Reserves (Goleen Gol, Tushi, and Mahudand) have been created. All these sites face accelerating pressures from anthropogenic uses of wild resources. Several are too small to safeguard biodiversity and provide for the survival needs of wildlife, which have adapted to the limited carrying capacity of the cold desert environment by existing at low population densities and dispersing over vast areas. To protect biological diversity in this region, larger ecological landscapes will need to be brought under conservation management and corridors will need to be formed to link core wildlife areas. The question arises as to how best to achieve this aim. The establishment of traditional PAs (National Parks and Wildlife Sanctuaries geared to preservation) is not an answer, because these landscapes support sizeable human populations. Any attempt to establish a traditional (restrictive management) PA would likely lead to severe social conflict, in turn making conservation efforts meaningless. Clearly, a balance needs to be found between the management of wildlife and the needs and resource-use practices of local communities.

Conservation programmes in the region have tended to be administered from the top down—following a trend established during the colonial era. Ownership of most wildlife and forest resources

is vested with the State. Protected Areas have been established without accommodating the needs and views of local communities, and the focus has been on the enforcement of legislation and regulations by the State apparatus. For various reasons, these approaches have failed to protect biological diversity, and population numbers of threatened species continue to decline. A primary problem is that there has historically been a marked absence of ownership on the part of local communities over conservation efforts, who have often been alienated from conservation programmes— with severe contra conservation implications. Many programmes are simply untenable because they do not provide communities with alternative means of livelihood but yet expect them to forego resource uses.

The traditional conservation model is costly to administer. It requires sizeable investments in infrastructure, equipment and staffing, often well beyond feasible budget allocations. Financial and human resources have been stretched, leading to a low return per unit of investment[7]. The challenge, in these circumstances, is to find more cost-effective solutions to managing wild resources. One way of satisfying this need would be to devolve responsibilities for conservation to the community level. To achieve this aim, local communities will need to be accorded a utilitarian stake in the management of wild resources. In part, this may be achieved through an education campaign aimed at sensitising villagers to the non-monetary values of biodiversity, including benefits accorded by consumptive uses of flora and fauna and those captured through the flow of ecological services. But this alone will be insufficient and monetary incentives will also be needed. Opportunities for catalysing productive uses of wild resources on a sustainable basis need to be found in order to increase their relative values and to provide a direct conservation incentive. The objective must be to secure a nexus between the development objectives of local communities and the objectives of sustainable ecosystem management.

If present problems are to be effectively addressed, conservation planners will need to ensure that strategies account for the perspectives of villagers, their world views, knowledge base, perceptions of risk and past and present patterns of resource management. If problems of open access are to be resolved, usufruct rights over wild resources will need to be accorded to communities, empowering them to guard against over-exploitation by outsiders. The ability of communities to adapt their resource-use practices has been outpaced by demographic, economic and technological change. Social mobilisation efforts need to focus on challenging them to recognise the implications of such change and to rethink their development strategies in the face of it. These efforts will need to be complemented by investments in productive infrastructure aimed at widening livelihood options. No single conservation or development agency can address all these requirements, hence the need to marry and better focus efforts.

THREATS TO SPECIES AND HABITATS

While low human populations have historically limited anthropogenic impacts on the biodiversity of the mountain areas, the present situation is typified by a gradual acceleration of threats. Proximate threats to species and habitats can be summarised as follows:

- Degradation of rangelands by domestic livestock, leading to a loss of habitat quality for wild ungulates.
- Hunting: Ibex, Markhor and other wild ungulates are hunted for food by local villagers and for sport by outsiders without legal permits; Snow Leopards, Lynx, Otters, Grey Wolves and other predators are hunted for pelts, and in retaliation against livestock predation.

[7] This is particularly a problem in the high mountain region, where the rugged landscape makes policing costly— especially in areas where communities are loath to co-operate.

- Forest loss owing to the unsustainable harvest of fuelwood, trees for the construction of shelters, and fodder for livestock.
- Overharvest of medicinal plants and other economically useful flora.
- Disease transmission from livestock to wild fauna, particularly closely related species.

The underlying causes of the above mentioned threats can be broken down into two levels, namely those associated with institutional capacity and policy related weaknesses and those stemming from structural, social and economic factors. The first level includes the following factors:

- Communities have little utilitarian stake in protecting the resources (owing to a lack of participatory management mechanisms, secure tenure and usufruct rights) leading to open access and depletion. Until recently, there was little recognition in government circles of the importance of community participation in conservation planning and management.
- Legal instruments to support community-based conservation initiatives are poorly developed.
- Incentives for conservation are weakly developed, and opportunities for capturing monetary values from wild resources are limited. There is a dearth of appropriate models for effecting sustainable use measures suited to local agronomic, ecological and socio-economic conditions.
- There are few avenues for information exchange and networking between communities, meaning that they have been unable to share experiences related to wild resource management endeavours.
- Technical, human and institutional capacities amongst government and non government agencies responsible for conservation are weakly developed.

The second level comprises the following factors:

- Lack of access to water limits potential for fodder production for stall feeding of livestock – leading to over grazing in upland pastures (where competition with wildlife is greatest).
- Livelihood opportunities are limited owing to a lack of skills, market opportunities, access to inputs including credit, and structural economic problems. Conditions of poverty cause smallholders to be risk averse in making resource-use decisions. Many sustainable resource-use methods are untried and risky and are thus unattractive to communities.
- There is limited access to alternative fuel sources to meet household energy demands.
- Technology change has made previously sustainable resource-use practices environmentally destructive. In particular, access to firearms has reduced the effort involved in hunting.
- Moral values for wildlife are poorly developed. Formal and informal education programmes tend to ignore conservation issues.
- Some cultural factors inhibit adaptive resource-use management; women play a major role in managing livestock and agricultural activities and are largely responsible for fuelwood collection, but their ability to participate in conservation endeavours is constrained by their poor social status.

A more detailed summary of the threats and underlying causes, showing how each will be addressed under the GEF Alternative is provided in Annex VI.

ALTERNATIVE STRATEGY

The PRIF phase has developed a participatory process for engaging local communities in conservation planning, building upon the institutional base provided by AKRSP's extensive network of VOs/WOs and creating new institutions at the District (DCCs) level. Communities at each site developed Conservation Plans focusing on both habitat and species management. Each Plan provides information on biodiversity in the area, threats facing species, solutions to remove pressures, and community needs in order to operationalise conservation management. The Plans have provided a means for communities to re-think their development strategies in ways that account for conservation

objectives and values. The project has shown that communities are receptive to conservation initiatives if given greater responsibility for the management of wild resources. This receptivity largely stems from a nascent, though growing, recognition amongst village leaders that ecological degradation will damage the natural capital endowment that underpins local livelihoods. The PRIF roots participation in biodiversity conservation efforts by:

- initiating a process of dialogue within and between communities, and between communities and government to address biodiversity issues;
- encouraging communities to assume greater responsibility for the management of wild resources;
- engendering community based self-help initiatives in a bid to make conservation efforts more cost-effective and durable;
- successfully establishing links between all stakeholders based on common conservation objectives;
- collaborating with the government to effect joint management of wild resources (i.e. in partnership with communities); and
- developing strategies to involve women in the process of conservation.

Biodiversity conservation cannot be effected in isolated pockets. A ban on hunting in one village jurisdiction does not guarantee the survival of wildlife if it moves outside of the protected zone. Sustainable solutions to conservation dilemmas will therefore require a convergence of thought and action amongst all communities residing in areas of interest for conservation. The alternative strategy has specifically been framed to provide for the survival needs of wildlife within the larger ecological landscape, and across village jurisdictions. A Conservancy is defined as a large area of land incorporating one or more watersheds in which the local people agree to conserve the biodiversity of the ecological landscape through collective management. The Conservancies are analogous to Managed Resource Protected Areas (category VI PA) as defined in the register of PA Management Categories (IUCN/WCMC, 1994). The management objectives are to [1] protect biodiversity by providing for the ecological needs of species and improving survivorship by arresting threats; [2] develop and apply effective management measures for sustainable use; and [3] contribute to ecologically sustainable development of the area. Six broad criteria were applied to define the four Conservancies:

(a) Ecosystem — The Conservancies are representative of the bio-geography of the mountain areas. Large areas of ecologically intact wildlands remain in each.
(b) Biodiversity — Conservation of broad mountain landscapes is necessary to conserve wide-ranging species as well as those species that migrate seasonally from higher to lower elevations.
(c) Commitment — The Conservancies are built around nucleus villages that have committed themselves to conservation under the PRIF phase.
(d) Co-operation — Communities within the Conservancies must agree to co-operate in the management of the larger ecological landscape.
(e) Social congruence — The people living within the Conservancies must be culturally congruent.
(f) Co-funding — Government agencies, other NGOs and donors have made financial commitments for projects that will address the ultimate causes of biodiversity loss in the Conservancies.

The MACP has been designed based on seven outputs, aimed at comprehensively addressing the determinants of biodiversity loss. Building on the lessons learned and networks fostered during the PRIF, the project will provide a conservation overlay to a sizeable baseline of sustainable development interventions. The following section describes the objectives, outputs and activities of the GEF alternative, including interventions financed by non GEF sources. Specific activities and tasks to be funded through UNDP (GEF, UNDP and government cost sharing) are listed in the logical framework matrix, which also provides quantifiable indicators for project impact monitoring.

DEVELOPMENT OBJECTIVE: To protect and ensure the sustainable use of biodiversity in Pakistan's Karakoram, Hindu Kush, and Western Himalayan mountain ranges through application of a community-based conservation paradigm.

IMMEDIATE OBJECTIVE: Establishment and effective long-term management of four community-based Conservancies covering wide ecological landscapes, zoned for multiple uses, and backstopped by an enabling institutional, policy, regulatory, and financial framework.

OUTPUT 1: The institutional and human capacity of community level organisations to conserve biological diversity will have been strengthened, and planning and management structures will be in place.

1.1. Initiate dialogue with target communities in new areas.

The focus in new villages selected under the PRIF phase for inclusion under the MACP, initially, will be on social mobilisation[8]. The emphasis will be on strengthening social relationships between project workers and community leaders in these areas. A participatory learning exercise will be implemented to enhance understanding of the world views, perceptions, and problems of target communities. Conservation issues will then be looked at with reference to their interface with locally perceived developmental and resource management needs. Through this participatory process, communities will be made aware of the relevance and importance of biodiversity conservation to their livelihoods. From the very start of this participatory learning process, key community activists will be identified to act as village motivators for conservation. Such motivators will play a strong role in institutional networking to realise the objectives of ecosystems management.

1.2. Establish Valley Conservation Committees (VCCs).

Valley Conservation Committees will be established at the watershed (or cluster) level, building on existing VO/WO structures and AKRSP experience. Membership will be decided by communities in each valley. The Committees will be responsible for engaging community members in conservation management efforts, for developing a Valley Conservation Plan, for overseeing implementation at the valley level, and for building and maintaining cluster-level linkages at the Conservancy level to ensure wider ecosystem management. Support to local communities under the project would be provided through a Terms of Partnership (TOP) agreement that sets out the mutual obligations of contractual parties and provides checks and balances to enforce conservation measures. TOP's would be negotiated with the VCCs, following establishment, covering all participating communities in the four Conservancies.

1.3. Design and implement culturally appropriate strategies for involving women in conservation.

The involvement of women in conservation activities will very much depend upon gender relations within the target community and different strategies will need to be developed to address the varying socio-economic, political, ethnic and ecological factors at play. Gender sensitisation will initially focus on those communities that are receptive to the notion of womens participation in conservation

[8] It is essential that the MACP adopts a flexible approach to social organisation strategies in support of conservation; an approach that is not overtly prescriptive but, rather, sensitive to local conditions and norms.

activities. Where possible, full participation of women in the process of preparing the Conservation Plans will be ensured. This will entail enhancing their understanding of the interrelations between socio-economic and ecological systems. Gender workshops will be conducted with both men and women where feasible. Through these workshops a cadre of women conservation motivators will be selected.

1.4. Undertake conservation management planning at the valley level.

Training will be provided to VCC members in conservation planning techniques. The VCC's will develop Valley Conservation Plans (VCPs), comprehensively articulating conservation needs, problems and solutions. The Plans will provide a road map for effecting biodiversity conservation, with responsibilities for implementation shared by village organisations, the project, and partner agencies. The planning process will provide a framework for jointly assessing ecological, social and economic issues and evaluating conservation and development linkages and trade-offs. The Conservation Plans are dynamic instruments, and will need to be updated from time to time. Therefore one aim of capacity building at the village level is to institutionalise the planning process, strengthening local participatory planning skills.

A major part of capacity building in social processes is made up of learning and awareness building. In a participatory context, this learning involves an understanding of the various social forces that are at work in institution building. Initially, the implementing agency and partners will have a prominent role in working with the communities to mediate conflicts and resolve problems. Eventually the communities will take ownership of the process and institutionalise it within the local conservation and development framework.

1.5. Establish a Conservancy level management framework.

The institutional base for supra-VO clusters is already in place in much of the project region. These clusters are formed around common objectives, such as construction of large-scale infrastructure facilities, or establishment of community networks to plan and implement social interventions. Similarly, conservation management in the Conservancies will be achieved through an institutional framework for co-operative planning, taking a step-by-step approach**,** and fully involving communities in the identification of appropriate planning and management units. The Project would strengthen the capacity of existing District Conservation Committees (DCCs) established under the PRIF (membership of which will include representatives from VCCs and District administrations). These Committees offer an effective and time tested mechanism for linking government and community-based conservation efforts. Their main function will be to ensure congruence of management at the cluster level, ensure compliance with regulations and monitor conservation outcomes.

Workshops will be conducted to address the following issues: [1] benefit sharing of wild resource use; [2] land use zoning (creation of set asides and extractive use areas); and [3] rules and regulations at the Conservancy level. In addition, the workshops will further clarify the roles and responsibilities of different stakeholders in Conservancy management. Sub-committees will be established within DCCs to ensure that diverse initiatives at the cluster level are properly integrated. Outside expertise for these workshops will be drawn from governmental and non-governmental institutions and partner agencies. The VCPs will be merged into Conservancy Management Plans to ensure a unified approach to conservation in each Conservancy. Conservancy level planning will entail specialised training to integrate valley level management at the macro level. Such training will be targeted at key activists and VCC representatives. The District Conservation Committees (DCCs) will take overall responsibility for approving the Conservancy Management Plans and guiding their implementation.

The Conservancy level management framework will be strengthened by inputs from the Northern Areas Conservation Strategy (NACS) and Chitral Conservation Strategy (CCS). These initiatives would develop a comprehensive sustainable development strategy for the mountain areas. The NACS would develop a Biodiversity and Protected Areas sub-strategy for the Northern Areas, complementing GEF inputs. A land use mapping exercise covering all of NAs using available technology will be undertaken and will provide baseline information for detailed valley land use planning.

Financing Output 1

Funding Source	Activity	Amount (in US$)
GEF	See log frame	2,998,626
SDC/IUCN	Public consultations; Village /valley land use planning	100,000
Total		**3,098,626**

OUTPUT 2: Conservation values will have been imparted to local communities through a well targeted conservation education and awareness drive, with avenues developed for the sharing of information/experiences regarding wild resource management amongst villagers.

Activities under this Output would be spearheaded in conjunction with WWF-Pakistan, which would provide co-financing for awareness raising on broader environmental awareness issues. GEF inputs would be limited to conservation awareness related work, feeding into biodiversity management in the Conservancies. WWF co-financing would deal with ancillary issues, such as waste disposal, littering, pollution, soil erosion and the management of community wood plots. In addition, WWF would provide support for the development of literacy training materials with conservation themes.

2.1. Develop and implement a communications strategy.

A Project Communications Strategy will provide the framework for identifying appropriate media tools and activities required for awareness raising. Conservancy specific awareness needs would be further assessed through a scoping exercise, allowing a targeted strategy for imparting conservation values to be developed for different stakeholder groups, including women and minority groups. The scoping will be linked to the sub-strategies on Education and Environmental Communication being developed under the NACS and CCS. These will provide an assessment of the current status of both formal and informal education in the public, private and NGO sectors. Efforts to develop an environmental education constituency (or "roundtable") under NACS/CCS will further support awareness activities under the MACP.

The project will sponsor a media outreach programme, focusing on radio. Various ethnic groups within the Conservancies broadcast radio programmes in their own languages. Broadcasters will be sensitised to conservation issues, and a regular fact sheet will be prepared for distribution to radio announcers as a means of disseminating information on conservation and sustainable use. In order to communicate information on project activities, including lessons learned material, to a wider national constituency, a web page would be established as an information storehouse.

2.2. Implement a Schools in Conservation Programme.

The project will support a "schools in conservation" programme within the Conservancies. Teachers from already established government, AKES, and private (including community) schools in the

Conservancies will be linked to the programme. They will be given training in instructional methodologies to spearhead conservation education. In consultation with education authorities, conservation education modules and teaching aids would be developed for use in schools. Workshops would be organised to provide teachers with an opportunity to share experiences and discuss future conservation education plans. Together with other local NGOs, special events such as speech contests and essay competitions will be organised focusing on the importance of conservation. The project would also create links with youth clubs in order to promote their involvement in conservation, training club members in conservation awareness raising techniques.

As pilot activities under the Environmental Education Sub-strategy of NACS, conservation awareness will be integrated into the primary school curriculum and training modules/manuals will be prepared in collaboration with the Directorate of Education and AKES.

2.3. Operationalise informal conservation awareness programmes.

Education and awareness efforts are closely linked to advocacy. Hence there is a need to discuss conservation issues in village forums (in addition to Village/Valley Conservation Committee Meetings). Village activists (motivators) would be provided with training in conservation advocacy methods as a means of facilitating discussion of conservation issues in village meetings. Links will also be made between village forums and cluster level exchange forums. Activists will collaborate with local teachers to foster discussion of conservation issues on a routine basis in village meetings.

Predators are considered a threat to livestock and are treated as vermin by many local communities. The role of predators in maintaining ecosystem balance is poorly understood. Attacks on livestock are generally a consequence of the decline in natural prey species, populations of which have been depleted due to over-hunting and habitat loss. As a result, retaliatory killing of predators such as the Snow Leopard has increased. The best avenue to bring about awareness on the subject will be through the Village/Valley Conservation Committees. Awareness programmes funded through the project will sensitise communities to predator-prey relationships in the wild, the negative impacts of over-hunting the natural prey populations of predators, and the role predators play within the mountain ecosystems. A number of options exist to reduce predation on livestock. These include the improvement of corral design to make them predator proof, guarding of livestock in the high pastures (rather than leaving them unattended as is currently the case), and herding of livestock to villages at night when the incidence of attacks is high. The awareness component will alert villagers to these methods.

Women play a major role in natural resource management, particularly in fuelwood collection, water carrying, forest nursery management, medicinal plants collection, livestock management and agriculture. Literacy levels amongst women are, however, very low, constraining their participation as full stakeholders in community based conservation activities. A number of NGOs (including AKRSP and community based organisations) are sponsoring initiatives aimed at improving functional literacy rates amongst women. With co-financing provided by WWF, the alternative strategy would feed into these initiatives by developing conservation specific material for integration into these programmes, and by sensitising literacy teachers to conservation issues.

2.4. Enlist the support of religious leaders in conservation activities.

Religious leaders in the project region play an important, and growing role, in informing communities on social issues. Such leaders could provide a potent and innovative vehicle for reaching large constituencies with conservation messages. The project would support the involvement of religious leaders in conservation work through a carefully designed and culturally sensitive programme by

organising training workshops, developing teaching materials, and training religious scholars in awareness raising methods focusing on the conservation related teachings of Islam. Work in the Gojal and Tirichmir Conservancies will focus on outreach to Ismaili Muslims, who comprise the majority of the population. But in the Nanga Parbat and Qashqar Conservancies, where Sunni Muslims are in the majority, different approaches will be developed and operationalised.

Financing Output 2

Funding Source	Activity	Amount (in US$)
GEF	See log frame	729,776
WWF	Environmental education and awareness raising support	500,000
SDC/IUCN	Strategy formulation; Curricula development	200,000
Total		**1,429,776**

OUTPUT 3: A system for monitoring and evaluating project impacts, including ecological, and socio-economic outcomes will have been established.

3.1. Undertake biological monitoring to assess impacts on biodiversity.

The project makes provision for on-going data collection and assessment to monitor the status of biodiversity. The PRIF conducted wildlife surveys in sample sites, and population status data is available for Snow Leopards, Markhor and Ibex in these areas. Baseline data will be collected in eight additional sites, focusing on the above species, plus other keystone species to be identified (with technical inputs supplied at project inception). In addition, habitat status surveys will be undertaken in 8 sample transects, enabling plant biomass to be monitored and ecological response to conservation interventions assessed. Satellite imagery would be purchased and interpreted to corroborate information on habitat distribution and status. Reliable data on species numbers is available for each of the Conservancies, providing a baseline for future monitoring. Additional baseline data on habitats and keystone species would be collected in year 1 of the project, with annual sampling efforts undertaken in years 2-7 to establish trends and elicit project impact. Regional experiences in conservation impact assessments, particularly from Nepal, will be taken on board.

3.2 Conduct project process / performance monitoring.

Performance indicators have been developed for the project (see log frame) and will be refined during the first year of the project. The Monitoring and Evaluation Officers will be responsible for determining the periodicity of data collection, and for developing sampling and analytical methods. As conservation management regimes are dynamic, affected by social, economic, political, and ecological forces, it is essential to understand the processes that have bearing on conservation outcomes[9]. Process monitoring will be carried out by project staff in partnership with villagers. Results will be presented to villagers to facilitate discussion and self-examination of trends.

[9] Management regimes must be responsive to changes in internal conditions (e.g., controlled by the managers) and external ones (e.g., beyond the control of the managers). This means that an M&E system used to measure the effects and impacts of conservation and sustainable use interventions must be based on guiding principles, rather than a prescriptive checklist. The assessment process should be a tool that resource managers, and other local stakeholders, can use to identify and monitor the key biological, economic, and social factors that will influence the sustainability of any given natural resource use. As the relative importance of individual factors in influencing sustainability will vary over time, assessments will need to be performed regularly, based on the life, or seasonal, cycle of the resource and to account for periodic changes in underlying conditions.

This activity will also build capacity at the village level to monitor impacts and assess the sustainability of uses of wild resources in conjunction with conservation professionals. The objective is to sustain monitoring efforts, as part of an integrated conservation planning and management system, beyond the life of the project. A series of training workshops will be conducted, focusing on learning by doing. The workshops will concentrate on building skills in survey techniques, data recording and analysis methods. Monitoring mechanisms have already been put in place under the PRIF phase, and some training in wildlife survey methods has been provided. However, these mechanisms need to be refined and strengthened, and further capacity building is required to fully institutionalise monitoring.

3.3. Institutionalise compliance monitoring within the Conservancy management paradigm.

Operationalisation of active conservation management will require that checks be instituted to ensure compliance. Management regulations will be developed through Output 1 and formalised through Output 6, and will include a mix of traditional sanctions and legal penalties. The PRIF has shown community level enforcement to be reliable and effective. This activity would build capacity for compliance monitoring and reporting at the village level, ensuring that the objectives of and harvest limits set out in the VCPs are met, and adhered to. Such monitoring will cover a wide swathe of resource use activities, including subsistence hunting, commercial hunting, fuelwood and fodder collection, grazing, and the harvest of medicinal plants and culinary herbs. Village Wildlife Monitors, designated by communities in consultation with VCC representatives will be trained in compliance monitoring techniques through a "train the trainer" approach. The DCC's would oversee the institutionalisation of such monitoring so as to maintain accountability.

3.4. Document and disseminate the lessons learned during implementation.

Case studies will be developed for each Conservancy to document the findings of the monitoring exercises conducted at the village/valley and Conservancy levels. In addition, the lessons learned from project implementation, including the outcomes of the proposed sustainable use demonstrations, will be carefully documented and disseminated to conservation professionals elsewhere.

Financing Output 3

Funding Source	Activity	Amount (in US$)
GEF	See log frame	794,709
Total		**794,709**

OUTPUT 4: Development agencies and communities will be targeting financial and human resources towards long-term village eco-development in the Conservancies.

4.1. Integrate conservation management considerations into development initiatives at the village level.

Substantial efforts have been made to mobilise linkages with other development programmes or "partner agencies", such as AKRSP, the EU financed Dir Kohistan Environmental Rehabilitation Project, and the IFAD/UNDP Northern Areas Development Project. Partner agencies will address some of the ultimate causes of biodiversity loss in the project areas by investing in productive infrastructure and livelihood activities, responding to ecodevelopment needs articulated in Conservation Plans. These co-operative partnerships will ensure that interventions are targeted towards achieving conservation enabling development objectives, ensuring a more efficient use of

scarce conservation funds, and fully integrating conservation into the development paradigm. Interventions proposed under the alternative strategy will be substitutional to the extent that:

- in the business as usual situation, community development needs would have been articulated without reference to conservation objectives (under the alternative strategy a shift in development priorities will occur, with interventions modified to address the ultimate causes of biodiversity loss);
- additional development assistance is specifically being leveraged for communities in the Conservancy areas (under the alternative strategy, partner agencies will include biodiversity conservation objectives in the criteria set employed in prioritising development interventions and in choosing project locations[10]);
- activities take on board the priorities and needs of all community members, including marginalised groups that are most responsible for deleterious land use activities such as unsustainable utilisation of forest products; and
- activities incompatible with conservation objectives (such as the construction of link roads to high pastures) will be restricted.

The project, with GEF funding, would assume responsibility for the following tasks upon project inception.

- finalising and signing Memoranda of Understanding (MoU's) with the partner agencies, establishing a joint programmatic framework for interventions;
- sensitising partner agency staff to conservation management needs.

Partner agency staff would be engaged in the preparation of Valley Conservation Plans, which will prioritise development interventions to address threats to biological diversity. For the first time in the region, ecological/ biological factors will be specifically integrated into economic decision making at the watershed level, and the Plans will provide a vehicle for marrying development and conservation initiatives. Workplans for delivering ecodevelopment interventions would be finalised by communities and partner agencies following preparation of the VCPs, clearly stipulating the respective roles and responsibilities of different institutions in activity implementation.

4.2. Operationalise delivery of village eco-development schemes at the village level.

The specific activities that will be advanced under this component will be determined through the organic process of participatory planning. Depending on need, project partners will be responsible for:

- building productive infrastructure, such as irrigation channels and hydro powered lift irrigation systems to extend the area under cultivation;
- piloting field initiatives to demonstrate the viability and efficacy of ecologically sustainable land use practices (such as rotational grazing);
- providing technical assistance to improve livestock husbandry methods;
- improving animal health, so enhancing the productivity of livestock (enabling villagers to obtain meat and milk needs from smaller herds);
- supplying technical inputs, seedlings and financial resources for social forestry programmes; supplementing government agricultural and livestock extension services to improve the productivity of animal husbandry and farming system methods; and
- providing enterprise support to villagers in support of sustainable livelihood initiatives.

[10] Other criteria include social, economic and technical feasibility.

Financing Output 4

Funding Source	Activity	Amount (in US$)
GEF	See log frame	125,000
AKRSP	Agriculture, livestock, forestry and human resource development (all sites)	3,500,000
UNDP	Productive infrastructure and forestry (Qashqar)	250,000
IFAD/UNDP	Human resource development, agricultural services strengthening (Gojal and Nanga Parbat)	300,000
EU/IUCN	Natural resource management, agricultural support, human resource development (Qashqar)	800,000
Total		**4,975,000**

OUTPUT 5: The knowledge base regarding sustainable use of components of biodiversity will have been enhanced, with results applied in on-going community development activities.

A major focus of the GEF alternative is to increase the relative values of wild resources as an incentive for their conservation. A great range of wild resources with consumptive and productive use values exist in the high mountain environments, including economic/ medicinal plants, wild ungulates (trophy values) and game birds. At the present time, however, a number of barriers exist to sustainable use of these resources including:

- a lack of clear resource tenure and custodianship;
- a lack of understanding of the biological and ecological parameters of sustainable use management;
- a lack of knowledge of demand side factors, including market determinants for productive use options, and the economic parameters of sustainable use;
- inadequate institutional structures for promoting management; and
- a dearth of techniques, skills and experience to promote sustainable uses.

The project will undertake a set of demonstrations aimed at establishing the biological and economic viability of sustainable use options and developing an effective management regime, focusing on barrier removal activities. Based on planning and feasibility work undertaken during the PRIF, the project would support demonstrations of sports hunting, game bird, and wild plant management.

Sport Hunting: A carefully regulated Markhor and Ibex trophy hunting program[11] will be developed. The PRIF has built a strong policy foundation for using trophy hunting as an economic incentive for communities to participate in wildlife conservation. This support includes:

- a study of market characteristics and legal implications for trophy hunting;
- approval by GOP for 5 Ibex hunting permits issued in 1997 to communities in the NAs (in 1998 this quota was increased to 15 ibex);
- approval by CITES to allow an export quota of 6 Markhor annually from community-based management projects in Pakistan;
- drafting of Rules under the Northern Areas Wildlife Preservation Act (1975) to support implementation and enforcement of the Act;
- declaration of community representatives as Honorary Game Wardens (NWFP) to help government officials enforce the NWFP Wildlife Act (1975);
- development of a provincial policy on trophy hunting by the NWFP Wildlife Department; and
- administrative arrangements for revenue sharing of trophy fees between government (25%) and communities (75%).

[11] 6 Markhor trophies per year were permitted by the 10th COP to CITES, 1997

Population monitoring commenced during the PRIF but needs to be continued in order to determine sustainable harvest levels. In addition, efforts are needed to link target communities with licensed outfitters that are connected to international markets and can promote exclusive hunting opportunities, to strengthen management arrangements, and develop mechanisms to ensure the equitable sharing of revenues.

Game Birds: The project would seek to manage recreational and subsistence hunting and collection of partridges and pheasants by visiting Pakistanis from "down country" as well as by local villagers. The Wildlife Department in NWFP has "authorised" certain land owners to establish commercial game bird hunting operations. Under this programme the local operators are authorised to sell hunts for a specified number of birds of a particular species. But a framework for management is lacking and such hunting is currently pursued on an *ad hoc* basis. Activities would determine sustainable use harvest levels by establishing population status, promoting community based measures to regulate trade in the Conservancies, and exploring avenues for enhancing financial returns at the local level from hunting/collecting as a conservation incentive. As game birds migrate between higher and lower elevations with the seasons, management will address habitat requirements over large areas also benefiting other components of the local biodiversity.

The market for captive game birds is not regulated or managed by any agency and the trade takes place on an *ad hoc* basis. The market potential for partridges is large with thousands of birds being sold as pets in cities and towns. Prices of the birds vary from Rs 100 to Rs 2,000 according to their calling ability and condition.

Economic and Medicinal Plants: A number of economically important plant species occur in the project area, including wild thyme, cumin, morel mushrooms, and a rich variety of medicinal plants (including sea buckthorn, ephedrine, and the endangered costus root). These species are now commercially collected without reference to conservation needs and with limited tangible benefit accruing to local communities. The project will establish the status of target populations, enhance general awareness of problems, identify sustainable harvest limits and management requirements, promote information exchange amongst managers, and strengthen capacity to implement management measures aimed at ensuring the sustainable use of key species. One of the primary objectives of activities would be to improve habitat management, thus improving conditions for biodiversity.

Cumin is the seed coming from two species of plants (*Cuminum cyminum* and *Carum bulbocastranum*) growing at higher elevations in a very narrow ecological zone between the Dry Temperate and Dry Alpine ecosystems. The best quality cumin (based on fragrance), that also fetches the highest price, comes from the Astore area in the Nanga Parbat Conservancy. The total harvest from the Astore area has been reported at 5,000 kg. Harvests are currently not managed or co-ordinated, leading to competition between collectors, and unsustainable use. Enhanced benefit sharing within communities—linking benefits to management of the habitat and resource— will reinforce the need to restrict grazing of livestock on high pastures thereby contributing to the protection of a number of endemic plant species.

There is currently an extensive harvest of morel mushrooms (*Morchella conica* and *M. rotunda*) from the Qashqar Conservancy for export to Switzerland, France and Germany. The mushrooms are found in Pine forests in the Dry Temperate Coniferous and Holly Oak Scrub ecosystems. In 1995, about 25 metric tonnes (dry weight) were harvested from Dir and Chitral Districts and 2 tonnes from Swat. Attempts to cultivate commercial quantities of morel mushrooms have not been successful and continued harvests will depend on the protection of pine forest habitats. This demonstration activity will focus on integrating the values of non-timber forest products (i.e. morel mushrooms) into

sustainable pine forest management. Consideration will also be given to the need for greater inter-community co-operation in the harvest to optimise income as part of the management planning process. In addition, activities would explore opportunities for enhancing the benefit share captured at the local level, imparting awareness on the links between productive use and the management of forests.

5.1. Select field sites for demonstration of sustainable productive uses of wild flora and fauna.

The choice of sites for demonstration projects will be determined by ecological factors, by social conditions, and by the degree of maturity of each village in the conservation planning and management process. The first step will involve refinement of existing criteria for site selection, drawing on scientific expertise from relevant international institutions/organizations such as IUCN's Species Survival Commission (SSC) and Sustainable Use Initiative (SUI). The criteria would then be applied through a consultative process (involving District Conservation Committees) to select sites. Markhor and Ibex use management will be tested in all four Conservancies. Game bird management activities would centre on sites in Nanga Parbat and Tirichmir Conservancies where bird populations are sufficient to support productive uses. Morel mushroom management would be tested in Qashqar Conservancy, while cumin and medicinal plant management would be spearheaded in Nanga Parbat and Tirichmir Conservancies. More than one site would be selected for the various demonstrations in order to tailor management to different social, economic, ecological and institutional landscapes.

5.2. Enhance the knowledge base on biological, ecological, social and economic parameters of sustainable productive use.

Prior to promotion of use, the project would document the status of target populations and ecosystems and determine harvest limits. Biological surveys would be performed at the demonstration sites to obtain a baseline for tracking biological and ecological responses to management. In addition to this work, existing levels of harvest for the target species would be documented. Technical expertise would be attained from national and international organizations such as IUCN/SSC/SUI to determine biological thresholds for sustainable uses of the target species, as well as assess the potential benefits and risks of sustainable use activities as they relate to broader biodiversity conservation objectives. The project would also collect information on the determinants of demand for target species and market chains, reviewing benefit capture at the local level. Opportunities for fostering a more equitable sharing of benefits, increasing the share of benefit captured at the local level, and creating links with conservation management, would be identified, again with specialist inputs. This work would also divine socio-economic constraints to sustainable use management of the target species.

5.3. Operationalise sustainable productive use management of target species on a demonstration basis.

In consultation with local communities and DCCs, the project would operationalise sustainable use demonstrations by extending usufruct rights for resource harvests to local communities, instituting permitting requirements, regulating the location, quantity and season of harvest, and testing benefit sharing arrangements. In order for the project concept to bear fruit, it is important that those communities that assume the costs of conservation management also reap the benefits. Thus an incentives regime will be established through the project to give wild resources focussed value (see output 6). The project would provide capacity building support through training of VCC and DCC members in planning and managing uses, focusing on approvals, monitoring and regulatory aspects. Training would also be provided to NRM Specialists (linked to the specialist network established by AKRSP) in adaptive use management, so as to develop a cadre of extension workers able to advise

VCCs on management needs in the longer term. A key focus will be on developing effective monitoring and regulatory measures to ensure that use occurs on a sustainable basis, benefits local communities, and fosters resource stewardship, while avoiding problems of market saturation. A Management Plan would be prepared for each species with support from IUCN/SSC/SUI, clearly establishing monitoring processes. The programme would be scientifically audited through the appropriate Species Survival Commissions, with mechanisms established to engender long term auditing and technical assistance from the scientific community.

5.4. Institute mechanisms to develop and manage ecotourism.

Ecotourism in the northern mountain areas of Pakistan has not developed into a large scale industry— though considerable potential exists for development, particularly of domestic tourism. Government records show that some 16,000 Pakistani and foreign tourists visit Chitral (NWFP), and 20,000 visit the Hunza area (NAs) annually. Many tourists conduct trekking tours, and mountaineering expeditions are regularly mounted. Tourism is generally unmanaged, and is placing moderate pressures on the natural environment—pressures that can be expected to grow as tourist numbers increase. These pressures include consumption of fuelwood, contributing to the loss of native forests, trampling of ecologically fragile areas, and littering. The project will sensitise villagers to the implications of these pressures in terms of sustaining tourism, and their impacts on biodiversity.

Ecotourism will initially be developed only in those areas where communities have identified it as a high priority. It will not be imposed from the outside but, rather, be focused in areas where ecotourism is culturally and ecologically feasible. The main focus of activities will be to:

- train Valley Conservation Committee members in tourism promotion techniques and develop linkages with tour operators to mobilise marketing expertise;
- develop a Code of Conduct for tourists within Conservancies to ensure that they do not damage the fragile mountain ecosystems;
- train local guides in visitor management techniques;
- identify and apply appropriate fee schedules for visitation to the Conservancy areas;
- find ways and means of co-ordinating tourism management activities between different villages along trekking routes; and
- investigate options for leveraging trekking permit fees for the purposes of capitalising the financial mechanism (output 7).

Activities would be cost-shared between GEF and UNDP, with GEF inputs focused on incorporating biodiversity concerns into tourism management. All the Conservancies offer a number of tourist attractions including wildlife viewing opportunities and spectacular scenery. Demonstration sites would be selected following further discussions with local communities. Co-financing will be provided from the NACS which has identified the growing ecotourism sector as a focus for establishing linkages with the private sector in NAs. An interest group will be formed (which may evolve into a "Business Roundtable") to promote enforcement of environmental regulations and quality standards for tourism.

5.5. Support enterprise development to promote sustainable use activities.

The project would cement linkages with the Enterprise Development Programmes of AKRSP and other partner agencies to facilitate technical assistance and financing of sustainable productive use and ecotourism development schemes, where shown to be ecologically, socially and economically viable. Partner agencies would take responsibility for providing business training and marketing support, as well as extending micro credit. Prospective entrepreneurs would be trained in negotiation skills to enhance their leverage when dealing with middle men in trade, as part and parcel of benefit

sharing measures. [Such financing has not been factored into the co-financing estimates because it is contingent on the proven success of the demonstrations.]

Financing Output 5

Funding Source	Activity	Amount (in US$)
GEF	See log frame	696,692
UNDP	Ecotourism—see log frame	100,000
UK	Technical assistance for wild plants management	100,000
SDC/IUCN	Ecotourism linkages	50,000
IUCN/ SSC/SUI	Technical inputs for hunting and wild plants management	100,000
Total		**1,046,692**

OUTPUT 6: Government policies and regulations will have been remoulded to support management of the Conservancies and institutional capacities for managing participatory conservation models will have been strengthened.

6.1. Develop a Model Provincial Wildlife Law.

The Project would support efforts to develop a Model law governing management of the Conservancies and wildlife utilisation. Support would be provided for legal drafting, public consultations, legal review of the draft, and solicitation of final approvals from legislative bodies. Parallel funding for the development of a model provincial wildlife law is available through the Northern Areas Conservation Strategy (NACS). The NACS has identified, as one of its components, a review of existing environmental legislation (particularly in relation to forestry, agriculture, wildlife and protected areas, land-use, and environmental assessment) to assess the need for new policies and laws to support implementation of the NACS. Following this review, a draft framework and sectoral legislation will be prepared and reviewed through a series of consultative workshops. The product will be submitted to the Government of Pakistan for consideration. Similarly, as part of the Sarhad Provincial Conservation Strategy (SPCS) in NWFP, efforts to reform environmental policy and law will be supported at both the provincial and District levels (e.g. through the Chitral Area Conservation Strategy). This higher-level and sectoral approach that is now being facilitated through regional conservation strategies will complement the focus of the MACP on reforming conservation legislation. Policy reform will be carefully monitored during the process of implementing the MACP.

6.2. Develop enabling policy and legal mechanisms for Conservancies.

The project will promote the development of specific rules governing the management and sustainable use of wild resources in the Conservancies. The following provisions will be made specifically for the Conservancies:

- legal recognition (through gazetting) of the Conservancies; the project will assist government to extend the existing Protected Area categories to accommodate a range of management objectives from strict preservation (IUCN Category I) to community-based conservation areas or "Conservancies" (IUCN Category VI)[12];
- extension of appropriate authority (in the form of tenure, lease or other options) to DCCs, local communities, and other traditional groups of users;

[12] There are currently only 3 categories of protected areas in Pakistan: National Parks, Wildlife Sanctuaries and Game Reserves. Of these, Wildlife Sanctuaries are the most restrictive providing "...undisturbed breeding of animals". National Parks have been set aside to provide for conservation, education, research and recreation while Game Reserves are important wildlife areas where hunting permits can be granted.

- provision of rules that facilitate local management, including:
  - allocation of trophy hunting licences to the Conservancies;
  - permitting the commercial sale of plants (e.g. mushrooms, cumin, medicinal plants);
  - collection of conservation fees from trekkers and other tourists;
  - licensing of certified guides;
- requirement for Conservancy Management Plans that have the status of subsidiary legislation between periods of review;
- reconciliation (and acceptance) of local resource inventories in the Conservancies with ongoing government monitoring and reporting.

There are already precedents in Pakistan for area-specific legislation to support community involvement in resource use activities (e.g. the Hazara Forest Act). This will be consulted during the project to explore its application to the Conservancies in NWFP and NAs.

6.3. Strengthen government capacity for collaborative conservation management.

The project will work at all 3 levels of government (Federal, Provincial and District) to strengthen their capacity for supporting project activities. At the federal level, the project will assist the NCCW in regulating trophy hunting of Markhor to ensure that conservation of this species is enhanced through the CITES approved program and that communities in the Conservancies are actively involved. The capacity of the Zoological Survey Department (ZSD) in wildlife surveys, studies, taxonomy and Pakistan Forest Institute (PFI) in survey of medicinal plants and other federal institutions, where possible, will also be enhanced. At the provincial/regional level, the project will assist the Wildlife Department in developing wildlife survey techniques and regular monitoring programmes in co-operation with the communities. Systems will be developed to institutionalise the collection of appropriate resource data on which to base management decisions and establish allowable use levels. Biological data from the Conservancies will be gathered and stored in the Wildlife Department and government staff will be trained in the analysis and use of this data. At the District level, government staff will be fully involved in resource surveys carried out by the project. It is important to develop a good working relationship in the field to build trust between government and local communities; the Project will facilitate this through frequent interactions on the ground. Field-based officers will also be trained in survey techniques and sustainable use management skills.

This work will be supported by institutional capacity building to develop and strengthen the capabilities of government staff to support management of the Conservancies. Enhancement of institutional capacity is also one of the primary objectives of NACS which will provide additional support for this work by creating a separate Environment Section within the Planning and Development Department, and training "focal points" based in key line departments to support conservation and sustainable development activities. Efforts will be made by the government and other partners to ensure Conservancy regulations are implemented, to monitor impact, to provide extension services, and to apply the incentives regime to reward and penalise communities based on the quality of their management. Training efforts will aim at sensitising government officers to the mechanics of community-based conservation, plus strengthening their skills base in order to enable them to effectively execute their oversight and support functions. This activity includes provision for specialised training overseas in conservation and sustainable use management disciplines, in addition to field training.

Financing Output 6

Funding Source	Activity	Amount (in US$)
GEF	See log frame	1,090,197

Funding Source	Activity	Amount (in US$)
SDC/IUCN	Policy/legal reforms, institutional capacity building	100,000
Total		**1,190,197**

OUTPUT 7: A Biodiversity fund will be in operation and will be contributing towards meeting the recurrent costs of Conservancy management.

A financial mechanism will be developed to cover a portion of the recurrent costs of conservation interventions in the Conservancies beyond project closure—so ensuring financial sustainability. Recurrent costs associated with conservation management in the Conservancies include the expenses associated with monitoring implementation of Conservation Plans, enforcing regulations, on-going operations, and awareness efforts. A Trust Fund would be established to cover these costs, with an endowment being created for the purpose. The fund would be established following an iterative process, allowing for extensive stakeholder involvement in design. In light of emergent "best practices" and lessons learned from the application of GEF- sponsored Environmental Funds in other developing countries, the process would comprise of three phases: [1] Design and Consultation; [2] Commencement; and [3] Operations. Activities under this output are further detailed in Annex XIII.

7.1. Finalise design of the Conservancy Fund in consultations with major stakeholders.

A Steering Committee would be established to oversee design of the fund, and would include representatives from Government, donors, AKDN, environmental NGOs, and the private sector. The following activities would be undertaken:

- Prepare and review background material regarding Incorporation of the Fund, Asset Management, Trusteeship, Legal Aspects of the Fund, Fund Raising Strategies, Financial Management Arrangements, Disbursements, and Monitoring of Funds application.
- Establish mechanisms for stakeholder participation. The PRIF has researched several options for governance structures which will need to be assessed.
- Develop a fund raising strategy.
- Define legal structures, tax status, and location of the trust. Options for governance and preferred operational mechanisms will need to be developed in line with legal structures.
- Review asset management options. Monies will be managed by an investment fund. A portion of the returns will be disbursed for field level activities, with the balance being ploughed back (to maintain the value of the initial endowment in real terms).
- Determine Operational Mechanisms for the fund. An operations manual will be developed clearly specifying rules and operational procedures for the fund.

7.2. Complete necessary procedural and legal requirements for the establishment of the Fund.

The following tasks will be undertaken:

- Fund raising. An endowment of US$ 5 million (Rs 240 million) will be created (which is sufficient to meet the recurrent costs of management in the Conservancies). Of this amount, the GEF would provide US$ 1.5 million, UNDP US$ 0.75 million, and the Government of Pakistan, US$ 0.75 million. The remaining US$ 2 million would be raised prior to draw downs from the fund. This amount would be raised from donor contributions, private sector contributions, and user fees, including trekking fees.
- Finalisation of asset management procedures.

- Preparation and endorsement of Articles of Incorporation, Trust Prospectus and by laws, selection of Board of Trustees, and agreements with the Asset Manager.
- Legal establishment of the trust. This will involve incorporation, and establishment of asset management and trust operations sections.

7.3 Take steps to operationalise the Fund.

The following tasks will be undertaken:

- Capitalisation of the fund. UNDP in consultation with PSC will review funds management modalities, including the location of the fund, the choice of asset manager, and the funding strategy and will release monies into the trust account only if satisfied that the strategic plan, operating plan and administrative and accounting systems are robust.
- Return on Investment. Funds will be set aside for a period of at least one year before returns are allocated for Conservancy management.
- Management and review of First Project Cycle.

7.4. Provide early incentives for Conservancy management through the creation of Valley Conservation Funds

In order to build trust and strengthen partnerships with local communities at an early stage, the project makes provision for delivery of an early incentives package. Valley Conservation Funds will be established at the watershed level, capitalised jointly by UNDP budgetary resources and local villagers (community co-financing will be a conditionality for the establishment of a VCF in any given area). The funds will be invested in high yielding deposits, with the proceeds drawn upon by communities to finance conservation enabling activities prior to the establishment of the Trust Fund. A Terms of Partnership agreement between the project and communities will stipulate mutual obligations as regards management and utilisation of the funds. Communities will also be required to deposit a portion of the proceeds from sustainable use activities in the fund—providing a means of sharing benefits in an equitable manner. The modalities for this would be developed during implementation.

Financing Output 7

Funding Source	Activity	Amount (in US$)
GEF	Design of Trust Fund and Seed Financing (see log frame)	1,665,000
UNDP	Financing of Trust Fund and Valley Conservation Funds	1,122,000
Communities (VCCs)	Valley Conservation Funds	250,000
GOP	Financing of Trust Fund	750,000
Total		**3,787,000**

TARGET BENEFICIARIES

Beneficiaries include the following stakeholders. [1] Global communities who will benefit from the protection of unique ecosystems, species and races that otherwise would face local and global extirpation. A number of economic benefits will be captured by this constituency, including direct use, future use, existence and recreational-use values. [2] Local communities: The project will stem the erosion in ecosystem functions and maintain use, option, amenity and other values for the benefit of future generations. Activities sponsored under the project will enhance the ecological sustainability of baseline development programmes. [3] Government: Local and Provincial government staff will

benefit from training programmes, additional field experience, and being sensitised to participatory conservation methods. [4] Field Staff working for Partner NGOs and Development Agencies will benefit from training in participatory conservation methods, and exposure to new know-how. In addition, intrinsic values associated with the existence of diverse life forms will be protected.

EXPECTED END OF PROJECT SITUATION

The following results are expected to have been achieved by the end of the project:

i. Four Conservancies areas will have been formally designated, covering an area of 10,800 square kilometres and encompassing a representative sample of the bio-geographic regions of the W. Himalaya, Karakoram and Hindu Kush ranges. There will be clear evidence of active biodiversity conservation, with improvements in habitat quality and an increase in populations of keystone species. Land within each Conservancy will be zoned and managed by communities for multiple uses including protection, harvesting of wild resources, social forestry, livestock and agricultural activities.

ii. Strong capacity for conservation management will have been established at the local-level. Valley Conservation Committees formed for conservation purposes will be planning, managing, and monitoring conservation efforts in each Conservancy with support from DCCs. An umbrella Conservancy Management Plan will have been prepared for each of the four Conservancies, agreed upon by participating villages, and will be guiding resource-uses and development. A system for policing regulations will be in place, supported by the necessary legal instruments. Environmental awareness programmes will have been executed to impart conservation values to community members, and a forum for inter-village communications on conservation issues established. A record of project impacts will be available, lessons learned will have been documented and disseminated, and monitoring mechanisms will have been institutionalised as part of the conservation paradigm.

iii. Development programmes within the Conservancies, including those sponsored by communities, governments, NGOs, and donors will be geared towards the achievement of conservation objectives. The foundations for long-term sustainable development in the Conservancy areas will be in place, supported by a conducive policy, regulatory and institutional framework. Field trials of sustainable use models will have been completed, with the results guiding resource-uses in the Conservancy areas. Existing extension agents, including community-based agricultural, livestock and forestry specialists will have been trained in technical aspects of sustainable use, with mechanisms established through government and NGOs for the provision of future refresher courses.

iv. Government wildlife policies will have been reoriented towards supporting community-based conservation, as provided for under the Biodiversity Action Plan. Enabling legislation will exist to give legal backing to the Conservancies, providing a means for targeting incentives to villages, regulating resource uses, and enforcing Conservancy Management Plans. The institutional capacity of Provincial Wildlife and Forestry Departments will have been strengthened to co-manage the Conservancies, with government providing management advice, ensuring compliance with regulations, and monitoring impacts.

LOGICAL FRAMEWORK MATRIX

Acronyms: VWG- Village Wildlife Guides; VCC- Valley Conservation Committees; VCP- Valley Conservation Plans; DCC- District Conservation Committees; NP- Nanga Parbat; TM- Tirichmir; QPRs—Quarterly Progress reports; APR—Annual Progress Reports; RMP—Resource Management Plans.

<table>
<tr><th>Intervention Logic</th><th>Indicators of Performance (qualitative & quantitative)</th><th>Source of Verification</th><th>Risks and Assumptions</th></tr>
<tr>
<td>Development Objective: To protect and ensure the sustainable use of biodiversity in the Karakoram, Hindu Kush, and Western Himalayan mountain ranges through application of a community-managed conservation paradigm.</td>
<td>- Increase in number and distribution of keystone species observed in sample plot areas, as shown below:
Baseline (1998) versus 7 years (2006) shown in parenthesis

<table>
<tr><th>Species \ Site</th><th>Khyber (Gojal)</th><th>SKB (NP)</th><th>Arkari (TM)</th><th>Goleen (Qashqar)</th></tr>
<tr><td>Ibex</td><td>120(200)</td><td>230(300)</td><td>200(275)</td><td>60(90)</td></tr>
<tr><td>Markhor</td><td>-</td><td>50 (100)</td><td>-</td><td>30(50)</td></tr>
<tr><td>Snow Leopard</td><td>2 (4)</td><td>4 (7)</td><td>5 (8)</td><td>?</td></tr>
</table>

- No decrease in the number of rare plant species or the number of vertebrate species currently found in the Conservancies over the life of the Project

<table>
<tr><th>No. of Species \ Site</th><th>Total</th><th>Gojal</th><th>NP</th><th>TM</th><th>Qashqar</th></tr>
<tr><td>Rare Plants</td><td>109</td><td>17</td><td>39</td><td>64</td><td>20</td></tr>
<tr><td>Mammals</td><td>45</td><td>18</td><td>23</td><td>21</td><td>21</td></tr>
<tr><td>Birds(breeding)</td><td>86</td><td>32</td><td>53</td><td>48</td><td>72</td></tr>
<tr><td>Amphibians</td><td>6</td><td>1</td><td>1</td><td>6</td><td>6</td></tr>
<tr><td>Reptiles</td><td>32</td><td>5</td><td>5</td><td>32</td><td>32</td></tr>
<tr><td>Fish</td><td>19</td><td>16</td><td>16</td><td>9</td><td>9</td></tr>
</table>

Improvement in habitat quality (increase in native species composition and biomass) for selected high pastures. Baselines and study sites will be established during the first growing season</td>
<td>-Species presence/absence surveys
-Standardized trend surveys from fixed observation points
-Transect and vegetation biomass surveys
-Remote sensing data</td>
<td>Communities have both material and moral reasons to protect wildlife.
Species populations are able to recover from past over-exploitation and Conservancies provide for minimum species survival needs (i.e., are ecologically viable in the long-term).
Established checks and balances can hold communities accountable for management, and ensuring sustainable use.
The project enhances the existing baseline of conservation effort by expanding the geographic scope and buffering adjacent PAs from excessive threats.</td>
</tr>
</table>

Intervention Logic	Indicators of Performance (qualitative & quantitative)	Source of Verification	Risks and Assumptions
Immediate Objective Establishment and effective long-term management of four Conservancies covering wide ecological landscapes and zoned for multiple uses, backstopped by an enabling institutional, policy, regulatory, and financial framework.	-Govt. approval of legal establishment of 4 Conservancies -Reduction in livestock numbers as shown below. **Site** **Gojal** **NP** **TM** **Qashqar** **B/line** 80,000 62,500 37,500 57,500 **7 yrs** 64,000 50,000 30,000 46,000 -Evidence of application of hunting regulations -Evidence of application of forest management regulations -Evidence of application of zoning strategies -Harvest quotas applied for wild resource use	-PC I, Notifications -AKRSP reports -Village records - Sample surveys -VCC records -Police records -Government records -DCC records -DCC, VCC records -DCC, VCC records	Communities are willing to adapt their land-use practices in order to facilitate biodiversity conservation. Current Government commitment to decentralise systems of conservation management and support community- based conservation will be maintained. The transfer to communities of usufruct rights over wild resources will provide a utilitarian incentive for better long-term management. Sufficient and high-quality human resources can be mobilised in order to implement the project.
Output 1 The institutional and human capacity of community level organisations to conserve biological diversity will have been strengthened, and planning and management structures will be in place.	-80% communities independently using participatory planning techniques -VCPs prepared and up-dated in all Conservancies -VCCs established in all Conservancies villages - At least 40% of the VCCs have female sub-committees -DCCs operating in all Conservancies -4 Conservancy Management Plans prepared and updated -Management regulations established for each Conservancy	-QPRs, Village records -QPRs, Village records -VCPs -QPRs, VCPs -VCCs -QPRs -QPRs -DCC minutes -QPRs -CMPs	The geographic spread of the Conservancies will not impede effective co-ordination of conservation efforts Communities within each Conservancy are willing and able to collaborate to achieve conservation, and social conflicts between them can be resolved. Existing community based organisations provide a platform for the advancement of conservation objectives. Male villagers will support the inclusion of women in conservation planning and management. A broad cross-section of support for conservation can be mobilised within communities, including village leaders, the clergy, women and youth.
Output 2 Conservation values will have been imparted to local communities through a well-targeted education and awareness	-Conservation issues discussed in village forums (yes/no) - Conservation education programmes started in 50% of schools in Conservancies.	-Case studies, forum minutes, AKRSP records -School curricula	Latent moral values for wildlife can be reinvoked. Communities are willing to protect conservation values for future generations. School teaching programmes are sufficiently flexible to enable conservation education to be included in the syllabus.

Intervention Logic	Indicators of Performance (qualitative & quantitative)	Source of Verification	Risks and Assumptions
drive, with avenues developed for the sharing of information and experiences amongst villagers.	-50% of population in the area contacted directly as part of the conservation drive -Two village exchange visits conducted annually in each Conservancy. - Local media regularly cover project	-Field visit reports, Notes for Record -QPRs, AKRSP reports -Radio, newspaper reports	The poor social status, limited mobility and low literacy of women are not insuperable constraints to awareness raising. Informal education methods will be effective in raising local awareness
Output 3 A system for monitoring and evaluating project impacts, including ecological and socio-economic outcomes will have been established.	-M&E systems established and functioning at all levels -One independent M&E survey conducted annually in each Conservancy -Four process monitoring case studies produced annually -One M&E workshop held in year 1 of the project followed by 5 refresher workshops in subsequent years -Quality of survey reports produced by village specialists	-M&E reports, QPRs -QPRs -QPRs, Case studies - Workshop reports, QPRs - Village monitor records -Technical experts' input and comments	Durable and transparent monitoring mechanisms can be established at the village level. Villagers are willing to share information regarding their land-use practices.
Output 4 Development agencies and communities will be targeting financial and human resources towards village eco-development in the Conservancies.	-Eco-development aspects of VCPs implemented in at least 80% of target villages -50 village specialists trained in wild resource management -Increase in area under fodder production **Site** **Gojal** **NP** **Tirichmir** **Qashqar** **B/line** 20 ha 170 ha 50 ha 75 ha **7 yrs** 30 ha 300 ha 100 ha 150 ha -Increase in area under tree plantations **Site** **Gojal** **NP** **Tirichmir** **Qashqar** **B/line** 28 ha 220 ha 70 ha 90 ha **7 yrs** 38 ha 297 ha 95 ha 122 ha -25% decrease (by year 7) in number of livestock taken to high pastures for grazing during the summer	-Partner agency reports -do -do -do -do	Pasture improvement initiatives will not lead to an increase in stocking levels, so increasing competition with wildlife. Partner agencies will continue to provide supporting investments for execution of the alternative strategy. Development of fuelwood plots to meet domestic energy requirements will reduce pressures on indigenous forests. Distributional factors within the village economy can be effectively addressed.

Intervention Logic	Indicators of Performance (qualitative & quantitative)	Source of Verification	Risks and Assumptions
Output 5 The knowledge base regarding sustainable use of biodiversity will have been enhanced, with results applied in on-going community development activities.	-One training workshop per year per Conservancy conducted in sustainable use methods - Volume of sustainably harvested products marketed -No. of Resource Management Plans developed for wild resource use.	-QPRs, training reports -Case studies -RMPs, VCPs, QPRs -Case Studies	Barrier removal will engender sustainable uses of biodiversity components. Ecologically sustainable land-use practices are socially and economically viable. Income from use of resources will be invested in management. Communities are willing and able to apply adaptive management strategies and continue resource monitoring beyond the project life
Output 6 Government policies and regulations will have been remoulded to support management of the Conservancies and institutional capacities for managing participatory conservation models will have been strengthened	-Supportive policy & legal framework is in place -Protected area classification system revised to include Conservancies -4 Conservancies designated as protected areas under revised classification system -Communities in Conservancies granted usufruct rights for wild resources	-Gazettes, Notifications -Notifications -Gazettes -Legal documents	Institutional rigidities can be overcome. A binding relationship can be developed between project and government staff. Trainees are receptive to new conservation methods and apply new skills in day-to-day operations. Political support for policy and regulatory change will be forthcoming.
Output 7 A Biodiversity fund will be in operation and will be contributing towards meeting the recurrent costs of Conservancy management.	- Trust fund established and capitalised at US$ 5 million - Successful completion of first project cycle -VCF funds invested in high yielding deposit accounts -30% of proceeds from sustainable use activities deposited in VCF		Funding can be leveraged over the longer-term to further capitalise the fund (as and when necessary) Agreement can be reached between the various stakeholders regarding funds management and application. The government is willing to allow NGO and community representatives to participate in management of the fund to ensure accountability. The funds will be equitably distributed taking account of management performance and need.

Intervention Logic	Indicators of Performance (qualitative & quantitative)	Source of Verification	Risks and Assumptions
Activities **1.1 Initiate dialogue with target communities in new areas** 1.1.1 Jointly program community mobilisation with social outreach programs of other partner organisations 1.1.2 Finalise community entry strategy 1.1.3 Mobilise motivators from PRIF 'nucleus' villages for outreach in new areas 1.1.4 Initiate dialogue with community leaders at the village level 1.1.5 Mobilise community representatives for valley-level planning **1.2 Establish Valley Conservation Committees (VCCs)** 1.2.1 Prepare Terms of Reference (ToRs) for VCCs 1.2.2 Negotiate Terms of Partnership (ToPs) compacts for conservation 1.2.3 Develop work plans for valley level activities **1.3 Design and implement culturally appropriate strategies for individual women in conservation activities** 1.3.1 Develop targeted "women in conservation" strategies for project areas 1.3.2 Sensitise project staff to gender issues 1.3.3 Identify female conservation motivators from WOs 1.3.4 Perform gender analyses at the village level 1.3.5 Establish women's subcommittees under VCCs **1.4 Undertake conservation management planning at the valley level** 1.4.1 Establish integrated planning framework with partner agencies 1.4.2 Undertake resource and needs assessments using participatory learning and action tools (PLA) 1.4.3 Assess conservation needs based on information provided under Output 3 1.4.4 Provide technical assistance to VCCs for conservation and sustainable use management (link to Output 5) 1.4.5 Identify multiple use zoning needs (protection, extractive uses, etc.) 1.4.6 Develop Valley Conservation Plans 1.4.7 Develop second five year Valley Conservation Plan 1.4.8 Develop annual operational work plans 1.4.9 Organise inter-village exchanges to foster co-operative management at the valley level **1.5. Establish Conservancy level management framework** 1.5.1 Define membership and functions of DCCs 1.5.2 Obtain DCC endorsement of Valley Conservation Plans 1.5.3 Design Conservancy Management Plans based on ecosystem management needs 1.5.4 Operationalise enforcement mechanisms for valley and Conservancy levels (link to output 6) 1.5.5 Organise inter-valley exchanges to foster co-operative management			
2.1 Develop and implement Communication Strategy 2.1.1 Assess Conservancy-specific communication and conservation awareness needs through a scoping exercise 2.1.2 Develop a project logo 2.1.3 Develop a web page to disseminate lessons learned from the project 2.1.4 Prepare regular conservation fact sheet for radio/print media **2.2 Implement "Schools in Conservation" program**			

Intervention Logic	Indicators of Performance (qualitative & quantitative)	Source of Verification	Risks and Assumptions
2.2.1 Select teachers for "train the trainer" activities 2.2.2 Develop training material and educational modules for use in schools [with help of teachers] 2.2.3 Integrate conservation awareness into primary school curricula 2.2.4 Organise teacher training workshops 2.2.5 Organise lectures on conservation related topics **2.3 Operationalize informal conservation awareness programs** 2.3.1 Design resource materials for use in community outreach 2.3.2 Organise awareness raising activities as part of inter-village exchanges (Output 1) **2.4 Enlist support of religious leaders in conservation activities** 2.4.1 Develop conservation awareness materials for use by religious leaders 2.4.2 Organise conservation awareness workshops for religious leaders			
3.1 Undertake biological monitoring to assess impacts on biodiversity 3.1.1 Purchase satellite imagery for habitat and landuse interpretations 3.1.2 Finalise list of biological/proxy indicators and study sites 3.1.3 Expand baseline database through additional sampling 3.1.4 Develop village-level monitoring capacity by training Village Wildlife Guides 3.1.5 Form partnerships with research institutions for scientific backstopping of monitoring 3.1.6 Undertake further biological sampling to elicit trends **3.2 Conduct project process/information, performance monitoring** 3.2.1 Prepare quarterly and annual progress reports on achievement of indicators 3.2.2 Monitor delivery of workplans and contract services 3.2.3 Undertake financial audits **3.3 Institutionalise compliance monitoring in Conservancy management paradigm** 3.3.1 Monitor implementation of conservation plans 3.3.2 Institutionalise joint "watch-and-ward" measures 3.3.3 Facilitate independent reporting to DCCs and other agencies 3.3.4 Report back to communities on compliance monitoring			
4.1 Integrate conservation management considerations into development planning initiatives at the valley level 4.1.1 Formalise MoUs with partner agencies to facilitate joint programming of conservation and development interventions 4.1.2 Train staff of partner institutions in conservation management methods 4.1.3 Engage partner development agencies in preparation of VCPs (link to Output 1) 4.1.4 Identify opportunities for promoting conservation enabling development activities 4.1.5 Finalise workplans, for delivery of conservation enabling development activities at the valley level			
5.1 Select field sites for demonstration of sustainable use of wild flora and fauna 5.1.1 Develop criteria (social, economic, biological) for site selection 5.1.2 Identify demonstration sites within Conservancies			

Intervention Logic	Indicators of Performance (qualitative & quantitative)	Source of Verification	Risks and Assumptions
5.1.3 Finalise selection through a consultative process **5.2 Enhance knowledge base on biological, ecological, social and economic parameters of sustainable use** 5.2.1 Collect information on population status of target species 5.2.2 Document existing levels of harvest for target species 5.2.3 Determine biological thresholds for sustainable use of target species 5.2.4 Elaborate costs and benefits of sustainable use with regard to biodiversity conservation 5.2.5 Collect information on market chains and determinants of demand for harvest of target species 5.2.6 Assess distribution of benefits from existing markets 5.2.7 Identify opportunities for capturing value added as a conservation incentive 5.2.8 Identify social and economic constraints to sustainable use management **5.3 Operationalise sustainable use management of target species on a demonstration basis** 5.3.1 Extend usufruct rights to local communities for resource harvests 5.3.2 Institute permitting requirements, where required (location, quantity and season of harvest) 5.3.3 Develop and test benefit-sharing arrangements 5.3.4 Enhance capacities of VCCs for collective planning and management of sustainable use of target species 5.3.5 Strengthen capacities of DCCs to approve, monitor and regulate sustainable use activities 5.3.6 Train cadre of sustainable use extension agents in adaptive management 5.3.7 Ensure policy congruence in support of sustainable use (Output 6) 5.3.8 Develop indicators for monitoring 5.3.9 Build community capacity for participatory monitoring and evaluation (PME) 5.3.10 Establish independent scientific auditing mechanisms 5.3.11 Document and disseminate lessons learned **5.4 Institute mechanisms to develop and manage ecotourism** 5.4.1 Develop Code of Conduct for visitors 5.4.2 Train VCCs in Visitor management techniques 5.4.3 Develop appropriate interpretational and promotional materials 5.4.4 Identify and apply appropriate fee schedules 5.4.5 Co-ordinate tourism management between villages along trekking routes 5.4.6 Apply appropriate fee schedule and leverage trekking fee for financial mechanism **5.5. Support enterprise development for promoting sustainable use activities** 5.5.1 Harness opportunities for increasing value added from sustainable uses at the local level 5.5.2 Train local entrepreneurs in negotiation techniques to increase benefit capture at the local level			
6.1 Develop a Model Provincial Wildlife Law (in co-operation with NACS/CCS) 6.1.1 Complete legal review of rules prepared under the NAs Wildlife Preservation Act ('75) 6.1.2 Customise a Model Wildlife Law for NWFP/NAs 6.1.3 Review draft law through a series of consultative workshops 6.1.4 Revise and submit laws for government approval **6.2 Develop enabling policy and legal reform for Conservancies** 6.2.1 Revise Protected Areas classification system to include Conservancies 6.2.2 Formally designate Conservancies as protected areas under revised system of classification			

Intervention Logic	Indicators of Performance (qualitative & quantitative)	Source of Verification	Risks and Assumptions
6.2.3 Draft rules and regulations specific to Conservancies that facilitate local management 6.2.4 Extend appropriate authority to DCCs for enforcement of regulations **6.3 Strengthen government capacity for collaborative conservation management** 6.3.1 Train government staff in participatory planning, management and impact monitoring 6.3.2 Institutionalise systematic collection of appropriate resource data in co-operation with local communities 6.3.3 Train government staff and DCCs in the analysis and application of field data to set sustainable use levels 6.3.4 Arrange fellowships for overseas study			
7.1 Finalise design of the Conservancy Fund in consultations with major stakeholders 7.1.2 Finalise details with regard to Incorporation of the Fund, Asset management procedures, Trusteeship, and legal aspects 7.1.3 Develop a manual specifying rules and operational procedures for the fund 7.1.4 Develop a fund raising strategy for soliciting additional support for the Conservancy Fund 7.1.5 Establish a monitoring system for reviewing fund disbursements and overall performance of the Fund 7.1.6 Establish audit procedures for transparent management of the fund **7.2 Complete necessary procedural and legal requirements for the establishment of the Fund** 7.2.1 Take measures to have the Fund legally incorporated under the specified rules 7.2.2 Initiate scoping exercise for identification of potential donors to the Conservancy Fund 7.2.3 Develop a systems manual outlining administrative structures in place 7.2.4 Prepare background material for potential donors to the Fund and initiate fund raising 7.2.5 Carry out an independent assessment of Fund management modalities and take action on recommendations 7.2.6 Select Asset Manager and sign management agreement 7.2.7 Decide eligibility criteria and procedures for releasing funds to community organisations 7.2.8 Negotiate and sign ToP with participating communities 7.2.9 Build capacity of communities, through training, to manage and operate VCFs **7.3 Take steps to operationalise the Fund** 7.3.1 Capitalise the fund 7.3.2 Carry out a management review of the first project cycle 7.3.3 Initiate second round of fund raising **7.4 Provide early incentives for Conservancy management through the creation of Valley Conservation Funds** 7.4.1 Negotiate amount of community contribution to the VCF 7.4.2 Negotiate and sign ToP with the communities 7.4.3 Capitalise VCF(s) after making project contribution 7.4.4 Establish monitoring procedures 7.4.5 Conduct periodic monitoring			

INSTITUTIONAL ARRANGEMENTS

EXECUTION AND IMPLEMENTATION ARRANGEMENTS

Execution and implementation arrangements for the project are built on the model established during the PRIF phase. This model has been time tested, and, importantly, was endorsed by the Independent Evaluation of the PRIF. However, in light of the added complexity and size of MACP, the arrangements have been adapted, following review, to enhance their efficacy. In determining implementation and execution modalities, the following factors have been taken into account [1] technical capacity, relevant field experience, cost effectiveness and past performance; [2] the existence and availability of managerial personnel, and organisational support capacity to carry out the functions associated with execution and implementation of the project; and [3] the willingness and commitment of the co-operating institutions to undertake the responsibilities. Implementation arrangements will be reviewed, and if necessary, adjusted, at the time of the scheduled mid-term Independent Evaluation of the project. Execution and implementing modalities would be governed by UNDP Pakistan's Project Cycle Operations Manual (PCOM), the Project Cooperation Agreement (PCA) between UNDP and IUCN, plus ancillary rules and procedures established for the UN system. Project management personnel will be trained by UNDP programme and operations personnel at the Country Office in UNDP Project Execution/ Implementation procedures.

Execution Arrangements: The MACP will be executed by the Government of Pakistan, with overall responsibilities for execution vested with MELGRD. The Ministry will collaborate closely with the Northern Areas Administration and the North West Frontier Province's Provincial Government in executing the project. In line with UNDP policies and procedures, the executing agency will be entrusted with co-ordination of the project, assuming ultimate responsibility for the achievement of project objectives. The executing agency will sign a Memorandum of Understanding with the implementing agent clearly specifying its functions, responsibilities, deliverables, measures for ensuring financial accountability and reporting requirements.

The Executing Agency will, in consultation with UNDP, appoint a National Project Director as the focal point responsible for liasing with UNDP and the implementing agent, overall oversight of the project, ensuring overall accountability to UNDP through the Project Steering Committee, co-ordination with other government line agencies, and reporting. A Biodiversity Specialist will be provided initially for a period of 3 years of the project to assist the MELGRD. If found beneficial to the project based on an assessment by the independent evaluation mission, an extension for the full 7-year period will be considered by PSC.

Project Steering Committee (PSC): A Project Steering Committee will be established to provide policy guidance to the project and monitor progress and performance. The PSC will facilitate inter-agency co-ordination of the project at the national level, provide avenues for maintaining inter-provincial linkages, and ensure that the lessons learned from implementation of the project are integrated into Pakistan's overall conservation programme. The Committee will be chaired by the Secretary, MELGRD. Members will include the Resident Representative, UNDP, DG (Environment), the National Project Director, the Project Manager/CTA, Chief (Environment) Planning and Development Division, the Inspector General of Forests, the respective chairmen of the Project Management Committees in NWFP and NAs, the Joint Secretary of the Economic Affairs Division, the Joint Secretary, KANA Ministry, Secretary of NWFP Forestry, Fisheries and Wildlife Department, Secretary of NAs Forests, Parks and Wildlife Department, General Manager, AKRSP, Country Representative, IUCN-Pakistan, and the Chief Executive Officer, WWF-Pakistan. MELGRD, through the NPD will serve as the Secretariat to the Committee and will take

responsibility for organising meetings, recording minutes and ensuring that decisions are implemented.

The frequency of PSC meetings will be decided by the Chair, but initially the Committee will be convened twice a year. The first PSC meeting each year will follow the preparation of a detailed Annual Project Report (APR) on implementation. The second PSC meeting will be convened during the middle of each year. PSC meetings will normally be convened in Islamabad.

The PSC will be responsible for the following activities:

- project review, monitoring and co-ordination;
- approval of annual work plan (including training and consultancies) and annual budget, including all components;
- co-ordination of government actions and provision of policy guidance;
- facilitating policy and legislative reform to support establishment of the Conservancies and to enable community management of wild resources for sustainable use;
- facilitating gazetting of the Conservancies as legally incorporated entities;
- monitoring efforts to establish financial mechanism;
- ensuring adherence to UNDP guidelines for the administration of project funds; and
- ensuring linkages with the NCS and BAP.

Implementing Agency: The project will be jointly implemented by IUCN-P, the lead technical agency designated as the implementing agent and the Department of Forestry, Wildlife and Fisheries in NWFP, the newly restructured NAs Forests, Parks and Wildlife Department in collaboration with partner NGOs, including AKRSP, WWF-P and the Himalayan Wildlife Project. The implementing agent will function under the relevant rules and procedures established by UNDP duly approved by GoP and approved annual work programme and budget and be responsible for procuring and delivering project inputs, and ensuring their conversion to project outputs, in view of their nature of skills required to implement the project, with expertise needed in participatory learning and planning methodologies, institutional strengthening, biodiversity management, technical disciplines related to sustainable use, and financial mechanisms for conservation. As the lead technical agency, IUCN will be tasked with providing technical assistance to their partners in implementation, i.e. the Department of Forestry, Wildlife and Fisheries in NWFP and the Department of Forests, Parks and Wildlife in NAs. MELGRD, the executing agency would monitor, co-ordinate and facilitate project implementation.

As the designated implementing agent, IUCN will be accountable to the Project Steering Committee and UNDP for the quality, timeliness and effectiveness of the services it provides, activities it implements, and the project funds it receives. The implementing agent will have the following additional functions:

- operational management of the project;
- accounting and funds management, according to the approved budget and annual work plan;
- recruiting and fielding personnel for work in the project sites (under intimation to the executing agency and UNDP);
- developing MOUs with partner donor agencies providing parallel financing for implementation of the alternative strategy and monitoring delivery of agency support (these MoUs will be shared with PSC);
- entering into sub-contracts with agencies with specific technical expertise required for the implementation of selected project activities;
- micro-planning, scheduling and organisation of activities and tasks;

- preparing quarterly and annual operational work plans for submission to the Executing Agency and UNDP;
- developing Terms of Partnership compacts with local communities setting out the respective obligations of communities and the project for activity implementation;
- managing equipment; and
- monitoring and reporting to UNDP and the Government on the progress of implementation.

The implementing agent will appoint a Project Manager/CTA in consultation with UNDP and the executing agency, with technical expertise and skills relevant to the Project. The Project Manager/CTA will be responsible for organisation and management of project activities to produce outputs, provision of technical assistance for project implementation, co-ordination and supervision of project personnel, and reporting. Regional Project Managers based in Northern Areas and NWFP would assist the Project Manager/CTA in these tasks.

The Project Manager/CTA will be based at IUCN Islamabad to maintain linkages with the national executing agency, UNDP, and partner organisations. Regional Project Offices will be established in Gilgit and Chitral (for Northern Areas and North West Frontier Province respectively), serving as an operational base for project activities in each region. Technical staff would be deputed to the Regional Project Offices. In order to co-ordinate social mobilisation activities at the site level, six Field Management Units (FMUs) will be established in the Conservancies. For operational and logistical reasons, one FMU will be established in Gojal Conservancy, two in Nanga Parbat Conservancy, one in Tirichmir Conservancy, and two in Qashqar Conservancy. The units will be phased out once the institutional capacities of DCCs and VCCs to manage conservation activities have been established. In order to facilitate joint programming, and capture cost efficiencies, the project will, where feasible, make use of existing institutional infrastructure maintained by AKRSP.

Sub-contracts: The implementing agent, under the authority of MELGRD, and in consultation with UNDP, would sub-contract designated activities to technical agencies as required for the delivery of project outputs. Given its technical capacity in the arena of conservation education and awareness raising, the World Wide Fund for Nature (WWF)-Pakistan would be contracted under the terms of Memorandum of Understanding signed with the implementing agent, to deliver activities and tasks listed under activity 2. In addition, the project would engage expertise from other relevant Government and Non-Government Organizations with proven technical capacity and an established track record to assist project staff, government and local communities to perform wildlife surveys, undertake impact monitoring, raise awareness and undertake conservation education activities, develop enabling policies amd regulations and spearhead the sustainable use demonstrations. Terms of Reference for the subcontracts are listed in annex XI. Sub-contractors would be responsible to the implementing agent for the timely delivery and quality of inputs, and would be selected on the basis of cost effectiveness, proven technical capacity, field experience in the mountain areas, and past performance. Contractual responsibilities would be governed under the terms of a MoU signed with the implementing agent.

Project Management Committees (PMCs): will be formed in both North West Frontier Province and the Northern Areas to supervise project implementation, ensure that project targets are met, and monitor on-the-ground impacts.

In NAs, membership will include the Chief Secretary (Chair), Secretary, Planning and Development, the Secretary of the Food, Agriculture, Forestry and Fisheries Department, the Chief Conservator of Forest, Parks and Wildlife, VCC representatives (appointed by DCC's), the Regional Programme Manager, AKRSP, the Director of the Northern Areas Conservation Strategy, the CTA of the

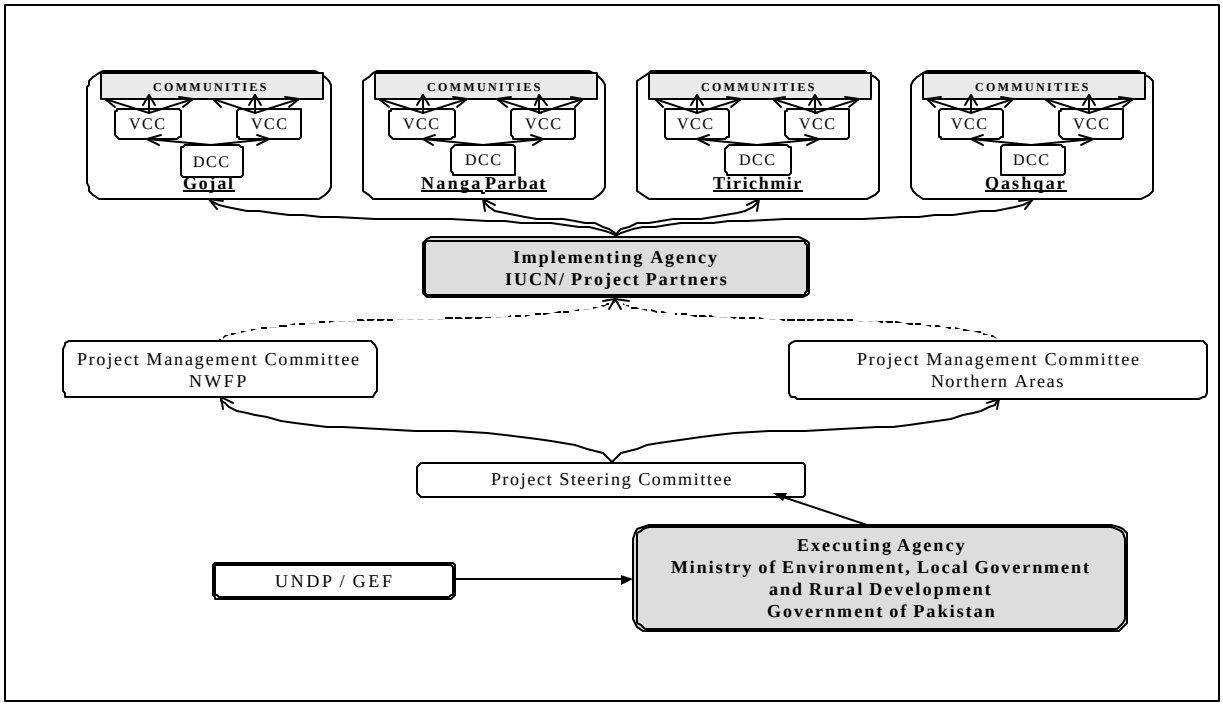
Northern Areas Development Project, a local representative each from IUCN, the Himalayan Wildlife Project, and WWF, and the Regional Project Manager, MACP. The NAs Administration may increase the membership if required.

In NWFP, the Regional PMC will be comprised of the Additional Chief Secretary-Planning, Environment and Development (Chair), Commissioner Malakand Civil Division, the Secretary of the Forestry, Wildlife and Fisheries Department, the Conservator of Wildlife, VCC representatives (appointed by DCCs), the Regional Programme Manager, AKRSP, the Project Director of the EU Dir Kohistan Upland Rehabilitation and Development Project, the Director of the Sarhad Provincial Conservation Strategy, local representatives of IUCN and WWF, the head of the implementing Unit for PAMP and the Regional Project Manager for MACP. The Government of NWFP may increase the membership if required.

The NPD, the Project Manager/CTA and a UNDP representative will also be members of both PMC's. The PMC's will meet at least twice a year at times and locations to be decided by the Chair. The Committees will be responsible for:

- monitoring the results of efforts to establish and strengthen VCCs and DCCs in the project sites;
- co-ordinating institutional arrangements for management of the Conservancies;
- co-ordinating policy and legislative development to give substance to the Conservancies, and gazetting them as legally incorporated entities;
- overseeing awareness and education activities;
- ensuring that partner agency programmes are fully integrated into the project framework;
- monitoring the results of the demonstration projects into sustainable use and supporting their integration into wider development programmes within the Conservancies;
- monitoring technical assistance provided by the contracting agencies, including all institutional strengthening services provided to local communities and government bodies;
- monitoring all training activities;
- ensuring linkages to regional conservation strategies; and
- reviewing annual workplans.

Diagrammatic Overview of Implementation Arrangements



Financial Management Arrangements: The implementing agent will open a dedicated account as a repository for project monies. Funds would be appropriated on a quarterly basis, based on the disbursement schedule contained in the budget and upon receipt of a financial report from the implementing agent. The implementing agent will report on and justify expenditures on a quarterly basis to the MELGRD and UNDP. Further disbursements would be made subject to receipt of the quarterly financial statement. The Project Manager/CTA would be responsible for monitoring the commitment of funds under individual budget lines until the relevant disbursements have been made, and the amounts recorded in the project account. UNDP-Pakistan's Finance Section will establish and maintain accounts for the project budget. The Finance Section will make payments following a joint review of the quarterly financial reports by the Executing Agency and UNDP. The quarterly disbursements made by UNDP to the implementing agency would be intimated to the executing agency.

Financial Auditing: UNDP will arrange for financial auditing of the project on an annual basis in line with standard procedures. Financial Audits will provide an assessment of the rate of delivery, financial accounting and monitoring systems, equipment use, and financial management structure for the project, including the adequacy of internal control and record-keeping mechanisms. Copies of the annual audit reports will be made available to the executing agency.

Procurement: All local and international procurement under the project would be carried out as per the "Project Cooperation Agreement" between UNDP and IUCN. In cases where procurement of non-expendable equipment (costing more than US$ 400) is to be undertaken by UNDP, rules and procedures established in the PCOM will be followed. The Project Manager/CTA will establish and maintain a property ledger for equipment purchased with project funds.

PUBLIC PARTICIPATION

Successful implementation of the MACP hinges on the full and active participation of stakeholders in project implementation, particularly of local communities in the Conservancies. The project aims at generating a strong sense of commitment to biodiversity conservation amongst local communities, giving them ownership over the management of wild resources. Such commitment will be integral to the achievement of stable conservation in the long-term. Community participation has been a core feature of the PRIF phase. The participatory process will be continued under the MACP, albeit with some additional elements.

The selection of project sites under the PRIF was based on a lengthy process of negotiation and consultation with target communities as well as other stakeholders, such as government line departments and local NGOs. Participation is a process, not an end in itself, and needs to be carefully finessed and nurtured, starting by building the basis of trust with local communities. The initial focus of community entry efforts under the PRIF was on building and cementing social relationships with local actors, so establishing the foundations for a durable partnership. The PRIF drew widely on PRA techniques as a tool for participatory learning about local resource management problems. This built on the initial trust building exercises. At first, PRAs were conducted through a wider village forum. When it became clear, however, that women were not empowered socially to participate in these forums, exercises for men and women were conducted separately. In addition, representatives from other stakeholder groups, such as the government and AKRSP, were active participants in the process.

The Conservation Plans developed under the PRIF have assisted the communities to establish a framework for project activities, to identify opportunities for and constraints to conservation, and to

formulate possible solutions. Communities have been encouraged to identify what they can do for themselves, rather than what outside actors can do for them. This builds on the approach to social mobilisation facilitated by AKRSP in the region, and aims at forestalling dependency. The participatory planning process has provided communities with a strong sense of ownership over their Plans. Quite clearly, conservation cannot take place in a vacuum— oblivious to communities' development needs. The Plans, for the first time, provide villagers with a roadmap for linking conservation and sustainable development at the community level, taking on board social, economic and ecological factors. Initiatives to operationalise management measures have been taken. Communities have imposed hunting bans on wildlife and established means of dealing with violators. In most cases, this has meant the imposition of fines, but more innovative examples of applying social pressure on violators also exist[13]. Communities have also started work on developing rotational grazing systems as well as better livestock management systems to curb pressure on pastures used by wildlife.

Natural resource management is not an alien concept to communities. Indigenous systems have been developed based on traditional practices and beliefs nurtured over hundreds of years. Several endogenous and exogenous factors are, however, gradually destroying the ecological balance. The PRIF has been instrumental in alerting villagers to these factors, and to the adverse systems feedback that can be expected if they are left unchecked[14]. A major innovative feature of the PRIF phase that will be carried through and strengthened under the MACP, was the establishment of District Conservation Committees. Members include representatives from government and "Village Conservation Committees". The DCCs provide a forum for villagers and government to discuss conservation problems, and effect co-management strategies. They have provided an avenue for empowering communities by creating new linkages with government. Indeed, the process of dialogue in itself is valued by villagers, previously accustomed to being isolated from systems of governance.

Future Strategies: Social sustainability will be critical if the MACP is to achieve economic, financial, institutional and ecological sustainability. A number of features are incorporated into the design of the proposed project to improve on the process piloted under the PRIF:

- Youth Organisations and other existing local institutions will be more actively engaged in mobilising communities for conservation.
- Women's needs will be better outlined in VCPs, which will highlight their important role in wild resource management, particularly in terms of engendering sustainable livelihood options. Networking strategies suitable to local women's needs will be developed to enable women to discuss social, ecological and economic problems. Women's conservation committees will be promoted where possible and conferences organised to enable committee members to share their experiences. Where social and cultural practices do not allow for the formation of such committees, efforts will be made to ensure that the role and input of women is strengthened through other appropriate institutional mechanisms.
- More stress will be placed on past traditions of self reliance. This will serve as a good entry point into villages.
- Social conflicts are a part of every society and should not be ignored in any community mobilisation effort. Where conflicts arise, solutions are also required and this in itself can strengthen intra and inter-community links. Training will be provided to project staff and

[13] In Arkari village (in the Tirichmir Conservancy), for example, management rules require all villagers to boycott the marriage and funeral ceremonies of people accused of hunting until they have paid a fine to the Village Conservation Committee.

[14] An important point to note is that the process of community mobilisation and planning initiated under the PRIF has allowed communities to view their own needs and those of conservation as an integrated whole. Through this process, the communities are also becoming active partners in creating backward and forward linkages with other NGOs and government.

community leaders in conflict resolution techniques. Conflict sharing/resolving workshops involving all stakeholders will be organised as a routine initiative to closely monitor this issue.

- More attention will be paid to the needs and livelihood strategies of minority groups in the project region to ensure their full participation in planning and activity implementation.
- More attention will be paid to building links between the government and community institutions. This will be engendered through:
  - promoting more frequent dialogues between communities, the project team and government;
  - maintaining a communications feedback loop to track stakeholder views and responses;
  - conducting information sharing workshops; and
  - building the capacity of government workers to undertake participatory conservation initiatives through provision of training

The MACP proposal has been developed following extensive consultations with stakeholders, including local community leaders, government personnel at all levels, donor agencies and NGOs. An iterative process has been followed, with increasing stakeholder participation engendered at each stage. The proposal builds on the outcomes of the participatory planning exercise initiated in villages under the PRIF phase, and fully reflects the needs and priorities of local villagers. The views of major stakeholders were extensively canvassed in conducting the independent mid-term evaluation of the project. The recommendations of the Review Mission as they relate to the scope of any follow on project have been taken on board in formulating the proposal. Additional meetings were scheduled with stakeholders during the process of project formulation. Finally, key stakeholders were invited to attend a workshop in Gilgit (in August, 1997) to discuss the shape of the MACP. Their views have guided the design and preparation of this document.

SPECIAL CONSIDERATIONS

REASONS FOR ASSISTANCE FROM UNDP

The MACP is fully integrated into UNDP's Country Co-operation Framework (CCF) for Pakistan, and UNDP is providing co-funding from TRAC funds to support the initiative. The overall focus of UNDP's efforts in the country is on poverty alleviation. The MACP, by arresting the processes of ecological degradation, will serve to stem an important causal factor of impoverishment in the mountain areas. There is an especially strong inter-connection between the natural environment and local social and economic systems in the mountain areas. Loss of biodiversity would have the adverse effect of foreclosing future uses of wild resources, including for both subsistence and market oriented purposes. Such a loss is irreversible, and is incompatible with the objectives of sustainable human development. The project has catalysed a great range of support from other programmes, including AKRSP, the EU, IFAD, and the Government of Pakistan to address these problems. By doing so, it will directly enhance village welfare and provide for the ecological sustainability of development assistance endeavours. Such resource mobilisation directly serves UNDP's mandate, to secure partnerships with other development agencies for the purposes of achieving sustainable human development objectives. UNDP interventions in Pakistan fall into three thematic areas, namely, improving governance, addressing gender inequity and protecting the environment and providing for sustainable livelihoods. The MACP will contribute towards the achievement of these programmatic objectives.

Governance: The project will support capacity building at various levels, including at the local and provincial government levels. Capacity to protect wildlife and habitats will be established at the local-level, with institutional mechanisms developed to conserve wild resources and provide for their sustainable use. At a provincial government level, support will be provided to retailor policies and

legislation and strengthen Wildlife and Forest Departments to support community-based conservation endeavours. The devolution of responsibilities for wildlife conservation to the local-level offers a number of benefits, including improving the cost-effectiveness and efficacy of conservation efforts, and strengthening linkages between government and civil society. The process to be adopted may be applied in other areas of Pakistan, and the MACP will support such application by carefully documenting and disseminating the lessons learned under the project.

Gender Issues: The MACP incorporates a strong gender perspective in order to address the needs and priorities of women, who are important conservation stakeholders in the mountain areas. This element will specifically build the capacity of women through training and awareness, enhancing opportunities for their full inclusion in conservation endeavours. The approach has been designed taking careful account of local cultural sensitivities with regard to gender relations.

Sustainable Livelihoods: The MACP directly addresses the objectives of this thematic area by aiming to protect a globally significant endowment of biological diversity. The project is significant in that it focuses on conservation and sustainable use of biodiversity in ecological landscapes that also serve as centres of human populations. It aims at increasing the relative moral and material values attached to wild resources by local communities, firmly placing conservation objectives at the centre of the community development paradigm. In doing so, it directly provides for the welfare of future generations at the local and global levels, protecting core conservation values.

INNOVATIVE FEATURES

The approach being taken is highly innovative, remoulding traditional approaches to conservation to better suit the specific conditions of the social, economic, ecological, and institutional landscape in the mountain areas. The aim is to place communities at the driving seat of conservation efforts, but with checks and balances instituted to make them accountable for the quality of their resource stewardship. The success of the community-based approach has been tested in other countries, most notably in Africa, and is witnessed by the emergent results of the PRIF phase. The project builds upwards from the needs and perceptions of communities by engendering an active stakeholder participation process. It recognises the impracticality of top down management administration and law enforcement in a situation where communities are hostile to conservation measures, and aims instead at creating an environment in which communities are fully supportive of conservation efforts. The focus on equity aims at ensuring that those stakeholders that bear the costs of conservation actions at the local-level are also the principle beneficiaries and custodians of conservation and sustainable use management activities.

Recognising that the success of the strategy hinges on the establishment of stable local institutions, a principle focus of the project is on building local-level capacity within village institutions for conservation. Rather than create a dependency on outside actors and external funding sources, the objective is to empower communities to manage their own wild resources. A conditionality for the participation of communities in the project is that they must be willing to dedicate their own human and financial resources towards implementation of the strategy. The PRIF phase has shown that communities are willing to dedicate such resources if convinced that conservation is in their self interests. The accordance to communities of usufruct rights over wild resources is an integral part of the project concept—and is critical if communities are to be motivated to support conservation. The Government of Pakistan places a high priority on the project and has agreed to take necessary policy and regulatory measures, in consultation with local communities, to decentralise controls and ensure effective implementation of the strategy.

SUSTAINABILITY

Project design makes strong provision for ensuring ecological, social, economic and financial sustainability:

Ecological sustainability will be fostered through engendering the sustainable use of wild resources, as determined by biological, economic and social factors. By improving the comparative value of wildlife management relative to ecologically destructive resource-use practices, the project will provide a utilitarian incentive for effective long-term conservation management. The project will firmly imbed conservation objectives and values into the foundations of the community development process— so ensuring that the development process itself is compatible with conservation objectives.

Social sustainability will be secured by ensuring the full and active participation of local communities in activity design and implementation. Wide-ranging consultations have been undertaken with community members in the project areas and the project design fully reflects their perceptions and needs. Training in conflict resolution methods will be provided to project staff and to community members, with mechanisms established for the arbitration and resolution of disputes.

Economic sustainability will be achieved by giving wild resources focused value as an incentive for their sustainable use and conservation. The objective is to widen the livelihood options of villagers by addressing the barriers to sustainable productive uses of wild resources, and to maintain subsistence values. The strategy is to leverage co-financing from partner agencies to fund activities that address structural socio-economic causes of biodiversity loss.

Financial sustainability is provided for through the establishment of a Conservancy Trust Fund, to be capitalised by government, UNDP and other sources, with a modest investment of GEF moneys. The trust will cover a share of the recurrent costs of community-based conservation, including the salaries of village wildlife guides, and expenses associated with running VCCs and DCCs.

COST-EFFECTIVENESS

The MACP is highly cost-effective relative to traditional conservation models. Local communities will shoulder many of the responsibilities for planning and management over the longer-term, dedicating their own savings and micro-credit funds towards applying sustainable use methods. Ownership, in turn, will improve the operating environment for conservation, reducing the costs of policing activities and improving the chances of success. In the longer-term, the receipts from sustainable use activities may also be drawn upon to fund field conservation activities. Co-operative partnerships forged with partner agencies will serve to increase the cost-effectiveness of the project by avoiding duplication of effort and targeting interventions towards conservation compatible development objectives.

RISKS

The assumptions underlying project design are detailed in the logical framework matrix. None of the risks are considered to be of sufficient magnitude to jeopardise project success and do not outweigh the potential benefits of the project. It should be noted that rural development programmes in the project areas have greatly expanded livelihood options for local communities over the past two decades. This has greatly improved the social and economic environment for biodiversity conservation- increasing the likelihood of project success. It should further be noted that the risks of project implementation have been greatly lessened as a consequence of implementing the PRIF. This

laid the groundwork for the project, establishing community receptivity to conservation and testing innovative approaches to social organisation, communications, and participatory planning. The PRIF has also sensitised Government to the objectives and needs of participatory conservation, catalysing support for community-based conservation.

a. Description of Risk: Reluctance on the part of government decision makers at the national and provincial levels to follow through on policies to decentralise conservation management responsibilities. Estimated Probability: Low. Estimate based on close consultations with government at various levels during the project formulation phase and the priority accorded to community-based conservation under current policies (in part strengthened during the PRIF). Possible Corrective Measures: Continue close dialogue with policy makers during implementation, and provide technical assistance to further develop an enabling policy and regulatory framework for community-based conservation.

b. Description of Risk: The spread of the project across the mountain areas of NWFP and the NAs, covering several districts, may cause co-ordination difficulties, delay implementation, and hinder a landscape approach to biodiversity conservation. Estimated Probability: Low. This is based on the experience of the PRIF phase, which established District Conservation Committees to co-ordinate activities at the local-level. The Project Management Committees will provide a regular forum for decision makers from the Northern Areas and North West Frontier Province to consult on project related matters. Possible Corrective Measures: Schedule regular meetings of the PMCs and maintain regular communications between executing and implementing agencies, including all project partners.

c. Description of Risk: Intra-community conflicts may prevent application of the cluster-level management concept, with communities failing to agree on joint management objectives. Estimated Probability: Medium. The project will work in areas where social mobilisation efforts have already been undertaken. It supports the cluster-level initiatives of other agencies, including AKRSP, strengthening already established linkages between communities. The willingness of communities to effect joint management will be a pre-condition of their inclusion within Conservancy areas. Consultations have already been undertaken with communities under the PRIF phase to determine their receptivity to such arrangements. Possible Corrective Measures: Train project staff and village leaders in conflict resolution techniques and be vigilant to social processes and responses.

d. Description of Risk: Project activities will be insufficient to catalyse necessary behavioural change amongst local communities to protect biodiversity. Estimated Probability: Low- Medium, depending on the area. The project concept is based on the experiences of the PRIF phase which has firmly established community interest in conservation and sustainable use activities (as demonstrated by the release of Snow Leopards, cessation of hunting, contributions to the VCFs and other indicators). Unlike many earlier conservation interventions in the region, the conservation strategy promotes alternative sustainable livelihoods as an incentive for local communities to forego ecologically deleterious resource use practices leading to habitat degradation and biodiversity loss. Several reasons can be advanced to explain community receptivity to conservation and sustainable use activities.

1. Potential returns from sustainable productive uses such as controlled trophy hunting are substantial relative to existing levels of rural household income (given a mean per capita income of US$ 100, returns of US$ 5,000 for an Ibex trophy and US$ 25,000- 35,000 for a Markhor trophy are highly attractive). Similarly, local communities currently capture only a small proportion of the benefit from the potentially lucrative morel mushroom trade. For instance, collectors currently receive US$ 10- 25 per kilogram of morel mushrooms; the same mushrooms retail for US$ 80-160 per kilogram,

with much of the benefit accruing to middle men. By providing training in negotiation techniques to community collectors vis a vis middle men, the strategy aims at increasing local benefit capture, again as a conservation incentive. The additional net benefits from cumin and game bird management and ecotourism are likely to be relatively lower, but still economically attractive.

2. A second key incentive for community participation in conservation is the offer of usufruct rights allocation— which will give them a greater degree of control over the use and management of wild resources. This will enable them to regulate access to high pastures, forests and wildlife by outsiders, capture benefit from enabling controlled access, and capture additional value from productive uses of flora and fauna. Sociological monitoring undertaken during the PRIF phase and discussions with local informants have indicated that communities accord high value to the allocation of usufruct rights, which is perceived as a strong incentive for conservation management.

3. Communities are also guided by other factors in opting for conservation over alternative development options. Interest in social forestry programmes has increased in those locales where an increase in formal employment, out migration and other factors has reduced the amount of labour available in the community to collect firewood from forests. The development of village forest plantations thus reduces the time budget required for fuelwood collection, indirectly catalysing forest conservation. Similarly, time budget factors are behind the trend to reduce livestock numbers evident in many areas, particularly where livestock productivity can be increased and target yields met from smaller herds. In these instances, targeted investments in social forestry and animal husbandry can serve to accelerate positive trends, building on local needs and circumstances. Recognising this, the project has created linkages with AKRSP and other rural development programs to supply technical assistance and inputs to engender more sustainable resource uses. Investments would be driven by (locally perceived) needs, as articulated in Valley Conservation Plans, rather than pre-determined from the top.

4. Conservation education activities will add an additional dimension to the conservation equation. Many communities have come to realise that injudicious natural resource use can have adverse implications for the livelihoods and survival. Some progressive communities, most notably Khyber village in the Gojal Conservancy had placed bans on the cutting of green wood and on uncontrolled grazing, well before inception of the PRIF. This understanding provides an important springboard for further development of conservation initiatives. [In areas where basic awareness is lacking, community exchanges and local study tours may play an important role in driving progressive action]. The involvement of religious leaders in awareness programs will add a moral dimension to conservation work, drawing on the conservation focused teachings of Islam to enhance management.

Site selection criteria have taken on board social receptivity to the conservation concept. The provision of support to communities under the project will be contingent on the negotiation and signature of a Terms of Partnership agreement, which will clearly specify mutual obligations for conservation planning, implementation and monitoring. Possible Corrective Measures: Monitor the distribution of benefits from sustainable use within the community and modify ToP compacts based on social responses. Undertake sociological monitoring to better understand the motivations and social dynamics inherent in conservation management in different communities. Incentives must not be a pre-condition for community participation in conservation efforts and villagers must be willing to dedicate their own human and financial resources to achieving conservation objectives.

e. Description of Risk: Partner agencies may fail to provide supporting investments for execution of the alternative strategy, leaving implementation gaps. Estimated Probability: Low. Extensive consultations have been undertaken with partner agencies and a strong commitment to the

project is in evidence. Partner agencies will be accorded a voice in the project by being represented on Project Management Committees and on the Project Steering Committee. A Memorandum of Understanding will be signed between the implementing agent and partner agencies, clearly stipulating mutual obligations. Possible Corrective Measures: Continue dialogue and integrate field activities during the implementation stage.

f. Description of Risk: Agricultural and livestock improvement initiatives will lead to an increase in stocking levels, so increasing competition with wildlife. Estimated Probability: Medium. Livestock numbers have been declining over the past two decades, owing mainly to a labour shortage (as young males leave the region to seek productive employment in urban areas). This trend is expected to continue. Improved livestock health and husbandry practices are also improving survivorship rates, allowing communities to meet target incomes by managing smaller herds. Support for livestock husbandry will continue as part of the process of implementing the alternative strategy, with funding provided by partner agencies. An improvement in the relative values of wildlife through the sustainable use initiative is expected to provide a strong incentive for better rangeland management. Possible Corrective Measures: Address the issue of overstocking through the awareness campaign, alerting communities to the adverse environmental effects. Develop an agreement with VCCs as part of the Terms of Partnership to manage livestock numbers.

g. Description of Risk: Agricultural and livestock improvement initiatives will lead to an increase in stocking levels, so increasing competition with wildlife. Estimated Probability: Medium. Livestock numbers have been declining over the past two decades, owing mainly to a labour shortage (as young males leave the region to seek productive employment in urban areas). This trend is expected to continue. Improved livestock health and husbandry practices are also improving survivorship rates, allowing communities to meet target incomes by managing smaller herds. Support for livestock husbandry will continue as part of the process of implementing the alternative strategy, with funding provided by partner agencies. An improvement in the relative values of wildlife through the sustainable use initiative is expected to provide a strong incentive for better rangeland management. Possible Corrective Measures: Address the issue of overstocking through the awareness campaign, alerting communities to the adverse environmental effects. Develop an agreement with VCCs as part of the Terms of Partnership to manage livestock numbers.

h. Description of Risk: Efforts to involve women in project activities may be resisted by communities, resulting in gender bias and an insufficient focus being given to the needs and priorities of women (with contra-conservation implications). Estimated Probability: Medium. The project will provide gender training to field staff, so improving their sensitivity to gender issues. The ongoing interactive feedback and communications process that will be invoked will provide project managers with avenues to stem gender conflict at an early stage. The awareness component will sensitise villagers to the importance of involving women in conservation efforts. Possible Corrective Measures: Focus activities initially in those areas where gender relations support women's involvement in planning and management and where actively functioning WOs exist. The success of such efforts may in turn serve as a catalyst for work in other areas.

i. Description of Risk: The absorptive capacity of government agencies and NGOs to implement the project is inadequate. Estimated Probability: Low. Project implementation would be facilitated through a government-NGO partnership. Training opportunities to enhance the capacity of project staff have been incorporated into project design. The level of community organisation in most of the project areas is high. When compared with other development initiatives in the area, the MACP represents a relatively modest investment in the area. Possible Corrective Measures: Apply demand rather than supply based approach to training; regularly review training needs; undertake

joint programming with a view to maximising complementarity between the MACP and associated initiatives.

PRIOR OBLIGATIONS AND PREREQUISITES

The project document will be co-signed by UNDP, EAD and MELGRD, and GEF/ UNDP assistance to the project will be provided, subject to UNDP being satisfied that the prerequisites listed below have been fulfilled or are likely to be fulfilled. When anticipated fulfilment of one or more prerequisites fails to materialise, UNDP may, at its discretion, either suspend or terminate its assistance.

(a) MELGRD will expedite general approvals, including completion of the PC1 document, to ensure timely signature of the project document.
(b) An independent review of funds management and allocation procedures will be undertaken, and recommendations acted upon, prior to any release of UNDP/GEF monies into the proposed Trust Fund. The review will establish whether policy and legal mechanisms have been established to support and give substance to Conservancy management before recommending that funds be released.
(c) Additional financing of US$ 2 million will have been secured, so as to capitalise the Trust Fund at US$ 5 million, prior to draw down of UNDP and GEF monies from the trust.
(d) The GOP, NAs administration and NWFP government formally agree to develop enabling policies and legislation to support and give legal substance to Conservancy management.
(e) The Government shall formally agree to manage State forests included within the Conservancies to ensure conservation and sustainable use of biodiversity.
(f) Items imported on the project account will be exempted from customs duties and taxes, surcharges and other levies or else the Government of Pakistan will take responsibility for clearance and payment of all such charges.
(g) The government formally provides cost sharing of US$ 0.75 million through UNDP as its share of expenditures.

PROJECT REVIEW, REPORTING AND EVALUATION

The project makes strong provision for impact monitoring, and indicators have been developed during project formulation to assess performance. The Implementing Agency will be required to report to Project Management Committees and to the Project Steering Committee at least twice annually . Prior to the first meeting of the PSC each year, an Annual Project Report (APR) will be prepared, clearly documenting progress in implementation, plus stating reasons for delays. In addition, Progress Reports will be prepared by project staff and submitted to Government and UNDP on a quarterly basis, in line with PCOM procedures. Finally, a Terminal Report will be prepared upon the close of the project to document lessons and highlight successes and failures. Two external evaluations are scheduled, one at the start of year four and the other at the close of the project. These will provide an exhaustive audit of project performance, with the mid term evaluation making recommendations as necessary for rephasing activities. Additional reviews may be scheduled as necessary. A schedule of PSC meetings, and APR preparation dates is given in Annex IV. UNDP-Pakistan will be required to submit a report on project performance to the GEF at the annual Project Implementation Review (PIR) of the GEF portfolio. The project will also extensively document the lessons learned from implementation for dissemination within Pakistan and overseas. The aim is to support the integration of the project approach into existing and proposed conservation initiatives.

LEGAL CONTEXT

The legal context for UNDP-assisted programmes and projects in Pakistan is established by two major agreements: 1) the Convention on the Privileges and Immunities of the United Nations, given affect by Act XX of 1948 of the Pakistan Constituent Assembly (Legislative) and assented to on 16 June, 1948; and 2) the agreement between the Government of the Islamic Republic of Pakistan and the United Nations Development Programme concerning assistance under the Special Fund Sector of the United Nations Development Programme, signed by the parties on 25th February 1960. This Project Document shall be the instrument (therein referred to as a Plan of Operation) envisaged in article 1, paragraph 2, of the agreement between the Government of the Islamic Republic of Pakistan and the United Nations Development Programme concerning assistance under the Special Fund Sector of the United Nations Development Programme.

UNDP-assisted programmes and projects for Pakistan are planned and executed in accordance with global UNDP Financial Rules and Regulations and the Project Cycle Operations Manual for Pakistan.
The following types of revisions may be made to this project document with the signature of the UNDP Resident Representative, provided he or she is assured that the other signatories of the project document have no objections to the proposed changes:

(a) Revisions in, or addition of, any of the annexes of the project document;
(b) 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 increases due to inflation; and
(c) Mandatory annual revisions which rephase the delivery of agreed project inputs or increased expert or other costs due to inflation or take into account agency expenditure flexibility.

ANNEX I: BUDGET

BL	Description	Agency	Agency	Total	Year1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
		GEF	UNDP	US$	US$	US$	US$	US$	US$	US$	US$
10.00	**Project Personnel**										
11.50	International Consultants										
11.51	Project Manager/CTA	197,818	-	197,818	64,000	65,920	67,898	-	-	-	-
11.99	**Sub Total: Int'l Consultants**	**197,818**	**-**	**197,818**	**64,000**	**65,920**	**67,898**	**-**	**-**	**-**	**-**
13.00	**Administrative Support Personnel**										
13.01	Accounts Officers	73,560	-	73,560	9,600	9,888	10,185	10,490	10,805	11,129	11,463
13.02	Executive Secretary	29,424	-	29,424	3,840	3,955	4,074	4,196	4,322	4,452	4,585
13.03	Secretary (NA/NWFP)	90,950	-	90,950	11,000	12,360	12,731	13,113	13,506	13,911	14,329
13.04	Drivers	71,218	-	71,218	10,080	10,382	10,694	11,014	11,345	11,685	6,018
13.99	**Sub Total: Admin. Support**	**265,152**	**-**	**265,152**	**34,520**	**36,585**	**37,684**	**38,813**	**39,978**	**41,177**	**36,395**
15.00	**Official Travel**										
15.01	Duty Travel	273,950	-	273,950	45,175	45,175	40,350	41,100	36,698	37,315	28,138
15.99	Sub Total: Duty Travel	**273,950**	**-**	**273,950**	**45,175**	**45,175**	**40,350**	**41,100**	**36,697**	**37,318**	**28,138**
16.00	**Mission Costs**										
16.01	Independent Evaluations	90,000	-	90,000	-	-	-	60,000	-	-	30,000
16.99	**Sub Total: Mission Costs**	**90,000**	**-**	**90,000**	**-**	**-**		**60,000**	**-**	**-**	**30,000**
17.00	**National Staff**										
17.01	Project Manager	80,869	-	80,869	-	-	4,560	18,240	18,787	19,351	19,931
17.02	Administrator	91,950	-	91,950	12,000	12,360	12,731	13,113	13,506	13,911	14,329
17.03	Reg. Project Managers	275,844	-	275,844	36,000	37,080	38,192	39,338	40,518	41,734	42,982
17.05	Biodiversity Specialist	141,329	-	141,329	24,000	24,720	25,461	26,225	27,012	13,911	-
17.06	Rural Sociologist	141,329	-	141,329	24,000	24,720	25,461	26,225	27,012	13,911	-
17.07	Social Organizers	249,271	-	249,271	32,000	48,000	49,440	50,923	33,941	34,967	-
17.08	Conservation Field Specialists	199,616	-	199,616	19,200	29,664	30,554	31,470	32,415	33,387	22,926
17.09	Planner (Conservancy Management) TA	26,000	-	26,000	3,000	3,000		10,000	5,000	5,000	
17.10	M&E Specialist	84,785	-	84,785	12,000	12,360	12,731	13,113	13,506	13,911	7,164
17.99	**Sub Total: National Staff**	**1,290,993**	**-**	**1,290,993**	**162,200**	**191,904**	**199,130**	**228,647**	**211,697**	**190,083**	**107,332**

BL	Description	Agency	Agency	Total	Year1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
		GEF	UNDP	US$	US$	US$	US$	US$	US$	US$	US$
20.00	**Sub Contracts**										
21.00	**Monitoring & Evaluation**										
21.01	Technical Assistance	15,000	-	15,000	5,000	-	-	10,000	-	-	-
21.02	Training (PME)	15,454	-	15,454	-	5,000	5,150	5,304	-	-	-
21.03	Biological Assessments	270,000	-	270,000	30,000	60,000	30,000	60,000	30,000	60,000	-
21.04	Lessons learned Documents	60,000	-	60,000	-	-	30,000	-	-	30,000	-
21.05	Project Information Systems	130,000	-	130,000	35,000	25,000	30,000	20,000	20,000	-	-
21.99	**Sub Total**	**490,454**	**-**	**490,454**	**70,000**	**90,000**	**95,150**	**95,304**	**50,000**	**90,000**	**-**
22.00	**Policy/Legal Support**										
22.01	Policy Reform	60,000	-	60,000	20,000	20,000	20,000	-	-	-	-
22.02	Legal Drafting	35,000	-	35,000	5,000	10,000	10,000	10,000	-	-	-
22.99	**Sub Total**	**95,000**	**-**	**95,000**	**25,000**	**30,000**	**30,000**	**10,000**	**-**	**-**	**-**
23.00	**Education & Awareness**										
23.01	Communication Strategy	80,000	-	80,000	30,000	10,000	10,000	10,000	10,000	10,000	-
23.02	Awareness Materials/Equipment	95,000	-	95,000	10,000	15,000	20,000	20,000	20,000	10,000	-
23.03	Schools in Conservation	85,000	-	85,000	-	25,000	20,000	20,000	20,000	-	-
23.04	Community Outreach	258,734	-	258,734	40,000	41,200	42,436	43,708	45,020	46,370	-
23.05	Media Outreach	40,000	-	40,000	-	10,000	10,000	10,000	10,000	-	-
23.06	Religious Leaders Outreach	25,000	-	25,000	5,000	10,000	10,000	-	-	-	-
23.07	Youth Conservation Activities	30,000	-	30,000	-	10,000	10,000	5,000	5,000	-	-
23.99	**Sub Total**	**613,734**	**-**	**613,734**	**85,000**	**121,200**	**122,436**	**108,708**	**110,020**	**66,370**	**-**
	Demonstrations: Sustainable Use										
24.10	**Trophies & Game Birds**										
24.11	Selection of Field Sites(Cons. Wkshps)	6,000	-	6,000	3,000	3,000	-	-	-	-	-
24.12	Biological/Socio-economic Assessment	115,000	-	115,000	15,000	34,000	34,000	8,000	8,000	8,000	8,000
24.13	Management Planning	15,000	-	15,000	5,000	5,000	5,000	-	-	-	-
24.14	Institutional Strengthening	53,000	-	53,000	6,000	16,000	21,000	-	5,000	5,000	-
24.15	Impact Monitoring	20,000	-	20,000	-	-	-	-	10,000	-	10,000
24.99	**Sub Total**	**209,000**	**-**	**209,000**	**29,000**	**58,000**	**60,000**	**8,000**	**23,000**	**13,000**	**18,000**
25.00	**Economic/Medicinal Plants**										
25.10	Selection of Field Sites (Cons. Wkshps)	14,000	-	14,000	-	4,000	10,000	-	-	-	-
25.11	Biological/Socio-economic Assessment	83,729	-	83,729	6,376	17,000	15,000	23,000	14,353	8,000	-
25.12	Management Planning	10,000	-	10,000	-	-	5,000	5,000	-	-	-

BL	Description	Agency	Agency	Total	Year1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
		GEF	UNDP	US$	US$	US$	US$	US$	US$	US$	US$
25.13	Institutional Strengthening	79,000	-	79,000	-	6,000	16,000	21,000	20,000	10,000	6,000
25.14	Impact Monitoring	20,000	-	20,000	-	-	-	-	-	10,000	10,000
25.99	**Sub Total**	**206,729**	**-**	**206,729**	**6,376**	**27,000**	**46,000**	**49,000**	**34,353**	**28,000**	**16,000**
26.10	**Ecotourism**										
26.11	Assessment of Ecotourism Potential	-	15,000	15,000	-	15,000	-	-	-	-	-
26.12	Assess Cost/Benefit for conservation	25,000	-	25,000	-	5,000	20,000	-	-	-	-
26.13	Develop Codes of Conduct	15,000	-	15,000	-	-	15,000	-	-	-	-
26.14	Develop Interpretation Materials	40,000	-	40,000	-	-	-	15,000	15,000	10,000	-
26.15	Promote Ecotourism in Target Sites	-	38,000	38,000	-	-	-	19,000	19,000	-	-
26.17	Training in Tourism Management	40,000	40,000	80,000	-	-	15,000	25,000	25,000	15,000	-
26.99	**Sub Total**	**120,000**	**93,000**	**213,000**	**-**	**20,000**	**50,000**	**59,000**	**59,000**	**25,000**	**-**
27.00	**Audit**	**15,324**	**-**	**15,324**	**2,000**	**2,060**	**2,122**	**2,185**	**2,251**	**2,318**	**2,388**
30.00	**Training & Workshops**										
30.01	Staff Orientation/Training	30,000	-	30,000	10,000	5,000	10,000	-	5,000	-	-
30.02	Gender Sensitization	30,000	-	30,000	10,000	10,000	-	10,000	-	-	-
30.03	Conflict Resolution Training (VCCs)	36,000	-	36,000	12,000	12,000	-	-	12,000	-	-
30.04	PLA Training (VCCs/ DCCs)	38,000	-	38,000	26,000	-	12,000	-	-	-	-
30.05	Adaptive Management Training	80,000	-	80,000	-	15,000	15,000	20,000	15,000	15,000	-
30.06	Study Tours	50,000	-	50,000	-	-	25,000	5,000	20,000	-	-
30.07	Overseas Training (Long Term)	70,000	-	70,000	-	-	-	-	35,000	35,000	-
30.08	Overseas Training (Short Term)	120,000	-	120,000	-	-	-	40,000	40,000	40,000	-
34.01	Valley Level Forums (dialogue)	60,000	-	60,000	10,000	16,000	14,000	11,000	9,000	-	-
34.02	Valley Level Forums (Management)	105,000	-	105,000	14,000	12,000	22,000	18,000	12,000	17,000	10,000
34.03	VCC Meetings	29,400	-	29,400	-	5,400	5,562	5,728	6,261	6,449	-
34.04	DCC Meetings	38,311	-	38,311	5,000	5,150	5,304	5,464	5,627	5,796	5,970
34.05	Conservancy Forums (inter village)	135,899	-	135,899	-	16,000	16,480	24,720	25,462	26,225	27,012
39	**Sub Total**	**822,610**	**-**	**822,610**	**87,000**	**96,550**	**125,346**	**139,912**	**181,350**	**149,470**	**42,982**
40.00	**Equipment**										
45.01	Vehicles (6 x pickups)	90,000	-	90,000	90,000	-	-	-	-	-	-
45.02	Vehicles (6 x land cruisers)	120,000	-	120,000	-	-	-	120,000	-	-	-
46.01	Office Equipment (Non-expendable)	148,710	-	148,710	86,560	-	-	62,150	-	-	-
46.02	Field Equipment	39,300	-	39,300	39,300	-	-	-	-	-	-
49	**Sub Total**	**398,010**	**-**	**398,010**	**215,860**	**-**	**-**	**182,150**	**-**	**-**	**-**

BL	Description	Agency	Agency	Total	Year1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
		GEF	UNDP	US$	US$	US$	US$	US$	US$	US$	US$
50.00	**Miscellaneous**										
51.01	Operations and Maintenance										
51.02	Premises (Rent)	118,700	-	118,700	16,800	17,304	17,823	18,359	18,908	19,476	10,030
51.03	Consumables (Expendable supplies)	73,463	-	73,463	11,723	12,074	12,438	12,810	9,670	9,886	4,862
51.04	Utilities – Electricity/Gas/Water	125,935	-	125,935	20,096	20,699	21,320	21,960	16,577	16,949	8,334
51.05	Vehicle Running/Maintenance	157,418	-	157,418	25,121	25,874	26,651	27,450	20,722	21,182	10,418
51.06	Office/Equipment Maintenance	40,811	-	40,811	6,512	6,709	6,909	7,116	5,373	5,491	2,701
52.01	Reporting Costs	38,311	-	38,311	5,000	5,150	5,304	5,464	5,627	5,796	5,970
53.01	Sundries										
53.02	Postage/Courier	23,322	-	23,322	3,722	3,873	3,948	4,067	3,070	3,138	1,544
53.03	Telephone/Fax	128,266	-	128,226	20,469	21,083	21,715	22,367	16,884	17,260	8,488
59	**Sub Total**	**706,226**	**-**	**706,226**	**109,443**	**112,726**	**116,108**	**119,593**	**96,791**	**99,178**	**52,347**
	Financial Mechanism										
71.00	**Valley Conservation Funds**	**-**	**372,000**	**372,000**	**46,424**	**65,113**	**74,461**	**65,116**	**65,116**	**55,770**	**-**
72.00	Trust Fund										
72.01	Trust Fund Design	125,000	-	125,000	35,000	40,000	40,000	5,000	-	-	-
72.02	Trust Fund Appraisal	25,000	-	25,000	-	-	-	25,000	-	-	-
72.03	Trust Fund Investment	1,500,000	1,000,000	2,500,000	-	-	-	2,500,000	-	-	-
79	**Sub Total**	**1,645,000**	**1,372,000**	**3,017,000**	**81,424**	**105,113**	**114,461**	**2,595,116**	**65,116**	**55,770**	**-**
90.00	**Project Total**	**7,440,000**	**1,465,000**	**8,905,000**	**1,020,903**	**1,019,441**	**1,089,029**	**3,713,193**	**896,464**	**826,370**	**339,600**
93.00	**Project Support Costs**	**660,000**	**35,000**	**695,000**	**99,286**	**99,286**	**99,286**	**99,286**	**99,286**	**99,286**	**99,286**
99.00	**Grand Total (UNDP & GEF)**	**8,100,000**	**1,500,000**	**9,600,000**							
100.00	**Government Cost Sharing**										
	Trust Fund Contribution			500,000				250,000	250,000		
	Productive Infrastructure			250,000	30,000	50,000	50,000	50,000	40,000	30,000	
109	**Sub Total**			**750,000**		**50,000**	**50,000**	**300,000**	**290,000**	**30,000**	**30,000**

ANNEX II: WORK PLAN

ANNEX III: OPERATIONAL WORK PLAN FOR YEAR 1

ANNEX IV: SCHEDULE OF PROJECT REVIEWS, REPORTING, AND EXTERNAL EVALUATION

Proposed Project Starting Date:		May 1999
REPORTING ACTIVITY DESCRIPTION		
1.	Inception Report	May 1999
2.	1st Project Steering Committee (PSC) meeting	Nov. 1999
3.	1st Annual Project Report (APR)	April 2000
4.	2nd PSC meeting	May 2000
5.	3rd PSC meeting	Nov. 2000
6.	2nd Annual APR	April 2001
7.	4th PSC meeting	May 2001
8.	5th PSC meeting	Nov. 2001
9.	3rd Annual APR	April 2002
10.	6th PSC meeting	May 2002
11.	7th PSC meeting	Nov. 2002
12.	Mid Term Evaluation	March 2003
13.	4th Annual APR	May 2003
14.	8th PSC meeting	May 2003
15.	9th PSC meeting	Nov. 2003
16.	5th Annual APR	April 2004
17.	10th PSC meeting	May 2004
18.	11th PSC meeting	Nov. 2004
19.	6th Annual APR	April 2005
20.	12th Annual PSC meeting	May 2005
21.	Terminal Report	July 2006
22.	Terminal Evaluation and Project Review	August 2006

In addition to the above, progress reports will be prepared on a quarterly basis, as per UNDP requirements; Project Management Committee meetings would take place on a bi-annual basis.

ANNEX V: INCREMENTAL COST ANALYSIS

Baseline:

The baseline situation is best described by making reference to specific bundles of activities considered necessary in order to provide for effective community-based management of biodiversity in the mountain areas.

i. Local-level Management Capacity: The capacity of villagers to manage large ecological landscapes is weak. However, there is a substantial baseline of social mobilisation efforts. Rural support programmes such as AKRSP have mobilised villagers to form co-operative Village and Women's Organisations to act as catalysts of community development. Some training has been provided to village leaders to strengthen planning, management and organisation capacities. The efficacy of these efforts varies considerably from area to area. In some villages, VOs have become highly effective instruments of change, mobilising the collective energies of villagers towards a common purpose. In others, VO's have been less successful. In all cases, however, the capacity of VOs to integrate conservation activities into their community development initiatives is limited, and further awareness and training is needed. Cultural factors complicate the picture. Women, though responsible for many aspects of wild resource management, have little say in village decision making. Their needs and concerns, as they relate to conservation, are not being addressed, giving them little capacity to adapt their resource-use practices (see Khan, Rubiya Ali., 1996). Beyond the village level, there are currently no institutional structures to support co-operative management of wild resources. As wildlife ranges across the communal lands of villages, such co-operation is of the essence to effect conservation.

ii. Education and Awareness: Insufficient awareness of the ecological implications of current resource-use practices is another factor contributing to biodiversity loss. Understanding of the contributory values accorded by biodiversity in mediating the supply of ecological services to the village economy and maintaining the productivity of those biological resources with tangible use values, is weak. For example, the role of predators in maintaining healthy populations of wild ungulates with potential trophy values is rarely considered in decision making. A number of NGOs, most notably WWF-Pakistan, have established education programmes focusing on imparting conservation values to school children. These efforts are clearly critical as a foundation for future conservation, but they will need to be scaled up and better targeted if they are to have an impact.

iii. Monitoring Capacity: There is a lack of capacity of villagers to monitor uses of wild resources, and an absence of suitable indicators, reporting, and evaluation mechanisms. Several rural development programmes, notably AKRSP, have established monitoring systems, but these do not cover uses of wild resources. If community-based management is to be successful, then strong monitoring will be critical. This will need to feed in to planning and management efforts to ensure that problem areas are effectively addressed.

iv. Ecologically Sustainable Development: Community development efforts are supported by the provincial administrations, which provide funding for major capital works including bridge construction and road maintenance. NGOs such as AKRSP, and other rural support programmes have been active in providing productive physical infrastructure, and have supported activities aimed at diversifying local livelihoods. An important issue is that rural development programmes have been advanced without taking broader conservation objectives into account. Comprehensive plans have never been developed to guide resource-uses and to determine community needs in addressing conservation dilemmas. The result is that conservation needs are not being integrated into wider development initiatives.

v. Sustainable Uses of Biological Resources: The baseline situation is typified by a lack of models for effecting sustainable uses of wild resources. There has been relatively little targeted research in the area to develop culturally appropriate techniques and suitable technologies for improving the sustainability and productivity of wild resource use. Such demonstrations will be essential if the relative

values of wildlife management are to be enhanced in relation to alternative land uses. A number of barriers are presently foreclosing sustainable uses. These include the dearth of an appropriate skills base, the lack of an institutional framework for village based management, the lack of supporting policies and legislation, a lack of understanding of the determinants of markets, and market failure problems that result in low prices being paid to producers. Over the next 5 years, AKRSP with funding from NORAD and the European Union, will undertake a number of trials on medicinal plant propagation as well as study livestock wildlife interaction (for the purposes of reducing competitive pressures on highland pastures).

vi. Policy, Legislative and Institutional Framework of Government: The Government currently provides limited funding for management of existing PAs, though not all sites are covered and outlays are inadequate to mitigate threats (most of which have their genesis outside of PA boundaries). While policies are being developed at the national level to support community-based conservation, an enabling policy framework does not exist in the provinces. Capacity within Wildlife and Forest Departments to monitor and regulate wildlife uses in community-managed conservation areas is very weak. Capacity building will be critical, as government has an important role to play in making communities accountable for habitat and wildlife management. Some capacity building in NWFP has been provided through the Swiss funded Chitral Conservation Strategy (CCS) that is being implemented by IUCN in Chitral district of NWFP. Similarly, the SDC is financing the Northern Areas Conservation Strategy, aimed at developing a framework for sustainable development in the Northern Areas. But these initiatives do not target community based biodiversity conservation and more work is needed to build institutional capacities in this area.

vii. Financial Framework: AKRSP has established an effective savings and rural credit framework, building capacity and accountability at the village level for funds management. These efforts have built a high degree of funds management discipline amongst community members. A financial mechanism for conservation is, however, lacking.

GEF Alternative:

In a business as usual situation, without implementation of the GEF Alternative, Pakistan would continue to invest in Protected Area management in the mountain areas. While Protected Areas are necessary in order to accord strict protection to species, ecological landscapes outside of PAs will need to come under conservation management. Without such an approach, biodiversity would continue to be lost as populations of species are extirpated from communal lands. The ecology of the mountain areas warrants that large areas be brought under conservation management, but budget constraints would limit conservation programmes to working in the current, spatially fragmented, areas. The costs of policing the rugged mountain region to ensure compliance with wildlife laws would be prohibitive, especially in situations where communities are hostile to conservation interventions— lacking a utilitarian incentive to co-operate. The laudable government policy of providing for community-based conservation would not be effected, owing to the lack of a suitable prototype and insufficient funds and know-how for its execution. The approach proposed under the alternative strategy would decentralise responsibilities and share costs amongst stakeholders, increasing the accountability of communities for their stewardship of wild resources. In brief, the following interventions are proposed under the alternative strategy:

i. Building Local-level Planning & Management Capacities: GEF monies will be employed to strengthen Village Organisations, to engender self-help and a sense of individual and collective responsibility for conservation at the local-level. Conservation Plans will be developed in new sites, following the process piloted during the PRIF. The Plans will detail strategies for abating threats, and assign responsibilities for execution. Village specialists trained by AKRSP as agricultural, livestock and forestry extension workers will be trained in wild resource management techniques, and will play a dual advisory and advocacy role at the local level in spearheading conservation. An organic process will be established to effect conservation of the wider ecological landscape and establish an institutional framework for co-operative management. Cluster level linkages between villages will be fostered at the valley (or watershed) level through the establishment of Valley Conservation Committees (VCCs). District Conservation Committees (DCCs), established under the PRIF phase will oversee conservation

management in each Conservancy with representation from VCCs and district administrations. Able villagers will be assigned as Village Wildlife Monitors to monitor field activities and enforce regulations. A Conservancy Management Plan will be developed (building from the Valley Plans) through a process of negotiation between stakeholders, taking social, ecological, and institutional factors into account. The Management Plan will be fully integrated into local development plans to ensure a congruency between conservation and development programmes in the longer term. Land within each Conservancy will be zoned for multiple uses and regulations and policing mechanisms will be established to provide for effective management. A special effort will be made to include women in all aspects of conservation planning and management, using a culturally sensitive strategy aimed at empowering them in the village context. Co-financing for elements of this component relating to planning will be provided by SDC/IUCN.

ii. Education and Awareness: Efforts will focus on imparting conservation values to communities, to alert them to the long-term welfare implications of biodiversity loss and ecologically exploitative development. Awareness will focus at the village level, with conservation education workshops and opportunities provided for villagers from different areas to share lessons and experiences as regards wild resource management. Activities will also focus on training school teachers to serve as conservation educators, developing teaching aids, and sponsoring conservation activities within local schools in each Conservancy. Co-financing for this component will be provided by WWF—Pakistan and from the regional conservation strategies (CCS and NACS).

iii. Monitoring Capacity: The project will assist in building the capacity of local villagers to monitor wildlife, developing simple and easily verifiable impact indicators and providing training in basic field biology, recording, and reporting techniques. This component will feed into conservation planning and management efforts in the Conservancies.

iv. Ecologically Sustainable Development: This component aims at remoulding community development efforts to support conservation objectives. A Memorandum of Understanding will be signed with three partner agencies, namely AKRSP, the EU and the IFAD/UNDP NADP, to provide support in a number of areas, including developing irrigation infrastructure and investing in social forestry and improved livestock management. The objective is to remove some of the underlying causes of biodiversity loss, including, *inter alia*, by promoting livestock fodder production as a means of reducing grazing pressures on upland pastures, developing and maintaining irrigation channels to improve access to water (to enable barren lands to be brought under fodder cultivation), improving livestock health and productivity to enable target milk/meat yields to be attained from smaller herds, and developing fuel wood plantations to meet household energy requirements— thus reducing pressures on natural forests stands.

The process will be as follows: communities will articulate their needs in addressing conservation in the Valley Conservation Plan. This will provide, for the first time, an avenue for communities to integrate conservation needs into their development paradigm. Partner agencies will support implementation of the Conservation Plans—based on the priorities articulated by villagers. The communities themselves will be major contributors towards implementation of the alternative strategy, dedicating savings, funds accessed through existing micro-credit schemes, and sweat equity inputs as necessary. Through the project, conservation will be embedded within the community development paradigm over the longer term, providing foundations for ecologically sustainable development. This is a substitutional activity in that it modifies the baseline to make it congruent with conservation objectives. [In a business as usual situation, programme funds would have been expended without taking conservation needs into consideration.]

The bulk of the financing for this component will come from AKRSP development programme and the EU financed Dir Kohistan Upland Rehabilitation and Development project in NWFP. Further financing will be provided by IFAD under the Northern Areas Development Project, which will support capacity building of government agricultural and livestock extension services in NAs, and fund demonstration projects in ecologically sustainable farming and livestock management systems within the Gojal and Nanga Parbat Conservancies.

v. Sustainable Uses of Biological Resources: The project will finance a number of demonstration initiatives aimed at testing models for effecting sustainable uses of components of biological diversity (the demonstrations will be in three thematic areas, productive uses of fauna, productive uses of flora, and ecotourism). This will involve assessing the existing data set on uses, including traditional knowledge and management systems, and evaluating barriers to sustainable use in light of existing technologies and social, economic and institutional factors. The demonstration initiatives aim at proving the viability of sustainable uses—developing appropriate and cost-effective methods. The results of the studies will be disseminated to communities in the Conservancy areas, with village specialists trained as extension agents. Co-financing for this component will be provided by the UK in the form of technical assistance, SDC/IUCN, IUCN SSC/SUI, and UNDP (for ecotourism demonstrations).

vi. Policy, Legislative and Institutional Framework of Government: The project will provide technical assistance to the governments of the NAs and NWFP to remould conservation policies and legislation to give substance and legal backing to the Conservancies. Training will be provided to district officers and the staff of wildlife and forestry departments, *inter alia* in participatory methods, conflict resolution, and technical skills related to sustainable use paradigms. This will enable government to more effectively monitor and regulate management within the Conservancies. The component would be co-financed by SDC/IUCN.

Financial Framework: The project will support the establishment of a financial framework, funded by various sources, to cover a portion of the recurrent costs associated with management of the Conservancies over the long term. These costs include salaries for Village Wildlife Monitors, costs of refresher training for VO representatives and village specialists, on-going awareness efforts, and the costs of running the various District Conservation Committees. The project will make a financial contribution to the fund, with matching funds provided by UNDP and government; the project will also provide technical assistance to government to mobilise additional resources for the fund to capitalise it at US$5 million.

The project, with financing from UNDP and matching funds from local communities, will also establish Valley Conservation Funds as a means of providing early incentives for conservation. The funds will be used to provide seed money for eco-development initiatives highlighted as a priority by local communities and which are linked to the attainment of conservation objectives.

Scope of Analysis:

The systems boundary for the assessment includes the high mountain environments of the NAs and NWFP— an area of approximately 90,000 square kilometres. This region includes five administrative districts in the NAs and three in NWFP. The scope of analysis captures existing and proposed interventions to facilitate community-based conservation, broken down into seven programme categories. The analysis captures the changes that will be effected, relative to the baseline situation, as a result of implementing the alternative strategy. Incremental costs have been estimated over a period of 7 years, the life of the MACP.

Costs and the Incremental Cost Matrix:

Incremental costs to be financed by the GEF amount to US$ 8,100,000. Baseline expenditures amount to US$ 91,763,260 and the alternative strategy has been costed at US$ $ 108,113,260. Funding from non GEF sources amounts to US$ 8,250,000, of which US$ 3,650,000 has been committed for complementary activities, and the remainder (US$ 4,600,000) for substitutional ones. GEF financing amounts to 7.5% of the cost of the alternative strategy. The project is expected to yield a wide range of global and local benefits, which are listed in the IC matrix. Co-funding has been leveraged from UNDP, the GoP, local

communities[15] and a number of donor agencies to cover the costs of sustainable development activities that will generate mostly local benefits.

The project will yield a number of incidental domestic benefits by placing wild resource use on a sustainable footing. Benefits that will result in significant avoided costs (i.e. in terms of future habitat restoration costs) are associated with activities funded by non-GEF sources (mainly output 4). Other benefits will be diffused over a wide range of stakeholders, will accrue over the long-term, and are uncertain. While output 5 (sustainable use demonstrations) will in the long-term deliver domestic economic benefits, a dearth of technical information on wild propagation and management, the lack of information on market determinants, the lack of local skills and experience in new use methods (that suit evolving social and economic conditions), and the lack of appropriate institutions for management serve as potent barriers to sustainable use. The high costs of pilot activities and initial training serve as disincentives for the application of sustainable use methods, owing to poor initial cost-benefit ratios. GEF funding is needed to overcome these barriers and make sustainable use options more financially attractive.

[15] Community contributions will come from AKRSP savings, household contributions, and revenue from SU activities. Communities, would, in addition, apportion time budgets for implementation. [Sweat equity inputs are not costed in the incremental cost assessment.]

Incremental Cost Matrix:

Cost/ Benefit	Baseline (B)	Alternative (A)	Increment
Domestic Benefits	➢ Depletion of the ecological capital base is threatening future harvesting of wild resources. ➢ A loss of ecological integrity is threatening environmental service functions. ➢ Wildlife management generates low comparative values relative to alternative resource-uses. ➢ Community development is imposing environmental externalities locally, and mechanisms are lacking to enable villages to jointly manage wild resources in the common good. ➢ Local communities lack usufruct rights to wild resources. ➢ Current community development programmes are taking insufficient account of conservation demands— threatening their ecological sustainability.	➢ Management activities to wild resource harvesting on a sustainable footing. ➢ Protection of natural forests and rangelands by providing communities with alternative land-use options. ➢ Demonstration initiatives to widen options for the sustainable use of wild resources. ➢ Strengthening of cluster-level institutions with training provided to village leaders to improve management capacities. ➢ Retailoring of government policies to provide communities with usufruct rights under a joint management compact that makes them accountable for resource stewardship. ➢ Holistic development planning accounting for ecological, economic and social needs.	➢ Local use and option values for wild resources will be secured for future generations. ➢ Ecological service functions of the natural environment will be protected. ➢ Comparative values of sustainable wildlife use will be enhanced— so widening livelihood opportunities. ➢ Uses of wild resources will be regulated at the inter-community level, reducing the external costs imposed by present land-use practices. ➢ Communities will be empowered to manage their wild resource base. ➢ The ecological sustainability of current development programmes will be enhanced.
Global Benefits	➢ The loss of wildlife in larger ecological landscapes is eroding global conservation values. ➢ The perceptions and needs of local communities are not being accounted for in conservation programmes—reducing the effectiveness of management. ➢ Insufficient institutional, human and financial capacity at the local community level to manage biodiversity. ➢ Conservation objectives are poorly integrated into development planning at the village level. ➢ Technical, skills-related, and knowledge barriers are impeding sustainable uses of biological products. ➢ Villagers are poorly sensitised to broader conservation values. ➢ Lack of enabling policies and legislation for	➢ Creation of community-managed wildlife Conservancies. ➢ Development of community based conservation model ➢ Strengthening of community -based organisations and creation of a joint management framework ➢ Development of a community-based conservation paradigm; Development of Village and Conservancy Conservation Plans to guide natural resource management. ➢ Implementation of demonstration models into sustainable use. ➢ Awareness campaign aimed at imparting conservation values to villagers. ➢ Policy and legal development.	➢ Protection of biodiversity in wider ecological landscapes of global significance. Global use, non use, existence and options values for biodiversity in the Karakoram, W. Himalaya and Hindu Kush ranges will be secured. ➢ Improved chances that stable conservation will be achieved in the long-term. ➢ Establishment of strong community based institutions for biodiversity management. ➢ Wildlife survivorship improved as conservation is integrated into the community development paradigm. ➢ Paradigm shift from unsustainable to sustainable use of biological resources-- with incentives created for conservation. ➢ Improved awareness of the contributory

Cost/ Benefit	Baseline (B)	Alternative (A)	Increment
	community-based conservation.		values of biodiversity to local livelihoods. ➢ Establishment of durable foundations for community-based conservation.
Costs Local Planning & Management Capacity	WWF US$ 420,000 Local NGOs[16] US$ 350,000 AKRSP[17] US$ 4,375,000 Total US$ 5,145,000	Total: US$ 8,243,626	GEF: US $ 2,998,626 SDC/ IUCN: US$ 100,000 Total: US $3,098,626
Education and Awareness	WWF US$ 350,000 Local NGOs US$ 400,000 AKES US$ 300,000 Total US$ 1,050,000	Total: US$ 2,479,776	GEF: US $ 729,776 WWF: US$ 500,000 SDC/IUCN: US$ 200,000 Total: US $ 1,429,776
Monitoring	AKRSP US$ 2,187,500 GNA US$ 210,000 GNWFP US$ 280,000 Total US$ 2,677,500	Total: US$ 3,472,209	GEF: US $ 794,709 Total: US $ 794,709
Community Eco development [18]	AKRSP US$ 37,187,500 NADP US$ 17,209,000 Local NGOs US$ 525,000 GNA US$ 9,100,000 GNWFP US$ 14,000,000 Total: US$ 78,021,500	Total: US$ 82,996,500	Complementary Funding: UNDP: US$ 250,000 Substitutional Funding: AKRSP: US$ 3,500,000 NADP: US$ 300,000 EU: 800,000 GEF US$ 125,000 Total: US$ 4,975,000
Sustainable Use Demonstrations	AKRSP: US$ 600,000 Total: US$ 600,000	Total: US$ 1,646,692	GEF: US $ 696,692 UNDP: US$ 100,000 UK: US$ 100,000 SDC/IUCN: US$ 50,000 IUCN-SSC: US$ 100,000 Total: US $ 1,046,692
Gov. Policy,	Gov Expend[19] US$ 1,119,260	Total: US$ 5,459,457	GEF: US $ 1,090,197

[16] Local NGOs captured in the analysis include the Himalayan Wildlife Project, Naunihal Welfare Organisation, Dobani Social Welfare Organisation, and the Belour Advisory and Social Development Organisation.

[17] AKRSP is funded by a number of donor agencies, including the Netherlands government, European Union, UK Department for International Development, CIDA, Norad, GTZ, and the World Bank.

[18] Including expenditures on capital works (roading, irrigation), agricultural support, livestock management, and social forestry activities.

Cost / Benefit	Baseline (B)	Alternative (A)	Increment
Institution Building	NACS US$ 2,500,000 CACS US$ 650,000 Total: US$ 4,269,260		SDC/IUCN: 100,000 Total: US $ 1,190,197
Financial Mechanism	Total: US$ 0	Total: US$ 3,787,000	GEF: US$ 1,665,000 UNDP: US$ 1,122,000 GoP: US$ 750,000 Local Communities: US$ 250,000 Total US$: 3,787,000
Cost Totals	Grand Total: US$ 91,763,260	Grand Total: US$ 108,085,260	Incremental Costs to be funded by GEF: US$ 8,100,000 Funding from Other Sources: US$ 8,222,000

[19] Estimated expenditures of wildlife management authorities in the project region.

ANNEX VI: THREATS AND PROPOSED ACTIONS

A summary of the main threats to biodiversity and the action proposed to mitigate their influence is given below:

Root Causes of Threats	**Proposed Actions**
Threat: Subsistence hunting (ungulates and game birds for meat)	
Inadequate policies and laws to promote community (and individual) rights, responsibilities, and accountability for uses of wild resources. Lack of co-operative agreements between communities in bio-regions to manage wild resources. Traditional management measures weakened by technological, socio-economic, and demographic change. Management measures to deal with new circumstances are lacking. Cultural factors (there is a strong tradition of subsistence hunting in the region). Moral values for conservation are poorly developed. Barriers to sustainable use: (a) inadequate understanding of the conditions required to achieve sustainability of uses; (b) lack of technical knowledge regarding ways and means of managing wild resources to achieve higher sustainable yields; (c) lack of capacity in government and local communities to design and implement sustainable use activities. Lack of avenues for information exchange to share experiences regarding natural resource management. .	Establish joint management regime within Conservancies involving government and local communities [output 1, 6]. Transfer of usufruct rights to local communities to provide a utilitarian incentive for conservation [output 6]. Develop legal instruments to support joint management framework, including appropriate legal authority to control access to wildlands [output 6]. Establish co-operative management compacts between communities [output 1, 2]. Develop new management measures at local level (hunting bans, household quotas, traditional sanctions imposed on violators) [output 1, output 5]. Awareness building at community level and media outreach (i.e. radio) [output 2]. Conduct sustainable use demonstrations to identify appropriate harvest and management regimes and overcome barriers [output 5]. Technical training (e.g. surveys to determine sustainable use thresholds) [output 3, 5]. Sponsor village information exchange visits [output 1, 2].
Threat : Commercial hunting (body parts and plants for traditional medicine and trophy markets)	
Villagers have no authority to control resource use by outsiders. There is a strong tradition of using influence to access hunting opportunities. Dearth of alternative livelihood options. The high prices paid for animal parts (skins, bones and trophies) serves as a strong contra conservation incentive; Markets for animal parts in neighbouring countries are lucrative. Awareness of conservation regulations is limited and penalties for malfeasance are inadequate. Knowledge about values and markets for wild resources and sustainable productive use opportunities is limited at the local level.	Promote alternate ways to earn money, i.e. watch & ward. Formalise and manage well regulated trophy hunting (sustainable use incentive) [output 1,5]. For selected species consider preparation of management plan for commercial exploitation and demonstrate viability [output 1,5]. Develop marketing and management skills to promote opportunities for sustainable use [output 1,5]. Support activities aimed at diversification of rural livelihoods [output 4]; Establish early incentives (village conservation funds) [output 7] Develop and apply traditional penalty system to bring offenders to account. Build relations with law enforcement authorities, including local magistrates and the police and adjust penalty systems [output 1, 6]. Increase awareness of the law through media outreach activities [output 2] Co-ordinate conservation actions on a regional basis

Root Causes of Threats	Proposed Actions
	through the Himalayan initiative and other avenues.
Threat: Retaliatory killing of predators (owing to predation on livestock)	
Predators treated as threat to livestock and as vermin by many local communities [attacks on livestock can be a consequence of a decline in natural prey]. Poor construction of livestock corrals (predator access for predators). Role of predators in ecosystem is poorly understood at village level. Livestock left unattended in pastures.	Improve livestock management (pen livestock at night when threat of predation is highest; demonstrate improved corral design (i.e. predator poof); investigate means of improving protection (i.e. use of trained sheep dogs) [output 1, 4]. Awareness building at the community level of ecological importance of predators [output 2]. Promote local solutions through Valley Conservation Committees [output 1]. Establish early incentives (Valley Conservation Funds) [output 7].
Threat: Habitat degradation by domestic livestock n.b. Livestock numbers are decreasing as able bodied men leave the region to seek productive employment. Nevertheless, current stocking levels are placing moderate to severe pressures on rangelands.	
Breakdown of traditional systems of participatory grazing and pasture management leading to unrestricted grazing. Pastoralists allow unrestricted grazing of livestock in high pastures. Problems include over grazing, trampling and soil compaction—retarding regeneration) Poor productivity of livestock owing to poor breeding and high incidence of disease: Pastoralists maintain larger herds in order to meet target milk / meat targets. Limited access to water limits opportunities to grow fodder for stall feeding of livestock. Villagers perceive any reduction in livestock numbers as an inordinate risk to their livelihoods; Dearth of alternative livelihood options.	Targeted research to determine ways and means of reviving traditional systems of habitat management [output 1, 3]. Design and implement a participatory grazing management system. Elements to include a) designating discrete livestock grazing areas (avoiding core wildlife areas); b) establishing corridors for moving livestock [output 1,4]. Reduce livestock numbers by: a) improving livestock quality, b) providing better veterinary care [output 4]. Stimulate fodder production to take pressure off pastures (which may require construction of additional water channels to bring barren land under production); distribute seeds of high quality leguminous fodder varieties [output 4]. Improve the nutrient value of feed through urea straw treatment, improve feed utilisation (through silage making), and improve feeding methods (manger construction). These activities will be implemented through targeted demonstration projects [output 4]. Improve and intensify animal husbandry practices through the training of village livestock specialists [output 4]. Support activities aimed at diversification of rural livelihoods [output 4,5].
Threat: Impact of transient populations of livestock (Pastoralists and nomads).	
Grazing rights unclarified leading to open access and pasture degradation.	Consider designating grazing sites to protect natural habitat [output 1]. Empowerment of Conservancy villages to regulate grazing rights in pastures [output 6]

Root Causes of Threats	**Proposed Actions**
Threat: Deforestation n.b. Natural forests in the mountain areas are spatially scattered and vulnerable. These forests are used to meet village fuel, fodder, and timber needs, but demand outstrips supply, leading to over exploitation.	
Fuelwood scarcity leading to clearance of indigenous vegetation to meet rural energy needs. Depletion of forests to provide fodder for livestock. Open access problems (as above) and lack of management measures at local level to protect remaining forests. Imbalance between relative values for forest conservation and exploitation. Unregulated commercial harvesting of timber in some areas.	Establish private forest nurseries to meet local demand for saplings of fast growing tree species [output 4]. Promote afforestation of fast growing non fruit trees on communal and private land by supporting land development [output 4]. Provide planting materials and alfalfa seeds (for inter-cropping), with communities absorbing a portion of the costs [output 4]. Provide technical assistance to improve silvicultural techniques [output 4]. Develop irrigation infrastructure (or widen and maintain existing channels) to provide uninterrupted water supplies to nurseries / plantations [output 4]. Maintain forest plantations, with selective weeding, and protection against livestock trampling and browsing [output 4]. Support fodder production (as above) Better range & livestock management to facilitate natural regeneration [output 1,4]. Apply management measures for indigenous forests (i.e. limit fuelwood harvests to dead trees) and develop local sanctions to deal with violators [output 1]. Support sustainable use demonstrations to identify avenues for increasing the relative values of forest conservation (i.e. improving returns from morel mushroom harvests) [output 5]. Commercial uses of forests to be regulated within the Conservancies [output 1, 6].
Threat: Disturbance to wildlife	
Anthropogenic activities disturbing wildlife. Poor visitor management in ecologically sensitive areas. Limited awareness at the local level of the ecological impacts of disturbance.	Management planning, taking account of human impact on certain species. Curtail human impacts on core areas in the Conservancies (i.e. developing resource use zones and appropriate management measures) [output 1]. Adopt policy which excludes hunting (and other invasive activities) in areas where species are breeding and / or birthing [output 1]. Increase public awareness of the impacts of disturbance on wild populations and the biological requirements of species [output 2]. Apply visitor management measures. [output 1, 5].

ANNEX VII: ECOLOGICAL OVERVIEW

Three of the world's great mountain ranges — the Hindu Kush, Karakoram and Himalayan — meet at the confluence of the Gilgit and Indus rivers in northern Pakistan. The landscape is dominated by some of the world's highest mountains, including 5 peaks over 8,000 m. These high mountains bar the seasonal monsoon rains (which influence the southern slopes of the Himalayas) from much of the project area. As a result, most of the valleys in the Northern Areas and Chitral receive little rainfall and are classified as a cold desert. Average rainfall is under 200 m.m. per annum. Most of the snowfall occurs above 4,000 m, increasing with elevation.

Local (alpha) diversity varies in parallel to regional (beta) diversity. The number of species in small areas of uniform habitat (alpha diversity) will, to a large extent, depend on the specific elevation and aspect those habitats are located at. These parameters, in turn, influence the amount of precipitation, productivity and species richness of a specific habitat and region. For instance, north-facing slopes at higher elevations in the dry alpine ecosystem of the Gojal Conservancy are more diverse than other sites in the Conservancy but considerably less so than similar sites (in terms of elevation and aspect) in the dry temperate coniferous forests of the Nanga Parbat Conservancy which is the most northern area to be partially influenced by the monsoon (Nanga Parbat forms a rainfall barrier to the rest of Northern Areas).

Given the seasonal extremes in environmental conditions (from +45 degrees Celsius in summer to -20 degrees in winter), beta diversity is enhanced by the amount of species specialisation to particular habitats and seasons. Most birds in the area are migratory and there are only a few winter residents (Roberts, T.J. 1991). A short but very intensive growing season results in a temporal flush of plant species diversity which, again, will vary depending on elevation and aspect. Resident mammals migrate between altitudes to optimise forage intake. The 4 proposed Conservancies represent unique mountain ecosystems where alpha and beta diversity are enhanced by the variety of microclimates and environmental conditions provided by the range of aspects and elevations typical of this mountainous area. Four ecological zones can be distinguished:

Dry alpine zone and snowfields.— This zone occurs in the northern most regions and predominates at high altitudes. It covers most of Baltistan, plus the northern regions of Gilgit and Chitral. The landscape in the valley floors is characterised by a desolate waste of boulders, drifting sand and sheer cliffs. Moist areas are found beneath glaciers and snowfields and along stream banks. The vegetation in the valley bottoms and along stream beds includes species such as *Hippophae rhamnoides*, *Myricaria elegans*, and Salix spp. Shrubs and forbs are widely scattered and include species such as *Capparis spinosa*, *Tribulus terrestris*, *Peganum harmala*, *Sophora alopeuroides* and *Lycium ruthenicum*. The principle plant species found in moist areas and sheltered ravines are *Salix dendriculata*, *Mertensia tibetica*, *Potentilla desertum*, *Juniperus macropoda*, *Polygonum viviparum*, *Berberis pachyacantha*, *Rosa webbiana* and *Spoirea lycioides*. The dominant grasses are *Festuca altaica* and *Poa attenuata*.

On the periphery of this zone, mammals such as Himalayan Ibex, Stone Marten, Golden Marmot, Blue Sheep, Himalayan Lynx Grey Wolf, and the endangered Snow Leopard are found. Typical birds of prey include the Golden eagle, Lammergeier, Himalayan Griffon Vulture and Common Kestrel, while game birds include Chukar, Himalayan Snowcock, Hill Pigeon, Snow Pigeon and a number of passerines.

Alpine meadows.— These lush, well-watered meadows occur between 2,600 and 3,200 m on valley bottoms or high plateaus surrounding the main water courses. In spring the meadows are carpeted with wild flowers such as Iris, Anemone, Primula, Gentian and a variety of wild roses. The meadows are enclosed by drier mountain slopes. Soils are rich and moist, but become dryer towards the transition zone with mountain slopes. Various species of grasses of the genus *Poa* and sedges *Carex*, artemesia and clover are found here. The shrub layer includes willow, wild rose, hawthorn and *Viburnum spp*.

Mammals such as the Snow Leopard, Himalayan Ibex, Brown Bear, Lesser Shrew, High Mountain Vole and Chinese Birch Mouse are found here. The avifauna includes species such as the Himalayan Griffon Vulture, Lammergeier, Himalayan Snowcock and Snow Pigeon.

Dry temperate coniferous forest.— These forests are usually found in the inner ranges of the Himalayas. There is a gradually changing interface with moist temperate forest, but in general the zone is characterised by far fewer deciduous tree species and by single species stands of conifers. It occurs between 1,500 to 3,400 m asl. in parts of Gilgit, Astore, Chitral and Dir districts. Typical trees found at higher elevations in northern Dir and parts of Chitral are *Cedrus deodara* and *Pinus wallichiana*, while *Quercus ilex* and *Juglus regia*, scattered bushes of *Artemesia maritima* and *Ephedra intermedia* occur at lower elevations. In the Astore and Nalthar valleys (Gilgit district), *Picea smithiana, Pinus willichiana, Rosa webbiana* and *Artemisia maritima* are common.

Mammals found in these forests include Royle's Pika, the small Kashmir Flying Squirrel, Himalayan Black Bear, Long Tailed Field Mouse and Turkestan Rat. The avifauna inventory includes the Long-legged Buzzard, Black Throated Jay, Nutcracker, and Jungle Crow.

Holly oak scrub.— This is an intermediate zone which covers parts of lower Chitral and Dir. It lies between 1,500 and 2,500 m. The southern part of the zone is influenced by the monsoon rains in late July-August. Aridity increases to the north and after crossing the Lowari Pass, the valleys are dominated by stands of holly oak. Chilgoza pine intermixed with deodars are found at elevations above 2,500 m. The major trees of this zone are *Pinus wallichiana*, *Pinus gerardiana*, *Cedrus deodara, Quercus balloot*, with scattered shrubs of *Daphne oleoides, Sophora griffithii, Cotoneaster numularia, Artemesia martima* and *Berberis lycium*.

Large mammal species found in this zone include Markhor, Urial Sheep, Black Bear, Snow Leopard, Himalayan Lynx and Stone Marten. Common game birds include Himalayan Snowcock, Chukar and Koklas Pheasant. Birds of prey include Golden Eagle, Lammergeier, the Common Kestrel and Alpine Chough.

Bio-Geographic Overview

Baltistan - Astore.— The whole of Baltistan falls in the dry alpine, alpine meadows and snowfields zone, while the valleys of Astore are influenced by monsoon rains and comprise part of the dry temperate coniferous zone. Forest resources are meagre with some trees growing on mountain slopes. Precipitation at lower elevation in Baltistan is about 100 mm resulting in a cold desert climate. Four of the highest peaks occur in this region—a major attraction for mountaineers and tourists.

The flare horned Markhor *Capra falconeri falconeri* occurs here. This endangered sub-species is confined to valleys which drain into the Indus river. Its real stronghold is on the holly oak covered lower slopes of the Nanga Parbat massif. It also occurs on both sides of the Astore River and up to the Indus valley as far as the Harmosh range in south-western Baltistan. Once common in the region, numbers have declined but scattered populations are still found. Hingu Nullah is famous for its population of Markhor. Skoyo Nullah, located east of the Hingu catchment is also a well known Markhor habitat. Patches of surviving birch and oak forests are present on the slopes below 2,500 m, while conifers grow at higher elevations.

Baltistan also harbours remnant populations of Ladakh Urial. The endangered Snow Leopard is found throughout Baltistan at higher elevations and preys on Himalayan Ibex and occasionally on unattended livestock. It is mainly encountered in dry alpine areas.

The valleys of Astore are influenced by rains. The Mushkin forest in Astore is one of the last remaining pine forests in the area, with trees reaching a height of 25 m. Astore is also famous for its medicinal plants and spices. Good quality cumin occurs above 2,500 m. Over 250 medicinal plants and spices have been identified, being used for the treatment of various ailments. The area is famous for costus roots (kuth) *Saussurea lappa.* This is an endangered species which is used in several remedies including the treatment of malaria symptoms, joint pains and in gynaecological complications.

The endangered Musk Deer is found in the forested regions of Astore. These shy and mainly solitary animals have declined in numbers and are considered to be globally endangered. They use the forested regions in winter and migrate to alpine pastures after the snow melts. Himalayan Ibex are plentiful and inhabit the rocky outcrops. The highly endangered Woolly Flying Squirrel has been found near the Mushkin forest, the limit of its present southern range in the Himalayas. This species was considered to have become extinct until a few years ago, when live animals trapped by the locals revealed its presence in the nearby Jaglot valley. The Kashmir Flying Squirrel is also found in Mushkin. Among game birds, the Monal Pheasant and Himalayan Snowcock have been observed.

Gilgit.— This region falls under the dry alpine and permanent snowfields zone with the valley heads supporting alpine meadows. At the very tip of Hunza, along the border with Afghanistan and China, the Marco Polo Sheep is found. The species is highly endangered. The number of animals in Pakistan has declined in recent years. The species uses seasonal home ranges and groups from Afghanistan and China drift into Pakistani territory. The Khunjerab National Park and neighbouring areas harbour Himalayan Ibex and the largest concentration of the Blue Sheep. These animals occupy the high ground above 4,000 m. between the Khunjerab and Shimshal rivers. Because of their isolation, the animals are rarely seen.

The Khunjerab area also supports a healthy population of Snow Leopards which is the main predator of wild ungulates in the area. A cluster of six villages have formed a nature protection society to conserve the buffer zone around the park. Marmots are common in the alpine pastures. The area also has a population of feral yaks. Among game birds, the Himalayan Snowcock is found near the snowline while the ubiquitous Chukar occurs in the valleys.

Chitral.— Chitral covers an area of 15,000 sq. km. with a population of 280,000 people. About 2% of the total area is covered with dry temperate forests. The northern valleys are characterised by dry temperate vegetation without conifers and oaks while to the south the valleys are covered with holly oaks, a typical habitat for Markhor. Urials also occur in some of the western valleys of lower Chitral. Their numbers are low due to hunting pressure. The Musk Deer is also found in lower Chitral where conifer forests are present. Common Otters are found in some of the streams. Other carnivores are Himalayan Lynx, Ermine and Stone Marten— a species associated with steppes. In summer the marten is found as high as 3,600 m but in winter descends to cultivated valleys at 1,200 m. Martens prey on Cape Hare, Marmot, Pika and Chukar.

The Himalayan Snowcock occurs in rocky terrain close to the snowline. The Chukar is another common game bird associated with barren rocky terrain with grasses and scrub. Chitral lies along the invasion route of migratory birds which extends to Balochistan. Many Himalayan mammals and birds have been able to extend their range southward through the Hindu Kush mountains. The best examples are the Black Bear, Pallas's Cat, Scaly-bellied Green Woodpecker, Blue Whistling Thrush, Streaked Laughing Thrush, the Himalayan Tree Creeper and the Simla Black Tit.

Dir and Swat.— Elevations in this region rise abruptly from the foothills of Swat to the snow clad peaks of the southern Hindu Kush. The Dir area has dry temperate conifer forests with alpine meadows found at valley heads, while the upper reaches of Kumrat are cloaked by virgin forests in intact condition. Deodar cedars are the dominant trees, some of which are over one hundred years old. The endangered Black Bear occurs in the valley together with the common Otter. In the higher outcrops, Snow Leopard, Musk Deer and Himalayan Ibex are found. The valley is linked to Chitral and Swat. Game birds include the Himalayan Snowcock, Monal Pheasant and Koklas Pheasant.

Description of the Conservancies

Gojal Conservancy: The Gojal Conservancy will secure the integrity of Khunjerab National Park which it buffers. It is also close to the Taxkorgan Nature Reserve in China. Both sites face escalating anthropogenic pressures. Two ecosystems are captured in the Gojal Conservancy: the alpine meadows, extending out from the Khunjerab National Park, and the dry alpine ecosystem which dominates the

landscape of northern Pakistan. The Conservancy boundaries are proposed on the basis of ecosystems, distributions of flagship species, social homogeneity in the region and the strength of the commitment of communities to conserve their biodiversity. To the west and south the boundary of the Conservancy includes the Chupurson River drainage system. The southern boundary crosses the Karakoram Highway at the village of Husseni, and follows the Shimshal watershed to the east up to the Chinese frontier. The northern border is formed by the boundary of the Khunjerab National Park.

Nanga Parbat Conservancy: The Conservancy addresses biodiversity conservation needs in the dry temperate coniferous forest, dry alpine, and alpine meadow ecosystems. The northern boundary of the Conservancy is formed by the Indus River, starting at its confluence with the Gilgit River. The boundary follows the Indus to the south east to a point west of Skardu, where it passes to the south abutting the Deosai National Park. The boundary passes to the west through the Chachor Pass, then turns to the north-west to incorporate the Astore River watershed, then heads due west to include the Nanga Parbat watershed, and finally turns north to the confluence of the Gilgit and Indus Rivers.

Tirichmir Conservancy: The Conservancy will serve to stabilise a fragile ecosystem and in particular, protect the sub-alpine and alpine ecosystem surrounding the Tirichmir peak. It will also provide a buffer to the Chitral Gol National Park and the Tushi Game Reserve. Two ecosystems are captured in this Conservancy: dry alpine and alpine meadows. The northern boundary of Tirichmir Conservancy is formed by the international border with Afghanistan. The north-east boundary is composed of the watershed between the Torkoh river and Tirich valley. The southern boundary is the tehsil (district) boundary between Mulkoh and Chitral districts, Ujhor valley, Moni, Murgangol and Ramboor Gol. The western boundary is also bounded by the border with Afghanistan.

Qashqar Conservancy: Qashqar is the old name of Chitral, derived from Qashghar, a region of Turkestan in Central Asia. The majority of the people who live in and around this Conservancy trace their ancestry to people who migrated to this region from Qashghar several centuries ago. The Conservancy will serve to protect valleys in Chitral and Dir where remnant pockets of dry temperate forests are still left intact. Three ecosystems are captured in this Conservancy: dry temperate, oak scrub and alpine meadows. The dry temperate valleys are found in Mahodand and the upper reaches of Goleen Gol and Madaglasht. The alpine pastures are found throughout the area from 3,000 m in elevation upto the snowline. The northern boundary is formed by the watershed line between Goleen Gol and Mastuj river, the tehsil (district) boundaries between Chitral and Mastuj tehsil and the watershed line between Basgqar Gol and Rizhun Gol. The line dividing Chitral and Swat districts forms the northern boundary. The southern boundary follows the watershed divide between Mahodand valley and Gabral valley and the district boundary of Swat Kohistan and Dir Kohistan. The western boundary is formed by the watersheds between Sherdara and Biar valley and Kumrat and Gawaldai valley.

ANNEX VIII: THE SOCIAL LANDSCAPE AND LAND USE IN THE PROJECT AREAS

Changes in Socio-economic Fundamentals: Political and geographic isolation have largely been responsible for the historically slow development of socio-economic infrastructure and services in the region. Administrative and socio-economic changes, though gradual, have however occurred – their impact being most visible over the last twenty years. Agents of change have included the various government departments but also NGOs and donor bodies such as the AKDN, UNICEF, FAO, the World Bank, and IFAD. Road construction has been a major determinant of change. This has improved access to the rest of the country— in turn transforming diet, clothing, farming practices, and technology, and improving communications and social sector service delivery. In agriculture, tractors and mechanical threshers have largely replaced animal draft ploughing and threshing systems. Fertilisers are increasingly being used, and the introduction of high yielding seed varieties has increased agricultural production levels. Improved access to the outside world has also spurred out-migration to urban centres and the Gulf— especially of young people seeking formal employment. This in turn has increased farm labour demands on older men and women (both young and old). The number of educated people is increasing gradually and so are per capita incomes, as technologies improve and market opportunities expand. These few examples underscore the extent to which the region is undergoing transformation. Some changes have positive implications for conservation. For example, the increase in formal employment opportunities provides an alternative to livestock rearing and other activities that impact habitats. Increased farm labour demands reduce the time budgets available for livestock husbandry, providing an incentive to maintain smaller herds. Time budget constraints have also been a motivating factor in driving development of forestry plantations, reducing the amount of time spent collecting fuelwood.

Despite positive trends, threats to biodiversity remain. The reasons are manifold. A comprehensive conservation plan has never been developed to guide development activities and their associated ecological costs and benefits have heretofore never been factored into decision making. A second factor is that even though substantial progress has been made in developing fuelwood plots and increasing fodder cultivation for stall feeding of livestock, additional efforts are needed. In order for agricultural, forestry and livestock programmes to reduce pressures on biodiversity, interventions will need to be continued over the longer-term. A third factor is that past resource management initiatives, including social forestry programmes, have been spread across the region – rather than being targeted at biodiversity rich areas. But simple continuance of existing programmes will be insufficient to realise conservation objectives. A number of programmatic adjustments are needed. Development priorities will need to be assessed in light of ecological values. Interventions will need to be better focused, taking on board ecological in addition to social and economic objectives. And initiatives will need to be better targeted in order to reach communities in the Conservancies. In addition, the relative values of wildlife management will need to be enhanced, as an incentive for wildlife conservation as opposed to ecologically destructive land uses. Parallel awareness initiatives are needed to sensitise villagers to the contributory values of biodiversity in village based production systems, and the to the social and economic costs of ecosystem degradation.

Local-level Leadership: The political structures of the mountain environment have undergone significant transformation in recent years:

- Previously village leadership centred around the *Numberdar* who was the direct appointee of the Raja of the area and was responsible for collecting taxes. *Numberdars* informally continue to perform many roles in villages, and often intervene to settle disputes over usufruct rights and water access, as well as resolve personal quarrels. They therefore still serve as useful resource persons in local- level conflict resolution.
- The *Jirga*, or village council is still responsible for regulating village affairs and making important decisions. Membership of the council was traditionally limited to village elders; now, however, other criteria are also considered, including education, wealth and occupational status.
- Religious leaders also play an important advisory role— one that is increasing in importance. The clergy interprets religious norms, and advise the community on matters such as female education, and family planning.

- Another form of religious leadership is limited to the Ismailis where in addition to the Jamaat Khana committee, financial committees, free grazing committees and rules and regulations committees also exist.
- District Council representatives have also emerged as important figures. They can play a key role in bringing outside resources to their villages and consequently are awarded a say in village politics.
- The VO/WO presidents and managers have also emerged as a dynamic force in rural development. The managers in particular are young, often better educated men who are increasingly playing a key role in bringing social sector development to their communities by forming welfare organisations as well as NGOs as is the case in Khyber in Gojal Conservancies (Gloekler, 1997).

Population: As the last census was conducted in 1981, all the data beyond that year have been derived from projections. For the project region, a growth rate of 3.3% has been used (AKRSP Database 1995) [20].

	1981	1995
Mountain Areas	783,103	1,200,000
Pakistan	84,253,644	128,805,211

There are pockets of low and high population concentrations in all the Conservancies. The approximate population coverage in the Conservancies is about 10% of the total population of the project region.

Education: Although many new initiatives in the private/public sector are underway to improve the literacy level and the quality of education in the project area, there is still tremendous scope for improvement. The project area has an overall average literacy rate of 14.3% (compared to a national rate of 35%) [21].

Adult Literacy Rate Estimates (1995)

Source	Overall Literacy Rate	Male Literacy Rate	Female Literacy Rate
Northern Areas	14.7%	24.24%	3.39%
Upper NWFP	14%	24%	3%

Source: AKES, 1995

The 1981 census also point to spatial variations in literacy levels within the project region, which reflects differences in outreach. Cultural forces are also at play in some areas, particularly with regard to women—bound as they are by mobility and purdah issues.

The recent projections of the government and other institutions show that about 60% of school age children in the project area are currently enrolled in schools (NA Secretariat, 1996; AKES, 1995).

Education Facilities: The various village resource appraisals conducted in the Conservancies show that if not all then at least most of the main villages have either primary or middle schools, often financially supported by the community itself. There are limited facilities for female education beyond the primary level. In villages lacking separate girls' schools, a co-education system is often present, with two separate shifts operating.

The remoteness of a village is not always a hindrance to the establishment of schools as is the case with Shimshal in Gojal Conservancy where there are government, private and Diamond Jubilee (AKES) schools (Shimshal Valley, IUCN Gilgit, 1997). Similarly, in another remote valley of Nanga Parbat Conservancy, the community is running a primary school out of an 'imam bargah'— a prayer building, on a self- help basis. For further education, the children have to leave their village (VMP, Shagarthang, 1997).

[20] The Northern Areas government has used the growth rate of 3.8% and the National Institute of Population Studies (NIPS) has used growth rates that are below 3%.

[21] This average was calculated from AKES, 1995 data.

The existing local institutions provide a strong foundation for pursuing conservation awareness under the MACP.

Employment: With the construction of major roads such as the Karakoram Highway (KKH), the Lowari Top road to Chitral and a network of village link roads, livelihood patterns have been greatly altered. Roads have increased the mobility of local communities, and have stimulated economic growth—increasing off-farm employment opportunities. In addition to education, other factors that have affected employment in the project region include the existence of the public sector and trade expansion due to the KKH (FHIES). Generally it is observed that education services and other infrastructure are better developed in Gilgit and hence there is slightly more tendency for people in that area as compared to other parts to find employment locally. The table below illustrates these trends:

Percentage of people working (off-farm) in the Project Region

Place	Gilgit	Chitral	Baltistan	Astore
In the village	61%	28%	36%	45%
In the capital town	21%	30%	17%	15%
In the region	7%	19%	38%	32%
Elsewhere	11%	23%	9%	8%

Source: FHIES, 1996

In Chitral, the Chitral Scouts (an army unit) offer more permanent employment opportunities. In the other two areas as well as in Hunza and Gojal, seasonal employment, often related to tourism, is more frequent. Although farm incomes are still a major contributor to the rural economy, various factors such as the decreasing size of landholdings due to population increase, an increase in education levels, and various market opportunities are leading to a gradual increase in the proportion of off-farm income.

Rural Income Distribution in the Project Area *(Figures in Rupees)*

	Gilgit	Chitral	Baltistan	Astore
Farm Income	34,652	32,737	26,251	22,324
Off-farm Income	30,861	31,645	13,023	21,279
Off-farm as % of Total Income	47%	49%	33%	49%
Per Capita Income	6,401	6,626	5,035	4,360

Source: FHIES, 1996

Another issue closely related to off-farm employment is migration, and the resulting remittances and other benefits that it has brought to the project area. Although no detailed migration study has ever been conducted in the region, the material available so far shows that out-migration is sizeable. Seasonal migration is more common, but permanent migration is also significant.

An increasing emphasis on off-farm employment combined with male migration, an increase in the number of school going children as well as the introduction of new agricultural inputs have meant a considerable increase in the workload of women. This has also meant a change in priorities within the household economy which involves women giving up certain tasks in favour of others (Streefland et al., 1995). Most villages have been affected by these changes and this is reflected in the evolving institutional structures that develop to address new needs.

The factors which are changing the balance between farm and off-farm income contributions need to be looked at more carefully in order to develop alternative career/livelihood strategies for various interest groups. With more out-migration and/or interest in other economic opportunities, there is a danger that the indigenous ecological knowledge base will be lost.

Institutional Development: The existent community based social structures provide a strong base upon which the success of the PRIF and that of the MACP rests. Through the initiatives of AKRSP - the driving force behind the process of community organisation - some 2,065 Village (VO) and 980 Women

(WO) Organisations have been established in the mountain areas (AKRSP Annual Review, 1996). AKRSP's participatory approach has been successfully steered forward by three basic principles - organisation and co-operative management, capital generation through regular savings, and skills development at the village level. This has led to the development of two models, an institutional model (based on VOs/WOs) and a production model based on skills development and provision of agricultural, livestock, forestry, enterprise and other technical support services.

Without denying the tremendous achievements and impacts of AKRSP's institutional model, it needs to be mentioned that there are still some gaps which arose not so much because of the inherent shortcomings of the model but because of the varying interests of the various collaborating organisations as well as the diversifying needs of the communities. The diagnostic process of AKRSP mainly focuses on the improvement of livelihoods through a pre-packaged approach which is partially unavoidable, due to the programme's focus on certain technical areas. Also, VOs are representative of neighbourhoods (mohallahs) and not villages. Hence overall village development plans were not devised. This means that (AKRSP's) social organisation is geared to address only specific needs at the village/neighbourhood level instead of focusing on overall resource management in terms of the interaction of a community with its ecological/social/political and economic surroundings. In the fragile ecosystems of the mountain environment, the lack of an overall vision as to the direction that a community will take in order to address future threats can and has had serious consequences. Lack of village level ecological awareness and planning has led to the destruction of wildlife habitats with adverse effects on human populations and biodiversity. Through establishing partnerships between MACP implementing organisations, AKRSP and other local development agencies, there is potential to bridge this gap and at the same time to build the capacity of different stakeholders, most of all the communities themselves, to co-operate in managing ecosystems.

Land-use: The Hindu Kush, Karakoram and Western Himalayan ranges are characterised by high mountains with steep and dissected slopes, cut by narrow valleys subject to active surface erosion. In this naturally unstable terrain, landslides and rockfalls are commonplace occurrences. The area is marked by an arid temperate climate with extremes of temperature. A summary of the climatic characteristics of the region is given below:

Altitude and Climate in the Project Area

Altitude (masl)	Climatic Characteristics
Below 2,100	These areas, consisting of valley floors and hill slopes, experience diurnal as well as seasonal temperature variations and receive little rainfall.
2,100 – 3,300	These areas enjoy a temperate climate receiving, on average, some 400mm in snowfall each year.
Above 3,300	These high altitude areas are very cold. Areas not under permanent snow have a very short growing season.

Rainfall is sparse as the area lies on the periphery of the Himalayan monsoon belt. There is sharp spatial variation in annual precipitation, which ranges from 150mm on the valley floor to more than 2,000mm at higher altitudes. In terms of geographic distribution, rainfall generally decreases from west to east. No analogous pattern is observed on the north-south axis. However, the southern slopes of the Himalayas receive more monsoon rainfall than other areas, and the southern reaches of the Hindu Kush receive rain from the Western Disturbances and some precipitation during the monsoons.

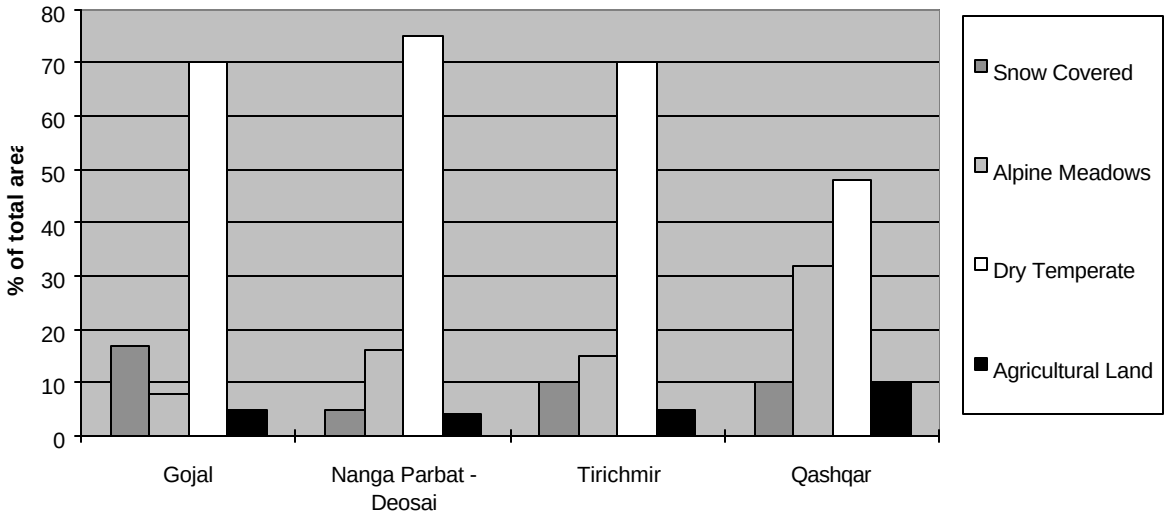
Land Tenure: Land tenure in the four Conservancies follows a similar pattern whereby most land situated below irrigation channels is privately owned while land situated above irrigation channels constitutes public property. Only a small proportion of land is situated below irrigation channels and therefore most land in all four Conservancies is government-owned.

Irrigation and Land Development: The area's sparse rainfall necessitates artificial irrigation. There is a plentiful supply of water from streams carrying meltwater from snowfields. This water is deflected through irrigation channels to the fields, sometimes over distances of one kilometre or more, and along

steep slopes. Rural Support Program initiatives have succeeded in mobilising the human resources of the village towards the repair and maintenance of irrigation channels, which have been widened and lined. The construction of irrigation channels and expansion of the existing network has brought about a "green revolution" in the mountain areas. By 1995, more than one thousand kilometres of irrigation channels had been constructed, bringing about 15,000 ha of land under cultivation (providing opportunities for growing fodder and developing tree plantations, thereby contributing to a reduction in pressures on pastures and forests).

Farming Systems: Most farmland (95%) in the four Conservancies is irrigated by a network of small channels, fed by streams and river offcuts, while a negligible portion of the cultivated area is devoted to rain-fed farming. Only 40% of the land is suitable for double cropping using existing varieties and farming techniques. Water shortages often occur in summer months, when the water level in tributaries drops. The production systems in the northern reaches of the Conservancies is generally based on cultivation of a single crop, combined with livestock keeping. The main crops include wheat, maize, barley and millet. Maize is occasionally intercropped with legumes (peas and beans). In recent years, potatoes have been introduced as an important cash crop. At lower elevations, (1,000 to 2,000 masl), double cropping is possible alongside waterways with maize and potatoes being grown in addition to the above-mentioned crops.

Land-use Pattern in the Project Area



Livestock Production: Livestock plays an important role in mountain area farming systems and contributes significantly to the rural economy. An estimate of animal numbers in the Conservancies is given in the following table:

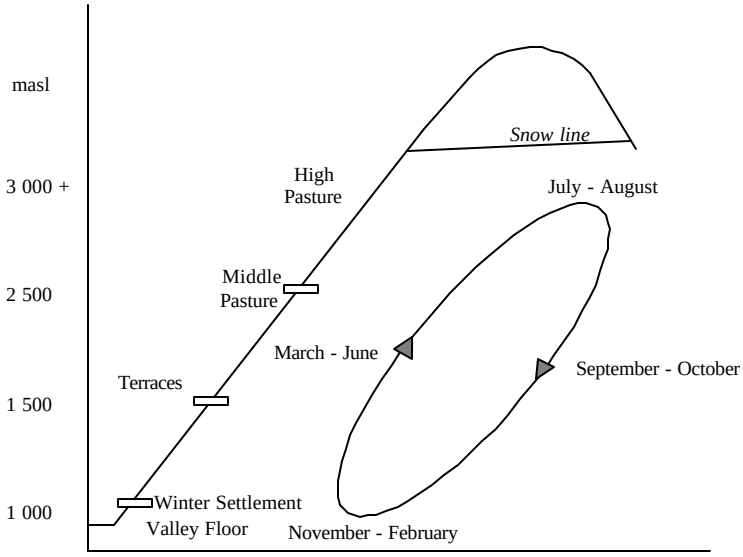
Animal Populations in the Conservancies

Site	**Gojal**	**Nanga Parbat**	**Tirichmir**	**Qashqar**
No.	80,000	62,500	37,500	57,500

The natural limitations placed on farming increase the importance of livestock in the project area. Livestock herds above the summer settlements (4,000 to 5,000 masl) are dominated by yaks, which are allowed to graze freely in a semi-wild state. High altitude pastures are located in the vicinity of glaciers and snowfields. Closer to the summer settlements, herds are predominantly composed of sheep and goats. Yaks and their crossbreeds are common only in the Tirichmir and Gojal Conservancies.

Pasture Degradation and Transhumance: Transhumance in the Conservancies follows a general pattern that is exemplified by the schematic chart below. The altitude of high pastures in the Tirichmir and Gojal Conservancies is lower than that shown in the schematic chart, but the overall picture remains essentially the same. Pasture degradation in the past has emanated primarily from transhumant activities in the Conservancies— driven by demographic growth. Husbandry practices, such as the free grazing of livestock in pastures, have caused substantial degradation, with herds trampling regrowth and compacting soils, so retarding regeneration. The most acute pressure on the high pastures occurred during the years of the Afghan War in the 1980s. This decade saw Afghan herdsmen entering with their herds of sheep, goats, and mules into the pastures of the Tirichmir and Qashqar Conservancies, resulting in very severe pasture degradation. The end of the Afghan war saw the return of refugees to their homeland and a significant reduction in pressures.

Transhumance Cycle



Recognising the environmental impacts of livestock husbandry practices, several state-sponsored and donor-sponsored programs have been introduced to improve management and mitigate pressures on rangelands. Interventions comprise a number of elements, including:

- **Planting of fodder crops (alfalfa) and quick- growing fodder trees (poplar, robinia and ailanthus) on irrigated land:** The increase in fodder production has enabled villagers to stall feed their livestock, reducing the number of animals grazing on rangelands. Nutritious fodder crops such as alfalfa have a positive effect on animal health (especially for milk producing animals), and stall feeding has led to a decrease in animal mortality rates.
- **Improving the genetic base of livestock to produce higher yielding and more disease-resistant strains:** Artificial insemination has led to the development of new breeds of livestock which have higher milk and meat yields but are also well adapted to the difficult local conditions. This has led to a reduction in animal populations since farmers can now obtain the same quantities of milk and meat from smaller herds. The reduction in animal numbers has reduced the pressure on rangelands.
- **Introducing rotational grazing and better shepherding practices to permit pasture regeneration:** The introduction of rangeland management practices such as rotational grazing has reduced grazing pressure on rangelands, giving them more time to regenerate.
- **Training livestock specialists as master trainers and improving animal health facilities:** Animal health has improved over the past two decades, reducing the risk of early mortality, and improving livestock productivity.

Forestry: Forest resources in the mountain areas are limited, and usually far removed from human settlements. There is a shortage of wood and fodder for fuelwood, shelter, and animal fodder. Pressures

on natural forests, pastures and other natural resources are threatening the fragile geophysical environment and biodiversity of the Conservancies. These pressures are being attenuated through the activities of various social forestry initiatives sponsored by rural support programs such as AKRSP.

Social forestry initiatives were first piloted in the region in the 1980's, but full scale implementation began only in the 1990s. Despite their infancy, impacts have been substantial. Census surveys indicate that forestry initiatives have resulted in a threefold expansion of tree cover in some areas. In 1996 alone, village communities in the Northern Areas planted 3.86 million trees on 1,182 ha of land. The total area under forest cover in the NWFP is 40,548 ha while the area under community forests is 4,047 ha. The various initiatives have trained village forestry specialists to provide extension services and advise on silviculture.

Role of Women in Natural Resource Management (NRM)

The "rural organisation of production" links farming systems into an integral whole, requiring the inputs of both men and women. In addition to on-farm activities, women are responsible for many household tasks. Since many of these tasks are "non-productive", they are often overlooked even though they may account for a large portion of womens time budgets and may be critical to the maintenance and survival of the household. Children and younger women (daughters and daughters-in -law) also assume significant roles in terms of farm and household activities. Young women are responsible for livestock management. They also assist with weeding and are generally responsible for cultivating vegetables and fruits. If there is more than one woman in a household, the older women will generally be responsible for milking cows, feeding livestock, and household tasks (such as caring for young children) while younger women work the fields. Women generally take responsibility for virtually all management and care of animals. This includes winter grazing of weak or young goats and sheep, fodder collection, stall feeding, milking and milk processing, and carding and spinning wool. For this reason, women are critical stakeholders in the arena of conservation management, and their needs must specifically be addressed if stable conservation is to be achieved.

Gender Activity Profile for All Conservancies (M = men, W = women, B = both)

Spring Activity	Gender			Autumn Activity	Gender		
	M	W	B		M	W	B
Maintenance of terraces			x	Harvesting of maize/wheat			x
Carrying farm yard manure to fields			x	Threshing wheat	x		
Land preparation for vegetables		x		Shelling maize		x	
Cleaning grains for grinding		x		Drying and stocking grains		x	
Carrying grains to watermills	x			Stall feeding animals		x	
Collecting fuel wood		x		Grazing livestock around village			x
Grazing livestock		x		Winnowing grains for grinding		x	
Poultry management		x		Carrying grains to water mill	x		
Stall feeding livestock		x		Collecting fuel wood		x	
Cooking/washing clothes		x		Milking animals and processing milk products		x	
Cleaning/sweeping the house		x		Fetching water		x	
Child care		x		Cleaning the house		x	

Spring Activity	Gender			Autumn Activity	Gender		
	M	W	B		M	W	B
Milking animals		x		Child care		x	
Processing milk products		x		Cooking/washing clothes		x	

Summer Activity	M	W	B	Winter Activities	M	W	B
Land levelling			x	Collecting fuel wood			x
Ploughing fields	x			Milking animals		x	
Watering and weeding		x		Stall feeding animals		x	
Maize sowing	x			Milking animals and milk products		x	
Spreading manure		x		Spinning and weaving wool		x	
Grazing livestock in summer pastures			x	Spinning and weaving goat hair		x	
Grazing livestock around the village		x		Poultry management		x	
Collecting fuel wood		x		Sewing and embroidering		x	
Milking animals and processing milk products		x		Cooking/ washing clothes		x	
Fetching water		x		Cleaning/sweeping the house		x	
Child care		x		Child care		x	
Harvesting and threshing of wheat			x				
Vegetable growing and picking		x					
Cooking and washing clothes		x					

ANNEX IX: CONSERVATION LEGISLATION AND POLICIES

A raft of colonial laws aimed at preserving game animals and birds were inherited at the time of independence in 1947. These alien laws, poorly tuned to Pakistan's social, economic and institutional landscape, failed to achieve the objectives of conservation (as witnessed by an alarming decline in wildlife populations and serious habitat degradation in the post-Independence period). Recognising the situation, the Government of Pakistan appointed a Wildlife Enquiry Committee in 1968 which drafted conservation legislation later adopted through various provincial Acts and Ordinances. These statutes provided for the establishment of a variety of protected areas, including national parks, wildlife sanctuaries and game reserves. However, many protected areas exist only on paper, the government lacking adequate financial and human resources to manage them. Furthermore, centralised authority and top-down planning systems have deprived rural communities of their traditional user rights, their sense of ownership of wild resources, and incentives to actively participate in their conservation and sustainable use. As a result, despite existing laws, hunting bans, and punitive measures, pressures on wildlife remain unchecked. Clearly, a new approach is needed.

There is a growing awareness, world-wide, that management of natural resources must actively involve, and recognise the needs of, local communities. In several developing countries, new partnerships are being forged between governments and rural communities to make the latter beneficiaries and custodians of conservation efforts. These new approaches are now also being tried in Pakistan, but enabling legislation is lacking.

Review of Existing Policy, Laws and Institutional Support: The Constitution of the Islamic Republic of Pakistan (1973), having been drawn up before the concept of "biodiversity" gained wide currency, contains no reference to biodiversity and only limited reference to the environment. Under the Constitution, the power to enact laws on environmental matters (other than "fishing and fisheries beyond territorial waters" and "environmental pollution and ecology") rests with the provincial assemblies and not the national parliament. Federal jurisdiction in the area of wildlife conservation is limited to the protection of migratory species and implementation of international Conventions (such as the CBD and CITES).

Pakistan has a wide range of laws, some dating from pre-1947, relating to the conservation and sustainable use of different elements of biodiversity. These include framework environmental laws, and forestry, wildlife, fisheries, livestock, and land-use legislation.

Forestry Laws: Existing forest laws in NWFP and the NAs are largely reflective of out-dated scientific knowledge and priorities and are not geared to current conservation needs (Ahmed and Mahmood 1998). The reasons are numerous but a few deserve special mention. Human and livestock populations have increased dramatically, rights and concessions of individuals have multiplied and timber prices have greatly appreciated since the laws were enacted. Forests are being exploited by a "timber mafia" that has little respect for the law and no concern for the principles of sustainable use. The various Forest Acts do not account for wildlife and their habitat (forests), nor do they protect the interests of forest-edge communities.

In 1993, the federal government adopted a 25-year Forestry Sector Master Plan which sets out policy guidelines for the future development and management of the forestry sector. The Plan includes an Ecosystem and Biodiversity Action Programme, including schemes for rehabilitating the mangrove forest of the Indus Delta, protecting the Juniper and Chilgoza pine forests in Balochistan, and protecting all endemic and endangered species of flora and fauna and important ecosystems through the designation of conservation areas. The Plan also recommends that provincial forest legislation be updated to provide, amongst other things, for the conservation of natural forest ecosystems and suggests a model law for the purpose.

Wildlife Laws: While wildlife legislation in both pre-independence and post-independence days was voluminous, it was concerned almost entirely with the hunting and shooting of game species. The extermination of predators was encouraged and there was a lucrative trade in skins and other animal products.

A large area of Pakistan, very important for wildlife, remained outside the law. The legislation did not provide for the management of species or their habitat, and enforcement remained very weak throughout the country. Tight compartmental working of government departments foreclosed development of an integrated approach to conservation. Laws were enacted in isolation and were insufficiently publicised— including to those responsible for enforcement. Some confusion prevailed as to the application of wildlife protection laws (other than the Rules under the Forest Act) on Reserved and Protected Forests.

The Wildlife Enquiry Committee prepared a Model Wildlife Law, which was later adapted by all four provincial governments as well as local governments (AJK & NAs). The present legislation mainly consists of provincial acts and ordinances. These include:

- the Sindh Wildlife Protection Ordinance, 1972;
- the Punjab Wildlife (Protection, Preservation, Conservation and Management) Act, 1974;
- the Balochistan Wildlife Protection Act, 1974;
- the North West Frontier Province Wildlife (Protection, Preservation, Conservation and Management) Act, 1975;
- the Northern Areas Wildlife Preservation Act, 1975;
- the Islamabad Wildlife (Protection, Preservation, Conservation and Management) Ordinance, 1979;
- Azad Jammu and Kashmir Wildlife Act, 1975.

Laws on hunting in the Protected, Reserved and other categories of forests declared under the Forest Act (1927) and Hazara Forest Act (1936) were not changed by the wildlife laws of NWFP. Hunting was regulated by the Rules made under the Forest Acts. Hunting on private property was permitted in NWFP. Elsewhere, game animals (birds and animals) were designated as State property. Two Federal Acts are applicable in all the provinces, namely the Pakistan Forest Act, 1927 and the Pakistan Environmental Protection Act, 1997.

Legislative Needs Arising from Related Conventions and Programmes: Pakistan is a Party to a number of international conventions and programmes relating to biodiversity conservation, all of which carry implications for national legislation. Three conventions deal with species: the *Convention on the Conservation of Migratory Species of Wild Animals* (adopted in Bonn, Germany in 1979 and which Pakistan ratified in 1987); the *Convention of International Trade in Endangered Species of Wild Fauna and Flora (CITES)* (signed in Washington in 1973; Pakistan became a party in 1976), and the *Convention on Biological Diversity* (signed in Rio in 1992 and ratified by Pakistan in 1994). Pakistan is a party to two area-based treaties: the *Convention on Wetlands of International Importance* especially as Waterfowl Habitat (signed in Ramsar, Iran in 1971, and which Pakistan became a Party to in 1978); and the *Convention Concerning the Protection of the World Cultural and Natural Heritage* (signed at UNESCO, Paris in 1972). In addition to these treaties, Pakistan supports the UNESCO *Man and Biosphere (MAB)* programme (initiated in Paris in 1968) and has signed and ratified the *Convention for Combatting Desertification*.

Under the Bonn Convention, Pakistan's principle obligations are 'to protect certain endangered species listed in Appendix I of the Convention and to endeavour to conclude agreements for the protection and management of migratory species whose conservation status is unfavourable and of those whose conservation status would substantially benefit from the international co-operation deriving from an agreement (such species are listed in Annex II, de Klemm and Shine 1993).

Under CITES, Pakistan's principle obligations are to restrict the import and export of listed species. Appendix I lists endangered species of flora and fauna in immediate danger of extinction. Appendix II lists species not in immediate danger of extinction, but which may become so if trade restrictions are not applied. Appendix III lists species for which co-operation between Parties is desirable for their protection. A range of legislative measures are commended by the CITES Secretariat and IUCN for the adequate implementation of CITES (de Klemm 1993).

Under the Convention on Biological Diversity, signatories have made a commitment to conserve biological diversity, to use biological resources sustainably and to equitably share the benefits arising from the use of genetic resources. The main thrust of implementation is at the national level and includes the development of national biodiversity strategies and action plans.

The Ramsar Convention is primarily concerned with the conservation and management of wetlands included in the 'List of Wetlands of International Importance' (Davis 1994; de Klemm and Shine 1993). Parties are also required to promote the 'wise use' of wetlands on their territory and to take measures for the conservation of wetlands and waterfowl by establishing nature reserves on wetlands, whether they are listed or not. A Wetland Fund was set up in 1990 to assist Parties to discharge their obligations under the Convention. A range of legislative measures are required to implement the Ramsar Convention, including legislation for the conservation and wise use of wetlands in general, and of specific wetlands in particular, and for the division of jurisdiction among government agencies for the catchment-wide management of wetlands (Davis 1994).

Under the World Heritage Convention, Pakistan's principle obligation is to conserve and transmit to future generations the natural and cultural heritage situated on its territory (de Klemm and Shine 1993). The inclusion of a site on the World Heritage List requires the approval of the World Heritage Committee. A special financial mechanism, the World Heritage Fund, has been established to assist Parties to discharge their obligations in respect of listed sites, with great success.

The only world-wide programme for the establishment and conservation of protected areas is the Biosphere Reserve network which was developed under UNESCO's Man and Biosphere Programme (de Klemm and Shine 1993). As there is no treaty, nor any legally binding obligations governing this network, designations of Biosphere Reserves are made on a purely voluntary basis.

Pakistan has signed and ratified the UN Convention on Combatting Desertification (full title: 'UN United Nations Convention to combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa'). Though this Convention does not directly address biodiversity, it addresses the degradation of arid and semi-arid rangelands.

Recent Developments: In 1993, the National Conservation Strategy (NCS) was framed as a statement of national environmental policy. Developed following extensive consultations with major stakeholders, a main aim is to facilitate effective co-ordination between the actions of federal and provincial governments, NGOs, the private sectors, local bodies and local communities in pursuit of sustainable development. The NCS goals - "conservation of natural resources", sustainable development, and improved efficiency in the use and management of resources" - are defined in broad terms. Though "biodiversity conservation" constitutes one of the 14 "core programmes" of the NCS, and though other NCS core programmes touch on biodiversity-related issues, there is an insufficient articulation of conservation and sustainable use measures. The NCS recognises the shortfall in identifying the need to draw up a national wildlife use and conservation policy as a priority.

The Eighth Five Year Plan of GOP identifies the need to develop provincial conservation strategies to implement the NCS. The Sarhad Provincial Conservation Strategy (GoNWFP 1996) has been completed and others (or Baluchistan and Northern Areas) are in preparation. While the SPCS is more specific than the NCS about actions needed, with a chapter devoted to 'biological diversity, parks and protected areas', it too does not comprehensively address the requirements of the Convention. Indeed, the SPCS refers to the current national biodiversity strategy and action planning process and the need to develop an equivalent provincial biodiversity strategy and action plan. In 1998, the GOP finalised a National Biodiversity Action Plan to conform with the CBD and to propose and prioritise measures which secure conservation and sustainable use objectives. Under the PRIF, a draft Wildlife Policy and a draft Model Wildlife Law have been prepared and are currently under review by provincial governments.

ANNEX X: TERMS OF REFERENCE - STAFF

1. National Project Director

Background

The National Project Director (NPD) is the operational focal point for the project within the Ministry of Environment, Local Government and Rural Development. The NPD will be a senior staff member of the Ministry at least at the Joint Secretary or Director General level who will act as NPD in addition to his/her regular work.

Duties and Responsibilities

1. Act as the focal point and responsible party for the project in the Government executing agency (MELGRD);
2. Ensure that all Government inputs committed to the project are available
3. Ensure that the Project Manager/CTA is empowered to implement the project;
4. Assist the Project Manager/CTA, as necessary, to resolve implementation problems;
5. Represent the project at Project Steering Committee meetings;
6. Provide assistance in the co-ordination of project activities that involve other government agencies.

Selection Criteria

1. Authority and seniority in national executing agency that is appropriate to the project;
2. English language reading, writing and speaking skills;
3. Technical knowledge and experience related to the project;
4. Leadership and supervisory experience;
5. Time available according to needs of project.

2. Project Manager/Chief Technical Advisor

Background

The Project Manager/Chief Technical Advisor (CTA) has responsibility for the overall management and coordination of the project in the two regions of operation (NWFP and Northern Areas). During the first three years of the project, an international CTA will be responsible for initial project mobilisation and implementation. A national Project Manager will take over in year 3 and supervise two Regional Project Managers responsible for field implementation (required because of the geographic spread and remoteness of the four Conservancies).

Duties and Responsibilities

1. Supervise and coordinate production of project outputs according to the project document and the procedures in the Project Cycle Operations Manual;
2. Select, recruit and supervise two Regional Project Managers and one Project Administrator;
3. In collaboration with the UNDP Country Office, ensure that all MoUs are prepared and negotiated with project partners;
4. Mobilise all project inputs not covered by implementing agency letters of agreement in accordance with the relevant procedures in Project Cycle Operations Manual and authorise expenditures for these inputs;
5. Supervise preparation and revision of the project work plans, budgets and financial plans;
6. Organise and coordinate project activities according to the work plan in order to produce the outputs;
7. Regular liaison with the UNDP Country Office, governments and project partners;

8. Timely preparation and submission of financial reports, the Annual Project Report (APR) and any other required progress reports;
9. Report to the NPD on a regular basis;
10. Identify and resolve implementation problems with the assistance of the NPD if necessary;
11. Represent the project on the Project Steering Committee.

Selection Criteria

1. Post-graduate degree in social sciences or natural resource management with at least 15 years professional experience;
2. Ability to effectively coordinate a large, multi-disciplinary project involving several different stakeholders;
3. Experience in implementing community-based conservation projects;
4. Ability to use tact and diplomacy to resolve conflicts and achieve results;
5. Excellent English language writing and speaking skills.

3. Project Administrator

Background

The Project Administrator will be responsible for providing overall administrative support to the Project Manager/CTA in co-ordinating project management between NAs and NWFP, and reporting to the executing agency and UNDP.

Duties and Responsibilities

1. Ensure timely preparation and submission of quarterly financial reports as per rules and procedures established by UNDP;
2. Ensure timely preparation and submission of quarterly and annual project progress reports;
3. Provide guidance to regional and field staff in the preparation of financial and operational progress reports;
4. Assist in the recruitment and processing of new project staff;
5. Provide logistic support to the regional Project Managers for procurement of equipment, and preparation of service contracts;
6. Interact closely with regional staff and project activities, and provide advice on project planning, implementation and monitoring according to the incumbent's area of expertise;
7. Organise project related meetings, particularly those of the PSC and PMCs.

Selection Criteria

1. Advanced degree in Business Administration and/or Accounting;
2. A minimum of 3 years experience in managing finances for large-scale projects;
3. Excellent communication skills (particularly in writing) in Urdu and English;
4. Strong computer skills (MS Office), especially for spreadsheets and work plans.

4. Executive Secretary

Background

The Executive Secretary will work under the direct supervision of the Project Manager/CTA and will be responsible for providing overall secretarial support.

Duties and Responsibilities

1. Provide secretarial support to the Project Manager/CTA and Project Administrator including independent handling of routine letters and queries, in writing or verbally, as appropriate, scheduling appointments, answering phone calls, and miscellaneous related activities;
2. Assist in processing administrative and financial management forms, particularly processing of travel request forms, payment request forms, leave applications, etc.;
3. Co-ordinate travel arrangements, both domestic and international, for all staff members;
4. Co-ordinate logistical arrangements for all meetings, in house as well as others;
5. Desktop formatting, typing and/or editing of all correspondence, reports and proposals for staff members of the MACP;
6. Update and maintain database currently in use in the Project for mailing of newsletters, correspondence, etc.;
7. Ensure proper filing of all office correspondence and important project documents of assigned subject;

Selection Criteria

1. Graduate with a minimum of 3 years of experience;
2. Excellent computer skills specially typing, word processing and using spread sheets;
3. Ability to edit, format and organise reports;
4. Fluency in Urdu and English.

5. Regional Project Manager (2 positions)

Background

The Regional Project Manager (RPM) is responsible for the day to day, operational management of the project in the region (NWFP or Northern Areas). He/she will plan, initiate, manage and monitor project activities. The RPM will have a dual reporting relationship to the overall Project Manager/CTA and to a government counterpart (Conservator of Wildlife in NWFP and Chief Conservator of Forests, Parks and Wildlife in Northern Areas).

Duties and Responsibilities

1. Select, recruit and supervise Project professional staff and administrative support staff;
2. Prepare and revise project work plans, budget and financial plans;
3. Organise and implement project activities according to the work plans;
4. Prepare and submit regular financial reports, quarterly progress reports (QPRs) and other technical reports on project implementation;
5. Develop and coordinate training programs and short-term consultancies;
6. Guide the social organisation and conservation planning process in close consultation with AKRSP;
7. Facilitate good working relationships between project staff, communities and local administration;
8. Authorise project expenditures in the field;
9. Identify and resolve implementation problems, with the assistance of the Project Manager/CTA or government counter part, if necessary;
10. Represent the project on the Project Management Committee;
11. Provide other technical assistance, as appropriate.

Selection Criteria

1. Post-graduate degree in social sciences or natural resource management with at least 10 years experience;
2. Proven ability to build and lead multi-disciplinary teams of technical staff;
3. Supervisory and project management experience, preferably from the mountain areas;

4. Sensitivity to gender issues;
5. Excellent communication skills in both English and Urdu.

6. Secretary (2 positions)

Background

Under the direct supervision of the Regional Project Manager, the incumbent will provide secretarial services for the project in the region.

Duties and Responsibilities

1. Provide clerical support to all regional staff, including typing, faxing documents, courier mailing, general mailing, filing, and miscellaneous related activities;
2. Act as receptionist, handling visitors, answering phone calls and coordinating visits to the field units;
3. Ensure proper filing of all office correspondence and important project documents;
4. Ensure daily cleanliness of office rooms and upkeep of premises;
5. Ensure adequate supply of stationary, its distribution and inventory of stocks;

Selection Criteria

1. Graduate with minimum of 3 years work experience;
2. Fluency in computer skills, especially word processing and spread sheets;
3. Good typing speed and ability to manage day to day office work;
4. Fluent in Urdu and English.

7. Accounts Officer (2 positions)

Background

The incumbent, under the direct supervision of the Regional Project Manager, will be responsible for maintaining all project accounts in the region.

Duties and Responsibilities

1. Prepare Cash, Bank and Journal vouchers;
2. Maintain cash and bank books, and update ledger accounts;
3. Maintain funds for the project and report to Manager Finance and Accounts on a timely basis;
4. Prepare monthly reconciliations;
5. Maintain and update property ledgers;
6. Suggest and implement internal control procedures in all Field Units with the assistance of the Project Administrator and the Finance Office at Islamabad;
7. Assist staff in the preparation and timely submission of administrative and financial management forms;
8. Receive and review monthly reports from all Field Offices, and prepare consolidated report for the Project Administrator;

Selection Criteria

1. B.Com with 2-4 years experience in handling financial and accounting matters;
2. Ability to prepare reports especially on spread sheets;
3. Fluency in computer skills;
5. Fluency in Urdu and English.

8. Rural Sociologist (2 positions)

Background

Reporting to the Regional Project Manager, the Rural Sociologist will be responsible for developing and implementing a Social Organisation strategy to mobilise communities in support of conservation and sustainable use activities. This will be done in close collaboration with project partners (particularly AKRSP).

Duties and Responsibilities

1. Develop community entry strategy and initiate first dialogues with community leaders;
2. Oversee implementation of gender in conservation activities and their full integration into the project framework;
3. Facilitate conservation management planning at the valley and Conservancy levels;
4. Establish baseline information on social indicators in support of a suitable impact and process monitoring system;
5. Document social organisation process and lessons learnt on a regular basis;
6. Co-ordinate socio-economic research studies in the project area;
7. Supervise social organisers working in the field units to strengthen community capacity for conservation;

Selection Criteria

1. Post-graduate degree in social sciences with at least 5 years of relevant field experience;
2. Understanding of conservation and rural development issues, particularly in mountain environments;
3. Ability to lead and motivate a team of social organisers;
4. Excellent communication skills in both Urdu and English.

9. Monitoring and Evaluation Specialist

Reporting to the Project Manager/CTA, the Monitoring and Evaluation Specialist will be responsible for developing and implementing a monitoring and evaluation system for the project. Specifically, the responsibilities would include identification of monitoring indicators, developing procedures for: data collection, process monitoring, participatory M&E system, periodic reporting and internal evaluation framework. The above-mentioned will be done in close collaboration with the Project Manager/CTA and M&E consultant.

Duties and Responsibilities

1. Take the lead role in identifying and implementing an overall Planning, Monitoring and Evaluation (PM&E) system for the project in relation to: project results, activities, indicators, and review procedures;
2. Take the lead role in establishing data collection procedures;
3. Review, adopt, test and modify existing/available M&E tools, techniques and methods to suit the specific needs of the project;
4. Provide guidance and support to regional project teams in implementation and/or modification of data collection, monitoring and review procedures, and assessment of results and activities;
5. Prepare and implement a programme for enhancing the M&E capacities of project team members;
6. Organise and conduct M&E workshops for project team and community members;
7. Facilitate annual and periodic review and assessment exercises;
8. Keep abreast of new methods and techniques with regard to M&E of biodiversity conservation initiatives in South/South East Asia region;

Selection Criteria

1. Post-Graduate degree in social sciences or natural resource management with 5 years of experience;
2. Proven ability to develop and establish monitoring systems and carry out project planning exercises;
3. Ability to lead and motivate team members;
4. Excellent writing skills and ability to fluently speak English and Urdu.

10. Social Organiser (Field Worker)

Background

Reporting to the Rural Sociologist, the Social Organisers will be based in the field units with primary responsibility for social mobilisation and community capacity building in the conservancies.

Duties and Responsibilities

1. In close collaboration with AKRSP, initiate dialogues with target communities in new areas;
2. Mobilise community representatives for valley-level interactions and conservation planning with special consideration for gender needs;
3. Facilitate the establishment of Valley Conservation Committees and women's subcommittees, where appropriate;
4. Facilitate valley-level PLAs and village forums at both valley and Conservancy levels;
5. Assist in the collection and analysis of socio-economic and other resource data from communities;
6. Assist in the training of village activists or VCCs in support of conservation activities;
7. Maintain close and regular contact with target communities and actively work to resolve any conflicts within or between communities, in consultation with other project and AKRSP staff.

Selection Criteria

1. University degree in social sciences with at least 3 years of relevant field experience;
2. Ability to work in the field for extended periods of time, often under difficult environmental conditions;
3. Excellent communication skills, preferably in the local dialects.

11. Biodiversity Specialist (2 positions)

Background

Reporting to the Regional Project Manager, the Biodiversity Specialist will be responsible for preparation of Conservation Plans and for developing and implementing monitoring systems and activities in support of conservation and sustainable use of biodiversity.

Duties and Responsibilities

1. Provide overall technical assistance to the development and delivery of biodiversity related project activities and conservation planning;
2. Supervise and train staff in the collection, analysis and application of biological data;
3. Establish baseline biological indicators as part of a community-based wildlife monitoring system;
4. Supervise a field team of Conservation Planners in the preparation of conservation plans at the valley and conservancy levels;
5. Co-ordinate biodiversity research studies in the project area;
6. Provide technical inputs in education/awareness materials and project report production.

Selection Criteria

1. Post-graduate degree in biological sciences with at least 5 years of relevant work experience;
2. Strong scientific background in conservation planning and biodiversity monitoring of wild fauna and flora, particularly in mountain environments;
3. Ability to lead and motivate a team of Conservation Planners;
4. Experience in the development of sustainable use opportunities from wild fauna and flora would be a distinct advantage;
5. Excellent communication skills in Urdu and English.

12. Conservation Planner (Field Worker)

Background

Reporting to the Biodiversity Specialist, the Conservation Planners will be based in the field units with primary responsibility for the preparation of conservation plans at the valley and Conservancy levels.

Duties and Responsibilities

1. In close collaboration with the Social Organiser, initiate dialogues with community leaders and activists to promote valley-level interactions and conservation planning;
2. Undertake resource and needs assessments using valley-level PLAs;
3. Assist in the training of Village Wildlife Guides and other community activists;
4. Participate in biological field surveys and facilitate the involvement of VWGs in regular monitoring surveys of wild resources;
5. Assist VCCs and DCCs in preparing Conservation Plans at the valley and Conservancy levels;
6. Develop operational work plans to implement the conservation plans;
7. Assist in providing VCCs and DCCs with policy and legal support to enable community conservation efforts;
8. Maintain close and regular contact with target communities to facilitate conservation planning.

Selection Criteria

1. University degree in biological sciences/natural resource management with at least 3 years of relevant field experience;
2. Ability to work in the field for extended periods of time, often under difficult conditions;
3. Excellent communication skills, preferably in the local dialects.

13. Conservation Education Coordinator (2 positions)
[Under Education & Awareness sub contract]

Background

The Conservation Education Coordinator will be based in the regional office and will have a dual reporting requirement, reporting to both the Regional Project Manager and WWF's regional representative to ensure that activities under Output 2 are implemented, and co-ordinated with the ongoing education work of WWF. He/she will lead the development and delivery of education/awareness activities in support of project activities.

Duties and Responsibilities

1. Develop and implement communication strategy in collaboration with ongoing activities under NACS and CCS;
2. Design and implement a "Schools in Conservation" programme through teacher training workshops, lectures, and development of appropriate resource materials;

3. Develop informal conservation awareness programs, particularly for use by Ulemas;
4. Prepare regular conservation fact sheets for local radio/print media;
5. Facilitate discussion programmes on conservation issues at local radio stations; and,
6. Supervise Education Officers in the delivery of education/awareness activities in the field.

Selection Criteria

1. Post-graduate degree in education, journalism or related field with at least 5 years of relevant work experience;
2. Strong background in developing training and resource materials in support of conservation activities;
3. Ability to lead and motivate field teams in the delivery of education/awareness programmes at the conservancy level;
4. Excellent computer and communication skills.

14. Education Officer (Field Worker)

Background

Reporting to the Education Coordinator, the Education Officer will be part of the field team and will be responsible for the delivery of education/awareness programmes in the Conservancies.

Duties and Responsibilities

1. Develop close working relationships with key teachers, community activists and religious leaders for education/awareness activities;
2. Assist in the delivery of teacher training workshops, lectures and resource materials;
3. Organise conservation awareness workshops for religious leaders and help develop appropriate resource materials for use by Ulemas;
4. Assist in the planning and delivery of other training workshops in the Conservancies;
5. Promote the establishment and activities of youth organisations in support of conservation awareness; and,
6. Work as an integral part of the field teams in the Conservancies.

Selection Criteria

1. University degree in education journalism or related field with at least 3 years of relevant work experience;
2. Ability to work in the field for extended periods of time, often under difficult conditions;
3. Excellent communication skills, preferably in the local dialects.

ANNEX XI: TERMS OF REFERENCE – SUB-CONTRACTS

I. Output 2

Subcontract:
Conservation Awareness and Education

Objectives:
To contribute to Output 2 by imparting conservation values to local communities through a well-targeted conservation education and awareness initiative, and by developing mechanisms for sharing of information/experiences regarding wild resource management amongst villagers.

Activities:

1. Communication Strategy
   - ➢ Appropriate channels and modes of communication will be required to facilitate knowledge of project activities, impact and lessons learned amongst stakeholders and outsiders.
   - Assess Conservancy-specific communication and conservation awareness needs through a scoping exercise
   - Develop linkages with education/awareness initiatives of Regional Conservation Strategies

2. Awareness Material
   - ➢ Teaching materials and aids will be needed to impart conservation values amongst community members and school teachers.
   - Develop training material and educational modules for use in schools
   - Design resource material for use in community outreach
   - Develop conservation awareness materials for use by religious leaders

3. Schools in Conservation
   - ➢ Institutionalisation of conservation education in schools will require:
   - Selecting teachers for training as trainers
   - Workshops for training of school teachers as training instructors
   - Obtaining requisite permission from concerned department for integrating conservation awareness related material into school curricula
   - Carrying out an assessment of impact resulting from training imparted

4. Community Outreach
   - ➢ Training would be imparted to motivators and VWGs to enable them to impart awareness education at community forums.
   - Selection of education co-ordinators and officers for technical assistance
   - Organise awareness raising activities as part of inter village exchanges

5. Media Outreach:
   - ➢ Disseminate information on project activities, goals, objectives and achievements to a wide audience scattered over a large geographical area.
   - Prepare regular conservation fact sheet for radio/print media
   - Organise conservation-related discussion programs on radio

6. Religious Leaders Outreach:
   - ➢ Maximise outreach of conservation awareness initiatives amongst community members by enlisting support of religious leaders.
   - Organise conservation awareness workshops for religious leaders

7. Youth Conservation Activities
   - Target school and non-school youth for conservation awareness raising efforts by organising:
   - "Outside classroom" activities and events
   - Lectures on conservation related topics

Financing:

Activity	US$
24.01. Communication Strategy	80,000
24.02. Awareness Materials/Equipment	95,000
24.03. Schools in Conservation	85,000
24.04. Community Outreach	258,734
24.05. Media Outreach	40,000
25.06. Religious Leaders Outreach	25,000
24.07 Youth Conservation Activities	30,000
Total	**613,734**

Accountability:
The sub-contractor will be responsible to the implementing agency for the quality and timelines of the products required under this contract.

II. Output 3

Subcontract:
Monitoring and Evaluation of Project Impacts

Objectives:
Contribute to fulfilment of Output 3 by assisting in the establishment of a monitoring and evaluation system for assessing project impacts and ecological and socio-economic outcomes.

Activities:

1. Technical Assistance
   - Further refinement and strengthening of monitoring mechanisms (established under PRIF) will be required through:
   - Data collection for biological/proxy indicators
   - Integrating social and biological monitoring indicators
   - Establishing mechanisms for streamlining monitoring feedback into decision-making
   - Identification of training needs in survey methods
   - Designing mechanism for monitoring implementation of conservation plans

2. Training (PME)
   - Build community capacity, for undertaking social and biological monitoring, through a "learning by doing" approach.
   - Providing "on the job" training to VWGs in survey techniques, data recording and analysis methods
   - Institutionalise joint "watch and ward" measures

3. Biological Assessments
   - A comprehensive baseline data on wild flora and fauna will be required to underpin initiatives for conservation and sustainable use of resources.
   - Expanding of baseline database through additional sampling of plants and wildlife

- Listing of biological/proxy indicators and study sites
- Undertaking further biological sampling to elicit trends and monitor impacts
- Forming partnerships with research institutions and IUCN's Global Network for scientific backstopping of monitoring

4. Lessons Learned Documentation
   - ➢ Assessing project methodology, impact and planned implementation of conservation plans will require:
   - Preparing process monitoring and impact case studies
   - Preparing thematic reports

5. Project Information Systems
   - ➢ In order to prepare and implement conservation plans, the project will require accurate information on existing habitats.
   - Purchase of satellite imagery
   - Mapping habitat and land-use zones

Financing:

Activity	US$
22.01. Technical Assistance	15,000
22.02. Training (PME)	15,454
22.03. Biological Assessments	270,000
22.04. Lessons Learned Documentation	60,000
22.05. Project Information Systems	130,000
Total	**490,454**

Accountability:
The sub-contractor will be responsible to the implementing agency for the quality and timelines of the products required under this contract.

III. Output 5

Subcontract:
Sustainable Use Demonstrations -Trophies and Game birds

Objectives:
Contribute towards enhancement of the knowledge base of communities regarding sustainable use of biodiversity components, and apply results in on-going community development activities. This sustainable use demonstration will strengthen the existing Ibex and Markhor trophy hunting programme in all 4 Conservancies. It will also seek to manage, on a sustainable basis, the hunting and capture of game birds (primarily partridges and pheasants) in the Qashqar and Nanga Parbat Conservancies.

Activities:

1. Selection of Field Sites
   - ➢ Demonstration sites for barrier removal activities in support of sustainable use will be identified.
   - Develop socio-economic and biological criteria for site selection
   - Select demonstration sites within Conservancies through a consultative process

2. Biological/Socio-Economic Assessment
   - ➢ Demand and supply side determinants of sustainable use will be assessed.

- Collect information on population status of target fauna
- Document existing levels of harvest for target species
- Determine biological thresholds for sustainable use of target species
- Elaborate costs and benefits of sustainable use with regard to biodiversity conservation
- Collect information on market chains and determinants of demand for harvest of target species
- Assess distribution of benefits from existing markets
- Identify opportunities for capturing value added as a conservation incentive
- Identify social and economic constraints to sustainable use management

3. Management Planning
   - ➢ Management plans would need to be prepared for the target species, providing information on population status, detailing management needs and clearly articulating management modalities.
   - Assist communities in preparation of species management plans
   - Obtain credible scientific authentication of plans

4. Institutional Strengthening
   - ➢ Build capacity and extend appropriate user rights to communities for improved management and sustainable use of wild resource.
   - Extend usufruct rights to local communities for resource harvests
   - Institute permitting procedures, where required
   - Develop and test benefit sharing arrangements
   - Enhance capacities of VCCs for collective planning and management of sustainable use of target species
   - Strengthen capacities of DCCs to approve, monitor and regulate sustainable use activities
   - Train cadres of sustainable use extension agents in adaptive management techniques
   - Ensure policy congruence in support of sustainable use

5. Impact Monitoring
   - ➢ Assessment of intended outcome of conservation plans will require periodic monitoring of wild resource status and levels.
   - Develop indicators for monitoring
   - Build community capacity for participatory monitoring and evaluation
   - Establish independent scientific auditing mechanisms
   - Conduct plant surveys
   - Prepare case studies

Financing:

Activity	US$
25.11. Selection of Field Sites	6,000
25.12. Biological/Socio-Economic Assessment	115,000
25.13. Management Planning	15,000
25.14. Institutional Strengthening	53,000
25.15. Impact Monitoring	20,000
Total	**209,000**

Accountability:
The sub-contractor will be responsible to the implementing agency for the quality and timelines of the products required under this contract.

IV. Output 5

Subcontract:
Sustainable Use Demonstrations-Ecotourism

Objectives:
Contribute towards enhancement of the knowledge base of communities regarding sustainable use of biodiversity components, and apply results in on-going community development activities. This subcontract will focus on developing ecotourism potential in 3 Conservancies (Gojal, Nanga Parbat and Tirichmir) with active community involvement.

Activities:

1. Assessment of Ecotourism
   - ➢ In order to devise a strategy, a detailed study of the potential and constraints for ecotourism development in the project area will be undertaken.
   - Study detailing the scope for development of ecotourism in the region (current and future trends)

2. Assessment of Cost/Benefit for Conservation.
   - ➢ Successful initiatives for enhancing ecotourism potential in the target Conservancies will require a thorough study of potential costs and benefits.
   - Study of biological cost/benefit of ecotourism initiatives
   - Study of economic cost/benefit of ecotourism initiatives

3. Develop Code of Conduct
   - ➢ Successful implementation of ecotourism initiatives will require establishing guidelines and procedures for management of ecotourism.
   - Impact assessment with inputs from project specialists
   - Booklet outlining "Do's and Don'ts" for potential ecotourists
   - Identify and apply appropriate fee schedules and leverage trekking fee for financial mechanism (Trust Fund)

4. Develop Interpretational Materials
   - ➢ A publicity campaign will be needed to disseminate information to, and elicit interest of, potential ecotourists to specific demonstration sites within the Conservancies.
   - Develop signage at appropriate sites
   - Prepare brochures, maps and posters (photos)

5. Promote Ecotourism in Target Sites
   - ➢ Successful initiatives will require establishing linkages with organisations/individuals involved in the tourism industry and promoting local initiatives which are congruent with objectives of ecotourism.
   - Develop a marketing strategy for ecotourism
   - Establish links with local and national tour operators
   - Set up a Web page on the Internet
   - Harness opportunities for increasing value added from ecotourism at the local level

6. Training in Tourism Management and Impact Monitoring
   - ➢ Community capacity to manage ecotourism to their own benefit will need to be enhanced:
   - Train VCCs in visitor management techniques
   - Train local entrepreneurs in negotiating techniques to increase benefit capture at the local level
   - Training of community members as ecotourist guides
   - Develop indicators for monitoring impact of ecotourism
   - Develop community capacity for participatory monitoring

Financing:

Activity	US$
25.31. Assessment of Ecotourism Potential	15,000
25.32. Assess Cost/Benefit for Conservation	25,000
25.33. Develop Codes of Conduct	15,000
25.34. Develop Interpretational Materials	40,000
25.35. Promote Ecotourism in Target Sites	38,000
25.36. Training in Tourism Management	80,000
Total	**213,000**

Accountability:
The sub-contractor will be responsible to the implementing agency for the quality and timelines of the products required under this contract.

V. Output 5

Subcontract:
Sustainable Use Demonstrations-Economic/Medicinal Plants

Objectives:
Contribute towards enhancement of the knowledge base of communities regarding sustainable use of biodiversity components, and apply results in on-going community development activities. This sustainable use demonstration will focus on enhancing the productive (commercial) cultivation of plants with economic and medical use potential. As a precursor to the management/cultivation of other varieties of plants, the initial emphasis will be on management of Morel mushrooms in Qashqar Conservancy, and cultivation of cumin in Nanga Parbat and Tirichmir Conservancies.

Activities:

1. Selection of Field Sites
   - ➢ Demonstration sites for barrier removal activities in support of sustainable use will be identified.
   - Develop socio-economic and biological criteria for site selection
   - Carry out vegetation mapping exercise
   - Select demonstration sites within Conservancies through a consultative process

2. Biological/Socio-Economic Assessment
   - ➢ Demand and supply side determinants of sustainable use will be assessed.
   - Collect information on population status of target flora
   - Document existing levels of harvest for target species
   - Determine biological thresholds for sustainable use of target species
   - Elaborate costs and benefits of sustainable use with regard to biodiversity conservation
   - Collect information on market chains and determinants of demand for harvest of target species
   - Assess distribution of benefits from existing markets
   - Identify opportunities for capturing value added as a conservation incentive
   - Identify social and economic constraints to sustainable use management

3. Management Planning
   - ➢ Management plans would need to be prepared for the target species, providing information on population status, detailing management needs and clearly articulating management modalities.
   - Assist communities in preparation of species management plans
   - Obtain credible scientific authentication of plans

4. Institutional Strengthening
   - ➢ Build capacity and extend appropriate user rights to communities for improved management and sustainable use of wild resource.
   - Extend usufruct rights to local communities for resource harvests
   - Institute permitting procedures, where required
   - Develop and test benefit sharing arrangements
   - Enhance capacities of VCCs for collective planning and management of sustainable use of target species
   - Strengthen capacities of DCCs to approve, monitor and regulate sustainable use activities
   - Train cadres of sustainable use extension agents in adaptive management techniques
   - Ensure policy congruence in support of sustainable use

5. Impact Monitoring
   - ➢ Assessment of intended outcome of conservation plans will require periodic monitoring of wild resource status and levels.
   - Develop indicators for monitoring
   - Build community capacity for participatory monitoring and evaluation
   - Establish independent scientific auditing mechanisms
   - Conduct plant surveys
   - Prepare case studies

Financing:

Activity	US$
26.21. Selection of Field Sites	14,000
26.22. Biological/Socio-Economic Assessment	83,729
26.23. Management Planning	10,000
26.24. Institutional Strengthening	79,000
26.25. Impact Monitoring	20,000
Total	**206,729**

Accountability:
The sub-contractor will be responsible to the implementing agency for the quality and timelines of the products required under this contract.

VI. Output 6

Subcontract:
Policy and Legal Support

Objectives:
Facilitate reform of Government policies and legislation to support management of the Conservancies and institutional capacities for managing participatory conservation models.

Activities:

1. Policy Reform
   - ➢ Reforms in policies of Government will be necessary for effecting improved management of conservation initiatives.
   - Develop enabling wildlife policy for NWFP and NAs
   - Revise Protected Areas classification system to include Conservancies
   - Formally designate Conservancies as protected areas under revised system of classification
   - Draft rules and regulations specific to Conservancies that facilitate local management

- Extend appropriate authority to DCCs for enforcement of regulations

2. Legal Drafting
   - New legislation and regulations will need to support new approaches in conservation and sustainable use of wild resources.
   - Complete legal review of rules prepared under the NAs Wildlife Preservation Act ('75)
   - Customise a Model Wildlife Law for NWFP
   - Review draft through a series of consultative workshop
   - Revise and submit legislation for Government approval
   - Assist the CITES Management Authority in Pakistan (NCCW) to provide necessary regulations to control the trade in endangered species from the Conservancies

Financing:

Activity	US$
23.01. Policy Reform	60,000
23.02. Legal Drafting	35,000
Total	**95,000**

Accountability:
The sub-contractor will be responsible to the implementing agency for the quality and timelines of the products required under this contract.

ANNEX XII: EQUIPMENT LIST

	Item	Quantity	Specifications	Estimated Price ($)	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7
Regional Offices	Computers-Pentium	6	With modem and UPS	15,000	15,000			15,000			
	Printer	4	Laser printer	2,400	2,400			2,400			
	Scanner	2		2,000	2,000			-			
	Generator	1	Heavy Duty	3,000	3,000			-			
	Photocopier	2		8,000	8,000			8,000			
	Television	2		1,300	1,300			1,300			
	VCR	2		1,600	1,600			1,600			
	Overhead Projector	2		1,400	1,400			1,400			
	Slide Projector	2		1,200	1,200			1,200			
	Fax Machine	2		1,000	1,000			-			
	Furniture		Desks, chairs, racks.	4,000	4,000			1,310			
	Total			40,900	40,900			32,210			
Field Offices	Generator	6		9,000	9,000						
	Computers	6	Pentium with UPS	11,290	11,290			11,290			
	Printers	6	Laser printer	3,000	3,000			3,000			
	Photocopier	6	Light Duty	6,000	6,000						
	Global Positioning Systems	6		2,000	2,000						
	Binoculars	100		18,000	18,000						
	Spotting scopes	10		4,000	4,000						
	Cameras	6		1,727	1,727						
	Camping Equipment		Tents, Sleeping Bags	6,000	6,000						
	Furniture		Desks, Chairs, Racks.	6,000	6,000						
	Total			70,017	70,017			14,290			
Islamabad Office	Photocopier	1	Heavy Duty	4,000	4,000						
	Computer	5	Pentium Processor	12,500	2,500			10,000			
					6,500			10,000			
					114,417			56,500			
			Office equipment:		78,690			56,500	Total OE & FE		170,917
			Field Equipment:		35,727			-	10% Contingencies		17,093
					114,417			56,500			188,010

ANNEX XIII: FINANCIAL MECHANISM

A. Conservancy Trust Fund

Management of the Conservancies will incur recurrent costs. Many of these costs are expected to be absorbed by villagers, mainly through providing sweat equity inputs and small financial contributions. However, a portion of the costs will need to be externally supported. The following activities are considered necessary to operate the Conservancies in the long-term, and for which outside funding will be needed:

- Renumeration of Village Wildlife Guides (for "watch and ward" activities);
- Salaries of Village Sustainable Use Specialists (portion of salaries to be funded, remainder to be collected through fees);
- Technical assistance and training for villagers, including training and refresher courses for Sustainable Use Specialists;
- Costs of periodic DCC Meetings (transport, per diems etc.);
- Costs of Conservancy Cluster Level forums, arranged to enable villagers to discuss issues of common concern and resolve conflicts;
- Monitoring and evaluation activities;
- On-going awareness and education work.

Indicative Costs per Conservancy (in Rs.)

Item	Unit Cost	Total Cost
Village Wildlife Guides	Rs.1500/ month x 240 man months (approximate)	Rs.360,000
Legal Costs	Rs.60,000	
Sustainable Use Specialists	Rs.1500/ month x 60 man months	Rs.90,000
Technical Assistance	Rs.25,000/ month x 12 man months	Rs.300,000
COMMITTEE MEETINGS	2 per year at Rs.20,000 each	Rs.40,000
Cluster Forums	Rs.100,000 per forum	Rs.100,000
Monitoring Inputs	Rs.25,000 x5 months	Rs.125,000
Awareness Work	Extension: Rs.100,000 School Activities: Rs.50,000	Rs.150,000
Miscellaneous		Rs.100,000
Total:		**Rs.1,165,000**

The scope, magnitude and costs of management will vary from area to area depending on social, economic, and institutional circumstances, and based on the degree of threat facing biodiversity. Initial cost estimates indicate that, at current prices, the minimum cost will amount to some Rs.1.16 million per Conservancy per annum (equivalent to US$23,000 at current exchange rates)[22]. Thus the total amount for the four Conservancies will amount to approximately Rs.4.4 million per year (US$88,000). It is proposed that a Conservancy Trust Fund be established, with the proceeds being used to cover these expenses.

In designing the MACP, planners were guided by the obvious necessity to ensure effective and cost-efficient administrative arrangements for operation of the proposed fund. The PRIF phase has researched requirements for establishing an Environmental Trust Fund[23]. A number of materials have been prepared,

[22] These costs do not include the costs of inputs provided by government, including staff salaries and operational expenditures, nor do they include the cost of on-going social forestry programmes, and those associated with the development and maintenance of productive physical infrastructure.

[23] While the PRIF was initially charged with investigating the feasibility of establishing a National Environmental Trust Fund, this mandate was modified based on the findings of the Independent Evaluation of the project (in April 1997). The Evaluation Mission argued that establishment of a National Fund lay outside the scope of the PRIF, given its focus on mountain ecosystems, and recommended instead that efforts be geared towards establishing a mountain areas conservation fund for the Northern Areas and North West Frontier Province.

including a Discussion / Concept Paper on the proposed Fund, a discussion paper on asset management options, a Legal Research paper on the Trust Structure, and an account of the Lessons Learned from Environmental Funds in other developing countries.

Objectives of the Fund:

The broad objective of the Fund is to provide a source of grant funding for community-based conservation within the proposed Conservancy areas. Sub- objectives are as follows:

- To provide stability in funding, delinked from government budget cycles;
- To support policing activities within the Conservancies— to ensure compliance with management regulations agreed to by both communities and government bodies responsible for oversight of conservation activities;
- To cover a portion of the costs of extension activities aimed at ensuring sustainable use management of wild resources;
- To meet expenses associated with cluster level institutional mechanisms developed to manage the Conservancies;
- To cover the costs of on-going technical assistance to communities and training to ensure application of best practice management methods;
- To provide stable funding for on-going conservation awareness and education activities; and
- To monitor the recurrent costs of impact monitoring and operational planning at the community level.

Establishment Process:

Establishment of the Fund will follow an iterative process, allowing for extensive stakeholder consultation. In light of emergent "best practices" and lessons learned from application of GEF-sponsored Environmental Funds in other developing countries, the process will be divided into three phases: [1] Design and Consultation; [2] Commencement; and [3] Operations.

1. Design and Consultation. The following activities will be undertaken:

a) Establishment of a Steering Committee to oversee design of the Fund. The Committee will include representatives from the Northern Areas Administration, the Government of North West Frontier Province, GOP, UNDP, AKDN, donor agencies, and IUCN. The Terms of Reference of the Committee will be to:
   - Evaluate design options;
   - Engage in consultations with major stakeholders regarding the objectives and modalities of the fund;
   - Review background material regarding Incorporation of the Fund, Asset Management Procedures, Trusteeship, Legal Aspects of the Fund, Fund Raising Strategies, Financial Management Arrangements, Disbursements, and Monitoring of Funds Application;
   - Reach consensus regarding design elements;
   - Co-ordinate Trust Fund design with activities of the Protected Areas Management Project (PAMP);
   - Oversee fund-raising efforts; and
   - Ensure donor requirements are met.

The Project Team will serve as the Secretariat for the Conservancy Fund Steering Committee, taking overall responsibility for convening stakeholder consultations, preparing technical papers, and finalising the funding proposal.

b) Establish mechanisms for stakeholder participation. The PRIF phase has researched several options for governance structures which will need to be considered by the Steering Committee. Options include:
   - Representation on the Governing Board (this offers stakeholders a role in funds governance);

- Participation in a general assembly (stakeholders could participate in a "Membership Forum" that provides an open forum for the discussion of issues, elects the governing Board, and discusses funding priorities); and
- Representation on Regional Advisory Committees established in the Northern Areas and North West Frontier Province (such Committees would have less powers than the General Assembly model i.e. they would not elect the governing board. However, they could provide technical advice to the Board);

c) Define legal structures, tax status and location of the trust. Options for governance and preferred operational mechanisms will need to be developed in line with existing legal structures in the country of location. A legal research paper pertaining to the establishment of trusts in Pakistan has already been completed by the PRIF team. Trust structuring options include:
   - A company registered by guarantee;
   - A trust established in accordance with the Trust Act; or
   - A registered NGO

   Under Pakistani Law, beneficiaries of trusts must be legally registered and capable of holding property. This may require that funds be channelled to Community Based Organisations in the Conservancies through a nationally registered NGO.

   A Trusts Operation unit would be established in Pakistan to receive the funds and manage day to day operations. The governing board would be responsible for policy making and monitoring performance.

d) Review of asset management options. Moneys will be managed by an investment fund, and would be invested in capital markets. A portion of the returns will be disbursed for field level activities, with the balance being retained and reinvested (to cover inflation and maintain the value of the initial endowment in real terms). One option is to link management of the fund with the management of similar funds in other countries. Such pooling would provide economies of scale in management, reducing administrative expenses. The Steering Committee will need to review investment options, and determine risk thresholds and target income levels.

2. Phase 2: Commencement of the Fund: In addition to on-going fund raising efforts, the following activities would be undertaken:

a) Operational Mechanisms for the Fund. An Operations Manual will be developed clearly specifying rules and operational procedures for the Fund. Policies and procedures would be developed to ensure that disbursements from the Fund are used only to cover the agreed costs of Conservancy management and not diverted for other purposes (i.e. use in other areas).

b) Legal establishment of the Conservancy Fund. This will involve incorporation, and establishment of asset management and Conservancy Fund operations sections, preparation and endorsement of constituent documents, Fund prospectus and by-laws, selection of Board of Directors, and agreements with the Asset Manager.

c) Administrative Structures: These need to be formulated for the smooth running of the day to day activities of the Conservancy Fund. A Systems Manual would be developed to detail the administrative structures in place.

d) Operational Mechanisms for the Fund: An operations manual will be developed clearly specifying rules and operational procedures for the fund.

e) Fund raising: An endowment of US$ 5 million (Rs 250 million) will be created. An initial endowment of US$ 3 million will be established through the MACP. Additional funds, amounting to US$ 2 million would need, however, to be raised over the life of the project— to give long-term security to the Fund. One option would be to raise a portion of the amount through charging user fees, including

trekking fees. Another option would be to solicit donations from private corporations, or depositing proceeds from sustainable use activities into the Fund. Success in fund raising will very much be correlated with the integrity of management and administrative efficiency. The following principles apply:

- Strong clear vision: Donors will need to be convinced that the trust meets their own funding objectives;
- Strong fund raising programme: The programme should have specific targets, and should be responsive to the needs of donors;
- Reaching for opportunities: Fund raising strategies will need to be innovative, soliciting investments outside of the traditional funding arena.

f) Finalisation of Details for Asset Management:
The Fund will be designed with a view to ensuring administrative efficiency and cost-effectiveness in management. An options paper will be prepared for consideration by the Steering Committee. The paper will cover the following aspects:

- In country costs and net income needs;
- Investment strategies to achieve gross income targets, including asset mix objectives;
- Asset management procedures;
- Roles and responsibilities of the funds manager (who will manage the portfolio of bonds, equities and cash deposits to achieve income targets);
- Criteria for selection of the funds manager (size of the firm, capacity, investment philosophy, risk management systems, past experience in managing environmental funds, management costs etc.);
- Eligibility criteria for disbursement from the Fund (in accordance with the objectives of the MACP);
- Checks and balances on the use of funds in the field;
- Performance monitoring criteria (i.e. performance indices) and monitoring procedures;
- Format of annual audit statements.

Offshore registration of the fund offers several benefits, and is standard practice in most national environmental funds. Some of the advantages of setting up an Offshore Conservancy Fund include:

- Providing asset security against domestic currency fluctuations;
- Obtaining tax free status (or virtually tax free);
- Drawing on the expertise of professional asset managers;
- Ensuring security of assets;
- Widening the range of available investment vehicles; and
- Improving administrative efficiency.

g) Preparation and endorsement of Articles of Incorporation, Fund Prospectus and by laws, selection of Board of Directors, and agreements with the Asset Manager.

h) Legal establishment of the trust. This will involve incorporation, and establishment of asset management and trust operations sections.

3. Phase 3: Operations. The following activities would be undertaken:

a) Capitalisation of the Fund: UNDP will review funds management modalities, including the location of the fund, the choice of asset manager, and the funding strategy and will release moneys into the Conservancy Fund account only if satisfied that the strategic plan, operating plan and administrative and accounting systems are transparent and robust. The lessons learned from the operation of similar funds in other countries will be taken on board in conducting the review.
b) Return on Investment. Funds will be set aside for a period of two years before returns are allocated for Conservancy management.
c) Management and review of First Project Cycle.

CONGRUENCE WITH GEF POLICY:

The recommendations made in the GEF Evaluation of Experience with Trust Funds (1988) have been fully considered in design. In particular:

- Given the interest generated by the PRIF phase, and based on consultations with potential donors, prospects for leveraging additional funding so as to capitalise the fund at US$ 5 million appear excellent. GEF and UNDP monies would only be released into the fund once additional financial commitments have been secured.
- Given an average annual net return of 6%, receipts from the endowment will adequately cover the recurrent conservation costs of all four conservancies (estimated at US$92,000-130,000 annually), administration costs (estimated at US$ 70,000 annually) and plough-back of approximately US$ 100,000 each year. Administration costs will be kept to a minimum (less than 20% of total receipts) while trying to ensure effective and transparent management of the Fund. During the design stage, opportunities for joint administration of the Fund with other trust funds will be explored (e.g. the World Bank PAMP Fund) in order to improve efficiency and capture scale economies. In addition, cost efficiencies would be obtained by nesting functions (i.e. funds disbursement and field monitoring) within the activities of existing rural development programmes with a proven track record.
- The Fund will be managed by an independent Governing Board and Secretariat which will have the overall responsibility for setting policy and funding priorities, fund raising, approving work programmes, allocating funds and monitoring performance of the fund.
- Establishment of the Fund is a high government priority, as demonstrated by government contributions to the initial endowment, and willingness to create enabling policies and regulations. The Government also supports multi-stakeholder involvement in fund governance.
- Legal and financial services are well developed; financial management skills have been developed at the community level through AKRSP's savings and credit programme.
- Many of the activities fostered under the MACP (such as the sustainable use demonstrations) will be self-sustaining without drawing on proceeds from the trust fund.

B. Valley Conservation Funds

A lesson learned from conservation initiatives world-wide (and one that has been reinforced by past experiences in Pakistan), is that early incentives are often important to catalyse community- based conservation. While such incentives should not be a pre-condition for the participation of communities in conservation endeavours, by building trust and strengthening partnerships at an early stage, carefully designed and executed early incentives packages can have a marked bearing on conservation outcomes. It is proposed that the MACP establish an early incentives regime by creating Valley Conservation Funds (VCFs) at the watershed level. These would be revolving funds, managed by communities for the purposes of financing conservation -related activities at the village level. Co-financing would be secured from local communities as a mark of their commitment to conservation efforts. Such financing will be a conditionality for the establishment of a VCF in any given area. In broad terms, the objectives of the VCFs are to:

- establish a self-supporting revolving fund at the valley level to contribute to the costs of conservation-enabling ecodevelopment activities not financed through partner agencies;
- until such time as the Conservancy Trust Fund is operational, cover a portion of the costs of watch and ward activities;
- create a sense of community ownership of conservation efforts; and
- create a vehicle for mobilising community funds for conservation purposes.

The VCFs will thus complement activities sponsored under the Conservancy Trust Fund – which will focus on supporting the community-based institutional frameworks required to manage the Conservancies.

The VCFs are based on the model tested under the PRIF phase of the project, and based on the savings mobilisation experiences of AKRSP. Initial experiences in managing the funds have been highly positive. An important determinant of success is that local villagers are already experienced in managing savings

accounts as a result of participating in AKRSP's substantive rural credit and savings programme. One indicator of success has been the high level of community cash contributions to the funds, although levels of co-financing from communities have varied from area to area, based on the economic status of villagers. The financing status of five VCFs established under the PRIF phase is as follows:

Financing of VCFs (in rupees)

VCF	Total Investment	Project Financing	Community Co-financing	Others[1]
Khyber	373,000	37,000	176,000	160,000
Hushey	332,000	50,000	50,000	232,000
Skoyo-Krabathang-Basingo	336,000	286,000	50,000	-
Arkari	415,000	340,000	50,000	25,000
Begusht	220,000	170,000	50,000	-

[1] Proceeds from sustainable use activities (such as ibex trophy hunting)

The following process will be followed in establishing the funds:

1. The project will negotiate a Terms of Partnership with each participating village, following initial social mobilisation and participatory planning exercises. The receptivity of villagers to establishment of a joint VCF will be elicited.

2. An endowment will be created and invested in a high yielding deposit in the region, with a portion of the proceeds drawn upon by participating communities to implement their Valley Conservation Plan. Investments will address the ultimate causes of biodiversity loss, supplementing and/ or contributing to investments in building productive and social infrastructure made by rural development programmes.

3. Ownership of the initial investment in VCFs will lie with the respective parties, according to their relative share of the endowment. 50% of the annual returns of the investments will be made available to communities— with the remainder being reinvested to maintain the real value of the endowment over time. Once a record of successful management has been achieved, ownership of the capital will be entrusted with communities.

4. Communities will be encouraged to make regular deposits into the account. In addition, a portion of the earnings from sustainable use activities, such as trophy hunting, will be paid into the fund.

5. Valley Conservation Committees will be responsible for management of the VCFs. Any expenditure proposed to be incurred from the VCF will be discussed in village assemblies or general body meetings of the villages and will be approved by the Valley Conservation Committee. To provide checks and balances, the Project Implementing Agency will approve funding requests.

6. All financial contributions to the funds will be invested under a joint Term Deposit Account[24] for an initial period of five years. Designated VCC representatives will serve as a co-signatory of the fund together with the Project Implementing Agency. The fund will be managed under the Terms of Partnership signed with the community.

7. The project would retain the right to review the use of income from the VCF accounts at periodic intervals.

[24] Current returns on such accounts are in the order of 16% per annum.

Inputs to and Outputs from the VCF

Inputs	Outputs
♦ Initial capital investment from the project based on an assessment of need in each valley; ♦ Co-financing from the community based on a sharing formula agreed to by the village. Minimum co-financing will be set at 25% of the total endowment; ♦ Co-financing from partner agencies; ♦ Individual donations, sponsorships and grants; ♦ Community fines on over-grazing, tree cutting and over-grazing; ♦ At least 30% of the net proceeds of sustainable use activities.	♦ Eligible expenditures will be determined by VCCs in consultation with project management. A possible list of eligible activities might include the following: i. Marketing of sustainable use products (e.g. trophy permits, medicinal plants and eco-tourism); ii. Purchase of seedlings for social forestry initiatives; iii. Habitat enrichment; iv. Tourism management activities (clean up etc.)

Costs: UNDP will provide US$ 400,000 in seed funding. The communities will be expected to provide co-financing equal to 25% of the seed capital. An initial amount of US$500,000 will thus be available for investment. During the course of the project, additional funds will be deposited in the accounts from fines, and sustainable use activities (such as trophy hunting). These inputs are estimated to total some US$ 150,000. With funding leveraged through sponsorships and investments by other donors, the total amount invested in the funds over the life of the project is expected to be no less that US$ 700,000.

Pro-forma for a TOP with Villages regarding Operation of the VCFs

General Conditions of the VCF	Duties of VOs	Duties of the Implementing Agency
1. The capital amount will be invested in a high yielding deposit; 2. 50% of the gross interest on the deposit may be withdrawn annually for use in village conservation schemes; 3. At the close of the Term, the project and VCC will jointly review the functioning of the agreement; Subject to satisfactory operation of the fund, ownership of it will be divested to the communities. 4. The balance of the VCF will never be less than the initial capital investment; 5. The project and VCC may decide to close the account at any time. In such an event, the original investment made by the project, other donors and the VCC will be returned to the respective parties; 6. The project reserves the right to review the use of income from the VCF account at any time; 7. The project will support efforts of the VCCs to mobilise capital from other sources to increase the initial endowment.	1. The VCC will agree to co-finance the VCF as per the TOP negotiated with the project; 2. The VCC will agree to invest a portion of income derived from sustainable use of wild resources in the VCF; 3. The VCC will use savings from the VCF to cover the costs of implementing VCPs; 4. The VCC will determine funding priorities. 5. The VCC will nominate a representative to withdraw savings and serve as a joint signatory to the account.	1. The project will contribute towards creation of the VCF endowment; 2. The project will nominate a person to serve as a joint signatory of the VCF account; 3. The implementing agency will report on the use of funds to the Project Management Committees.

ANNEX XIV: LESSONS LEARNED DURING THE PRIF PHASE

The following account provides an overview of the lessons learned during implementation of the PRIF phase. These lessons have been incorporated into the design of the MACP. A matrix at the end of the section summarises the key lessons and the corresponding design features of the PRIF. An opportunity exists to apply best practices developed under the project in other conservation / sustainable use interventions. The lessons learned during the entire process of implementation, including the PRIF phase, will be carefully documented under the MACP. The intention is to share experiences, both positive and negative, with conservation practitioners working elsewhere in Pakistan and in other developing countries.

Introduction:

The high mountain environments of northern Pakistan are home to many unique species, several of which are globally endangered or threatened. Many factors are responsible for endangerment, including hunting for subsistence and sport, and habitat loss as a result of human encroachment. The depletion of certain species is having ramifications on the wider ecosystem, as inter-specific linkages are upset. For example, overhunting of species such as Ibex and Markhor is disturbing predator-prey relationships, causing species such as the Snow Leopard to resort to predation on domestic livestock (leading to retaliatory killings by villagers). Though several Protected Areas have been established to conserve biodiversity, the various sites are too small and fragmented to provide for the biological needs of species. The survival of many species depends on the protection of habitats and populations in the wider ecological landscape— outside of present PA boundaries. The PRIF phase (given the project title: "Maintaining Biodiversity in Pakistan with Rural Community Development"), commenced operations in early 1995 and was jointly implemented by the GoNWFP and IUCN. The mountain region was selected as the project site both because it is a repository of valuable biodiversity, but also because it stands at the forefront of experimental development work in Pakistan. The Aga Khan Rural Support Programme (AKRSP) has helped pioneer participatory approaches to community development in the region, championing a development model that has been widely acclaimed. In a short duration, a strong tradition of involving local communities in all major social, economic development work has been established.

1. The Economy of the Mountain Areas

1.1 The region's economy is dependent on agro-pastoral activities, mainly for subsistence. Many typical traits of a rural subsistence economy are found here, i.e. communities are concerned primarily with maintaining food security, and risk aversity hampers the adoption of new technologies and adaptation of land use patterns. Commodity markets are not fully developed, and markets for many natural products are lacking. Productive employment opportunities have traditionally been limited, with portering / guiding work providing a source of income during the summer tourist season. However, local livelihoods have seen great improvement over the past two decades as a result of the work of several rural support programmes including AKRSP, and the development of productive infrastructure. This in turn has improved the socio-economic environment for biodiversity conservation in the region. In particular growing food security and access to income has created a safety net at the local level, meaning that communities can now afford to experiment with new resource use practices.

1.2 Wild resources play an important, yet comparatively under-rated role in the livelihood of local people. Natural pastures provide grazing grounds for domestic livestock, household energy demands are met from forests, and many food items, such as wild herbs and fruits are also obtained from the wild. In addition, wildlife such as ungulates and small game birds provide a source of protein and add variety to local diets. These benefits are mainly non-monetary— causing them to be discounted in decision making at the local-level. A second problem is that a lack of accordance of usufruct rights to communities is leading to open access problems. Local communities have little incentive to conserve wild resources because under present legislation, there is little to prevent outsiders from gaining access to them. This leads to a problem of "free riding" whereby outsiders enjoy the benefits of conservation (i.e. improved pasture conditions) without sharing the costs. A key lesson emanating from the PRIF phase is that if local communities are to be

encouraged to protect biodiversity, the relative values of wild resources will need to be enhanced, and legal structures will need to be constructed to ensure that those communities that bear the costs of conservation are also the principle beneficiaries.

1.3 The PRIF phase has played a major role in sensitising communities to the broader economic values derived from biodiversity conservation and sustainable use activities. Campaigns introduced through the project have aimed at providing new reasons for conservation, focusing on protecting consumptive use values, maintaining ecosystem linkages, and rekindling aesthetic and moral values. The aim has been to raise the profile of conservation, so as to influence the cost-benefit calculus associated with local uses of wild resources. This approach has borne fruit. Two communities serviced by the PRIF team have released captured Snow Leopards back into the wild. The animals were trapped following several incidents of livestock predation. While in ordinary circumstances the leopards would have been killed, this outcome was averted through conservation advocacy. Clearly an attitudinal shift is emerging. However, it is clear that awareness efforts will need to be sustained over a long period to have effect. In both the above cases, there was dissent within the village regarding the fate of the animals. Advocacy has convinced a segment of the community that conservation efforts are in the local interest. Further efforts are needed to widen and further empower this constituency.

2. Social Organisation and Community Participation:

There are a number of lessons to be learned from the approach to engendering community participation piloted under the PRIF. The main lesson is that it is easier to promote biodiversity conservation objectives where social institutions are strong and dynamic. It is important to work with those communities which have already been organised (insofar as this is possible without compromising biodiversity conservation objectives). Where such organisation is missing, it is important to dedicate considerable resources at an early stage to build and strengthen community institutions. This is important in a community based project— the success of which hinges on the capacity and experience of the local partners. However, there will always be some cases where social problems are too serious to resolve, and it is not worth investing time and other resources in trying to overcome them. This is a judgement which the project and its partners must take responsibility for. To make the most of existing development experience in the area, it is important to listen to the advice of local NGOs and CBOs and learn from their knowledge and past experiences. Moreover, project staff need to be equipped with good conflict management and negotiation skills— calling for extensive and on-going in-house training.

2.2 Different types of social organisations are needed at different levels. Social organisational models may also change based on the nature of the project. For example, an agricultural extension project may be implemented by working with small groups and individual farmers, rather than with a large cohesive group. On the other hand, conservation management projects require the existence of institutions that bring together fairly large groups, often with conflicting interests, in a common forum. The dominant model of social organisation present in the project area is based on single VOs, in fairly homogeneous small communities with more or less common interests - predominantly focused on achieving economic development. Recently, however, many VOs have come together to form valley level Cluster Organisations. The process of cluster formation is triggered by the need to tackle issues which transcend the village level (such as the establishment and maintenance of large infrastructure development projects). The PRIF experience shows that it is necessary to work at both levels. Communal management will need to be organised at a village level, using peer pressure as a vehicle to enforce conformity with regulations. However, the management regimes will need to be integrated over the wider landscape to ensure their congruence with broader conservation objectives. Therefore, it is important that while the project takes advantage of the dominant model of social organisation, it also utilises the Cluster Organisation model.

2.3 Another lesson is that different valleys have different capacities and needs and, therefore, require different approaches, levels of support, and types of assistance. Constraints to conservation faced in different valleys vary from each other, both in kind and degree. It is important that local power structures, and the way in which they relate to economic and social issues, be understood. This understanding is important in order to design appropriate interventions so as to minimise potential conflict.

2.4 Social mobilisation is also a lengthy process, meaning that community-based conservation initiatives need to be continued for a longer period than is otherwise the norm for conservation projects.

Project Implementation:

3.1 The PRIF phase initially focused efforts on the conservation of a single species— the Himalayan Ibex, a species with trophy values. This was later extended to include whole ecosystems, following awareness efforts aimed at increasing understanding of ecological dynamics. Ibex conservation has thus served as a catalyst for wider biodiversity conservation. The fact that captured Snow Leopards have been released on two occasions by villagers bears witness to the success of this approach (communities rarely accord economic or moral values to predators; growing recognition of the role predators play in maintaining ecosystem balance is promising for future conservation). The lesson here is that though an ecosystem approach is of the essence to protect biodiversity, the approach at the local level needs to be carefully finessed and tailored to local perceptions. Biodiversity conservation can be an esoteric concept to isolated local communities, and an initial focus on management of a few species may be in order to capture local interest. This interest can later be expanded upon. In short, a good biodiversity conservation project is that which evolves from simple ideas / interventions, and builds upwards as stakeholder capacity is strengthened.

3.2 Another lesson is that it pays to be flexible in implementation. All the features of project success cannot be determined *ex ante*, and design may need to be adjusted to suit evolving socio-political circumstances at the local level.

3.3 Bringing about policy change is a lengthy process which requires that a balance be struck between the needs of different stakeholders with sometimes conflicting interests. It has become apparent that effective change cannot be brought about in a matter of two or three years. Policy change requires realistic and careful planning, and time to implement.

4. Communications:

The PRIF has attempted to maintain clear and free channels of communication with all stakeholders— but on occasions, communications have been misinterpreted. Frequent and candid communications between the communities and project staff promotes trust building and strengthens social relations. Poor communications may lead to misunderstandings and potential conflicts between the project and stakeholders. Frequent visits to the communities by different staff can easily create confusion about project strategies and inputs, and raise communities' expectations. The lesson here is that it is necessary to manage communications to ensure that messages articulated by field workers and other project staff are consistent, and fully reflective of project policies and strategies.

5. Partnerships between the Government and NGOs:

5.1 The PRIF was implemented through a partnership between Government and an NGO (IUCN). The relative strengths of the government were shown to lie in its ability to address legal and policy issues, while the NGO was shown to have a comparative advantage in undertaking community level work and providing technical assistance. The PRIF demonstrates that the process of building a smooth working relationship between the implementing partners involves creating an environment of trust and partnership, and thereby diffusing any tensions that arise due to structural differences between the government and the NGO community. The PRIF has shown that partnerships can be fostered by inviting high-ranking policy makers to visit the project sites, and by establishing direct contact between the communities and local officials.

5.2 The PRIF was managed by a high-level Project Management Committee based in Islamabad, and chaired by the Secretary of the Ministry of Environment, Local Government and Rural Development. While this arrangement gave high level input into the project, it gave insufficient voice to local officials at the Provincial level. These officials will be instrumental to the successful realisation of conservation efforts, and mechanisms need to be found to give them a more substantive role in project oversight.

6. Capacity Building:

6.1 One of the main objectives of the PRIF was to empower and build the capacity of local people to enable them to conserve biodiversity. It is difficult to assess lessons learned from capacity building as it is by its very nature a long- term process. However, in terms of outputs envisaged in the project document, progress has been satisfactory. The main lesson to be learned is that capacity building is a long-term, resource demanding and slow process. It cannot be addressed on an *ad hoc* basis. The process of capacity building has to be continuous and linked to the objectives of the project and should contribute towards project performance.

6.2 A range of skills need to be built at the local-level, including leadership, management, organisational, participatory planning, monitoring and technical skills related to conservation and sustainable use of biological resources. The demand for conservation-related skills can be increased by demonstrating the economic returns from the application of these skills. If there are no tangible benefits from the use of biodiversity conservation skills, the communities may continue to receive the skills, but will not sustain them.

6.3 Historically, government departments in general, and ones in the project area, are under-funded, under-staffed, and lack technical capacity. However, on the positive side, there is a strong demand from government staff (and particularly local officials) for the acquisition of new skills. This demand is driven by two interrelated factors: first, the staff feel an intrinsic need to acquire new skills; and second, training improves career opportunities for staff within the civil service. It is clearly not possible to build the technical capacity of the government in a short period of time. However, it is important that this capacity is developed in the long-term, particularly in a situation such as exists in the NAs, where the government structure is relatively weak.

6.4 There is a danger that lack of capacity may lead to a dependency on expatriate expertise. Sometimes projects become too complacent because of easy and ready access to expatriate expertise; this should be avoided. Capacity needs at all three levels, local, project and government, can only be addressed through an on-going, iterative approach which enables people to learn by doing and build on their experiences and existing knowledge base.

7. Management and Administration:

7.1 Where two major partners (such as the government and IUCN) are working together, complications and friction can arise which can lead to serious delays in implementation. It may be important to clarify where different responsibilities lie, and to allocate these responsibilities in such a way so as to minimise tensions and optimise program delivery. An open and participatory management style helps to maintain flexibility and dynamism in implementation, and also build a strong sense of team work amongst partner bodies.

8. Monitoring and Evaluation:

8.1 External project monitoring is useful to keep track of project progress, and to provide guidance for future strategies. However, a diverse range of skills are required by staff responsible for monitoring, to ensure all aspects of the project are effectively covered. In addition, monitoring the conservation process, such as changing attitudes of the communities, and the emergent needs and changes in their value systems, is necessary to gauge the real impact of the project. This can only be done through internal and process oriented monitoring systems.

Matrix of Lessons Learned

Lessons Learned	Impact on Design
♦ Biodiversity is undervalued in the cost-benefit calculus of villagers, with only a fraction of the total economic values of conservation being accounted for in decision making.	➔ The participatory approach aims at uncovering relative costs and benefits from the community perspective. Potential returns from uses such as trophy hunting are substantial given existing levels of rural income. Conservation education activities will add a moral dimension to the conservation equation. A key incentive for community participation is the offer of usufruct rights allocation—which will give them a greater degree of control over the use and management of wild resources. ➔ Create links with markets.
♦ Participation of stakeholders during all phases of project is critical for sustainability. ♦ Conducive social infrastructure provides a head start to community based projects. ♦ It is important to understand local power structures and the way in which they influence the use and distribution of natural resources.	➔ Rigorous consultation process with stakeholders has commenced, and the project will adopt a participatory working methodology. ➔ The project will focus efforts on those communities that have already established a strong baseline of social organisation. ➔ Project activities have been designed following investigation of the existing social, economic and ecological conditions prevailing in the field.
♦ Simple approaches are needed, geared to communities' perceptions, to improve local receptivity to the project. ♦ A "learning by doing" approach to project implementation is crucial; the management should be flexible enough to deal with evolving needs and demands at the field level.	➔ In the initial stages project activities will be kept simple, with complexity linked to institutional maturity. ➔ A transparent and flexible approach to implementation will be engendered; process monitoring will be an ongoing feature of the project.
♦ Communications play a major role in team building among the project staff, and trust building between staff and project partners. ♦ Clarity about project objectives and activities facilitates smooth implementation and reduces the risks of raising unwarranted expectations.	➔ All channels of communication will be kept as open as possible. ➔ A communications strategy will be developed by project management.
♦ Government strengths should be harnessed with that of the project to reap maximum benefit from the partnership. ♦ Government procedures can be time consuming.	➔ Tasks will be delegated amongst the implementing agencies based on comparative strengths and weaknesses. ➔ Realistic planning, in terms of time, for activities that involve government approvals.
♦ Capacity building is long-term process for which fairly long-term planning should be carried out. ♦ Capacity building activities should not become supply driven.	➔ Activities aimed at capacity building will be implemented over a period of 7 years. ➔ Capacity building activities will be demand driven based on extensive stakeholder consultations.
♦ Monitoring should be carried out using simple systems with easily verifiable indicators.	➔ Participatory monitoring and evaluation systems will be developed, and community monitoring, reporting and evaluation capacities will be enhanced.

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