

Signature Page

United Nations Development Framework (UNDAF) Outcome:

CC-3/A-3/ III.I: Improved living conditions through environmental management for sustainable development.

PA/A-2/1.3: Improved water and NR Management and utilization

Expected Country Programme (CP) Outcome:

A comprehensive approach integrating environmentally sustainable development, global environmental concerns and commitments in national development planning, with emphasis on poverty reduction and with quality gender analysis.

Expected Country Programme Output: Commitments under global conventions on Biodiversity being implemented.

Implementing Partner: Ministry of Environment, Government of Pakistan and World Wide Fund for Nature, Paksitan:

Other Partners: The Royal Netherlands Embassy, Pakistan Poverty Alleviation Fund (PPAF), Provincial Line Departments, Relevant Research and Education Institutions, Federal Ministries, International and National NGOs

Background: The Pakistan Wetlands Project (PWP) aims to promote the sustainable conservation of freshwater and marine wetlands and their associated globally important biodiversity in Pakistan. The Project strategy is based on two sub-sets of objectives. The first will provide the required policy, institutional, technical and financial framework and generate positive public support essential for the mainstreaming of wetlands conservation. The second involves the design and implementation of sustainable, participatory management plans for four independent Demonstration Sites, each chosen to be representative of a broad eco-region in Pakistan. It includes specific mechanisms to secure financial sustainability and enhanced replication and proliferation of viable wetlands management interventions in a nation-wide, on-going wetlands conservation initiative.

Programme Period: 5 years	Estimated budget: US\$ 11,792,000
Programme Component: Environment	General Management Support Fee: 5% on cost sharing amount and fixed fee from GEF
Intervention Title: Pakistan Wetlands Project	Allocated resources:
Duration: 7 years	GEF: US \$ 2,991,350
	UNDP: 1,500,000
	RNE: 4,034,000
	WWF International: 1,200,000
	PPAF/Others: 2,066,650

JAVED HASAN ALY
Secretary
Ministry of Environment
Government of Pakistan
Islamabad

Agreed by: Ministry of Environment: _____

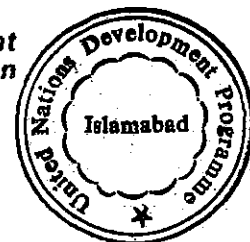
Javed

Önder Yücer
Resident Representative

Agreed by UNDP: _____

SHUJA SHAH
Secretary
Economic Affairs Division
Government of Pakistan
Islamabad

Agreed by Economics Affairs Division (EAD): _____



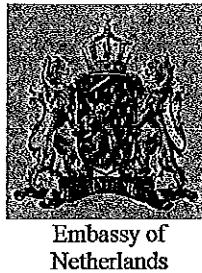
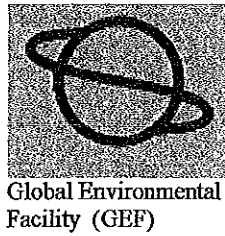
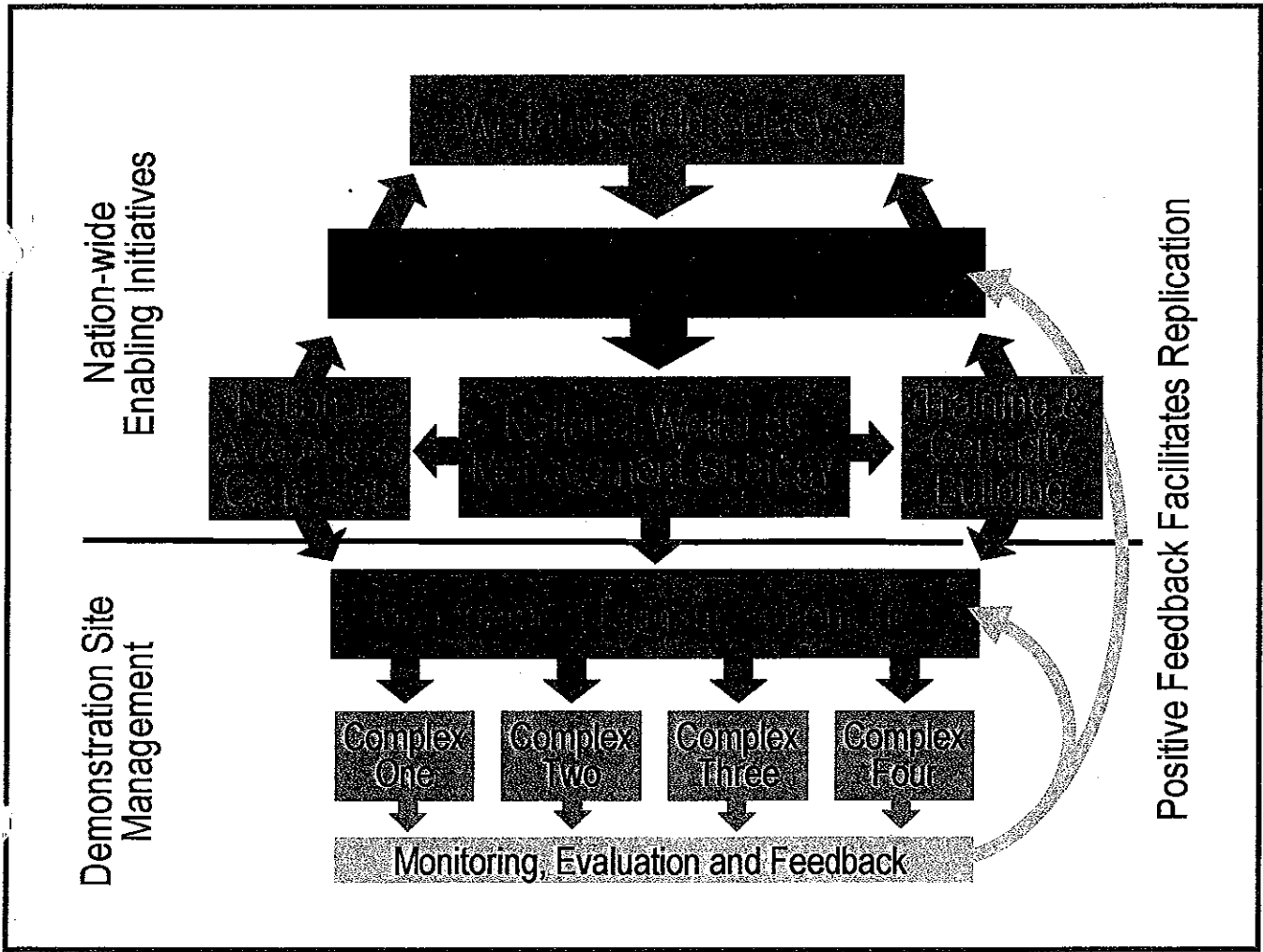
11 APR 2005





The Islamic Republic of Pakistan

**PROTECTION AND MANAGEMENT OF
PAKISTAN WETLANDS**



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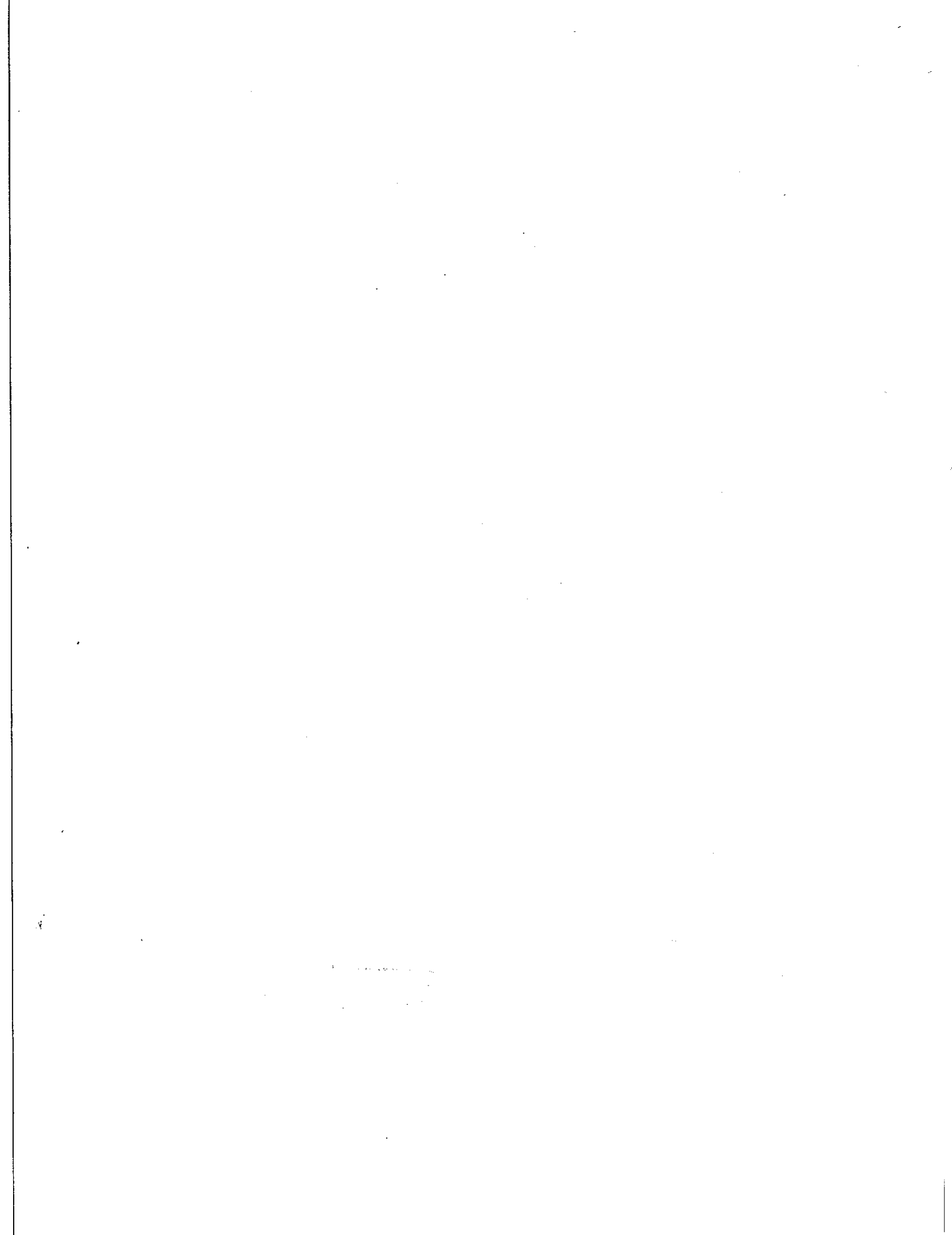
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**UNDP PROJECT
DOCUMENT**



UNDP PRO-DOC

(Section 1 of the Unified Package of Documentation)

Principal Partners:

- Government of Islamic Republic of Pakistan (GoP)
- Provincial/Territorial Government Agencies
- United Nations Development Programme (UNDP)

Other Partners:

- Global Environment Facility (GEF)
- Royal Netherlands Embassy
- Pakistan Poverty Alleviation Fund (PPAF)
- European Union (EU)
- World Wide Fund for Nature – International (WWF-Int)
- World Wide Fund for Nature – Pakistan (WWF-P)

Pakistan Wetlands Project

By 2002, Pakistan had proclaimed 227 Protected Areas (PAs) in four classes for the conservation of biodiversity. The total area committed to conservation amounts to 2,753,375 ha or 11% of the land surface which is substantially greater than the norm in most developing countries.

Despite the generally arid nature of Pakistan's climate, the region supports an estimated 780,000 ha of wetlands and in excess of 225 significant wetland resources are on record. By 2002, sixteen of these have been internationally recognised by the Ramsar Convention Bureau as being of global importance.

The diverse assortment of freshwater and marine wetlands that occur within the territorial boundaries of Pakistan support unique assemblages of biodiversity including globally important habitats, species and genomes. The same resource, however, also sustains an estimated 130 million permanent human residents and 3 - 4 million displaced persons from adjacent countries. The wetlands of the region are, therefore, generally degrading under a broad spectrum of anthropogenic threats most of which are a direct product of poverty, but many of which are exacerbated by human ignorance and mismanagement.

The Pakistan Wetlands Project aims to promote the conservation of freshwater and marine wetlands and the associated globally important biodiversity in Pakistan.

The project strategy is based on two broad objectives. The first addresses important issues such as policy, awareness and capacity to conserve at the national level in order to create an enabling environment for innovative and enhanced conservation of wetlands. The second focuses on the development and application of wetlands management plans at four selected demonstration sites, carefully chosen to broadly represent conditions in each of four wetlands eco-regions in the country and to have substantial potential for replicability.

Creation of an enabling environment for mainstreaming wetlands conservation in Pakistan: *Output 1* strengthens the existing wetlands conservation institutions in Pakistan. It provides for the establishment of a project coordination and consultation mechanism in the form of a *Project Steering Committee* and *Project Management Unit* supported by a comprehensive *Technical and Equipment Resource Centre* in order to create the institutional framework necessary for sustainable wetlands conservation. It is envisaged that these entities will evolve into a permanent government or parastatal wetlands management body by project year five.

Output 2 will enhance the quality of decision-making in regional resource-use planning by improving access to and manipulation of the baseline data that forms the basis of most modern scientific and socio-economic natural resource management tools. This will be achieved by amplifying the known information about the natural coastal and inland wetlands through enhanced, on-going field survey work and refining the existing wetlands Geographic Information System database. Working copies of this management resource will be disseminated to all Government and other key agencies engaged in wetlands conservation in Pakistan as a tool for refined decision-making and management of wetlands.

Output 3 will upgrade the existing Wetlands Action Plan to the level of a National Wetlands Conservation Strategy that is appropriately aligned with world norms and expectations but politically pragmatic in terms of Pakistan's ongoing initiative to devolve administrative power to the district and *tehsil*¹ level. Special attention will be given to both securing the long-term user rights of access of rural people to wetlands resources and the establishment of sustainable commercially viable resource use regimes. The document will both integrate wetlands management issues into policy-making across various sectors and ensure the mainstreaming of wetlands management in the development planning process.

Output 4 will address the dire need for training to enhance human capacity and skill levels in wetlands management by government and private sector personnel in Pakistan, ranging from survey work to the implementation of community-based

¹ A Tehsil is the second to lowest administrative unit that is recognised in Pakistan's political system and approximates to a sub-district.

conservation measures. In addition to the technical aspects of wetlands conservation, the training will build capacity within the current decentralized administrative set-up and among local communities. The creation of a cadre of trained junior and senior professional wetlands managers in Pakistan is expected to have a direct positive impact on the sustainability of long-term wetlands management in the country.

Output 5 will substantially improve awareness of the need for wetlands conservation at all levels in Pakistani society by shifting public opinion in favour of proactive conservation of resources, such as wetlands. This will be done by implementing a broad-based, nation-wide wetlands awareness and advocacy campaign. Together with the political measures for decentralised environmental management, introduced in 2002, this will enable local government and communities to collaborate to sustainably manage natural resources at the site level. It is anticipated that this will also lead to enhanced financial investment in wetlands conservation measures.

Output 6 specifically addresses the question of long-term sustainability of wetlands conservation measures. It provides for individual financial assessments to be made for each distinct conservation initiative that emanates from the Project. Where-ever possible, plans will be implemented for such conservation measures to be self-liquidating in order to reduce the financial burden on the state. In the case of conservation interventions that prove incapable of self-liquidation, a concerted effort will be made to secure long-term national or international donor support.

Implementation of participatory wetlands management at four demonstration sites: In response to the need to generate practical, replicable examples of viable wetlands conservation practice in Pakistan, four demonstration sites, each generally typical of a broader wetlands eco-region, have been selected for development. These four sites were chosen after an exhaustive consultative process and are each representative of a broad eco-region of Pakistan:

- Makran Coastal Wetlands Complex (MCWC);
- Central Indus Wetlands Complex (CIWC);
- Salt Range Wetlands Complex (SRWC); and
- North-west Alpine Wetlands Complex (NAWC).

It is anticipated that these site-level initiatives will implement a suite of appropriate community-based measures to conserve biodiversity and to promote the sustainable use of wetlands resources. These measures will include the establishment of conservancies, the formation of local institutions that equitably represent relevant stakeholders for sustainable management of wetlands and the introduction of alternate income generation ventures, including productive sector reform. The project will have a high replicable value in a national environment in which both public awareness of wetlands conservation issues and technical capacity to manage freshwater and wetlands will have been substantially enhanced.

Pakistan Wetlands Project

Part I (A): Situation Analysis

A detailed description of the problem to be addressed is provided in Section 1.5 of the attached Project Brief. Pakistan's natural wetlands and their associated globally important biodiversity are under threat from a range of both proximal and distal factors. The proximal threats include:

- Physical changes to wetlands and their adjoining landscapes such as the encroachment of agricultural land onto wetland sites;
- Broader national policy decisions that have affected wetlands such as the construction of large dams and development of major irrigation schemes that have reduced and changed the flow of water to wetlands; and
- Unsustainable anthropogenic practices such as over-fishing, harmful fishing practices, unsustainable extraction of wetlands vegetation and hunting, especially of threatened, vulnerable and endangered bird species and ungulates.

These direct threats are compounded by distal threats such as:

- Deforestation of wetlands and associated catchment areas;
- Pollution of wetlands by toxic, organic and inorganic substances;
- Eutrophication resulting from agricultural run-off; and
- Overgrazing of wetlands vegetation, peripheral zones and catchment areas.

These factors influence the wider landscape and buffer zones around wetlands and damage the physical environment in an indirect but pervasive manner. The principal root causes of wetlands degradation, described in detail in Section 1.5 stem from:

- A lack of awareness of the value of wetlands on the part of policy and decision makers;
- The pervasive poverty of wetland-dependent communities who have few alternatives but to extract wetlands resources in order to meet daily subsistence needs;
- Institutional deficiencies and lack of inter-agency co-ordination that result in lack of resources for enforcing existing laws;
- Policy deficiencies that exclude wetlands conservation issues in conservation management.; and
- Inappropriate development

There is an urgent need to address these threats in order to conserve Pakistan's wetlands and their associated globally important biodiversity. The objective of the Pakistan Wetlands Project is to conserve wetlands in Pakistan without exacerbating poverty. The proposed Project has been developed around two main objectives:

- The creation of an enabling environment for effective and sustainable conservation of natural wetlands at federal, provincial/territorial and local levels.
- Conservation of wetlands and their associated biodiversity in four demonstration

The relevant outcome in the UNDP Country Programme Improved national capacity to negotiate and implement global environment commitments.

The national institutional and legal framework is described in Section 1.4. A description of lessons learned that have influenced project design is provided in Section 13.2.

Part I (B): Strategy

Pakistan's commitment to and strategy for biodiversity conservation in general and wetlands conservation in particular are described in Section 1.4 of the Project Brief. Further, Section 2.3 describes UNDP's programme support of this Strategy. The Project takes a proactive approach to policy, institutional and technical capacity development for enhanced and sustainable management of wetlands. The specific activities in support of these goals are mentioned in Section 4.

Part II. Results Framework

A detailed Logical Framework Analysis is provided in Annex 2

<p>Intended Outcome: Improved national capacity to negotiate and implement global and international environmental commitments in support of biodiversity conservation.</p>
<p>Outcome Indicator: The amount of financing leveraged from international funding mechanisms such as the Global Environment Facility. In addition to the already existing medium- and full-sized GEF project portfolios of US\$ 9.3 million, the PWP will access US\$ 3.3 million of GEF financing.</p> <p>The amount of UNDP financing in the natural resource conservation sector. Including the PWP, the UNDP portfolio in the natural resource sector in 2004 will amount to US\$ 40.3 million.</p> <p>Strengthened institutional and technical capacity at the national level for the conservation of biodiversity in Pakistan in support of international commitments. With UNDP's support, projects are being implemented to meet Pakistan's commitment to the Convention on Biological Diversity (CBD), the Montreal Protocol on Ozone Depleting Substances, the Stockholm Convention (Phase Out of POPs) and United Nations Framework Convention on Climate Change (UNFCCC). Through the PWP, UNDP will enable Pakistan to enhance its progress in meeting its international commitment to the CBD and the Ramsar Convention.</p> <p>Active and sustainable conservation of Pakistan's natural resources including biodiversity.</p>
<p>Applicable Strategic Area of Support: Global conventions and funding mechanisms.</p>
<p>Partnership Strategy: Realising the vital need to involve all relevant stakeholders in the conservation of natural resources, UNDP-Pakistan has developed effective partnerships at government, NGO/civil society and local community levels. The partnership strategy has focused on augmenting technical, institutional, planning and policy-related capacity at the national level together with support for provincial and local government, civil society organisations and academic institutions. Support for grassroots initiatives, specifically through the GEF's Small Grants Programme, promotes creative avenues for addressing the poverty-environment nexus, facilitates capacity development of local stakeholders, encourages policy dialogue through lessons gleaned from community-based projects and develops sustainable local solutions to environmental issues.</p>
<p>Project title and number: Pakistan Wetlands Project (PIMS No: 1056)</p>

Intended Outputs	Output Targets	Indicative Activities	Inputs US\$
<p>The conservation of wetlands and their globally important biodiversity in Pakistan through:</p> <p>A. the creation and maintenance of an enabling environment for effective and sustainable conservation of natural wetlands at federal, provincial/territorial and local levels.</p>	<p>The extent and number of significant natural wetlands under effective, sustainable, community-based planning and management increases significantly by PY 7.0 as compared with PY 1.0 levels.</p>	Outputs 1-6	
		Creation of national institutions,	1,922,000
		Development of decision-making tools	1,549,000
		Development of National Wetlands Conservation Strategy	365,000
		Improved technical competence.	1,260,000
		Enhanced public awareness	1,042,000
Improved financial sustainability mechanisms	255,000		
<p>B. the implementation of sustainable wetlands conservation initiatives at four representative sites that will serve as replicable models for subsequent nationwide wetlands conservation initiatives.</p>	<p>The scale and number of threats to wetlands and their associated globally significant biodiversity are substantially reduced in the four demonstration sites by PY 7.0 as compared to PY 1.0 levels.</p> <p>By PY 7.0, population levels of endangered species show an increase over PY 1.0 levels in the four demonstration sites.</p>	Outputs 7 - 10	
		Sustainable conservation of biodiversity in MCWC	of 1,351,000
		Sustainable conservation of biodiversity in CIWC	of 1,629,000
		Sustainable conservation of biodiversity in SRWC	of 1,345,000
		Sustainable conservation of biodiversity in NAWC	of 1,074,000

Note: The component totals against each output are for the implementation phase of the project with total funding of US \$ 11,792,000.

Project Work plan and Budget

The summarized project work plan and budget is given below. For detailed work plan and budget see Annex 3 and Annex 4.1 of the GEF Executive Summary.

Expected Outcome: Improved national capacity to negotiate and implement global and international environmental commitments in support of biodiversity conservation.												
Expected Outputs	Activities	Time Frame (Year)							Responsible Party	Planned Budget		
		1	2	3	4	5	6	7		Source	Desc.	US \$
The creation and maintenance of an enabling environment for effective and sustainable conservation of natural wetlands at federal, provincial/territorial and local levels.	Creation of national institutions								Ministry of Environment and WWF-Pakistan	GEF; UNDP; WWF; RNE; Others	71200 71300 71400 71600 72100 72200 74000 74500	1922000
	Development of decision-making tools								WWF-Pakistan	GEF; UNDP; WWF; RNE; Others GEF	71400 72100 72200	1549000
	Development of National Wetlands Conservation Strategy								IUCN-Pakistan	GEF; UNDP; WWF; RNE; Others GEF	71400 72100 72200	365000
	Training and Capacity Building								Ministry of Environment and WWF-Pakistan	GEF; UNDP; WWF; RNE; Others GEF	71400 72100 63400	1260000
	Nationwide Wetlands Awareness Campaign								Ministry of Environment and WWF-Pakistan	GEF; UNDP; WWF; RNE; Others GEF	71400 72100	1042000
	Long Term Funding Campaign								WWF-Pakistan	GEF; UNDP; WWF; RNE; Others GEF	71400 72100 71600	255000

Expected Outcome: Improved national capacity to negotiate and implement global and international environmental commitments in support of biodiversity conservation.

Expected Outputs	Activities	Time Frame (Year)							Responsible Party	Planned Budget		
		1	2	3	4	5	6	7		Source	Desc.	US \$
Implementation of sustainable wetlands conservation initiatives at four representative sites that will serve as replicable models for subsequent nationwide wetlands conservation initiatives.	Sustainable conservation of biodiversity in MCWC								Ministry of Environment; Regional Line Departments; Local Communities and WWF-Pakistan	GEF; 71400 UND 72100 P; 71300 WWF; 72200 RNE; 74500 Other s 74000	71400 72100 71300 72200 74500 74000	1351000
	Sustainable conservation of biodiversity in CIWC								Ministry of Environment; Regional Line Departments; Local Communities and WWF-Pakistan	GEF; 71400 UND 72100 P; 71300 WWF; 72200 Other s 74500 74000	71400 72100 71300 72200 74500 74000	1629000
	Sustainable conservation of biodiversity in SRWC								Ministry of Environment; Regional Line Departments; Local Communities and WWF-Pakistan	UND 71400 P; 72100 WWF; 71300 RNE 72200 Other s 74500 74000	71400 72100 71300 72200 74500 74000	1345000
	Sustainable conservation of biodiversity in NAWC								Ministry of Environment; Regional Line Departments; Local Communities and WWF-Pakistan	UND 71400 P; 72100 WWF; 71300 RNE; 72200 Other s 74500 74000	71400 72100 71300 72200 74500 74000	1074000

Part III Management Arrangements

See Section 9 of the Project Brief annexed to this documents.

Part IV Monitoring and Evaluation

The PSC and, during the final two years of the Project the NWMC will oversee the process of *Monitoring and Evaluation* during the seven year life of the Project. The benchmarks for achievement of Project objectives will be clearly identified by PY 1.0, after baseline surveys are complete. Monitoring and Evaluation will take place by means of the following:

- **Quarterly Reports:** The *Project Implementing Agency* will provide *Quarterly Reports* summarising Project progress to the PSC according to the format specified in the *UNDP-Pakistan Project Cycle Operations Manual*, as revised. These will include reporting on progress with Project activities and targets, as outlined, on a quarterly basis. Corrective action will be proposed to rectify problems and will be presented to the PSC for approval and, if necessary, for government action.
- **Annual Report:** Based on a review of the Project's performance, an *Annual Report* will be presented to UNDP and the PSC. This will be reviewed at the first meeting of the PSC in each successive Project year but will be prepared annually in mid-December to meet with the requirements of the UN's annual reporting cycle. It will follow the standard UNDP format and elaborate on the Project's successes as well as failures in achieving designated targets for the year under review.
- **Mid-term Review:** A *Tripartite Mid-term Review* undertaken by a mission composed of independent members will take place in PY 4.0. In a comprehensive evaluation, this team will highlight the Project's achievements, accomplishment of goals and effectiveness in meeting objectives. The review may also recommend rescheduling of activities to accommodate exogenous, unexpected or new factors. A set of indicators to track Project progress at the mid-term level will be defined at the outset of the Project, based on the Project's *Logical Framework Analysis*.
- **Surveys:** Detailed *biological and socio-economic surveys* will be undertaken at the beginning of the Project to establish a baseline against which future progress may be measured. These surveys will be repeated at the mid-term stage, immediately prior to the *Mid-term Review*, to provide a *before and after* assessment of Project activities and to adapt or even replace specific Project interventions for increased effectiveness. Biological surveys will assess the changes in species richness and density, improvements in range and habitat and the overall health of the ecosystems. Where practical, a system of fixed-point photographic monitoring will be implemented and, if warranted by the scale and scope of an intervention, remote sensed images may also be used. Socio-economic surveys will focus on the success of awareness-raising activities, changes in income and livelihood stability for wetlands dependent communities. Reduction in unsustainable resource-use practices, effectiveness of community institutions in resolving conflict and sharing of benefits with vulnerable groups, such as women and the landless poor, will be other key parameters. After the mid-term evaluations, such surveys may be wholly or partially repeated as deemed necessary by PSC and *Project Implementing Agency*.
- **Final Review:** A Final Tripartite Review will take place at the end of the Project. This review will evaluate the PWP's success and impact and will document the lessons learned for further projects or policy development. UNDP will, as is customary, produce an annual Project Implementation Review (PIR) for the GEF portfolio.

For details on the monitoring and evaluation please refer to the Annex 8 of the attached project brief.

Part V Legal Context

The legal context for UNDP-assisted programmes and projects in Pakistan is established by two major agreements: First, the Convention on the Privileges and Immunities of the United Nations, given effect by Act 20 of 1948 of the Pakistan Constituent Assembly (Legislative) and assented to on June 16th, 1948. Secondly, 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 to the agreement on the February 25th, 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 United Nations Development Programme, concerning assistance under the Special Funds Sector of the United Nations Development Programme.

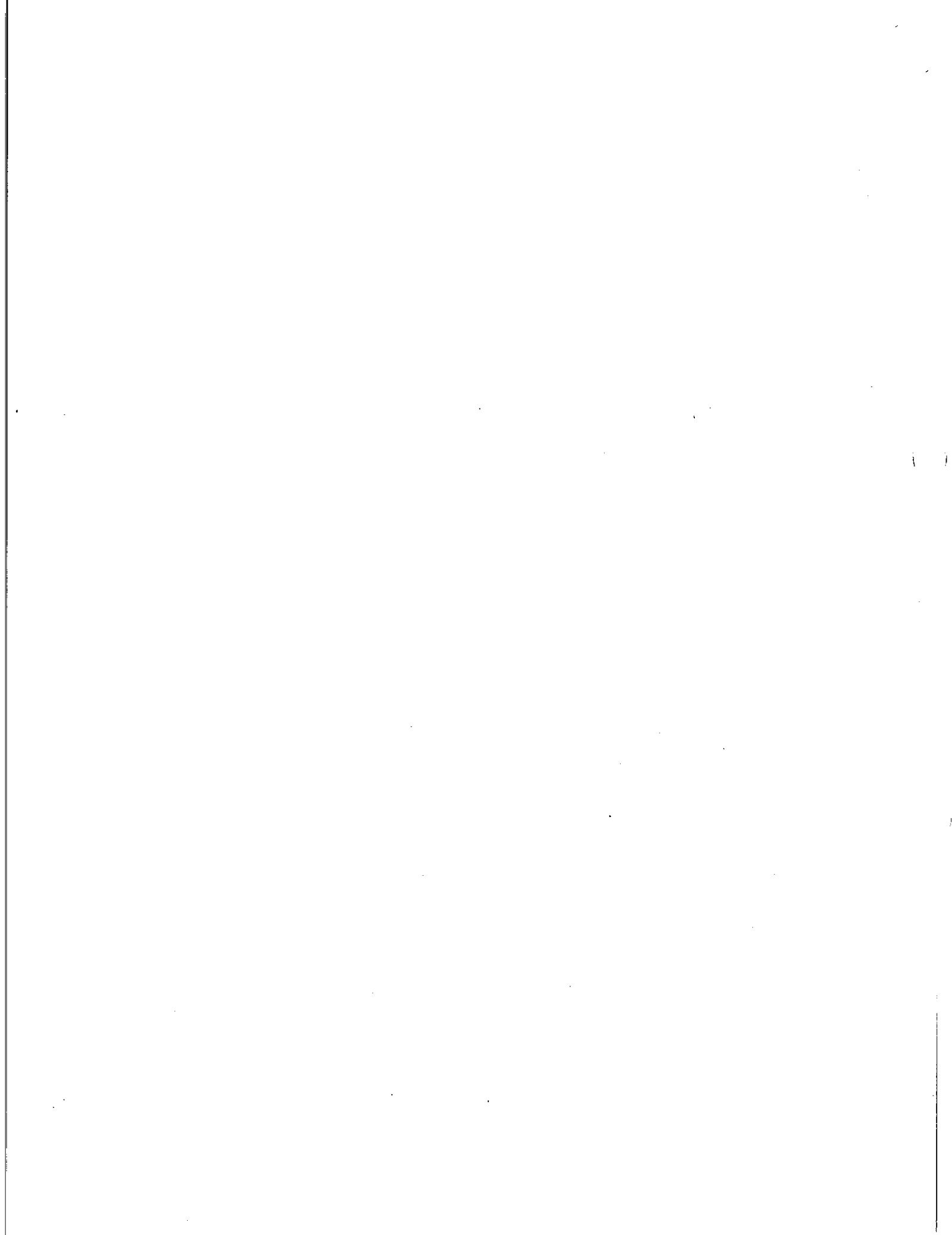
UNDP-assisted programmes and projects for Pakistan are planned and executed in accordance with local UNDP financial rules and regulations and the Project Cycle Operations Manual for Pakistan, as revised.

The following types of revisions may be made to this Project Document with the signature of the UNDP Resident Representative, provided that he or she is assured that the signatories to the Project Document have no objections to the proposed changes:

- Sustainable benefit sharing of wetlands resources;
- Revisions in, or addition of, any of the Annexes of the Project Document;
- Revisions that do not involve significant changes in the outputs, activities or targets of the Project, but are caused by the rearrangement of inputs already agreed to, or by cost increases due to inflation; and
- Mandatory annual revisions that rephrase delivery of the project inputs or increased expert or other costs or agency expenditure flexibility.

Apart from the UNDP logo, a GEF logo will also be included on all relevant GEF project publications, including among others, project hardware and vehicles purchased with GEF funds. Any citation on publications regarding projects funded by GEF will also accord proper acknowledgment to GEF.

**GEF PROJECT
BRIEF**



PROJECT BRIEF

1. Identifiers

Project Number: PIMS no. 1056
Project Name: *Protection and Management of Pakistan Wetlands Project*
Duration: 7 years. 1 January 2005 – 31 December 2011
GEF Implementing Agency: United Nations Development Programme
Executing Agency: Ministry of Environment, Government of Pakistan
Requesting Country: The Islamic Republic of Pakistan
Eligibility: Pakistan ratified the *Convention on Biological Diversity* in July, 1994.
GEF Focal Area: Biodiversity
GEF Operational Programme: The Project fits primarily within OP 2 Coastal, Freshwater and Marine Ecosystems but is also relevant for OP 1, Arid and Semi-arid Zone Ecosystems; OP 3, Forest Ecosystems; and OP 4, Mountain Ecosystems.
GEF Strategic Priority: The Project is in line with Strategic Priority 2 for the Biodiversity Focal Area, "Mainstreaming Biodiversity Conservation in Production Systems and Landscapes".

2. Summary

The *Protection and Management of Pakistan Wetlands Project* aims to promote the sustainable conservation of freshwater and marine wetlands and their associated globally important biodiversity in Pakistan. The Project strategy is based on two sub-sets of objectives. The first will provide the required policy, institutional, technical and financial framework and generate positive public support essential for the mainstreaming of wetlands conservation. The second involves the design and implementation of progressive, participatory management plans for four independent *Demonstration Complexes*, each chosen to be representative of a broad eco-region in Pakistan. It includes specific mechanisms to secure financial sustainability and enhanced replication and proliferation of viable wetlands management interventions in a nation-wide, on-going wetlands conservation initiative.

GEF Full Project	US\$ 2,991,350
PDF-B	US\$ 342,000
Sub-total GEF	US\$ 3,333,350
Co-financing:	
UNDP (Committed)	US\$ 1,500,000
Royal Netherlands Embassy	US\$ 4,034,000
WWF International Network (Committed)	US\$ 1,200,000
PPAF/Others	US\$ 2,066,650
PDF-B (UNDP)	US\$ 25,000
Sub-total Co-financing	US\$ 8,800,650
Total Project Cost (Full Phase)	US\$ 11,792,000
Total Project Cost	US\$ 12,134,000

4. Associated Baseline Financing **US\$ 9,395,800**

5. Operational Focal Point Endorsement

Mr. Jawed Ali Khan, Ministry of Environment, Government of Pakistan
Date: 7th March, 2003

Implementing Agency Contact

Tehmina Akhtar, Regional Coordinator – West Asia, Biodiversity/International Waters, UNDP
304 East, 45th Street, 9th Floor, New York, NY 10017, USA,
Tel: ++1 212 906-5460 Fax: ++1 212 906-6998

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List of Acronyms and Abbreviations

AJK.....	Azad Jammu and Kashmir	NEQS.....	National Environmental Quality Standards
AKRSP.....	Agha Khan Rural Support Programme	NEAP.....	National Environmental Action Plan
BAP.....	Biodiversity Action Plan	NGO.....	Non-Governmental Organisation
BCS.....	Balochistan Conservation Strategy	NPD.....	National Project Director
C.....	Centigrade	NPM.....	National Project Manager
c.....	Approximately	NRM.....	Natural resource management
CP.....	Country Programme	NWFP.....	North West Frontier Province
CBD.....	Convention on Biological Diversity	NWCS.....	National Wetlands Conservation Strategy
CBO.....	Community-based Organisations	NWMC.....	National Wetland Management Committee
CIESIN.....	Centre for International Earth Science Information	NY.....	New York
Network		OP.....	(GEF) Operational Programme
CITES.....	Convention on International Trade in Endangered Species of <i>Flora</i> and	PA.....	Protected Areas
<i>Fauna</i>		PAMP.....	Protected Areas Management Project (World Bank/GEF)
CIWC.....	Central Indus Wetland Complex	PDF (B).....	Project Development Fund - Category B
CTA.....	Chief Technical Advisor	PCDP.....	Palas Conservation and Development Project
DEM.....	Digital Elevation Model	PCOM.....	Project Cycle Operations Manual (UNDP-Pakistan)
DFID.....	Department for International Development (UK)	PMU.....	Project Management Unit
DNA.....	Deoxyribonucleic Acid	PPAF.....	Pakistan Poverty Alleviation Fund
p.g.....	<i>Exempla gratia</i> - for example	PRA.....	Participatory Rural Assessment
etc.....	et cetera	PSC.....	Project Steering Committee
FY.....	Financial Year	PWP.....	Pakistan Wetlands Project
GEF.....	Global Environment Facility	PWRI.....	Punjab Wildlife Research Institute
GIS.....	Geographic Information System	PY.....	Project Year
GoP.....	Government of Pakistan	RNE.....	The Royal Netherlands Embassy
GPS.....	Geographic Positioning System	Rs.....	Rupees
ha.....	Hectare(s)	RSP.....	Rural Support Programmes
IBIS.....	Indus Basin irrigation System	S.....	South
<i>In-situ</i>	In place	SCUBA.....	Self-contained Underwater Breathing Apparatus
IUCN.....	The World Conservation Union	SP.....	Strategic Priority
IUCN-P.....	IUCN Pakistan	SRWC.....	Salt Range Wetlands Complex
IWRB.....	International Wetlands Research Bureau	TA.....	Technical Assistance/Technical Advisor
K.....	1,000	TCBS.....	Training and Capacity Building Section
km.....	Kilometre(s)	TPR.....	Tripartite Review
km ²	Square kilometre(s)	TRAC.....	Trans-national Resource and Action Centre
K2.....	Karakoram Peak #2 (<i>Chogori</i> or Mount Godwin-Austen)	TREC.....	Technical Resource and Equipment Centre
M2.....	National Motorway Number 2	TV.....	Television
MACP.....	Mountain Areas Conservancy Project	UNDAF.....	UN Development Assistance Frame Work
MAP.....	million acre-feet	UNDP.....	United Nations Development Programme
MCWC.....	Makran Coastal Wetlands Complex	US or USA.....	United States of America
MOE.....	Ministry of Environment, Local Government and Rural	VCC.....	Village Conservation Committee
Development		VHF.....	Very High Frequency
m.....	Metre(s)	WAPDA.....	Water and Power Development Authority
N.....	North	WCCC.....	Wetlands Complex Conservation Committee
NAWC.....	North-west Alpine Wetlands Complex	WCMC.....	World Conservation Monitoring Centre
NCCW.....	National Council for the Conservation of Wildlife	WSPS.....	Wetlands Survey Programme Section
NDP.....	National Drainage Programme	WWF.....	World Wide Fund for Nature
NCS.....	National Conservation Strategy	WWF-P.....	World Wide Fund for Nature, Pakistan
		WWF-UK.....	World Wide Fund for Nature, United Kingdom
		4x4.....	Four-wheel drive or all-terrain vehicle

1. Background and Project Context

1.1 Environmental Context:

1. The 883,000 km² portion of the South Asian Sub-continent that falls under the jurisdiction of the *Islamic Republic of Pakistan* consists of an irregular, elongated, polygon that extends through 13.4° of latitude from 23.6°N to 37.0°N. Geomorphological diversity within Pakistan has given rise to a wide range of ecological conditions. **Vegetation types** that have evolved to occupy these physical environmental niches in the country include elements of several of the world's major ecological regions. Udvardy's (1975) classification incorporated elements of the *Indo-Malayan* and *Palaeartic* realms and Roberts (1991), based on his work in Balochistan, included a third, the *Ethiopian* or *African Realm*. The country also includes four of the world's ten major biomes: desert, temperate grassland, tropical seasonal forest and mountainⁱ. Between nine and twelve major **plant ecological zones** have been recognised within the country resulting in a surprising level of speciation. (See: *Optional Annex 36*). Although the rate of **endemism** in Pakistan is low, this may be explained by the reality that the country's borders were drawn for political reasons, largely out of context with any natural barriers. From an ecological perspective, it makes more sense to evaluate endemism on a sub-regional basis in the vicinity of Pakistan. The country lies at the crossroads of Asia's major Palaeartic bird migration routes. At different times in the annual cycle, there are substantial concentrations of passage migrants; at others there are influxes of winter visitors from northern breeding grounds or summer breeding migrants from the Indus Plains or northern alpine regions. This is believed to be a consequence of the country's geographic location between the great Rajasthan and Iranian Deserts in the east and west, respectively, the barriers created by the Himalayas, Hindukush and Karakoram Mountains in the north and by the Arabian Sea in the south.
2. **Wetlands:** Despite the generally arid nature of Pakistan's climate, the region supports an estimated 780,000 ha of wetlands that cover 9.7% of the total surface area of the countryⁱⁱ. In excess of 225 significant wetlands sites are on record in the prototype *Pakistan Wetlands GIS Database* developed during the *PDF (B) Phase* of this Project. Nineteen of these have been internationally recognised by the *Ramsar Convention* Bureau as being of global importance. (See: *Optional Annex 30*). The diverse assortment of natural freshwater and marine wetlands that occur within Pakistan support unique combinations of biodiversity. The same resource, however, also sustains an estimated 144 million permanent human residentsⁱⁱⁱ and 3 – 4 million displaced persons from adjacent countries. The wetlands of the region are, therefore, generally degrading under a broad spectrum of anthropogenic threats that are mainly rooted in poverty but exacerbated by lack of knowledge and mismanagement.

1.2 Global Significance

3. Pakistan's permanent and ephemeral wetlands are globally significant in two ways: first, in terms of the intrinsic value of their indigenous biodiversity and secondly, as an acute example of the *poverty/subsistence-use nexus* that constitutes one of the most fundamental threats to biodiversity worldwide. The high global significance of Pakistan's wetlands is attributable to the diversity of species that they support. In all, eighteen threatened species of wetlands dependent mammals are found in the country including the endemic Punjab Urial (*Ovis vignei punjabiensis*) and Indus River Dolphin (*Plantanista minor*). Further, twenty threatened bird species are supported by Pakistan's wetlands in addition to twelve reptiles and two endemic species of amphibians. Pakistan's wetlands also support between 191-198 indigenous freshwater fish species (including fifteen endemics) and a total of 788 marine and estuarine fish species^{iv}. The high altitude wetlands, characterised by sites such as Karumbar Lake, situated at an elevation of 4,150 m, and Saucher Lake, at 4,250 m on the
4. Deosai Plains, represent a relatively unique category of alpine wetlands that is confined to the Himalaya, Hindukush and Karakoram mountain cordilleras.

1.3 Socio-economic Context

5. Pakistan has been burdened by both poverty and over population since its inception as an independent state in 1947. An estimated 84.7% of Pakistan's population lives below the international poverty line of US \$2.00/day. The level of human and social development is low with 51% of the population living without access to education and 55% unable to reach basic health services. Poverty is exacerbated by a high population growth rate, which, at 2.4%, is substantially more than that of South Asia (1.9%) and other low-income countries (1.9%) as a whole^v. The majority of Pakistan's population (67%) resides in the rural areas that also support the bulk of the poor. These factors combine to exert an inordinate amount of pressure on Pakistan's natural resources, including wetlands that play a vital role in supporting livelihoods for the poor. Since their ownership of assets such as land remains low, the poor are obliged to use common property resources for subsistence. These include wetland resources such as emergent vegetation, freshwater and marine invertebrates and fish, and both resident and migratory birds. This level of economic dependence may be acute for specific vulnerable groups like landless, impoverished women and migrant communities. The socio-economic surveys performed during the PDF (B) Phase of this Project indicated that women form a key group that interacts intensively with wetland resources even though they are marginalised in NRM regimes. Tribal and migrant communities are another important social group that are intensely dependent on wetlands resources. Consisting largely of forest-users, fishermen and livestock herders, such communities have few incentives to conserve wetlands once their immediate livelihood needs have been fulfilled. Surveys found that a lack of alternate livelihoods, access to credit, health and educational facilities and a negotiated stake in NRM were key factors that could be addressed to create incentives for migrant communities.

1.4 Policies, Legislation and Institutions

6. Pakistan has demonstrated its commitment to biodiversity conservation by supporting international agreements such as the Ramsar Convention^{vi} (1978), the Bonn Convention on Migratory Species (1987) and to the Convention on International Trade in Endangered Species of Wild Fauna and Flora or CITES (1976). Nineteen of Pakistan's wetlands had been designated as Ramsar sites by June, 2003. At the national level, Pakistan formulated a National Conservation Strategy (NCS) in 1992 and a Biodiversity Action Plan (BAP) in 2000 to provide a policy framework for biodiversity conservation. The BAP calls for the integration of national policies, development of appropriate legislation measures for in-situ and ex-situ conservation of species, research and raising public awareness for sustainable management of Pakistan's biodiversity. It emphasises the value of wetlands as important repositories of biodiversity. The country launched a National Environment Action Plan (NEAP) in 2001 as a follow-up to the recommendations of the mid-term review of the NCS. The plan includes ecosystem management as one of the four core areas and wetlands management and protection is a component of the ecosystems management core area. Pakistan has also formulated a draft Wetlands Action Plan (WAP) that was officially adopted by the GoP in 2000. In providing an overview of the scope and condition of Pakistan's wetlands, the WAP highlighted poverty and institutional deficiencies as the prime factors contributing to the degradation of wetlands resources.
7. Pakistan's conservation laws provide for the creation of a range of Protected Area (PA) categories including Wildlife Sanctuaries, National Parks, Game Reserves and Unclassified PAs. Of the four wetlands complexes selected for the Project, three include PAs (See: Optional Annex 37). Provincial and territorial legislation that provides the legal framework for biodiversity conservation includes:
- Azad Jammu and Kashmir Wildlife Act (1975);
 - Balochistan Wildlife (Protection, Preservation, Conservation and Management) Act (1974);
 - Islamabad Wildlife (Protection, Preservation, Conservation and Management) Ordinance (1975);
 - Sindh Wildlife Protection Ordinance (1972, amended 1993);

- Punjab Wildlife (Protection, Preservation, Conservation and Management) Act (1974, amended 1991); and
 - NWFP Wildlife (Protection, Preservation, Conservation and Management) Act (1975).
8. In addition, forestry-related legislation such as the Forest Act (1927) and other provincial/territorial legislation place restrictions on forest use. The Pakistan Environmental Protection Act (PEPA) of 1997 that includes the National Environmental Quality Standards (NEQS) provides a legal framework to control environmental pollution.
9. At the federal level, the Ministry of Environment (MoE) has the institutional responsibility for coordinating all efforts related to natural resources and environmental management through four directorates:
- The Environmental Protection Agency (EPA);
 - Forestry;
 - Environment; and
 - The Energy Conservation Agency (ENERCON).
- (10) *The Forestry Wing*, headed by the Office of the Inspector General of Forests (IGF), is principally responsible for overseeing provincial biodiversity conservation initiatives and for national compliance with international obligations to which Pakistan is a signatory. The IGF is assisted in these tasks by the *National Council for the Conservation of Wildlife (NCCW)*, the *Zoological Survey Department (ZSD)* and the *Pakistan Forestry Institute (PFI)*. The NCCW is primarily responsible for maintaining links with international agencies such as the *Ramsar Bureau* and for co-ordinating Pakistan's activities in accordance with its international obligations and agreements. The ZSD monitors the fauna of the country and maintains records of important biota, especially migratory waterfowl that visit Pakistan's wetlands. The PFI is a research-based institution that offers comprehensive training in forest management.
11. Implementation of activities for biodiversity conservation, including the protection of wetlands sites, is the responsibility of the provincial/territorial wildlife agencies. Their mandate includes the management of RAs and enforcement of restrictions on resource-use. They have also collaborated in several successful attempts to involve communities in biodiversity management including sustainable trophy-hunting initiatives in Northern Areas, NWFP and Sindh. Forest use in wetland areas is principally regulated by the *Provincial/Territorial Forest Departments* that also provide licenses for commercial extraction of wood and impose fines for violations of regulations governing grazing and timber felling in government forests. Recognising the importance of community participation in forest management, joint forest management approaches have been implemented in NWFP and Punjab.
12. With the significant exception of the *Salt Range Wetlands Complex*, where private land claims exist on portions of the area occupied by the lakes, wetlands generally remain either government or communal property. Property in the vicinity of wetlands, especially agricultural land, is usually privately owned but registered by the *Land Revenue Department*. *Provincial/Territorial Fisheries Departments* are responsible for awarding fishing contracts and monitoring harmful fishing practices. The *Provincial Irrigation Departments* manage the network of irrigation headworks, canals and associated reservoirs that make up the *Indus Basin Irrigation Scheme (IBIS)* and a few smaller irrigation works in other parts of the country. The *Provincial/Territorial Agriculture Departments* provide agricultural extension services and the *Livestock Departments* deal with the maintenance of livestock, control of stock disease, etc. For strategic reasons, substantial wetland areas are under the control of military agencies such as the *Pakistan Navy* and *Coast Guards* that have jurisdiction over parts of the *Makran Coastal Wetlands Complex*.
13. Other agencies of note consist of the *Rural Support Programmes* at national and provincial/territorial levels and the *Pakistan Poverty Alleviation Fund (PPAF)*. The RSPs provide credit and training to low income households for a range of income generating projects in order to reduce poverty. The PPAF provides grants for the development of community infrastructure and for training in addition to

extending micro-credit for income-generating ventures. Several NGOs and Community-Based Organisations (CBOs) also operate in such areas, notably the *Soan Valley Development Project* in the SRWC and the *Ornithological Society of Pakistan* in the CIWC. Major non-governmental institutions working closely with wetlands include the *World Conservation Union (IUCN-P)*, *Himalayan Wildlife Foundation*, *Houbara Foundation* and *World Wide Fund for Nature (WWF-P)*. IUCN-P has taken an active role in strategy formulation for biodiversity conservation while WWF-P has been an active partner in implementing community-based conservation initiatives.

14. Local institutional capacity for addressing environmental issues is also being strengthened in terms of the GoP's 2002 initiative to promote decentralisation and devolution of administrative power. At the provincial/territorial level, *Environmental Tribunals* have been established to address violations of the *Pakistan Environmental Protection Act* and the *National Environmental Quality Standards (NEQS)*. These Tribunals consist of representatives of government, non-government and private sectors. At the district level, senior civil judges or magistrates are empowered to decide cases involving environmental offences and violations of the NEQS. At both district and tehsil^{vii} level, representatives of the MoE are appointed in the offices of the *District - and Tehsil Nazims*^{viii} to investigate and take immediate action on significant violations of the NEQS. These structures are aimed at strengthening local capacity for environmental management, encouraging community participation in local environment management and ensuring devolved decision making on environmental issues.

1.5 Threats to Globally Significant Biodiversity

15. Field surveys conducted during the PDF (B) phase of the Pakistan Wetlands Project (PWP) identified proximal (direct) and distal (indirect) threats to wetlands in Pakistan and their underlying causes. These threats fall into three categories:
16. **Unsustainable anthropogenic use of wetlands:** This encompasses a broad category of activities such as *destructive fishing practices*, *over harvesting* of wetlands vegetation, unsustainable *hunting* and localised *over-grazing* in and around wetlands. In most cases, each category consists of a spectrum of individual or inter-linked harmful practices. In the context of fishing, these practises include the use of explosives, inappropriate nets, net material or netting techniques, over extraction of juvenile life forms, unacceptably high by-catch levels and failure to observe prescribed seasonal and species-specific restrictions. Similarly, floating and emergent vegetation may be excessively extracted for fuel and grazing or to support industries such as rope, basket, mat and blind making. Migrant water fowl and wild goat species are widely hunted for subsistence and sport purposes. Excessive grazing has, in many areas, resulted in soil erosion and siltation. The *underlying causes* of this general category of threat are principally related to the perception that the resources in question are part of an *open-access system*. Such constraints as may exist are ineffective and penalties for illegal or inappropriate resource-use are often not significant enough to be prohibitive. These inappropriate practices generally stem from policy shortcomings, lack of alternate livelihoods, failure to enforce regulations and the inadequacies of communal property management regimes.
17. **Physical changes to wetlands on an eco-system level:** While the previous category of threats results in direct impact on individual components of wetland biodiversity, for example those species that are hunted or harvested, the threats in this category cause much more extensive physical changes to the ecosystem that negatively impact upon many attributes of wetlands. Included in this category are activities such as land reclamation, deforestation and over-grazing of catchment areas.
18. **Land reclamation problems** are especially evident in the SRWC and CIWC, where expansion of agricultural area is a common practice. Widespread deforestation, especially in the SRWC, has caused substantial losses of wetlands habitat through siltation. The underlying causes of this category of threats are similar to those in the previous type such as the perception of an open-access resource complicated by additional factors including the failure of decision-makers to adequately transfer appropriate environmental costs directly to users.
18. **Off-site activities that cause physical and chemical changes to wetlands:** These include practices that take place in locations other than the wetlands themselves but which may result in dramatic impacts on wetlands. The two most significant threats in this category include changes in water flow regimes or levels and water pollution. The geographic and temporal extent of wetlands in

the CIWC, for example, has been adversely altered by impoundments and the upstream extraction of water for irrigation purposes. Agrochemical pollution has led to increased eutrophication in SRWC and CIWC and industrial pollution has been implicated in reducing fish stocks in the CIWC and MCWC. Marine pollution, mainly from minor oil spills, also negatively impacts the MCWC. The underlying causes of this category of threats mainly stem from policy inadequacies, lack of enforcement and a pervasive lack of awareness.

19. Given these threats and underlying causes, the Project strategy seeks to implement a range of activities that will address the underlying causes, thus sustainably removing the threats. Such activities include:
- Implementation of user rights agreements such as Outputs 7.4, 8.4, 9.4 and 10.4, to address the issue of open-access resources;
 - Development of local capacity to establish and operate appropriate institutions to regulate user rights effectively, including improved enforcement such as Outputs 7.7, 8.7, 9.7, 10.7;
 - Training in support of these regulatory institutions such as Outputs 4.3 – 4.11;
 - Introduction of diversified income opportunities, to provide alternatives to those that may be negatively affected by the application of user rights systems such as Outputs 7.5, 7.8, 8.5, 8.8 etc;
 - Awareness and education programmes in support of the afore-mentioned activities such as Outputs 5.2 – 5.11;
 - Strengthened governance of wetland resources such as Outputs 3.2 and 3.3; and
 - The development of decision-making systems and management tools underpinned by the Wetlands GIS Outputs 2.1 - 2.3.
 - Other activities identified below serve to create the appropriate conditions to allow the effective application of these key interventions.

2. Baseline Course of Action

20. Although on a limited scale, issues surrounding wetlands and waterfowl were the prime movers in the early development of government conservation programmes in Pakistan.

2.1 Wetlands Management

21. Some twenty years after Pakistan's independence, an exploration sponsored by WWF-UK revealed that wildlife and wetlands resources in Pakistan were severely threatened and, in most areas, declining in condition. The expedition report prepared by Mountfort (1967) recommended that a range of wetland sites be declared PAs. Other early efforts included extensive surveys made by Savage (1967 - 1970) and Koning (1970, 1976, 1987 and 1989). Koning's field work was supported by the International Wetlands Research Bureau (IWRB) and he made the first ever effort to train provincial conservation staff in waterfowl identification^k. Pakistan ratified the Ramsar Convention in 1975 and, simultaneously, nine wetland sites were somewhat hastily recognised by the Ramsar Bureau as being of international importance. Early inventory work tended to be confined to readily accessible wetland sites. In 1980, IUCN compiled A Directory of Wetlands of International Importance in the Western Palaearctic. This was followed by the International Council for Bird Preservation's preliminary Inventory of Wetlands in East Asia. The Directory of Asian Wetlands prepared by Scott (1989) listed 52 sites in Pakistan, based on the work of the NCCW and other agencies. Scott and Poole (1989) subsequently compiled an overview of important wetlands in Asia that featured some of the resources in Pakistan. In 1987 Wetlands International (WI) initiated a mid-winter waterfowl census in the region and government staff from a range of institutions have participated in this survey series annually since that time. The Pakistan NCS (1992) included the protection of watersheds and water bodies as two of fourteen major programme areas for priority implementation. A report based on joint surveys by the NCCW and Ramsar Bureau in 1990 identified priorities for action including surveys, conservation measures, awareness raising, management and applied research. The report recommended rationalising the existing list of Ramsar sites. As a consequence, several were amalgamated into a complex, three existing sites were withdrawn from the list and two others added, bringing the total number of Ramsar sites in March 1996, to eight.

22. By 2003, the national and site level investment in wetlands was generally inadequate to meet the challenge of conserving globally important biodiversity. At the *national level*, the key significant drawback was the absence of an effective enabling environment that could encourage and sustain initiatives for biodiversity conservation. Key barriers to creating an enabling environment remained:
- the lack of effective and integrated policies;
 - the absence of decision-making tools and reliable information to support effective wetlands conservation planning;
 - technical deficiencies related to skills and equipment; and
 - the lack of general public awareness or political pressure that would favour wetlands conservation.
23. Few comprehensive decision support systems or management tools were available for regional resource planning. The scope of the GIS facilities in the PFI and *Forest Management Centre* in Peshawar, was limited to forestry only and not organised to accept data on other forms of biodiversity or socio-economic conditions in wetlands and their buffer zones. Technical capacity in almost every aspect of wetlands management tended to be inadequate due to a lack of resources for scientific and specialised wetlands management training, appropriate equipment and exposure to international approaches to wetlands management. While Pakistan had produced a *Wetlands Action Plan* in 2000, the lack of a comprehensive *Wetlands Management Strategy* hindered policy formation, co-ordination and management of wetlands at a national scale. Additionally, options for financial sustainability had not been fully explored to enable the proliferation of long-term initiatives in biodiversity conservation. As a result, such initiatives tended to be donor-driven and short-lived.
24. At the *site level*, several of the above-mentioned inadequacies were also evident. Although all four of the designated *Demonstration Complexes* fell within the jurisdiction of the provincial forestry and wildlife management agencies, actual activity was limited to partial enforcement of resource use regulations. Some community-based biodiversity management initiatives had been supported elsewhere by the appropriate agencies in NWFP and Sindh. These approaches had, however, not been applied in the four selected wetland sites. Biodiversity monitoring in these sites had also been inconsistent although the ZSD and WWF-P had undertaken some initiatives, particularly during the PDF (B) phase of the Project. Some short-term conservation initiatives had been implemented in recent years in MCWC, CIWC, and SRWC with the active involvement of WWF-P. Significant activities comprised of a programme for the rescue of Indus Dolphins (*Platanista minor*) stranded in irrigation canals during the dry season in CIWC and support for eco-tourism initiatives on the Indus River. In MCWC, initiatives had included the conservation of endangered Olive Ridley Turtles (*Lepidochelys olivacea*) and Green Turtles (*Chelonia mydas*) and the rehabilitation of mangroves near Jiwani. Monitoring of waterfowl, Punjab Urial (*Ovis vignei punjabiensis*) and Chinkara or Indian Gazelle (*Gazella bennettii*) had been the key focus of conservation activities in SRWC, although some limited community-based ventures, mainly related to environmental awareness, had also been implemented.
25. If the *2003 scenario* were to continue, it is projected that wetlands conservation in Pakistan would continue to encompass a series of essentially unrelated, short-term initiatives driven by donor support. In the absence of the measures proposed under the PWP, the existing national and site level conservation efforts are likely to have little sustainable impact on the globally important wetlands and their associated biodiversity in Pakistan.

2.2 Public Awareness and Environmental Education

26. Several provincial/territorial conservation agencies have produced a variety of posters and small-scale publications during the 1980s and 1990s to increase public awareness of waterfowl and wetlands. The *Sindh Wildlife Department* set up the first wetland information centres at Haleji Lake and Lungh Lake with donor support. Displays featuring relatively poorly mounted specimens of different waterfowl species have been created at some government-owned sites including Hazarganji-Chiltan National Park and the headquarters of the NWFP Wildlife Department. In early 2001, WWF-P established a sophisticated *Wetlands Information Centre* at Sandspit near Karachi with

donor support. In an effort to sustain conservation initiatives around Jiwani, the Government of Balochistan, in April 2002, offered WWF-P premises for a community *Wetlands Information Centre*.

2.3 On-going Externally Assisted Projects

27. Financial assistance for overall national environmental issues is being furnished through the UNDP financed *National Environmental Action Plan (NEAP) Support Programme*. This initiative supports a range of technical, institutional and regulatory areas within sub-programmes and acts as a baseline initiative that is further strengthened by the activities under the PWP.
28. Urban environmental issues are being supported through the UNDP-funded Fuel Efficiency in Road Transport Sector Project, Kasur Tanneries Pollution Control Project and Institutional Strengthening for Implementation of the Montreal Protocol. In addition to the World Bank supported Montreal Protocol on Substances that Deplete the Ozone Layer, these initiatives essentially address critical environmental issues related to urbanisation. Three key projects related specifically to biodiversity conservation focus on Pakistan's varied needs in the natural resource sector. These include:
 - the UNDP/GEF supported Mountain Areas Conservancy Project (MACP);
 - the EU supported Palas Conservation and Development Project (PCDP); and
 - the World Bank/GEF supported Protected Areas Management Project (PAMP).
29. These efforts generally integrate biodiversity conservation with community participation and introduce alternative livelihoods to ensure that custodian communities benefit from conservation initiatives. Some of the key lessons learned from these projects have included:
 - working within tribal norms and customs;
 - involving community level leadership;
 - generation of tangible economic benefits; and
 - the involvement of women in NRM decision-making.
30. Sharing experience from these projects will also guide the PWP in fine-tuning Project initiatives. Other conservation projects include the following medium-sized initiatives supported by UNDP:
 - Conservation of Habitats and Species of Global Significance in Arid and Semi-arid Ecosystems in Balochistan;
 - Conservation of Balochistan Junipers through Community Participation;
 - Sustainable Management of Chilghoza Forest Ecosystem in Suleiman Mountain Range; and
 - Conservation of Representative PAs through Community-based Management.
31. In 2003, the only initiative supporting wetlands conservation was the World Bank funded National Drainage Programme (NDP). Under the NDP, selected artificial wetlands in Sindh and Punjab that had been impacted by recent development projects implemented by the World Bank were eligible to receive limited financial support for conservation and rehabilitation. To date, the NDP has invested a modest amount of Project expenditure on the rehabilitation of selected wetlands. The wetlands in this category have, therefore, not been considered for site-based activities under the PWP.

3. Project Rationale

3.1 Broad Development Goals

32. As a developing country faced with political and economic instability, Pakistan has serious and varied economic problems. A key development challenge for the country is to promote economic growth and an equitable income distribution without degrading its natural resources. Despite its difficult economic conditions, Pakistan has striven to make environmental issues a priority. At the provincial, territorial and national level, the country is endeavouring to reduce poverty while conserving its natural resources. The PWP fits well within Pakistan's development goals by aiming to promote equitable sharing of natural resources, securing rights-of-access, especially for poor communities, diversifying livelihoods, improving the income earning potential of stakeholder communities and creating incentives for sustainable wetlands management. The Project will advance the GoP's recent

initiatives for devolution of power to provincial and local levels by developing the capacity and wetlands management skills of provincial institutions and strengthening community-based organisations.

3.2 Country Driven-ness

33. Pakistan has demonstrated its fundamental commitment to biodiversity conservation in general and wetlands conservation in particular through its support for appropriate international conventions. The adoption of a *Wetlands Action Plan* in 2000 further illustrates the GoP's recognition of the importance of wetlands and the need to find sustainable solutions for their conservation. Additionally, the GoP's support for wetlands conservation is evident from the contribution provided to the PWP during the PDF (B) phase. This included active participation in Project formulation, involvement in field surveys and the facilitation of site selection. The pledged involvement of government agencies personnel and facilities during the implementation phase of the Project will further bolster the GoP's capacity and support for wetlands conservation. The GoP agencies involved in Project formulation have committed to sustainable institutional backing for wetlands conservation. The recent initiatives by GoP facilitating the devolution of power to district and tehsil level provide a strengthened context for implementation of such initiatives at the site level.

3.3 Global Environmental Objectives

34. Pakistan's wetlands support a wide spectrum of globally important biodiversity that merits support from the international community to ensure its sustainable conservation. A significant fraction of Pakistan's wetlands-dependent biodiversity is classified as endemic (**See: Optional Annex 36**), threatened and vulnerable (**See: Annex 15**) in internationally recognized evaluations such as IUCN's *Red Data Book*. Furthermore, international conventions such as Ramsar have recognised the role that Pakistan's wetlands play in maintaining and sustaining regional ecological processes that support globally important biodiversity such as bird migration routes and wintering grounds. While the country is making efforts to conserve its wetlands, it is constrained in this task by lack of access to physical and financial resources and immediate political and economic problems.
35. With support from the GEF, the proposed Project offers a proactive opportunity to create an enabling environment that is essential to conserve all of Pakistan's wetlands. Further, the Project initiatives in four *Demonstration Complexes* provide a much-needed opportunity for the application of proven conservation methods and development of innovative regionally appropriate and sustainable approaches to address site-specific issues. Lessons generated within the Project will be relevant for ongoing wetlands conservation initiatives both within and outside Pakistan for evaluation and application to similar efforts in other regions and countries. Significant features of replicability are expected to include the approaches developed to integrate communities in wetlands management, providing alternate livelihoods to wetlands-dependent vulnerable groups and developing mechanisms for financial sustainability in a "resource strained" economy. Such issues confront wetlands conservation in other countries as well and the success of measures implemented under the PWP will provide useful guidance to the international community.

3.2 Immediate Objectives and Project Strategy

36. The purpose of this Project is to conserve globally important biodiversity in Pakistan without exacerbating poverty. After an analysis of the threats and root causes identified during the PDF (B) phase, the proposed Project has been developed around two inter-related *Immediate Objectives* and ten *Outputs*. These *Immediate Objectives* and their associated *Outputs* are described below.
37. **Immediate Objective 1: To create and maintain an enabling environment for effective and sustainable conservation of natural wetlands at federal, provincial/territorial, and local levels.** This objective focuses on a range of *Outputs (1-6)* that will enhance the capacity of government and partner agencies to implement a comprehensive *National Wetlands Management Strategy*, strengthen institutional and individual capacity at the national, provincial and local levels for wetlands management, increase public awareness and understanding of wetlands and their values, and catalyse public and private measures and commitments to secure sustainability of wetlands.

38. **Immediate Objective 2:** To implement sustainable wetlands conservation at four representative sites that will serve as replicable models for subsequent nationwide wetlands conservation initiatives. This objective focuses on several *Outputs (7-10)* whereby four *Demonstration Complexes* will each develop and implement a long-term sustainable, management plan for the conservation of resources within each of four wetlands complexes, relying on strengthened local coordination and supported by innovative and replicable public/private and community-driven initiatives.
39. A key feature of these management plans for *Demonstration Complexes* will be the establishment of *Wetlands Conservancies* in which wetlands resources will be managed by stakeholder communities in partnership with the relevant government agencies. Important phases in the implementation of each *Demonstration Complex* will be:
- the establishment of a site co-ordination and consultative mechanism;
 - the implementation of a range of *bridging* activities
 - the development of a long-term management plan for the envisaged conservancy including social mobilisation, capacity building, development of alternate or diversified livelihoods and conservancy design;
 - the development and implementation of a financial plan for the long-term sustainability of all components of the conservancy; and
 - the preparation of a strategy for the expansion and replication of the initiative within the general eco-region that it represents.

4. Project Objectives, Outputs and Expected Results

Output 1: Sustainable institutions are established to provide national level coordination for the conservation of wetlands biodiversity in Pakistan and to promote the dissemination of lessons learned, especially from *Project Demonstration Complexes*

40. **Output 1.1:** A *Project Coordinating Mechanism and Management Unit* are established as interim *Project management mechanisms* leading to the establishment of permanent federal government wetlands conservation entities.
41. **Baseline Situation:** In 2003 a range of agencies were concerned with wetlands conservation in Pakistan, each with varying capacities and influence over a range of conservation related resources and functions. An entity with the capacity for integrating these varying functions in addition to providing and facilitating the technical, managerial and other aspects of wetlands conservation is essential to ensure the effective implementation of the Project and to provide inter-agency coordination. This entity will also play a vital role in inter-agency co-ordination and the building of appropriate capacity within government and other agencies for mainstreaming wetlands conservation in national development initiatives.
42. **Implementation:** The PWP will establish its headquarters in the form of a *National Project Steering Committee (PSC)* and *Project Management Unit (PMU)* based in Islamabad, under the auspices of the MoE's NCCW. The PMU will be the organisational nucleus of the Project and will be staffed with government personnel seconded from relevant departments. Specific technical support positions will be filled by specialists who will transfer skills and build the capacity of government and partner agencies during the course of the Project. The PSC will provide overall guidance to the Project.
43. Having oversight of the entire Project, the PMU will be in a unique position to evaluate the success and appropriateness of wetlands conservation measures developed and implemented at the *Demonstration Complexes*. It will, therefore, also undertake the responsibility for compiling case studies and describing techniques for replication elsewhere. This will be achieved by ensuring that lessons learned in the *Demonstration Complexes* are rapidly assimilated and integrated into wetlands management policy (*Output 3*), Project training courses (*Output 4*) and public awareness programmes (*Output 5*).

44. By PY 5.0, it is anticipated that an institutional framework for wetlands conservation will have been established within the NCCW in line with the *National Wetlands Conservation Strategy (Output 3)*. This Agency will have improved institutional capacity for wetlands management, access to enhanced management tools and a *decision support system* underpinned by the Wetlands GIS (*Output 2*). This will enable the new government entity to assume full responsibility for the coordination of national wetlands management initiatives. If approved by the PSC, the accountability for the supervision of the final two years of the Project will pass from the PSC and the PMU to the new federal government entity which may consist of a *National Wetlands Management Council* and a *Secretariat*.
45. **Output 1.2: A comprehensive inventory of equipment is acquired, effectively deployed, maintained and regularly upgraded for the duration of the Project.**
46. **Baseline Situation:** By world standards, technological capacity in the field of natural resource management in Pakistan is extremely low. In reality, the wildlife conservation agencies have been under-funded since their inception and have seldom, if ever, had "the tools to do the job". Basic resources such as radio communication, access to maps, aerial and satellite photography, the use of relatively sophisticated boats and aircraft or specialised equipment such as SCUBA or fire-fighting apparatus have been deployed by most wildlife managers and researchers elsewhere for decades but these aids have seldom been available to any significant extent in Pakistan.
47. **Implementation:** A central PWP *Technical and Equipment Resource Centre (TREC)* will be set up at a location convenient to the PMU and NCCW. The TREC will be a secure facility that will be capable of housing the entire inventory of Project equipment plus the staff required for its management and maintenance. Equipment will be supplied for various Project activities as required for approved components of the PWP, with the sanction of the Project's *National Project Director (NPD)*. It is anticipated that the need for this centralised equipment resource will diminish by the end of the Project to the point where it may be discontinued. This being the case, the GoP will, during the terminal phase of the Project in consultation with the UNDP, decide where and how the Project's equipment assets will be deployed or otherwise transferred. This will be done according to the UNDP Pakistan's standard operating procedures as set out in UNDP's *Project Cycle Operations Manual*.
48. **Output 1.3: Training courses for users of specialised equipment are developed and presented.**
49. **Baseline Situation:** Fieldwork in several of the Project *Demonstration Complexes* and in many of the areas where wetlands surveys are to be conducted requires the use of 4x4s under extremely hazardous conditions. In these circumstances improper operation of vehicles may result in unnecessary losses of time, damage to equipment and injuries to staff.
50. A wide range of traditional small water craft are used in Pakistan. Most are based on centuries-old designs that have been upgraded, in some cases, to accept propulsion units that are usually marinised diesel water pump or truck engines. Conventional modern outboard motors are uncommon, as are hulls constructed from glass fibre or metal. Skilled operators for such modern craft are also in short supply.
51. **Implementation:** In collaboration with vehicle manufacturers, a specialised 4x4 drivers training course will be designed and presented by a trained instructor. The PWP will also design a comprehensive short course in small boat handling in collaboration with the Pakistan Navy and, in this way, provide training for all PWP boat operators. The same courses may be modified by the *Project's Training and Capacity Building Programme* and presented to community-based vehicle and boat operators wishing to upgrade their safety standards for eco-tourism ventures.

Output 2: Planning and land-use decision-making of wetlands conservation agencies at all levels is enhanced through the provision of comprehensive, current wetlands information, decision support systems and tools utilising spatial and other data from the Wetlands GIS Database.

52. **Output 2.1: A Wetlands Survey Programme Section (WSPS) is set up within the PMU under the overall direction of the NCCW.**
53. **Baseline Situation:** The Project's envisaged WSPS involves the recruitment of a broad range of specialists to carry out an integrated series of nation-wide wetlands surveys. Using specialised services and equipment, survey teams will consist of staff from participating government agencies, NGOs, local communities and the private sector.
54. **Implementation:** A core WSPS will be established under the leadership of a technically qualified and experienced co-ordinator. The *Co-ordinator, Survey Programme* will design a broad, long-term survey programme with quarterly work plans which, with the accompanying budget, will be reviewed by the NPD before approval and execution.
55. **Output 2.2: A national wetlands survey programme is designed and implemented. Activities will include but not limited to the following:**
- the determination of accurate, geo-referenced polygons for the boundaries of all significant wetlands greater than 10 ha in extent, their associated buffer zones and catchment areas;
 - a complete investigation by analysis of satellite images of the geographic occurrence and extent of alpine wetlands in areas above 3,500 m in Pakistan;
 - the development of standard, repeatable population survey programmes, such as *Distance@ Version 4*, for all key wetlands vertebrates, especially those that are reliable, responsive, indicators of wetlands environmental health;
 - the development and implementation of an appropriate water quality monitoring programme for selected wetlands sites;
 - the design and implementation of a national programme to co-ordinate provincial/territorial regional surveys of endangered freshwater and marine reptiles, resident and migratory waterfowl, and freshwater and marine cetaceans;
 - the development of indicators and mapping of socio-economic information including demography, settlement, livelihoods and natural resource-use; and
 - the identification of wetlands resources appropriate for the implementation of conservation measures developed in the Project *Demonstration Complexes*.
56. **Baseline Situation:** Principally as a consequence of technical and financial constraints, wetlands surveys by government and private conservation agencies in Pakistan are, at best, sporadic. They consist of irregular counts and estimates of the more significant species in selected, easily accessible wetlands. Little effort is made to co-ordinate survey work between various agencies and provinces, even in the case of endangered species such as the Indus River dolphin. As a consequence of these realities, there is limited ability to detect and respond with any level of sophistication to positive or negative small or large-scale trends in wetland environments.
57. **Implementation:** The basic approach to this component will be to close gaps in the knowledge of the geographic position and quality of wetlands in the remoter areas of the country such as the western deserts of Balochistan and the alpine highlands. A comprehensive, on-going programme of exploratory surveys of uncharted wetlands will be launched in order to enhance baseline information. As jurisdictional and land tenure issues are often at the root of inappropriate use of wetlands, a concerted effort will be made to fix the seasonal and permanent boundaries of significant wetlands and, if appropriate, the associated catchment areas. This will be supplemented by regular seasonal biological and water quality surveys of those wetlands for which basic cadastral information exists. It is anticipated that, by the end of the Project, the annual survey programme will be recognised as a vital component of wetlands management and that government financial support for the agencies involved will be restored to a level that is adequate to sustain the programme. Increased awareness, both in the public and private sector, of the importance of wetlands conservation is also likely to mitigate in favour of improved financial support of the survey programme (*Output 5*).

58. **Output 2.3: The Pakistan Wetlands Geographic Information System (W-GIS) Database is enhanced and deployed to conservation agencies.**

59. **Baseline Situation:** Prior to the implementation of the PDF (B) Phase of the PWP, almost all recorded, retrievable information on wetlands in Pakistan was in the form of unpublished departmental and Project reports, a superficial list attached to the draft *Wetlands Action Plan* (2001) and the details recorded in the *Directory of Asian Wetlands* (1989). These data sets range in complexity from information on easily accessible wetlands in south central Sindh and in isolated sections of the lower Indus Basin to superficial coverage in the more remote northern alpine areas of the country. Little data is available on associated socio-economic conditions, human population and livestock densities. The general format of these data sets does not facilitate cross comparisons with important parameters such as income levels, poverty indices, human or livestock densities, etc., all of which are significant descriptors of anthropogenic influences on wetlands.

60. **Implementation:** This component of the Project will consist of the following steps:

- alignment of *Pakistan's Wetlands GIS (W-GIS)* with the *Asia Wetlands GIS*, once it is complete, in order to facilitate data exchange, comparison, and ease of updating;
- installation of a full-scale updated version of the W-GIS in the offices of the MoE's NCCW during PY 1.0. A Project technical advisor will be seconded to the NCCW staff for the duration of the Project to maintain, update and facilitate the use of this resource and to train a GoP counterpart to independently operate the Database;
- provision of working copies of the W-GIS to all six provincial and territorial government conservation agencies with a comprehensive supporting package of computer hardware and software;
- provision of copies of the W-GIS to key agencies involved in wetlands surveys and biodiversity inventory work;
- revision of the W-GIS by Project specialists on behalf of the NCCW and various conservation agencies; and
- provision of training material on GIS operation and application in decision-making as well as the training courses in *Output 4*.

Output 3: A National Wetlands Conservation Strategy (NWCS) is developed, officially adopted and implemented at federal, provincial/territorial and community level.

61. **Output 3.1: A detailed contract for the formulation of a National Wetlands Conservation Strategy is developed and awarded.**

62. **Baseline Situation:** By June, 2003, the most advanced policy document dealing with wetlands conservation in Pakistan was the *National Wetlands Action Plan*. This document serves a useful interim role but is inadequate for comprehensive execution.

63. **Implementation:** An agency with suitable intra-governmental experience and proficiency in the formulation of conservation strategies will be offered a contract to develop the NWCS in close collaboration with relevant federal and provincial/territorial government agencies.

64. **Output 3.2: NWCS policy development phase is implemented.**

65. The document will feature but not necessarily be confined to the following issues:

- promoting and improving public awareness of freshwater and marine wetlands conservation issues and the principles of sustainable use;
- ensuring compliance with international commitments in the form of treaties and conventions;
- developing co-operation across international boundaries for the management of shared watersheds;
- improving governance and the effectiveness of public and private institutions engaged directly or indirectly in wetlands conservation with special attention to the rationalisation and streamlining of government policies and co-ordination and communication among agencies;

- enhancing environmental education initiatives with emphasis on wetlands conservation;
 - mitigating or removing acute threats to the integrity of significant wetlands;
 - fostering sustainable utilisation of wetlands resources with special attention to the mitigation of poverty and encouraging the involvement of communities and NGOs;
 - protecting the rights of access of rural communities to specific wetlands resources and defining the role to be played by such communities in the participatory management of natural wetlands;
 - conserving cultural heritage sites, customs and practices associated with wetlands;
 - promoting the accumulation of accurate inventory data and information about wetlands through surveys and monitoring; and
 - the assessment of current policies concerning closely related sectors such as water, agriculture, forestry and land management to ensure that they are compatible with the sustainable use of wetlands.
66. **Baseline Situation:** No dedicated *National Wetlands Conservation Strategy* has been developed but a *Draft Action Plan* was adopted by the MoE in 2000. The protection of watersheds and water bodies has been identified in the NCS as a high priority but no independent strategy has been proposed for conserving wetlands.
67. **Implementation:** The formulation of the *National Wetlands Conservation Strategy* will follow the basic guidelines provided by the Ramsar Bureau (2000). These will be further adapted to Pakistan's conditions in terms of the lessons learned during the formulation of the *National Conservation Strategy* (NCS), *Sarhad Conservation Strategy*, *Balochistan Conservation Strategy* and recently, the *Northern Areas Conservation Strategy*.
68. **Output 3.3: The formulated NWCS is officially adopted at federal, provincial/territorial and community level.**
69. **Implementation:** After formulation, the policy adoption and implementation phase will take place in collaboration with the Federal Cabinet.

Output 4: Technical competence of government agencies and CBO conservation staff is enhanced through comprehensive training and capacity building programmes.

70. **Output 4.1: A Training and Capacity Building Section (TCBS) is established within the PMU.**
71. **Implementation:** A locally recruited, technically qualified and experienced specialists will be engaged to serve as the *Co-ordinator* of the *Capacity-building and Training Programme*. The coordinator will assemble a team of specialists and prepare a long-term training programme for approval by the NPD. The *Training Plan* and all initiatives aimed at capacity-building will be screened to ensure that they develop synergy with training initiatives in other major projects. At the provincial level, for instance, efforts to build capacity within the relevant agencies in Balochistan will coordinate activities with the PAMP. A similar approach will be followed in NWFP in conjunction with the MACP to ensure cost effectiveness and maintain consistency of effort. An important function of the TCBS will be to integrate lessons learned from the Project's *Demonstration Complexes* into their programmes to facilitate rapid replication and proliferation of effective wetlands conservation measures.
72. **Output 4.2: A training and capacity-building needs assessment exercise is conducted for government and partner institutions involved in wetlands management and conservation.**
73. **Baseline Situation:** The majority of staff from government and partner institutions working on wetlands management acquire "on the job" training without strategic planning and investment in skill upgrading at the required levels. Some requisite and specialised skills are available within government agencies but few avenues exist for sharing skills.

74. **Implementation:** To build the requisite skills for effective and sustainable wetlands management within both government and partner agencies, the *Training and Capacity Building Section* will conduct a comprehensive needs assessment exercise. This exercise will enable the identification of gaps within the existing knowledge base, the assessment of existing skills, cost-effective methods for sharing them, the requirements for upgrading of skills and the acquisition for new and specialised skills. The needs assessment exercise will be part of a long-term strategy to develop and acquire the capacity for sustainable wetlands conservation at national, provincial/territorial and community levels. The exercise will generate a comprehensive and long-term Training Plan for the sector. Elements of the survey may be repeated to evaluate the impact of specific capacity-building programmes presented by the Project.
75. **Output 4.3: Post-graduate university course in wetlands management is established.**
76. **Baseline Situation:** By mid 2003, none of Pakistan's tertiary education institutions offered any undergraduate, postgraduate or general training in wetlands management. Most professional staff that are recruited for wildlife management purposes, therefore, tend to be graduates from other disciplines such as Forestry, Agriculture, Botany, Zoology or Biology.
77. **Implementation:** A comprehensive *curriculum* for a one-year post-graduate course in wetlands management will be designed in close consultation with the *PWP Academic Advisory Committee*. An appropriate university or institution will be selected for the presentation of the course, which will be subsidised by the PWP for an initial period of three years.
78. **Output 4.4: Pre-service and in-service public service training for GoP bureaucrats is presented.**
79. **Baseline Situation:** Governance in Pakistan is implemented at federal and provincial/territorial levels by a core of professional bureaucrats, who receive their professional training from either the *Civil Services Academy* in Lahore or *National Institute of Public Administration*, Lahore. A review of the course *curricula* of these institutions revealed that little or no training is provided in NRM and issues such as the conservation of wetlands go entirely unmentioned. Consequently, key decision-makers within the government service tend to learn about issues like NRM by experience, alone.
80. **Implementation:** NRM training modules with special reference to wetlands will be designed for each of the national bureaucrat training institutions in consultation with their academic staff and the *PWP Academic Advisory Committee*. Appropriate reference material supporting the two modules will be developed, printed and supplied free of charge to course participants for the duration of the PWP.
81. **Output 4.5: NRM and wetlands training modules for military leader group are presented.**
82. **Baseline Situation:** Pakistan has been under the control of military governments for about half of its 56 year existence. A superficial review of the training that is provided to pre-service and in-service military officers revealed that the courses do not include NRM at any level. This has a direct impact on NRM decision-making in government hierarchies during periods of military rule. It also affects the conservation of a vast portion of the country that is, for strategic reasons, permanently under the control of military staff.
83. **Implementation:** An extract will be made of appropriate components of *Outputs 4.3, 4.4 and 4.7 – 4.9* and adapted for inclusion in *officers' training courses*. Supporting notes, *aide memoires* and instructional material will be produced and distributed in the programme. The PWP's TCBS may also provide training for selected military instructors to enable them to present the NRM course material.
84. **Output 4.6: Directorate level in-service training courses for conservation agencies are presented.**
85. **Baseline Situation:** Majority of the staff in Pakistan's wildlife conservation agencies are trained in Forestry. This situation is counterproductive in the context of wetlands management. A practical short-term solution to the problem is to provide opportunities for senior staff to attend "conversion courses" in wildlife management with special reference to wetlands.

86. **Implementation:** The TCBS will develop and present a series of interrelated, comprehensive training modules on wetlands management. The individual courses will be repeated at least twice in each annual cycle. Where possible, local case studies will be used to illustrate the basic principles concerned in order to increase the relevance of the course material. Provision will also be made for the possible participation of senior professional staff in training opportunities that are offered abroad by international organisations with expertise on wetlands (*Output 4.11*).
87. **Output 4.7: Professional field staff in-service field training courses are presented.**
88. **Baseline Situation:** The general lack of proper training in wildlife conservation and, more specifically, wetlands management in Pakistan also results in an inadequate level of capacity among field staff to carry out field surveys, monitor biodiversity and implement a range of specialised wetlands management interventions.
89. **Implementation:** The TCBS will develop an appropriate series of short, in-service courses for professional level field staff in conjunction with specialists from *Wetlands International's Training Service* and other international agencies. These courses will be presented at a minimum frequency of twice *per annum*. Based on feedback received during the Project, the course content will be revised and upgraded to improve its effectiveness. Additional courses, if required, may be introduced to the programme at the discretion of the PSC.
90. **Output 4.8: Proficiency courses for non-professional field staff are presented.**
91. **Baseline Situation:** As a consequence of socio-economic environment in Pakistan, it is rare to encounter professional level wildlife conservation staff that are actually resident in or adjacent to PAs. The day-to-day management of the PAs is, therefore, routinely left to the resident junior non-professional staff such as wildlife guards, game watchers, etc. Because of budget constraints and limited technical capacity, these non-professional staff members receive very little proficiency training during their careers. The general standard of their service is, consequently, poor by comparison with similar conservation agency staff in other countries.
92. **Implementation:** Comprehensive proficiency courses based on the type of training given to wildlife rangers in East and southern Africa will be provided. Training camps will be set up in or near to a suitable PA and course participants will be trained in aspects such as discipline, law enforcement, public safety, weapons handling, wildlife surveys, fence construction, radio communications, fire-fighting, environmental interpretation and provision of tourism guide facilities, etc.
93. **Output 4.9: Custom-designed courses for CBOs are presented.**
94. **Baseline Situation:** The Project anticipates the involvement of CBOs and, especially *Village Conservation Committees (VCCs)* in the implementation of management plans for the four *Demonstration Complexes* and the subsequent replication of wetlands conservation initiatives elsewhere. The potential for this contribution extends to a range of practical measures such as conducting censuses of key species, control of exotic *biota*, rehabilitation of threatened *biota* and habitats such as mangroves, law enforcement, etc.
95. **Implementation:** As this component of the Project is dependent upon the mobilisation of *custodian communities*, it cannot be designed in advance. The envisaged approach is to periodically perform a *capacity-building needs assessment* for each *Demonstration Complex*, develop a site specific *capacity-building strategy* on the basis of identified needs, secure endorsement of the NPD for the strategy and the associated expenditure and implement the strategy. These steps will necessitate close collaboration between each specific *Demonstration Complex* Management Team and the Project's National Capacity-Building Team.
96. **Output 4.10: International in-service training courses for selected staff are arranged.**
97. **Baseline Situation:** With no specific institution offering academic training in wetlands management or wildlife management in Pakistan, most professional staff engaged in conservation of wetlands resources have no specialist training for the work at hand.

98. **Implementation:** The Manager of TCBS will carefully monitor the availability of short 3 - 8 week, international courses relating to wetlands management and monitoring. A sub-committee of the PSC will, on a quarterly basis, review nominations made by government wildlife conservation agencies, the PSC, the NPD or the NPM/CTA and approve the participation of highly motivated conservation officers in appropriate international training sessions. Professional staff from the private sector may also be considered but will be required to enter into a contract binding them to a specified period of service with the nominating organisation. An appropriate binding period of continued service with their parent organisations after completion of the course.
99. **Output 4.11: A comprehensive manual for conservation and management of wetlands in Pakistan is published.**
100. **Baseline Situation:** An important goal of the Project is to facilitate replication of effective wetlands management practices but no comprehensive guidebook or manual for the management of wetlands exists in Pakistan or the adjacent regions. Many of the techniques that will be developed, such as the breeding of endangered cranes, or those that have already been implemented in Pakistan, such as the methods used to survey the Indus Dolphin, are relatively unique. It is, therefore, anticipated that the publication of such techniques in a user-friendly manual would substantially enhance nationwide wetlands management capacity and would serve as a useful tool for conservation practitioners in the public and private sector.
101. **Implementation:** The material that is prepared for the training courses (See: *Outputs 4.4 – 4.10*) and the practical lessons learned during the development and application of management plans for the four *Project Demonstration Complexes* will be used to form the basis of a wetlands management techniques manual. This publication will be released in both conventional printed form and will also be made available on the wetlands website that will be developed as part of the Project (See: *Output 5.10*). Partners in this initiative are likely to be the PFI and the *Punjab Wildlife Research Institute*.

Output 5: A nation-wide wetlands awareness campaign is designed and implemented.

102. **Output 5.1: A Communications and Awareness Section is established within the PMU.**
103. **Implementation:** A locally recruited, technically qualified and appropriately experienced specialist will be engaged to serve as the *Co-ordinator* of the *Communications and Awareness Programme*. The coordinator will assemble a team of specialists and will prepare a long-term programme for approval by the NPD. Quarterly work plans and budgets will be submitted for review prior to implementation.
104. **Output 5.2: National public awareness and opinion surveys are conducted.**
105. **Baseline Situation:** The level of awareness for wetlands issues in Pakistan is generally very low. Reduced awareness levels were also repeatedly cited as a root cause of conservation problems during the *Consultative Phase* of the PDF (B).
106. **Implementation:** This survey, components of which will be repeated at least twice during the Project period, will be aimed at accumulating qualitative and quantitative information about public awareness, at all levels, concerning wetlands issues and public opinion in respect of the need for proactive freshwater and wetlands conservation issues.
107. **Output 5.3: Communications and awareness building strategy is developed, approved and implemented.**
108. **Baseline Situation:** The information on public awareness acquired during the PDF (B) phase of the Project was insufficient to serve as a basis for the development of an advanced communications and awareness strategy. *Output 5.2* is designed to provide such baseline information that will facilitate the development of a well-targeted and balanced strategy.
109. **Implementation:** Capitalising on the experience gained in the MACP, the PWP *Co-ordinator*, *Communications and Awareness* will formulate a strategy and submit it to the NPD for approval with

a schedule of estimated costs. The components of the strategy will include but not be confined to *Outputs 5.4 – 5.10*.

110. Output 5.4: A wetlands communication network is established.

111. Baseline Situation: Recent advances in information technology have introduced a modicum of Internet connectivity to many parts of Pakistan. It may be safely assumed that this trend toward enhanced cyber communications will improve. In these circumstances, the creation and maintenance of a web-based wetlands communication network would be a useful communications tool.

112. Implementation: The basic network of agencies and individuals established during the PDF (B)'s *consultative phase* will be enlarged upon and amalgamated with information from the *Donor Forum* that has been established for the Project. Additions to the network will also be recruited through hyperlinks to the Federal Government's GEF website (www.gefpak.gov.pk) and WWF Pakistan's website (www.wwfpak.org), among others.

113. Output 5.5: A primary schools outreach programme is designed and implemented.

114. Baseline Situation: A superficial review of classroom materials available in a cross-section of primary schools that were encountered during the survey component of the PDF (B) Project and WWF-P school visits revealed an almost complete dearth of indigenous natural resource material illustrating indigenous biodiversity.

115. Implementation: The output will, in an innovative way, identify areas within existing, primary level subject *curricula* where environmental principles and awareness of wetlands may be introduced without formal changes in the overall *curricula*. Appropriate material will be introduced indirectly by the preparation of appropriate teaching aids and materials, within the context of the existing *curricula* that will then be disseminated to the teachers of selected schools. This initiative may be extended to secondary schools if deemed appropriate by the PSC. Secondary components of the Output will include the preparation of a short course in wetlands awareness for primary school teachers of all subjects and the production of a companion booklet for primary teachers with the working title: "*Teaching Environmental Awareness in Primary Schools*".

116. Output 5.6: A religious leaders' outreach programme is implemented.

117. Baseline Situation: Despite the reality that in excess of 97% of the people of Pakistan are Muslims, little has been done to integrate Islamic religious philosophy and conservation. A WWF-P Project in Chitral District in 1990 significantly changed attitudes among the local public to the hunting of waterfowl by working through community religious leaders. The MACP also successfully established positive links with religious scholars at an early stage in that Project.

118. Implementation: The Project will establish contacts with the *Ulema* (religious scholars) to facilitate environmental education in religious schools. It will also produce material for use in sermons based on quotes from the *Holy Qur'an* and *Hadiith* and improve the level of environmental awareness of religious teachers.

119. Output 5.7: A comprehensive mass media outreach programme is implemented.

120. Baseline Situation: The increasing reach of mass media in remote areas of Pakistan presents a valuable opportunity to extend environmental awareness to vast sections of the population.

121. Implementation: The Project's national awareness campaign will capitalise on appropriate opportunities to use the local and national press, radio broadcasts (VHF) and television to disseminate information about wetlands and generally raise public awareness for wetlands issues. The Output will include the preparation of a 55-minute documentary film on wetlands. This will be dubbed into key languages such as *Pashtu*, *Brahvi*, *Saraiki* and *Sindhi* for use in *ad hoc* extension education programmes and regional TV broadcasts.

122. Output 5.8: A sports hunters' outreach programme is designed and implemented.

123. Baseline Situation: Modern sport hunters in Pakistan tend to come from the upper echelons of society and are inherently influential but difficult to control. The disparity between the social standing

of rural wildlife guards from relatively impoverished villages and the elite, often wealthy, sports hunters is usually sufficient to render effective law enforcement improbable. As enforcement alone is inadequate to change attitudes, self-regulation by the hunters seems to be one of the few viable socially acceptable options.

124. **Implementation:** Since ineffectively regulated sport hunting of waterfowl has consistently emerged as a cause of biodiversity loss in wetlands, the Project will endeavour to organise the waterfowl hunters of the country, increase their level of awareness for the problems that exist and encourage them to regulate their activities. Sporting firearms and ammunition traders and target shooting clubs will be used as an initial avenue of contact with waterfowl hunters.
125. **Output 5.9: A public awareness programme based on street theatre performances is implemented.**
126. **Baseline Situation:** A pilot Project supported by the *GEF/UNDP Small Grants Programme* demonstrated that traditional street theatre is an effective tool for awareness raising areas with low literacy rates. The Project was carried out in the Saraiki language areas of the south-central Punjab and was most successful in impoverished areas with low literacy rates.
127. **Implementation:** The pilot Project's lessons will be incorporated and will be expanded upon to include all significant components of the Indus River Dolphin home range, especially northern Sindh between Guddu and Sukkur irrigation barrages. The feasibility of using a similar approach for awareness-raising on wetlands issues will be investigated for other suitable project sites.
128. **Output 5.10: A Pakistan wetlands website is commissioned and created.**
129. **Baseline Situation:** A recent government evaluation of the annual growth of Pakistan's PC-based Internet users indicates that it may be as high as 25% per annum^x. Commercial Internet access providers are established in most areas that have landline or microwave telecommunications links.
130. **Implementation:** A well illustrated, interactive and effectively cross-linked website will be designed, launched on the World Wide Web and maintained for the duration of the Project. The language medium will be English but the possibility of providing hyperlinks to significant texts translated into Urdu will be investigated.
131. **Output 5.11: Wetland exhibits for information centres are designed and installed.**
132. **Baseline Situation:** A range of different agencies have developed wildlife and natural history exhibits in major cities of Pakistan. These include the *National Museum of Natural History* in Islamabad, the *WWF-P Wetlands Centre* in Karachi and the *Gilgit Conservation and Information Centre*. None, except for the *WWF-P Wetlands Centre*, focuses on wetlands or provides specific wetlands related information. Likewise, major towns and cities associated with the four selected Project *Demonstration Complexes* do not have any suitable exhibition of wetlands ecology that could be used as a teaching, training or awareness raising aid.
133. **Implementation:** If a series of wetlands teaching exhibits were to be produced for each of the major city centres, it is likely that they would share a common or generic component that might include as much as 75% of each exhibit. The PWP will facilitate the development of wetlands exhibits at a range of suitable venues in Pakistan's major cities and in the principal town centres associated with the selected wetlands *Demonstration Complexes*. This will be a relatively economical exercise as it will involve the design and replication of up to eleven copies of each modular component. An estimated 25% of expenditure would be associated with 'customising' each centre in terms of local content.

Output 6: Elements of long-term sustainability of wetlands conservation initiatives are developed and adopted.

134. Output 6.1: A Fundraising and Financial Sustainability Section (FFSS) is established.

135. Implementation: An internationally recruited, technically qualified and appropriately experienced person will be engaged to serve as Co-ordinator of the *Fundraising and Financial Sustainability Programme*. The incumbent will work in close collaboration with the Project's Administration and Logistics Staff and will be based in the PMU.

136. Output 6.2: Financial sustainability needs assessments are conducted.

137. Implementation: The Co-ordinator, FFSS will perform comprehensive financial needs assessments of individual components of the Project's wetlands conservation initiatives as they emerge. In each case, the goal will be to achieve independent financial sustainability for the initiative in question. In situations where this proves to be impractical, targeted efforts to secure long-term donor funding for these components of the wetlands conservation programme will be launched.

138. The Fundraiser's activities will be overseen by a Financial Advisory Sub-committee of the PSC that will approve and co-ordinate all methods of securing long-term financial stability for the PWP. Specifically, this Committee will oversee activities such as the establishment of trust funds or similar financial instruments and the management of their ongoing financial performance.

139. Output 6.3: Fund-raising options and initiatives are implemented.

140. Implementation: The FFSS will design and implement an innovative fundraising campaign that will develop the potential of charismatic components of the PWP to support those conservation initiatives, which, though important, may have little or no capacity to be financially self sustaining in the long-term. A wide range of potential sources of financial support including national, international, private and public sector sources will be explored for long-term financial sustainability. Private sector mechanisms are expected to include but not be limited to the development of:

- a trust fund;
- promotional campaigns;
- private donations; and
- corporate support.

141. Support from bilateral and multilateral agencies, eco-tourism ventures and revenue through entry tickets will be some of the public sector mechanisms explored for financial sustainability. The exact nature of these financial mechanisms such as the type of trust fund to be established will be assessed and finalised with the active guidance of a Financial Advisory Sub-Committee of the PSC.

Output 7: Wetlands biodiversity is sustainably conserved in the *Makran Coastal Wetlands Complex (MCWC)* by designing and implementing a comprehensive Management Plan.

142. General Baseline Situation: The MCWC lies on the Balochistan coast (See: *Figure 1*) where rugged conditions and poor communications hamper the efforts of the *Balochistan Forests and Wildlife Department* and other government agencies to manage natural resources. PA status has been extended to several parts of the Makran Coast, most significantly in the case of Hingol National Park that at 169,000 ha, is Pakistan's largest National Park. Two sites within the MCWC have been recognised by the Ramsar Bureau: *Astola Island* and *Jiwani Coastal Wetlands*. Both WWF-P and IUCN-P have mounted small-scale initiatives to conserve elements of coastal zone biodiversity on the Makran Coast. WWF-P initiated turtle and mangrove conservation programmes in Jiwani in 1998 and

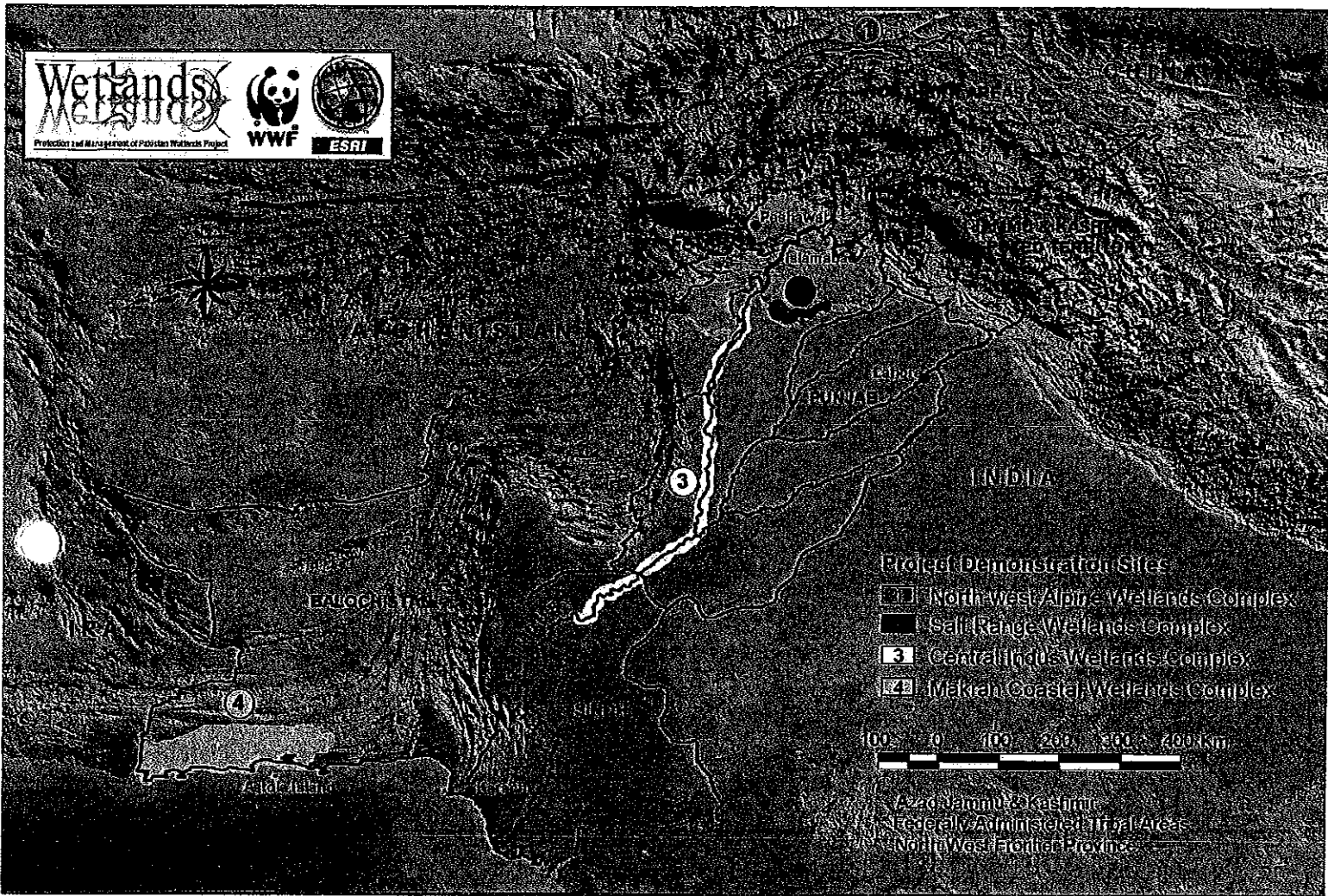


Figure 1: The geographic location of each of the four *Demonstration Complexes* selected for the *Pakistan Wetlands Project*. The sites were specifically chosen to be broadly representative of prevailing conditions and typical wetlands conservation problems in each of four separate ecological regions. It is anticipated that the *Demonstration Complexes* will yield valuable information about wetlands and encourage the development of innovative wetlands management techniques that may be readily replicated elsewhere in Pakistan as part of the national ongoing wetlands conservation programme.

143. in 2002 negotiated financial support for a mangrove rehabilitation campaign extending westwards along the coast from Sonmiani Bay to Kalmut Khor and Jiwani.
144. **Biodiversity:** Elements of the MCWC support a range of globally important biodiversity. These include significant areas of coral, mangrove swamps and sea grass, threatened marine turtles, the endangered Marsh Crocodile, large seasonal accumulations of migratory birds and approximately ten species of marine cetaceans. Jiwani Sea Mount and the areas of rocky shore-line, estuaries and associated mangroves are vital breeding areas for commercially important fish species.
145. **Human Habitation and Resource-use:** The MCWC is sparsely populated, for example the population density in Gwadar District is nine people per km². The majority of the population is concentrated around the coastal towns of Jiwani and Gwadar where fishing and other port-based activities are undertaken. Fishing is the principal occupation in the area. This is carried out by both traditional fishermen operating small diesel-powered boats and by deep sea trawlers from the large-scale national and international commercial fishing industry. Harmful fishing practices are rampant, such as the use of illegal nets and fishing during the spawning season. There is also a substantial by-catch of endangered marine species such as turtles and cetaceans. Coastal pollution from leakage of diesel boat fuel and oil further adds to the negative impact on wetlands. Other forms of resource dependence include fuel wood collection from mangroves and hunting for sport and subsistence purposes. A low literacy rate and cultural norms that restrict the social mobility of women hinder the participation of women in NRM regimes. Additionally, weak social indicators for the provision of health, sanitation services and access to drinking water exacerbate poverty and perpetuate dependence on natural resource based livelihoods.
- 146. Output 7.1: Institutions are established to integrate wetland conservation into local and provincial land use planning in the MCWC.**
147. **Implementation:** After a six-month inception period during which a core *Site Management Team* (SMT) will be recruited and trained in respect of Project administration and the implementation of the *Outputs* that all four sites share in common, the *MCWC Field Office* will be set up, commissioned and an interim *Wetlands Complex Conservation Committee* (WCCC) will be constituted. In addition to implementing *Outputs 7.2 – 7.12*, the SMT will have the important responsibility of identifying and describing viable wetlands conservation and management initiatives that emerge in the MCWC but may be suitable for replication elsewhere. Detailed information on such measures will be shared with the PMU. By PY 5.0, the SMT will be superseded by a permanent government or parastatal body created under the auspices of the provincial/territorial conservation agency.
- 148. Output 7.2: MCWC site explored and assessed.**
149. **Implementation:** After receiving advanced training in the use of GPS receivers for geo-referencing field data and in accumulating and formatting information for the *Pakistan Wetlands GIS-database*, the *MCWC Site Manager* will personally oversee the compilation of the comprehensive cadastral data set for the complex. This will ensure that the senior elements in the SMT are familiar with the full extent of the Complex, in terms of the natural resources and the human inhabitants who are the potential stakeholders in the Project.
- 150. Output 7.3: MCWC Immediate Action Plan for conservation is implemented.**
151. **Implementation:** Components of this plan may include but will not be restricted to:
- the control of feral dogs in the vicinity of Green Turtle (*Chelonia mydas*) and Olive Ridley Turtle (*Lepidochelys olivacea*) nesting sites in the MCWC;
 - the introduction of a used engine lubrication oil recovery and recycling service in the fishing boat anchorages of Jiwani, Pasni, Gawadar Bay and, if feasible, the smaller anchorages;
 - a programme to locate, remove and dispose of fragments of mono-filament gill netting dispersed in the inter-tidal zone along the coastline;
 - the control of domestic cats (*Felis domesticus*) and ship rats (*Rattus rattus*) on Astola Island;

- the establishment of a *coral-safe anchorage* on the leeward side of Astola Island and on Astola Sea Mount;
- a campaign to teach local fishermen how to effectively resuscitate marine turtles that have been recovered from fishing nets in a state of deep apnoea; and
- an evaluation of traditional rights of access to wetlands resources and the implementation of appropriate short-term legal measures to protect these.

152. Output 7.4: Communities are organised and mobilised into Village Conservation Committees (VCCs).

153. **Baseline Situation:** During the PDF (B) Phase it was established that the communities of the Makran Coast are isolated and poorly organised in most respects.

154. **Implementation:** Following the model developed by the MACP, conservation management in the MCWC will be achieved through an institutional framework for co-operative planning effected at the village/floating village level through the formation of VCCs. The VCCs will consist of appropriate user-groups that are wholly or partially dependent on wetlands resources for their livelihoods. The SMT will, in conjunction with the VCCs, develop participatory Micro-plans that embody community agreements on resource use and the design of alternative livelihood ventures that alleviate pressure on wetlands resources

155. Output 7.5: A programme for alternate/diversified livelihoods is developed and implemented.

156. **Baseline Situation:** The prime wetland resources of the MCWC are distributed over a c.120 km stretch of rugged desert coastline. The road reticulation in the region is poor and government control over the resources is understandably weak. Communities such as sea-going fishermen and graziers that use shoreline vegetation are highly mobile. Enforcing protection of biodiversity in one part of the complex is likely to simply displace the mobile user communities to another locality, thus defeating the objective of the exercise. The tenuous government control and dispersed nature of wetlands resources support the formation of self-administered, self-regulated wetlands conservancy in which the resources are adequately protected according to a prioritised zonation system and conserved with no net loss of livelihoods to the *Custodian Communities*.

157. **Implementation:** The MCWC site team will identify key wetlands resources along the coastline, including Astola Island and Astola Sea Mount and prepare an integrated plan for the formation of a wetlands conservancy in which the key components are adequately conserved and wetland biodiversity in the buffer zones is sustainably used by the resident communities.

158. Output 7.6: A NRM capacity-building initiative for women is implemented..

159. **Baseline Situation:** The socio-economic surveys performed during the PDF (B) Phase confirmed that many women in the vicinity of the conservancies provide sustenance to their families through management and use of natural resources. It was found that although they interact closely with natural resources, their contribution to NRM regimes is severely limited due to cultural and social norms severely inhibiting their participation in community decision-making.

160. **Implementation:** As the presence in public of women in many of the more remote areas of Pakistan is generally restricted under cultural and local interpretation of religious values, women are difficult to access as a group. The PWP will engage female social mobilisers to interact with the women in the *custodian communities* to improve their capacity and skills to sustainably use wetlands resources. A component of alternative income generation interventions will focus on improving the livelihoods of women, especially female-headed households.

161. Output 7.7: A MCWC Conservancy is officially proclaimed and established.

162. **Baseline Situation:** The coastline of the MCWC and the offshore resources of Astola Island and Astola Seamount include a range of biodiversity hotspots. These include marine turtle and sea bird nesting sites, localised outcrops of coral, mangrove swamps and extensive salt marshes that are the wintering grounds of Palaearctic migrant birds. The human communities that exploit these resources are relatively mobile such as shoreline pastoralists or seagoing fishermen. The only viable

proposition for wetland conservation in the long-term is the formation of a self-administered, self-regulated conservancy composed of the isolated communities that live in or close to the MCWC in concert with the Government of Balochistan conservation agencies.

163. Implementation: The PWP will evaluate the wetland sites that are dispersed through the length of the MCWC and integrate them into a matrix of buffer zones linked, if necessary, by corridors. The resident communities will be mobilised and empowered to protect the critical wetland resources on a seasonal and prioritised basis. This may necessitate withdrawing resource-use entirely from certain areas. There will, therefore, be a close relationship between the effectiveness of the envisaged conservancy and the successes of the alternate livelihood initiative described in *Output 7.5 and 7.6*.

164. Output 7.8: A MCWC Eco-Tourism Promotion Plan is implemented.

165. Baseline Situation: Public access to the region has improved in recent years with the extension of the so-called *Coastal Highway* westwards from Sonmiani Bay. With the planned development of Gwadar as a modern seaport and the possible construction of a major highway leading to the north, accessibility to the coastal belt of Balochistan is likely to increase even further. These development projects are expected to open the region to domestic and international eco-tourism.

166. Implementation: The MCWC Site Management Team will make an evaluation of the potential for various tourism activities in the Complex. As no viable market has been developed for such facilities, the PWP will design and promote a local eco-tourism programme and provide training to communities in the necessary skills.

167. Output 7.9: A Preliminary Oil Pollution Disaster Plan is developed.

168. Baseline situation: Although units of the *Pakistan Navy* and *Marine Security Agency* are based at Gwadar, no specific equipment exists for the control or mitigation of oil slicks in the vicinity. In 1997 an extensive oil slick threatened the Makran Coast when an abandoned and fully laden tanker foundered inside Pakistan's territorial waters. Fuel tenders and oilers used to service the large commercial fishing trawlers also pose a constant threat of marine and coastal pollution.

169. Implementation: The SMT will investigate the availability of emergency oil slick containment systems and services in the sub-region, including the Persian Gulf, and develop a preliminary disaster Action Plan for implementation if an oil slick should threaten key marine wetland resources on the Makran Coast.

170. Output 7.10: A bird-ringing programme is implemented.

171. Baseline Situation: The migratory bird populations of the Western Makran Coast have not been studied in any detail and no ringing exercises or attempts to recover such birds elsewhere have been attempted. In the long-term, it may be counterproductive for extensive conservation measures to be applied to these migrant bird populations without any substantial evidence of where they come from or go to and what measures are or should be in place in those regions.

172. Implementation: The PWP will, carry out an annual bird-ringing programme at the MCWC for six successive years. Serious consideration will be given to including a programme of DNA sampling and analysis as part of the bird-ringing initiative in order to analyse the interrelationships of regional migratory bird populations.

173. Output 7.11: A marine turtle tracking programme is implemented.

174. Baseline Situation: Pakistan's efforts to conserve marine turtles and participate actively in international marine turtle research have been intermittently supported by international donor agencies. The *Sindh Wildlife Department* has, during the past two decades, tagged more than 5,000 adult female turtles at the Sandspit and Hawke's Bay nesting colonies in Karachi. The primary limitation on the turtle tracking initiative has been financial. The Argos® tracking transmitters that have proven to be the only effective form of telemetry for actively tracking marine turtles are expensive and well beyond the financial means of the *Balochistan Forests and Wildlife Department*.

175. **Implementation:** In order to support the marine turtle nest protection programme that will become part of the MCWC's long-term management plan, it is proposed that an average of five turtles per year will be tagged over a period of five years and their movements within Pakistan's territorial waters and elsewhere monitored. As DNA sampling and analysis has been used elsewhere as a tool to investigate the interrelationships of marine turtle populations, appropriate tissue samples will be collected for this purpose.

176. **Output 7.12: A Marsh Crocodile (*Crocodylus palustris*) re-establishment programme is implemented.**

177. **Baseline Situation:** The general density of Marsh Crocodiles in the *Coastal Zone* of Balochistan has been substantially reduced in the past two decades due to illegal hunting. Marsh Crocodiles have been successfully bred in captivity elsewhere in the sub-region and the breeding of similar species in developing countries, such as Zimbabwe, is well established.

178. **Implementation:** A Marsh Crocodile breeding programme will be established within the MCWC or at a locality convenient to it. The captive breeding programme will use eggs recovered from wild crocodile nests. In accordance with the norms of other similar programmes in Africa, Australia and Central America, a significant proportion of the hatchlings will be returned to the parent community once they have adequately matured. The reintroduction programme will be contingent upon the identification of safe havens within the MCWC where there is adequate control over illegal hunting and where the local inhabitants have been convinced to protect the species.

Output 8: Wetlands biodiversity is sustainably conserved in the Central Indus Wetlands Complex (CIWC) by designing and implementing a comprehensive Management Plan.

179. **General Baseline Situation:** The *Central Indus Wetlands Complex* (See: Figure 1) consists of a continuum of wetland resources along the main stem of the Indus River between the town of Chashma in the north and the city of Sukkur in the South. It includes braided and meandering river channels, islands, *dhands* or oxbow lakes and seasonally flooded depressions in the flood plain. The environment in which the Complex is embedded is a vast, gently sloping semi-arid plain ranging in elevation from 125 m in the south to 585 m in the north. The Complex, which is approximately 708 km long and varies in width from c. 9 – 23 km, occupies an area of about c. 9,700 km².

180. **Biodiversity:** The main stem of the Indus River and its associated flood plain have been identified as the principal flyway for migrant bird species in the sub-region. All or part of this migration route may be used by up to 66 different species of bird including several threatened taxa such as the Sarus Crane (*Grus antigone*). In addition, the Indus River within the MCWC supports more than 95% of the surviving population of the endangered and endemic Indus River Dolphin.

181. **Human habitation and resource-use:** The CIWC is fairly densely populated with a high ratio of rural population and low industrial development. As a result, the socio-economic conditions in the region present a high level of poverty, income disparity and dependence on agriculture and natural resource based incomes. Farming, fishing and other natural resource-based occupations form major sources of livelihood for the poor. Credit facilities are limited, mainly consisting of private sources, and repayment rates can be as high as 25%. Irrigated farming is the main livelihood in the area. Cotton, wheat and vegetable are the main crops grown for the urban market. The level of agrochemical use in farming is steadily increasing. Livestock ownership mainly supports agricultural income in the region. Fishing, involves a large number of people in the region mainly under a contract system that generally exploits poor fishermen. Traditional fishing methods are still used involving hook and line and nets of various types and size. Harmful fishing practises such as agrochemical poisoning of fish are also now practised. Population pressures are high and majority of the population, especially female, has poor access to health and education.

182. **Output 8.1: Institutions are established to integrate wetland conservation into local and provincial land-use planning in the CIWC.**

183. **Implementation:** After a six-month inception period during which a core *Site Management Team* (SMT) will be recruited and trained in Project administration and implementation of Outputs that all

four sites share in common, the *CIWC Field Office* is set up, commissioned and an interim *Wetlands Complex Conservation Committee (WCCC)* is constituted. In addition to implementing *Outputs 8.2 – 8.12*, the SMT will have the important responsibility of identifying and describing viable wetlands conservation and management initiatives that emerge in the CIWC but may be suitable for replication elsewhere. Detailed information on such measures will be shared with the PMU. By PY 5.0, the SMT will be superseded by a permanent government or parastatal body created under the auspices of the provincial/territorial conservation agency.

184. Output 8.2: CIWC site is explored and assessed.

185. Implementation: After receiving advanced training in the use of GPS receivers for geo-referencing field data and in accumulating and formatting information for the *Pakistan Wetlands GIS-database*, the *CIWC Site Manager* will personally oversee the compilation of a comprehensive cadastral data set for the Complex. In view of the inherent instability of the riverine landforms, recent satellite images will be used extensively to plot the distribution of current river channels and islands. This will ensure that senior *Site Management Team members* are familiar with the full extent of the CIWC, both in terms of natural resources and human inhabitants who are stakeholders in the PWP.

186. Output 8.3: CIWC Immediate Action Plan for conservation is implemented.

187. Implementation: The CIWC's SMT will make a rapid assessment of threats to the integrity of biodiversity in the CIWC and design and implement the plan after approval by the NPD. Components of this plan may include but will not be restricted to:

- the control of illegal hunting of waterfowl in the PAs within the CIWC;
- the control of illegal fishing practices in the Indus River and in adjacent *dhands*;
- the control of illegal grazing of livestock within the PAs in the CIWC;
- the introduction of composting toilet systems in the riverside villages in the complex;
- re-commissioning of fish ladders at the major barrages; and
- an evaluation of traditional rights of access to wetlands resources and the implementation of appropriate short-term legal measures to protect these.

188. Output 8.4: CIWC communities are mobilised and organised into Village Conservation Committees (VCCs).

189. Baseline Situation: During the PDF (B) Phase it was established that the communities living along the banks of the Indus River within the CIWC and the *Mohanna* or boat people on the river itself are poorly organised.

190. Implementation: Following the model developed by the MACP, conservation management in the CIWC will be achieved through an institutional framework for co-operative planning effected at the village/floating village level through the formation of VCCs. The VCCs will consist of appropriate user-groups that are wholly or partially dependent on wetlands resources for their livelihoods. The SMT will, in conjunction with the VCCs, develop participatory Micro-plans that embody community agreements on resource use and the design of alternative livelihood ventures that alleviate pressure on wetlands resources.

191. Output 8.5: A programme for alternate/diversified livelihoods is developed and implemented.

192. Baseline Situation: Although the CIWC includes almost 600 km of the main stem of the Indus and spans two different ecological regions, the wetlands component is relatively homogenous in terms of the resources that it embodies. There is, therefore, relatively little latitude in the resource-use practices of the people that actually live on or in close proximity to the river. Where any form of livelihood threatens natural biodiversity and requires a measure of curtailment, few alternatives exist.

193. Implementation: The PWP will capitalise on lessons learned in a series of approximately ten TRAC-funded projects in the UNDP *Sustainable Livelihoods Programme*. The principal approach will be to empower people, especially women, by expanding their economic opportunities through sustainable

wetlands resource utilisation, alternate skill development, diversification of income generation, employment and access to social services.

194. Output 8.6: An NRM capacity-building initiative for women is implemented.

195. Baseline Situation: The socio-economic surveys performed during the PDF (B) Phase confirmed that women living in the communities along the Indus River support their families by using natural resources such as *Typha spp.* and *Tamarix spp.* to manufacture matting, baskets and ropes also to construct temporary shelters and semi-permanent housing for themselves and their livestock.

196. Implementation: The PWP will engage female social mobilisers to interact closely with women in the riverine communities to improve their capacity and skills for sustainable wetlands resource use. A component of alternative income generation interventions will focus on improving the livelihoods of women, especially female-headed households.

197. Output 8.7: A CIWC Conservancy is officially proclaimed and established.

198. Baseline Situation: The distribution of PAs along the length of the Indus River between Chashma Barrage in the North and Sukkur Barrage in the South is discontinuous and widely spread. Five PAs currently exist: the Indus Dolphin Reserve in Sindh, the Taunsa and Chashma Wildlife Sanctuaries in Punjab and the Indus Game Reserve and Indus Waterfowl Refuge of NWFP. Most of these wetlands sites are separated by distances of more than 100 km. Habitat fragmentation as a consequence of invasive agricultural practices and other forms of human encroachment have been identified as proximal causes of biodiversity loss.

199. Implementation: A series of sites with inherent potential for the conservation of wetlands biodiversity will be identified along the length of the river between Chashma and Sukkur. The Project will endeavour to upgrade conservation measures in these identified sites by incorporating them into a conservancy, where specified minimum standards that are conducive to biodiversity conservation are met. As this venture is likely to require reduced subsistence and commercial utilisation of wetland resources, it will, have to liaise closely with *Output 8.5 and 8.6* that focus on alternate livelihoods, sustainable use practices and income diversification.

200. Output 8.8: A CIWC Eco-Tourism Plan is implemented.

201. Baseline Situation: The potential exists within the CIWC to generate alternate income and livelihoods through eco-tourism for people who are wholly or partially dependent on wetland resources. Realising this potential, the *Punjab Department of Irrigation and Power Development* invited WWF-P to collaborate in the development of eco-tourism facilities in the so-called 'pond areas' of the irrigation barrages and other headworks in the Provinces.

202. Implementation: An evaluation will be made of the potential for developing low cost, environmentally friendly, tourism facilities such as picnicking and camping sites and other outdoor recreation activities. As no viable marketing system exists for such facilities, the PWP will develop and promote a local eco-tourism programme and, to a modest extent, subsidise the creation of basic infrastructure in the form of small demonstration projects.

203. Output 8.9: A River Pollution Disaster Plan is designed.

204. Baseline Situation: The main stem of the Indus River is traversed by a series of major rail and road bridges and oil pipelines within the CIWC. This introduces the possibility of a petrochemical spill of considerable magnitude in the event of a road or rail accident or pipe burst. There is also a potential for rapid discharge of poisonous pollutants from industrial development on the banks of the River in cities such as Sukkur. Field surveys confirmed that no preparations exist for the containment or treatment of risks of this general nature.

205. Implementation: The SMT will make a petrochemical and pollution risk assessment and devise a basic plan to mitigate the effects of such an accident within the CIWC.

- 206. Output 8.10: An enhanced income generation programme for fisher-folk and other wetlands dependent user-groups is established.**
- 207. Baseline Situation:** The level of poverty combined with lack of livelihood opportunities in the CIWC has resulted in a situation where people make excessive use of wetlands and their resources. Fisherfolk, in particular, are trapped in a spiral of over-fishing due to poverty and low prices received for their catch from contractors. Other vulnerable social groups and sub-groups that are prone to making excessive use of wetlands vegetation are women, especially in the case of female-headed households, migrant people and landless families. Lack of availability of credit for poor and vulnerable groups is a critical factor that has hindered livelihood enhancement and diversification in the region.
- 208. Implementation:** The Project will undertake a detailed assessment of income generating and enhancing ventures that can be introduced to fishing households and other vulnerable user-groups. This will include community consultations and assessment of technical, financial, marketing and other solutions applicable to the communities. The interventions foreseen include small-scale and mainly home-based ventures that especially encourage the participation of women such as poultry rearing, handicraft and embroidery development and the creation of links with urban markets to obtain a better price for rural products. The solutions identified will be introduced to the vulnerable groups in conjunction with access to micro credit and rural development schemes operating in the CIWC and its environs.
- 209. Output 8.11: An appropriate energy use programme is introduced to communities.**
- 210. Baseline Situation:** Riverine forests in the CIWC are currently being rapidly felled to meet rural fuel and timber needs. Community forests, in particular, have degraded in the vicinity of Taunsa.
- 211. Implementation:** A range of low technology, easily installed and maintained solutions for generating energy will be explored. These will be negotiated with local communities and the most appropriate technology for each community will be identified with community participation. Other technologies for reducing consumption of fuel wood such as fuel-efficient stoves will also be assessed and where possible, introduced. The communities will be encouraged to enter into agreements with the Project to establish restrictions on fuel-wood collection in exchange for access to alternate stove and fuel technologies.
- 212. Output 8.12: Trapped Indus River Dolphins are translocated.**
- 213. Baseline Situation:** A comprehensive survey of the surviving *Indus River Dolphin* population was undertaken in March/April, 2001, during the *PDF (B) Phase* of the Project. The exercise confirmed that the species now occurs as a metapopulation divided into six recognisable sub-populations, separated by irrigation barrages on the Indus River. While downstream movement through these barrages may possibly occur, upstream migration is regarded to be improbable. No genetic analyses have been performed but the low population densities between Jinnah Barrage and Taunsa Barrage suggest that inbreeding depression may be a potential problem.
- 214. Implementation:** The Project will build on the existing partnership between the *Sindh Wildlife Department*; the *Lahore Zoo* and *WWF-P* to develop a translocation programme as an extension of the established dolphin rescue programme. Where possible, appropriate samples will be taken for DNA analysis during these translocation operations.
- 215. Output 8.13: The potential for SONAR tracking of River Dolphins is investigated.**
- 216. Baseline Situation:** The social structure, diurnal activity patterns and migratory habits of the Indus River Dolphin are poorly understood, principally because individual dolphins are difficult to identify in the few seconds when they surface to breathe. In surfacing, they do not usually expose their tail flukes and, as they have dorsal fins that are relatively small, it is not possible to identify a significant proportion of the population by means of natural markings.
- 217. Implementation:** The PWP will engage a suitably qualified biologist to investigate the possibility that natural idiosyncratic sonar emissions could be used to identify and track individual dolphins within the

species' current home range. This initiative has the potential to provide crucial information relating to the biology of the Indus River Dolphin and enhance conservation measures.

218. Output 8.14: Comprehensive Indus Dolphin population surveys are conducted.

219. Baseline Situation: The wildlife authorities in Sindh and Punjab have been monitoring different components of the surviving Indus River Dolphin population for decades but the survey programmes have suffered from a lack of financial support, technical capacity, and continuity of effort.

220. Implementation: The CIWC SMT will organise and implement an annual survey of the entire home range of the Indus River Dolphin for the duration of the Project.

221. Output 8.15: A Gharial (*Gavialis gangeticus*) re-introduction programme is implemented.

222. Baseline Situation: Gharial historically occurred at low elevations in most of the rivers of Sindh and Punjab, but have been hunted into local extinction in the wild in the past fifty years. Gharial have been successfully bred in captivity elsewhere in the sub-region and the breeding of other crocodilian species in developing countries, such as Zimbabwe, is well established.

223. Implementation: A Gharial breeding programme will be established within the CIWC or at a locality convenient to it in Sindh, Punjab or NWFP. The captive breeding programme will consist of a collaborative effort between the Lahore and Karachi Zoos, supported by the *Sindh Wildlife Department* and the *Punjab Parks and Wildlife Department*. A parallel awareness-raising programme, aimed at curtailing illegal hunting will be launched in the prospective release areas well in advance of the first attempts to re-establish Gharial in the wild.

224. Output 8.16: A Hog Deer (*Axis porcinus*) re-introduction programme is implemented.

225. Baseline Situation: Hog Deer historically occurred in the riverine forests of the lower Indus Basin. Encroachment of agriculture into its wetland habitat has displaced the species and susceptibility to hunting with dogs has further reduced the surviving population.

226. Implementation: An experimental Hog Deer breeding programme will be established at two sites near CIWC, one in the north near Attock and one in the south near Taunsa.

Output 9: Wetlands biodiversity is sustainably conserved in the Salt Range Wetlands Complex (SRWC) by designing and implementing a comprehensive Management Plan.

227. General Baseline Situation: The *Salt Range Wetlands Complex* comprises of five independent wetlands: Kallar Kahar, Khabbeki, Ucchali, Jahlar and Namal Lakes (See: Figure 1). The entire SRWC has a total length of 175 km parallel to the Salt Range Escarpment that runs from Jhelum, in the east, to Kalabagh in the west. The Ucchali Wetlands Complex, constituting of Ucchali, Khabbeki and Jahlar Lakes, has been designated as a *Wetland of International Importance* under the *Ramsar Convention*, a distinction it shares with only eighteen other wetlands in Pakistan. The three main lakes of Ucchali Wetlands Complex are situated inside a cup-shaped catchment area called the Soan Valley, while Namal and Kallar Kahar Lakes are located on the periphery of this Valley.

228. Biodiversity: The area is rich in biodiversity and is the habitat of one of the endemic and endangered species of the country, the Punjab Urial (*Ovis vignei punjabiensis*). Other species, important from the conservation viewpoint are Chinkara (*Gazelle bennettii*) and Red Fox (*Vulpes vulpes*). These wetlands presently support the wintering flocks of White-headed Duck (*Oxyura leucocephala*). These lakes also support three other bird species listed in the *IUCN Red Data Book* the Cinereous Vulture (*Aegypius monochus*), the Imperial Eagle (*Aquila heliaca*) and the Sociable Plover (*Vanellus gregarius*). Furthermore, Greater Flamingos (*Phoenicopterus ruber*), Pied Harrier (*Circus melanoleucos*), Greylag Goose (*Anser anser*) and the Ferruginous Duck (*Aythya nyroca*) also visit these wetlands.

229. Human habitation and resource use: Socio-economic conditions in the Salt Range Wetlands Complex present a picture of excessive population pressure combined with intensive use of natural resources for livelihoods and daily needs. The main occupations in the region comprise of agriculture and government service, especially in the armed forces. The level of industrial development is low.

Agricultural plots tend to be small, usually quarter of an acre, and there is a clear trend towards land ownership as a form of wealth even if the land owned is not cultivable. All land in and around the lakes is privately owned, including the lake beds, which becomes available for cultivation when the water level has receded. Principal crops grown in the area are wheat in winter and vegetables in the summer. Wetlands provide a crucial source of irrigation in this essentially semi arid area. Grazing pressure in the region has badly eroded most communal grazing areas. Wood extraction is undertaken extensively both for the domestic fuel market and for supply to urban centres. The effects of deforestation on both *shamilat* (community forests) and Government forests have been extensive. Lack of infrastructure development has meant that the lakes are used for common household purposes such as watering cattle and washing clothes although the water of several lakes is reportedly too saline for human consumption.

230. WWF-P's endeavours in the SRWC consist of conservation of wetlands biodiversity in the *Ucchali Wetlands Complex* and the conservation of scrub forest in the Jhanger Valley, where an afforestation programme on communal lands has been completed with the participation of local communities. Additionally, communal PAs have been declared in order to protect the indigenous natural resources of the area. With community participation, the *Ucchali Wetlands Complex Management Plan* has already been developed.

231. Output 9.1: Institutions are established to integrate wetland conservation into local and provincial land use planning in the SRWC.

232. **Implementation:** After a six-month inception period during which a core *Site Management Team* will be recruited and trained in Project administration and the implementation of the *Outputs* shared by four sites, the *SRWC Field Office* is set up, commissioned and an interim *Wetlands Complex Conservation Committee (WCCC)* is constituted. In addition to implementing *Outputs 9.2 – 9.12*, the SMT will have the important responsibility of identifying and describing viable wetlands conservation and management initiatives that emerge in the SRWC but may be suitable for replication elsewhere. Detailed information on such measures will be shared with the PMU. By PY 5.0, the SMT will be superseded by a permanent government or parastatal body created under the auspices of the provincial/territorial conservation agency.

233. Output 9.2: SRWC site is explored and assessed.

234. **Implementation:** After receiving advanced training in the use of GPS receivers for geo-referencing field data and in accumulating and formatting information for the *Pakistan Wetlands GIS-database*, the *SRWC Site Manager* will oversee the compilation of a comprehensive cadastral data set for the Complex. This will ensure that senior elements in the SMT are familiar with the full extent of the Complex, both in terms of natural resources and potential stakeholders.

235. Output 9.3: SRWC Immediate Action Plan for conservation is implemented.

236. **Implementation:** Components of this plan may include but will not be restricted to:

- control of illegal effluent discharge in Kallar Kahar Lake;
- the protection of waterfowl habitat on Kallar Kahar Lake by implementing an interim zoning plan to control recreational use of the lake for boating;
- development of fire fighting capacity in the villages in collaboration with initiatives such as the *Soan Valley Development Programme* in order to contain range land fires that threaten catchment areas;
- the control of feral dogs in the vicinity of the lakes that support flamingo populations; (e) the introduction of a *moratorium* on the transfer of land ownership in respect of so-called "lake bed" property;
- control of illegal waterfowl hunting in the vicinity of the lakes and the micro wetlands in the lake catchment areas; and
- an evaluation of traditional rights of access to wetlands resources and the implementation of appropriate short-term legal measures to protect these.

- 237. Output 9.4: SRWC communities are mobilised and organised into Village Conservation Committees (VCCs).**
- 238. Baseline Situation:** During the PDF (B) Phase it was established that the communities of the SRWC are relatively well-organised and inherently well-disciplined apparently because many of the senior community members are retired military personnel.
- 239. Implementation:** Following the model developed by the MACP, conservation management in the SRWC will be achieved through an institutional framework for co-operative planning effected at the village/floating village level through the formation of VCCs. The VCCs will consist of appropriate user-groups that are wholly or partially dependent on wetlands resources for their livelihoods. The SMT will, in conjunction with the VCCs, develop participatory Micro-plans that embody community agreements on resource use and the design of alternative livelihood ventures that alleviate pressure on wetlands resources
- 240. Output 9.5: A programme for alternate/diversified livelihoods is developed and implemented.**
- 241. Baseline Situation:** The principal proximal threat to the biodiversity in the Salt Range lakes is agricultural encroachment. Mitigation of this threat will require the introduction of substantially more latitude in income generation. Improved agricultural extension, crop substitution, development of eco-tourism, provision of credit for small business and support to value-added activities are options that may be developed in the region.
- 242. Implementation:** The PWP will capitalise on lessons learned in a series of approximately ten TRAC funded projects in the UNDP *Sustainable Livelihoods Programme* and the GEF Small Grant supported *Soon Valley Development Programme*. The principal approach will be to empower people, especially women by expanding their economic opportunities through sustainable wetland resource utilisation, alternate skill development, diversification of income generation, employment and access to social services and micro credit.
- 243. Output 9.6: An NRM capacity-building initiative for women is implemented.**
- 244. Baseline Situation:** Socio-economic surveys during PDF (B) Phase in the SRWC confirmed that women in the vicinity of the conservancies were at least as actively involved in the utilisation of natural resources as men. Female literacy is high in the region and women well integrated into CBOs thus enhancing their active role in NRM.
- 245. Implementation:** The PWP will engage female social mobilisers to interact closely with the women in the *Custodian Communities* in order to improve their capacity and skills to sustainably use wetlands resources and reduce the incidence of water pollution from domestic sources. A component of alternative income generation interventions will focus on improving the livelihoods of women, especially female-headed households.
- 246. Output 9.7: SRWC Conservancy is officially proclaimed and established.**
- 247. Baseline Situation:** Observations of migratory and resident bird populations in the major lakes of the Salt Range have revealed that, during wetter periods, there is a general movement away from the larger water bodies into the myriad of 'micro wetlands' that occur in the Salt Range in the form of mountain streams, check dams and other small impoundments. Effective conservation measures must consequently, incorporate substantial buffer zones surrounding lakes to form a larger conservancy.
- 248. Implementation:** The formation of a conservancy in the SRWC will be based on a careful zonation of the whole region with levels of protection for the natural practical biodiversity in each component. An estimated 92% of the potential conservancy would include privately owned land or communal land, making a community-based approach essential.
- 249. Output 9.8: SRWC Eco-Tourism Promotion Plan is implemented.**
- 250. Baseline Situation:** Although, the Punjab Tourism Development Corporation has established a lodge in close proximity to Kallar Kahar Lake at the eastern end of the SRWC, tourism development

has not extended to the other Salt Range lakes despite improved accessibility for the inhabitants of Islamabad/Rawalpindi (1.9 million) and Lahore (6.3 million) following the completion of the M2 Motorway in 1998.

- 251. Implementation:** The Site Management Team of the SRWC will identify a series of suitable small, low cost, environmentally friendly camping sites to be operated by private entrepreneurs from the *Custodian Communities*. Private individuals and representatives of CBOs that are interested in participating in the development of the sites will be provided with adequate guidance in the *training and capacity building* component of the PWP. A few small demonstration developments may be supported by the Project.
- 252. Output 9.9: Vegetation enclosure plots are set up.**
- 253. Baseline Situation:** The overgrazed and degraded state of most of the rangeland in the catchment areas of Salt Range lakes is a condition that has existed for generations. Small areas in the degraded section of the Salt Range that have been inadvertently protected from livestock grazing pressure, however, exhibit substantially greater plant species diversity and denser cover than the adjacent overgrazed rangeland.
- 254. Implementation:** The PWP will construct a total of twenty vegetation enclosures, each 1 ha in extent, sited strategically in overgrazed communal grazing lands. The enclosures will consist of livestock and game-proof fenced quadrats 100 m x 100 m square. The projected recovery of the vegetation in the plots will be monitored by means of regular fixed-point photographs and, possibly botanical surveys. Each enclosure will, by written agreement, be placed under the custodianship of a suitable local CBO and will, as the vegetation recovers, be used to illustrate the benefits of good rangeland management and develop management programmes.
- 255. Output 9.10: Catchment area soil conservation Demonstration Complexes are established.**
- 256. Baseline Situation:** During the consultative phase of the PDF (B), siltation emerged as one of the significant sources of degradation of the Salt Range lakes. The siltation of the lake beds is clearly related to the high rates of soil erosion in parts of the associated catchment areas. The *Punjab Soil Conservation Department* has been engaged in a low-intensity soil conservation campaign for over a decade but its activities have been restricted by a general lack of funds and of trained expertise in the form of extension officers.
- 257. Implementation:** The SMT will negotiate the participation of up to fifteen communities in this component of the Project and establish a demonstration plot in each case. Soil reclamation work will include practical measures such as the construction of check dams, use of gabions to arrest the headward erosion of gullies and will implement more passive measures such as the introduction of rotational grazing. The recovery of test sites will be photographically monitored and the more successful sites will be used to demonstrate the value of the applied soil conservation measures to other communities in the SRWC.
- 258. Output 9.11: SRWC lake beds are surveyed.**
- 259. Baseline Situation:** The most detailed existing large scale maps of the lakes of the Salt Range are those produced by the PDF (B) Phase of the Project from topo-cadastral detail digitised from the Russian 1:100,000 military series. The 20 m contour interval used in the resultant DEMs, while adequate for the description of the catchment areas, does not provide any bottom detail for these essentially shallow water lakes.
- 260. Implementation:** A Garmin® GPS receiver/depth sounder combination instrument will be used to make transects across deeper portions of the lakes. In cases where the water is too shallow for accurate measurement using this instrument, a conventional physical measurement technique will be used. The existing water level gauges will be rehabilitated and recalibrated to allow more accurate measurements of the seasonal water levels to be maintained.

the perennial water resources. Isolated water bodies, such as kettle lakes on perched plains, are almost completely denuded of peripheral and emergent vegetation by the end of the summer.

271. The region is partially accessible during the year and well beyond the reach of the NWFP Wildlife Department's limited resources. With the notable exception of one senior government officer, few conservation biologists have ever visited the region.

272. Output 10.1: Institutions are established to integrate wetland conservation into local and provincial land use planning in the NAWC.

273. **Implementation:** After a six-month inception period during which a core *Site Management Team* (SMT) will be recruited and trained in respect of Project administration and the implementation of the Outputs that all four sites share in common, the *NAWC Field Office* is set up, commissioned and an interim *NAWC Wetlands Complex Conservation Committee* (WCCC) is constituted. In addition to implementing *Outputs 10.2 – 10.12*, the SMT will have the important responsibility of identifying and describing viable wetlands conservation and management initiatives that emerge in the NAWC but may be suitable for replication elsewhere. Detailed information on such measures will be shared with the PMU. By PY 5.0, the SMT will be superseded by a permanent government or parastatal body created under the auspices of the provincial/territorial conservation agency.

274. Output 10.2: An NAWC site is explored and assessed.

275. **Implementation:** After receiving advanced training in the use of GPS receivers for geo-referencing field data and in accumulating and formatting information for the *Pakistan Wetlands GIS-database*, the *NAWC Site Manager* will personally oversee the compilation of the comprehensive cadastral data set for the complex. This will ensure that senior elements in the SMT are familiar with the full extent of the Complex, in terms of the natural resources and potential stakeholders in the Project.

276. Output 10.3: NAWC immediate action plan for conservation is implemented.

277. **Implementation:** Components of this plan may include but will not be restricted to:

- the control of feral dogs in the vicinity of Karumbar Lake and the Upper Yarkhun Valley;
- control of the building of riverside weirs and hunting blinds to facilitate the hunting of waterfowl;
- control of illegal hunting of waterfowl and wetlands dependent wild ungulates;
- exclusion of key wetlands site from use as grazing grounds;
- control of the use of explosives to catch fish in the Yarkhun River; and
- an evaluation of traditional rights of access to wetlands resources and the implementation of appropriate short-term legal measures to protect these.

278. Output 10.4: NAWC communities are mobilised and organised into Village Conservation Committees (VCCs).

279. **Baseline Situation:** During the PDF (B) Phase it was established that the communities of the NAWC are extremely isolated and very poorly organised in general with the possible exception of education.

280. **Implementation:** Following the model developed by the MACP, conservation management in the NAWC will be achieved through an institutional framework for co-operative planning effected at the village/floating village level through the formation of VCCs. The VCCs will consist of appropriate user-groups that are wholly or partially dependent on wetlands resources for their livelihoods. The SMT will, in conjunction with the VCCs, develop participatory Micro-plans that embody community agreements on resource use and the design of alternative livelihood ventures that alleviate pressure on wetlands resources

281. Output 10.5: A programme for alternate/diversified livelihoods is developed and implemented.

282. **Baseline Situation:** The impact of *Wakhi* pastoralism on the sensitive high alpine lakes is substantial. Ways of mitigating the grazing pressure on, at least, certain selected wetland resources will be developed. This will necessitate exploring opportunities for diversified or alternate livelihoods.

261. Output 9.12: A bird ringing programme is implemented.

262. **Baseline Situation:** Despite substantial concentrations of species like the Greater Flamingo (*Phoenicopterus ruber*) on the Salt Range lakes, relatively little bird-ringing work has been done to establish the extent and overall range of the bird populations that are dependent on the lakes. In the long-term, it may be counterproductive for extensive conservation measures to be applied to these migrant populations without any substantial evidence as to where they emigrate from or go to and what measures are or should be in place in those regions.

263. **Implementation:** The PWP will, carry out an annual bird-ringing programme at the SRWC for six successive years.

264. Output 9.13: An experimental programme for breeding endangered cranes is implemented.

265. **Baseline Situation:** Four species of cranes have been recorded in the wetlands of south-central Pakistan. Demoiselle Cranes (*Anthropoides virgo*) are relatively plentiful while the Common Crane (*Grus grus*) is more rarely seen. Siberian Cranes (*Grus leucogeranus*) have traditionally overflowed Pakistan in their annual migrations in the past but they and the Sarus Crane (*Grus antigone*) are now regarded to be irregular visitors to the wetlands of the country.

266. Several tribal groups in south-eastern NWFP have long-standing traditions of capturing, rearing and hunting crane species. These practices are essentially illegal but are notoriously difficult to control.

267. **Implementation:** The Project will establish an experimental breeding facility for crane species in collaboration with communities in the above-mentioned areas that have historically recorded high densities of cranes. An effort will be made to persuade people who privately "own" threatened indigenous crane species to "loan" these birds to the breeding facility. Local private sector expertise in crane breeding will be drawn upon to implement the programme which may provide an alternative livelihood for people who originally sustained themselves with illegal crane capture and trading.

Output 10: Wetlands biodiversity is sustainably conserved in the North-west Alpine Wetlands Complex (NAWC) by designing and implementing a comprehensive Management Plan.

268. **General Baseline Situation:** The *North-west Alpine Wetlands Complex* (See: *Figure 1*) essentially consists of a series of high altitude, interlinked, glacial, kettle and valley bottom lakes, marshes, peat bogs and braided stream beds in the Yarkhun Valley. The range in elevation of the wetlands extends from 2,600 m in the southwest to 4,150 m in the case of Lake Karumbar at the north-eastern extremity. The NAWC, which is about 70 km long and up to 23 km wide, occupies an area of c. 1,760 km². The higher mountain peaks in the Complex, six of which are over 6,000 m, have permanent snow accumulation zones, ice fields and glaciers

269. **Biodiversity:** The indigenous biodiversity of the valley has been poorly studied. Typical plant species in the western valley bottoms are *Hippophae rhamnoides*, *Myricaria elegans*, *Populus ciliata* and *Salix viminalis*. Above the tree line, the dominant grasses are *Festuca altaica* and *Poa attenuata*. While there are year-round resident populations of wild vertebrates at lower elevations in the western sector of the valley, those in the eastern sector are either hibernating species such as the Golden Marmot (*Marmota caudata aurea*) or seasonal migrants such as the Marco Polo sheep (*Ovis ammon*). Flocks of migratory birds use the wetlands during the early and late summer periods.

270. **Human habitation and resources-use:** The communities in the eastern sector are predominantly *Wakhi* people – hardy pastoralists, whose settlements are snowbound for at least four months in the year. The principal source of subsistence in the eastern sector at elevations above 3,300 m is seasonal pastoralism augmented by hunting of alpine ungulates and migratory waterfowl. Fuel for space heating and cooking is a major problem and emergent vegetation as well as peat in the marshes and around the lakes and stream beds is cut, dried, stored and burned. Essential livestock is maintained through the winter by stall-feeding. Fodder consists of mostly cut and dried emergent vegetation from alpine wetlands. Non-essential livestock are moved down the valleys in the winter to areas where the climate is milder. This leads to dense concentrations of domestic animals around

283. Implementation: The PWP will compile a range of innovative options for reducing pastoralist pressure on the NAWC without creating any net loss of livelihoods or exacerbating poverty. The PWP will also capitalise on lessons learned in a series of approximately ten TRAC funded projects in the UNDP *Sustainable Livelihoods Programme*. The principal approach will be to empower people, especially women by expanding their economic opportunities through sustainable wetland resource utilisation, alternate skill development, diversification of livelihoods, employment and access to social services.

284. Output 10.6: An NRM capacity-building initiative for women is implemented.

285. Baseline Situation: The socio-economic surveys performed during the PDF (B) Phase confirmed that women in the vicinity of the conservancies do, as is elsewhere the case, provide sustenance to their families through management and use of natural resources. *Wakhi* women have rudimentary knowledge of both ecological interrelationships and a modicum of ecosystem management.

286. Implementation: The PWP will engage female social mobilisers to interact closely with the women in the *Wakhi* in order to improve their capacity and skills to sustainably use wetlands resources. A component of alternative income generation interventions will focus on improving the livelihoods of women, especially female-headed households.

287. Output 10.7: NAWC Conservancy is officially proclaimed and established.

288. Baseline Situation: The NAWC includes several spectacular wetlands such as Lake Karumbar and the Lashkar Ghaz peat bog. Largely inaccessible, the NAWC is an ideal prospect for the long-term establishment of a self-administered, self-regulated community-based, wetlands conservancy.

289. Implementation: The NAWC site team will identify the key wetland resources of the Complex and motivate for them to be extended the highest possible level of government protected area wetlands status. The surrounding buffer zones and associated wetlands will then be organised into a conservancy with the dual objective of protecting the natural biodiversity and sustaining the *Wakhi* and *Chitrali* inhabitants with no net loss of livelihoods.

290. Output 10.8: An NAWC Eco-Tourism Promotion Plan is implemented.

291. Baseline Situation: The spectacular alpine scenery of the upper Yarkhun Valley includes 149 peaks over 5,000 m and 21 over 6,000 m with all the attendant splendour of snow and ice fields and glaciers. These resources combine to make the 3–4 day trek from the village of Lasht at the western end of NAWC to Lake Karumbar, in the east, one of the most spectacular alpine journeys on earth. The possibility of the introduction of a pony trek along the length of the Wetland Complex therefore holds substantial potential.

292. Implementation: The NAWC Site Management Team will explore the possibilities of introducing the envisaged pony trek on a trial basis and will also develop a plan to enhance and promote the existing conventional trekking routes that traverse the upper Yarkhun Valley. Well regulated sport hunting also holds some potential for development.

293. Output 10.9: A Ramsar status application for NAWC is proposed.

294. Baseline Situation: A preliminary analysis performed using the *Pakistan Wetlands GIS-database* revealed that none of the significant Alpine Wetlands, with the exception of Saucher Lake on the Deosai Plains, enjoy appropriate protected status.

295. Implementation: A proposal will be prepared that motivates for the upper *Yarkhun* Valley to be recognised as a *Ramsar Site*. The Government of NWFP will be requested to consider extending appropriate Protected Areas status to the NAWC.

296. Output 10.10: A bird ringing programme is implemented.

297. Baseline Situation: Bird ringing campaigns carried out discontinuously during the past two decades in the main valley of the Chitral River have only enabled approximate estimates to be made of the winter migrant dispersal in South Asia. In the long-term, it may be counterproductive for extensive

conservation measures to be applied to these migrant populations without any substantial evidence as where they come from or go to and what measures are or should be in place in those regions.

298. **Implementation:** The PWP will, carry out an annual bird-ringing programme at the NAWC for six successive years and will, if feasible, also collect bird tissue samples to enable DNA analyses.
299. **Output 10.11: *Appropriate energy use programme is introduced to communities.***
300. **Baseline Situation:** The *Wakhi* communities living at high elevations above the tree line in the eastern extremes of the NAWC resort to burning emergent vegetation reaped from wetlands in the vicinity. The *Wakhi* houses are poorly insulated and excessive heat loss probably further exacerbates the fuel use problems. A range of fuel-efficient stove initiatives have been implemented in other parts of the NWFP, the Federally Administered Northern Areas Territory and even in neighbouring Afghanistan. None of these technologies has apparently ever penetrated the *Yarkhun Valley*.
301. **Implementation:** The SMT will investigate ways in which the insulation of the traditional *Wakhi* houses may be cost-effectively improved. This initiative will be complemented with the introduction of appropriate stove technology and establishment of experimental woodlots at higher elevations.

5. Anticipated End-of-Project Situation

302. The successful implementation of the Pakistan Wetlands Project will create an appropriate enabling environment that would facilitate and give impetus to enhanced wetlands conservation in Pakistan. This will enhance and strengthen the basic institutional, legal, policy, technical and financial framework necessary to mainstream wetlands conservation in the national policy-making process. There is a high probability that the following results will be achieved by the end of the Project.
303. **Institutional capacity for wetlands conservation:** By the end of the Project, the PMU and PSC would have been absorbed within the government structure as a wetlands management entity under the NCCW. With its institutional and human resources capacity strengthened, and with the technical resources developed under TREC, this entity will be enabled to effectively undertake and co-ordinate initiatives for wetlands conservation.
304. **Decision-support systems based on Pakistan Wetlands GIS-data Base functional:** A GIS-based inventory of Pakistan's natural wetlands will have been established. It will be accessible to all agencies that are directly or indirectly involved with wetlands conservation. Updated versions of the GIS will have been installed in all federal and provincial/territorial Wildlife Conservation Agencies and their staff trained to use this tool for enhanced planning and decision-making.
305. **Pakistan Wetlands Conservation Strategy:** Pakistan will have formally adopted and implemented a comprehensive Strategy for the conservation of naturally occurring wetlands.
306. **Wetlands Awareness:** The level of general public awareness of wetlands and associated natural resource conservation issues will have been raised to the point that the general public are aware of the true value and ecological significance of natural wetlands and in favour of proactive measures to conserve wetlands.
307. **Technical Capacity for Wetlands Conservation:** A substantially enhanced level of human resource capacity will have been established in Pakistan by means of intensive, on-going, pre-service and in-service training programmes at appropriate levels for government and partner agencies including local communities.
308. **Wetlands Management Techniques:** Working in concert with the people of Pakistan in the form of the *Custodian Communities*, government and private sector conservation agencies will have developed the capacity to sustainably manage suites of wetland resources in the form of wetland conservancies. The public and private sector partnerships at each site will have grappled with and solved many of the idiosyncratic problems usually encountered in wetlands conservation in each region. The sites will present effective, working models for replication and for solving wetlands conservation problems in similar environments elsewhere in the country.

309. **Sustainability:** Financial sustainability of wetlands conservation initiatives will have been ensured through the investigation and recommendation of financing measures for each intervention. This is likely to include public and private partnerships and the introduction of eco-tourism, and other innovative financial sustainability measures.

6. Stakeholder Participation in Project Design

310. During the PDF (B) preparatory phase, the Project has placed a strong emphasis on ensuring active stakeholder participation at all levels, federal, provincial/territorial, local and community. Inputs from stakeholders have been incorporated within an iterative process of Project design, with repeated consultation processes to verify needs, priorities and challenges of various stakeholders, and to secure their commitment and active engagement in the Project. Detailed consultations were held at the national and provincial/territorial levels by means of five workshops involving a broad spectrum of stakeholders. This process culminated in the short-listing of potential sites for investigation. Furthermore, the PDF (B) phase of the Project was overseen by a highly active and motivated PSC composed of a core of six representatives, each representing an appropriate provincial/territorial department and a representative from NCCW. The PSC provided valuable guidance to the Project by fine-tuning Project design and facilitating the prioritisation and selection of the four *Demonstration Complexes*. A *Scientific Advisory Committee* consisting of selected specialists also provided technical oversight.

311. The Project preparation and design has equally benefited from the active involvement of local communities in identifying needs, priorities and challenges in their interaction with wetlands. Field surveys conducted during the PDF (B) phase of the Project involved participation of and intensive consultations with communities at each of the four *Project Demonstration Complexes*. Following a *Participatory Rural Appraisal* (PRA) approach, the Project has sought inputs from a wide variety of income groups that have an impact on wetlands and their resources. In the CIWC, seventeen PRA exercises were conducted in two study areas. These included consultations with fishing communities, farmers, (both landowners and landless tenants), fishing contractors, migrant squatters living close to wetlands, forest users and graziers. Similarly, a range of PRAs were held in MCWC with fisherfolk and other communities. Consultations in the SRWC involved public meetings with a range of CBOs, farmers, graziers, local representatives, and forest users. PRAs and household surveys were conducted to determine wetlands use by various income/occupation groups. Graziers were the main focus of community consultations in the NAWC. Parallel consultations were held with men and women in each *Demonstration Complex* to ascertain gender differences in resource-use.

7. Eligibility in terms of the CBD

312. The Project complies with several articles of the CBD. Of principal relevance are **Articles 6, 7, 8, 11, 12, 13, 14, 17 and 18**. By developing a *National Wetlands Conservation Strategy* and reviewing appropriate national policies to assess their effects on wetlands, the Project complies with both parts of **Article 6: General Measures for Conservation and Sustainable Use**. Through the conduct of detailed field surveys, development of Management Plans, mitigation of threats, monitoring of biodiversity and data compilation by means of the *National Wetlands GIS Database*, the Project also complies with **Article 7: Identification and Monitoring** and **Article 14: Impact Assessment and Minimising Adverse Impacts**. Compliance with **Article 8: In-situ Conservation** is evident through the establishment of PAs and conservancies, development of Management Plans for conservation of biodiversity, promoting sustainable use within and outside PAs and minimising risks to biodiversity. The emphasis placed on promotion of sustainable use of wetland resources with community participation specifically implements **Article 10: Sustainable Use of Components of Biological Diversity**. By promoting alternative livelihoods to raise income levels of poor communities, the Project complies with **Article 11: Incentive Measures**. Incorporation of **Article 12: Research and Training** is evident under the components on national and provincial/territorial capacity building and skill enhancement. The Project also supports overlap with international technical developments on wetlands conservation which directly complies with **Article 17: Exchange of information** and **Article**

18: Technical and Scientific Co-operation. Through promoting awareness at both national and site specific levels, the Project complies with **Article 13: Public Education and Awareness.**

8. Eligibility for GEF Financing

313. The Project is in line with the GEF's new *Emerging Directions in the Biodiversity Focal Area*, and is consistent with the objective of **Strategic Priority 2: Mainstreaming Biodiversity Conservation in Production Sectors and Landscapes.** The Project is designed on the premise that sustainable management of wetlands requires the mainstreaming of biodiversity and ecological considerations within the productive uses of wetlands and their values, for both commercial and subsistence purposes. The Project places emphasis on promoting a broad-based integration of biodiversity conservation within the wider development agenda at the national, provincial/territorial and local levels in the country. This will be effected through capacity building, advocacy and awareness raising, and demonstration activities. The Project is highly responsive to the following specific sub-objectives of SP 2:

- catalyse mainstreaming through support for systemic and institutional capacity building
- improve awareness and education among government agencies and other stakeholders
- demonstrate mainstreaming, particularly local livelihood benefit – global environmental benefit linkages through 'win-win' examples.

314. The Project will focus on building systemic capacity for mainstreaming through its work on legal, policy and awareness issues, while developing institutional and individual capacities within government agencies and a number of other stakeholders. It will promote partnership building between agencies, local communities and private sector that secure biodiversity conservation and promote economic gains.

315. The Project falls within the **GEF Operational Programme 2: Coastal, Freshwater and Marine Ecosystems.** The combination of initiatives in biodiversity conservation, awareness raising and community participation approach fulfils GEF's emphasis on "integrated approaches to coastal area development" and "strengthening the network of conservation areas to conserve coastal, marine and freshwater biodiversity". The Project complies with the GEF's guidance on developing programmes based on ecosystems by implementing activities at a wetland complex level where each Complex is representative of a distinct ecosystem. Such activities will fulfil the GEF's consideration for "making systematic progress in securing global diversity objectives on the basis of a set of representative and complementary ecosystems of global biodiversity significance". Other considerations such as those concerning the production of a "framework for the design and implementation of cohesive systems of national actions" are met through the formation and adoption of a *National Wetlands Management Strategy*. With its focus on wetlands in arid and semi-arid ecosystems, as well as links with control of land degradation, the Project is relevant to OP 2 **Arid and Semi-Arid Ecosystems**. By promoting alternative livelihoods, the Project aims to take pressure off land-use in the form of intensive agriculture and other occupations in the vicinity of wetlands to promote sustainable land use. Specific activities in NAWC will comply with OP 4 on **Mountain Ecosystems** by reducing pressure from pastoralism. In this way, the Project will promote "sustainable land use practices on mountain slopes to protect habitats". In accordance with GEF's "*Considerations in Developing Operational Programmes*", the Project encompasses the central issues of (a) long-term protection; and (b) sustainable use of biodiversity. Both considerations guide the national level activities such as awareness raising, enhancing of technical capacity and skills and formation of a *National Wetlands Management Strategy*.

316. '*In-situ*' conservation remains the focus of site level activities – the sites being representative of distinct subsets of wetlands ecosystems. The promotion of sustainable use of biodiversity in accordance with GEF's guidelines is promoted through review and update of relevant policies and support for scientific and field level exchange of information with other countries. Collection of detailed baseline information, inventories and development of indicators for impact assessment under the *National Wetlands Conservation Strategy* will be another important output, as will the development of decision-support systems and tools and maintenance of a GIS-based information

network. Project outputs related to poverty alleviation and development of sustainable livelihood specifically satisfy the guidance on stakeholder involvement and social issues at the PA level. Additionally, the involvement of multiple stakeholders – government, non-governmental and private – in Project implementation will create long-term mechanism for public-private collaboration in wetlands conservation.

9. Implementation Arrangements at the Federal and Regional Levels

317. The relationship between most of the agencies and staff involved in the implementation of the Project is summarised in Optional Annex 31: *Project Staff Organisational Chart*.

9.1 GEF/UNDP Project Roles and Responsibilities:

318. As the Project is a UNDP/GEF initiative, its implementation arrangements will follow the guidelines set out in the UNDP *Project Cycle Operations Manual (P-COM)*. In terms of the P-COM, a *tripartite* implementation arrangement will be used. This involves the following three agencies:

- *GEF Implementing Agency*: United Nations Development Programme, Pakistan;
- *Executing Agency*: As defined by the P-COM, the *Executing Agency* is usually a Government organisation at the national, provincial or local level. The *Executing Agency* is the focal point of responsibility for the achievement of the objectives of development cooperation projects and is legally accountable for the external resources provided for development cooperation. In the case of the PWP, the Office of the Inspector General of Forests, Federal Ministry of Environment, Government of Pakistan will serve as the *Executing Agency*.
- *Project Implementing Agency*: In terms of the P-COM, the *Executing Agency* may be supported by a *Project Implementing Agency* whose main tasks include the mobilisation of *Inputs* and their conversion to *Outputs*. Such a project implementing agency is directly accountable to the associated *executing agency*. In the case of the PWP, the role of *Project Implementing Agency* will be filled by WWF-Pakistan.

319. The roles, responsibilities and inter-relationships of the key agencies required for implementation of the PWP in terms of the P-COM are defined by three documents or agreements.

9.2 Federal level

320. *Definition of roles*: The PWP will be executed under the supervision of Pakistan's Federal Ministry of Environment represented by the *Office of the Inspector General of Forests (IGF)*. In this role, the IGF will collaborate closely with the federal, provincial and territorial government agencies that are directly or indirectly involved in the Project. In accordance with UNDP-Pakistan policy, the *Executing Agency* will be entrusted with overall co-ordination of the Project and will assume absolute responsibility for the achievement of the PWP's approved objectives as described in this document.

321. *Responsibility for the Delivery of Outputs*: The *Executing Agency* will be assisted by WWF-Pakistan for the delivery of all Project Outputs in terms of an agreement to be concluded between the Federal MoE and WWF-Pakistan. The agreement will specify issues such as functions, responsibilities, financial accountability measures and reporting requirements. In this capacity, WWF-P will act as the *Implementing Agency* for the Project. WWF-P qualifies for taking this role by virtue of the organisation's broad range of experience in the implementation of natural resource management projects in Pakistan, especially with regard to community-based conservation of wetlands and the introduction of sustainable natural resource-use programmes. The authority vested in WWF-Pakistan will come into effect upon the signing of the *Project Document*; the agreement between IGF and WWF-Pakistan and the *Project Cooperation Agreement (PCA)* that will be concluded between UNDP-Pakistan and WWF-Pakistan. The overall implementation modalities will be governed by UNDP's *Project Cycle Operations Manual (PCOM)*, plus ancillary rules and procedures established for the UN System or, as may be specified in the agreements, WWF-P's standard operating procedures and staff rules

322. The NCCW, with the assistance of the *Project Implementing Agency*, will co-ordinate all national components of the Project and enter into partnership agreements with the appropriate government

partner agencies responsible for the implementation of the area-based initiatives in each of the four *Demonstration Complexes*.

9.2.1 Project Steering Committee (PSC)

323. The PSC will provide overall direction and monitor the implementation of the Project. An equally important role for the PSC will be the facilitation of inter-agency co-ordination at a national level. The NPD will serve as Convenor of the PSC (**See:** Section 9.1.2) which will be chaired by the Secretary, MoE. The National Project Manager/Chief Technical Advisor will act as the Secretary of the PSC.

324. **Composition of the PSC:** The PSC will be composed of, but not confined to, *ex-officio* representatives from the following agencies and offices:

325. Project Administration:

- Chairman of PSC (Secretary, MOE);
- National Project Director, PWP (Inspector General of Forests);
- National Project Manager/Chief Technical Advisor;
- GEF Implementing Agency Representative (UNDP Project Officer)
- Project Implementing Agency Representative, (Director General, WWF-P).

326. Government of Pakistan:

- Economic Affairs Division (*EAD*) (Ministry of Finance and Economic Affairs);
- National Council for the Conservation of Wildlife;
- National Herbarium (National Agricultural Research Centre, Ministry of Food, Agriculture and Livestock.);
- Office of the GEF Operational Focal Point;
- Pakistan Environmental Protection Agency;
- Planning and Development Division;
- Provincial/Territorial Wildlife Conservation Agencies (Provincial/Territorial Secretariats);
- Zoological Survey Department;

Parastatal Organisations:

- National Drainage Programme (Water and Power Development Authority, Ministry of Water and Power);
- Pakistan Poverty Alleviation Fund.

Non –Governmental Organisations:

- Leading Conservation NGOs such as IUCN-P and WWF-P;

Other members such as may be co-opted at the discretion of the PSC.

327. **Tenure of PSC Members:** As the Project is of comparatively long duration, it may reasonably be expected that there will be a relatively high turnover of *ex-officio* members. It is therefore important that the PSC includes a *quorum* of members who are appointed in their personal capacity for the duration of the project in order to retain a modicum of "institutional memory" (**See:** Lessons learned, Section 15.2.)

328. The PSC will monitor and evaluate the progress of the Project and take or endorse associated policy level decisions. The PSC meetings will be convened a minimum of once a year. The Chairperson will, however, have the discretion to convene the PSC more than once depending on the need for taking policy decisions. The Committee will specifically:

- critically review the Project's annual work plans and progress made in implementation of activities;
- facilitate policy and legislative reforms in support of wetlands management measures proposed by the Project;

- review and approve the final draft of the envisaged *National Wetlands Conservation Strategy* and the sub-strategies and action plans of the Project such as the *Public Awareness and Advocacy Strategy*;
- safeguard links with associated national and provincial/territorial policies such as the *Biodiversity Action Plan for Pakistan*, the *National Forest Policy*, the *NCS*, the *NEAP* and the *Provincial/Territorial Conservation Strategies*;
- guarantee compliance with Pakistan's international obligations related to conservation of biodiversity and, more specifically, wetlands; and
- provide guidance on issues requiring deviation from the approved project plan and on *ad hoc* issues that may arise during project implementation.

329. **Appointment of a PSC Executive:** In the interests of economy of effort, the PSC may, at the discretion of its members, appoint a *PSC Executive Committee* composed of six members on an *ad-hoc* basis, to represent the full PSC in matters that require decisions to be taken at relatively short notice.

330. **Transition of the PSC to a permanent wetlands conservation entity:** By the end of the fifth year of project implementation (PY 5.0), it is anticipated that the PSC will be superseded by a *National Wetlands Conservation Council* (working title). This body will be constituted in terms of the *National Wetlands Management Strategy* that will have been adopted and implemented by that time and will be formally linked to the NCCW. The *Council* will be supported at an operational level by a *Secretariat* that will take over the management of the final phases of the Project from the PMU, effectively replacing it in the Project implementation process.

9.2.2 National Project Director (NPD)

331. The Inspector General of Forests, who is an *ex-officio* PSC Member, will serve as *National Project Director* (NPD). The incumbent will be responsible for overall supervision of the Project and for liaison with UNDP-Pakistan and other Project partners. The *Project Management Unit* (PMU) will function under the direct supervision of the NPD. The NPD will exercise a high level of autonomy in decision-making and approving modalities for Project implementation such as quarterly plans, budgets, progress reports, etc. (See: *Lessons learned, Section 13.2*). When necessary, the NPD will ensure that relevant Project partners are consulted and critical decisions are made by consensus for the attainment of Project objectives. All Project inputs, such as, recruitment of personnel, procurement of equipment, negotiation of sub-contracts and provision of training will be undertaken with the approval of the NPD.

332. **Administrative support from the NCCW:** The NCCW will provide administrative support to the NPD for the supervision of the Project. The Project will provide the NCCW with the services of two staff members to facilitate this role for the duration of Project implementation period:

- A Project Liaison Officer; and
- A GIS specialist will service and operate the master copy of the W-GIS database.

9.2.3 National Project Manager/Chief Technical Advisor (NPM/CTA)

333. The NPM/CTA will, in consultation with UNDP-Pakistan and the *Project Implementing Agency*, appoint a *National Project Manager/Chief Technical Advisor* with the technical expertise and skills required by the Project.

334. The NPM/CTA will be responsible for overall operational management of the Project in accordance with the provisions of UNDP's *Project Cycle Operations Manual* and/or WWF-P's standard operating procedures and staff rules, as may be determined by the relevant inter-agency agreements.. The incumbent will also have the primary responsibility for the organisation and management of Project activities to produce outputs, the provision of high level technical assistance for Project implementation, co-ordination and supervision of Project personnel, and reporting.

9.2.4 Project Management Unit (PMU)

335. The organisational nucleus of the Project will be *Project Management Unit* consisting of permanent managerial and professional staff supported by a cadre of technical and administrative officers and assistants, clerical and unskilled staff (See: Optional Annex 31: *Project Staff Organisational Chart*). The PMU will work closely with the NCCW and will, therefore, be based in Islamabad at premises convenient to the offices of the NCCW.

9.2.5 Financial, Banking and Audit Arrangements

336. A dedicated account would be opened as a repository for Project monies. Funds will be appropriated on a quarterly basis, subject to the provisions in the Project budget and upon timely receipt of a financial report from the PMU. The PMU will report on and justify expenditures on a quarterly basis to UNDP-Pakistan through the NPD. Further disbursements will be made subject to receipt of quarterly financial statements. The NPM/CTA will 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 make payments following a joint review of the quarterly financial and progress reports by the NPD and UNDP-Pakistan. The quarterly disbursements would be recorded in duly certified *Combined Delivery Report* (CDR) by the NPD and NPM/CTA.

337. UNDP-Pakistan will arrange for financial auditing of the Project on an annual basis in line with standard procedures but, in doing so, will endeavour to avoid programmatic clashes with seasonally based fieldwork. Financial audits will provide an assessment of the rate of delivery, financial accounting and monitoring systems, equipment use, and maintenance, 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 NPD and PMU. All local and international procurement under the Project will be carried out as per the *Project Cooperation Agreement*. The PMU will establish and maintain a property ledger for equipment purchased with Project funds.

9.3 Implementation at the Demonstration Complex level

338. The PWP will take a strongly participatory approach during implementation at each of the four *Demonstration Complexes*. A range of stakeholders such as government agencies, private sector entities, NGOs, CBOs and local communities will be involved in the creation of the required institutions. These entities will actively participate in the implementation of activities especially in the design and introduction of alternative livelihoods for stakeholder communities.

9.3.1 Wetlands Complex Conservation Committees

339. The Project will convene Wetlands Complex Conservation Committees (WCCCs) at the regional level to oversee the implementation of activities at each *Demonstration Complex*. These WCCCs will provide site level guidance to the Site Management Teams (SMT) and, in due course, Village Conservation Committees. Specifically, their role will include:

- Review and approval of proposals submitted by VCCs for alternate income-generating ventures for user-group members, village based conservation activities and training of stakeholders;
- Sanctioning of funds to VCCs after the approval of such proposals;
- Monitoring and review of the success of alternate income generating ventures;
- Reviewing, approving and monitoring the progress in terms of Memoranda of Understanding (MoUs) concluded with VCCs with regard to sustainable management and use of wetlands and their associated biodiversity;
- Resolving differences/conflicts between VCCs and/or between VCCs and other stakeholders;
- Securing funds from public and private sector for conservation of wetlands;
- Approving the determination of conservancy boundaries and applying, where appropriate, for conservation status at the national or international level;
- Review and approval of the Management Plan for the *Demonstration Complex*;

- Co-ordination with local level government agencies and administration; and
- Initiating the replication of wetlands management techniques in adjacent areas.

340. The WCCC will consist of representatives from participating VCCs, local government, wildlife agencies, NGOs, CBOs, private organisations, the Tehsil Nazim's office and the SMT. They will meet on a quarterly basis, at least, to provide overall guidance to the Project and approve applications for projects identified by VCCs.

9.3.2 Regional Programme Directors (RPDs)

341. A senior Provincial Government Officer, preferably from the appropriate Provincial Conservation Agency, will serve as *Regional Programme Director*. The incumbent will be responsible for overall supervision of the regional activities of the PWP and for liaison with other Project partners. The *Site management Team* will function under the direct supervision of the RPD. The RPD will, when necessary, ensure that the relevant Project partners are consulted and critical decisions are made by consensus for the attainment of Project objectives.

9.3.3 Wetlands Complex Site Managers (SMs)

342. The NPM/CTA will, in consultation with UNDP-Pakistan, the NPD and the *Project Implementing Agency*, appoint four *Regional Site Managers*, one for each *Demonstration Complex*, with the technical expertise and skills required by the regional components of the Project

343. The SMs will be responsible for regional operational management of the Project in accordance with the provisions of the UNDP's *Project Cycle Operations Manual* and/or WWF-P's standard operating procedures and staff rules, as may be determined by the relevant inter-agency agreements. The incumbents will also have the primary responsibility for the organisation and management of the PWP's regional activities, the provision of technical assistance for regional implementation of the Project, co-ordination and supervision of regional Project personnel, and reporting.

9.3.4 Village Conservation Committees (VCCs)

344. At the community level, the Project will operate through Village Conservation Committees (VCCs) consisting, in most cases, of a cluster of villages geographically located in close proximity to wetlands or in areas where intensive resource use of wetlands and their associated biodiversity takes place. The exact cluster of villages and the number of VCCs will be finalised during the baseline data gathering stage of the implementation phase. The VCCs will consist of representatives of user groups that interact intensively with wetlands, such as fisher folk, communities that extract wetlands vegetation, farmers who own and cultivate land adjacent to wetlands and other user groups. In each *Demonstration Complex*, the exact number of user groups within each VCC and will differ considerably according to the location, occupations and resource-use patterns in each village. These user groups will incorporate all households within a cluster of VCC villages that derive their primary income from wetlands resources. The VCCs will elect their own office bearers and will, in conjunction with the SMT, finalise a *modus operandi* or constitution. The VCCs will consist of an appropriate number of representatives of village user groups. Each VCC may, in turn, elect a representative to sit on the WCCC.

345. The VCCs will be the focal point for the implementation of community involvement in conservation activities. In conjunction with the SMT, the VCCs will undertake a threat analysis to identify the links between resource-use practices and wetlands degradation. The threat analysis will also identify the economic and other factors causing the communities to engage in harmful resource use practices. This assessment will demonstrate to the communities the need for modifying livelihoods and resource use patterns. The VCCs will be assisted by the SMT in identifying alternative income generating activities and preparing proposals for submission to the WCCCs. They will also identify training, financial and other support needs for such ventures. These activities will be user-group specific and address the need for income enhancement or diversification where this is likely to take pressure off wetlands and their associated biodiversity. Although the exact design and nature of these ventures will be finalised during the implementation stage, they are broadly likely to consist of those listed in Table 1.

346. In general, the proposals for alternate income generating activities will need to meet the following criteria:

- demonstrate clear links with wetlands and natural resource conservation;
- be technically feasible;
- show market feasibility;
- have support from a clear majority of the appropriate user group, and
- be financially and environmentally sustainable.

347. The Project will provide seed money or *start-up capital* for financing the income generating ventures. Additionally, the VCCs will request each user-group to contribute at least 25% of the total costs in cash or kind for any alternate income generation activity or Project-related community development initiative. The SMT, in conjunction with the WCCC, will also secure such existing funds as may be available from other micro-finance and poverty alleviation organisations such as the *Pakistan Poverty Alleviation Fund*, RSPs, the *Khushal Pakistan Programme* and other NGOs. These organisations will be encouraged to extend the scope of their operations in the *Demonstration Complexes* and the Project will endeavour to link their micro-finance instruments to those alternate income generating ventures that also promote wetlands conservation. During the course of the Project, the VCCs will be encouraged to generate their own savings and maintain a group savings account so that additional finances are available to meet the needs for future financing of such ventures.

348. The VCCs will also enter into Memoranda of Understanding (MoUs) with the WCCCs and the SMT on modifications to existing resource use. These MoUs will identify changes in resource use for each user group and, where necessary, for the community as a whole. The changes in resource-use will be evaluated through periodic participatory monitoring and evaluation assessments. Areas where the VCCs, in general, and the user-groups, in particular, fail to comply with the agreed changes in resource use will be assessed and agreed with the VCCs and appropriate steps taken to ensure compliance with the MoUs.

349. The MoUs concluded with the VCCs and the associated income generating ventures and Project-related development activities will be embedded in *Village Micro-plans* that will be updated annually or more frequently, as circumstances dictate.

350. Through comprehensive training of the communities, the Project aims to build the capacity of VCCs so that by PY 6.0, they are able to function independently. It is anticipated that the mandate of such organisations will also be clarified and fortified in terms of the *National Wetlands Management Strategy*, once the latter has been officially adopted. At this stage, the VCCs will have become the primary channel for securing the necessary funds for alternate income generation activities. The Strategy will also provide security for community-based stewardship and management of wetlands. By this stage, also, the communities will be able to collaborate on an equal basis with the regional wetlands management entity to identify the requisite wetlands conservation activities, regulate the role of user-groups and implement and monitor the activities of the Wetlands Complex Management Plan.

Table 1: Indicative income-generation ventures in the *Demonstration Complexes*.

Type of income generating venture	Target/User Group	Demonstration Complex
Fishing		
Efficiency of fishing operations	Fisher folk	MCWC, CIWC
Post harvest handling of fish		
Storage of fish		
Boat improvements		
Introduction of co-operative ventures		
Improvement of transport and marketing		
Wetlands Vegetation		
Improvements of design, development and marketing of <i>Typha</i> woven products	Basket/mat weavers, women	CIWC
Cottage Industry		
Improvement of design and development of traditional embroidery products. Women, cap-makers, <i>ralli</i> makers		CIWC, SRWC
Creation of links to other rural and urban markets		
Grazing		
Improvement of livestock health (vaccination and veterinary care)	Farmers, pastoralists.	CIWC, SRWC, NAWC
Introduction of fodder crops for improved stall feeding in degraded range land areas.		
Introduction of new and improved breeds		
Support for improved milk and dairy production and marketing.		
Other income generating ventures		
Poultry farming	Women, small farmers, subsistence hunters, basket weavers.	MCWC, CIWC, SRWC
Apiculture (Bee-keeping)		SRWC
Improved collection, processing and marketing of NTFPs	NTFP collectors	CIWC, NAWC
Post harvest handling of vegetables.	Vegetable farmers, women	SRWC, CIWC
Improvement of marketing and transport	Vegetable farmers, farmer co-operatives.	

9.3.5 Site Management Team

351. Each *Demonstration Complex* will have an SMT that will provide the technical guidance to the Project. The SMT will consist of sections that focus on administrative management of Project activities, biological/wetlands conservation related interventions and social/community mobilisation. Consisting of hired government officers and both short and long-term contract staff and led by a Regional Programme Director who will be a serving government officer, the SMT will have principal responsibility for Project implementation in PY 1.0. Short-term contract employees are also likely to be hired on a temporary basis from government agencies, such as the ZSD, to meet immediate needs like baseline physical and biological surveys. The SMT will set up an office in or in close proximity to the *Demonstration Complex* and liaise closely with the appropriate WCCC, government agencies, VCCs and other stakeholders. The SMT will specifically undertake the following:

- immediate conservation activities to address the prevailing urgent threats to wetlands and their associated biodiversity;
- provide on-site training to government and partner agencies engaged in the Project;
- assist in detailed baseline surveys;

- formulate and regularly update the Management Plan;
 - spearhead the process of social mobilisation, community institution building, introduction of alternative livelihoods; and
 - secure the introduction of sustainable resource use practices. The SMT will also assist in the participatory monitoring and evaluation.
352. During the implementation phase, the Project will build the skills of government and partner agencies through training and capacity building so that by PY 7.0, the functions of the SMT can be performed by the wetlands management entity that will emerge at the regional level.

10. Risks and Sustainability

353. There are several potential *risks* to the Project's success but none is perceived to be of such a magnitude as to jeopardise implementation. These risks have been assessed during the evolution of the Project and measures have been implemented to reduce their impact. Significant risks are listed in **Table 2**.
354. Project design has laid emphasis on sustainability through the following means:
355. **Ecological Sustainability:** By tackling wetlands conservation at the level of entire wetlands complexes rather than as a piecemeal individual or site-specific effort, the Project ensures that ecological sustainability is maintained at an ecosystem level. Identification and mitigation or removal of threats at the grass roots level will ensure that the Project deals with causes rather than treating symptoms. A strong element of community integration will ensure that custodian communities are firmly involved in the long-term conservation of wetlands and their biodiversity.
356. **Social Sustainability:** Comprehensive consultation with communities during Project preparation has set the stage for social sustainability through ensuring involvement and support from a wide range of wetlands users. The Project will build long term measures for social sustainability by establishing representative VCCs that have a secure mandate for undertaking conservation initiatives with the support of the community and creating economic incentives for marginalised groups such as women, landless and migrant communities to encourage sustainable use of natural resources. As economic benefits begin to stream in to wetlands dependent communities and the benefits of natural resource conservation become increasingly evident, their cooperation will be secured in the conservation process. On a wider level, the awareness campaigns will establish widespread support within all echelons of Pakistani society to support wetland conservation. Through greater publicity for conservation issues, both from mass media and educational *curricula*, the Project will ensure long-term support for conservation from Pakistani society.
357. **Financial Sustainability:** Pakistan's economic challenges have consistently placed constraints on GoP's financial investment in wetlands conservation measures in the past. Recognising that enhanced conservation measures may exacerbate this situation, the Project has specifically included mechanisms for ensuring continued financial viability of conservation initiatives that are developed during the course of the Project.
358. A specific technical position has been created to investigate and plan for financial sustainability of conservation measures that develop through comprehensive financial analyses and the implementation of specific measures including but not restricted to:
- income generation through eco-tourism activities;
 - the introduction of levies on resource users;
 - the establishment of a *donor's forum*;
 - the establishment of mechanisms for long-term financing from multinational corporations and private enterprises; and
 - the establishment of wetlands conservation trusts or similar financial instruments.
359. The promotion of alternative livelihoods and enhanced site-level awareness measures will also act as the foundation for supporting these community institutions.

Table 2: Pakistan Wetlands Project Assessment of Significant Risks

	Risk	Threat Category	Brief Description	Mitigation Measures
Overall	The economic and political instability in Pakistan may prevent effective implementation.	Low - medium	Regional conflict, economic insecurity and law and order situation may worsen leading to the Project being delayed or shelved.	Little can be done to mitigate regional and large scale economic conditions. The Project will maintain an active dialogue with government agencies to secure and maintain their support for the Project.
Nat'l Wetlands Strategy	Resistance in formal adoption of Wetlands Management Strategy	Low	Various government departments may have conflicting views on the Strategy which could jeopardise its formal adoption.	Active involvement of government agencies and departments during Strategy formulation will facilitate institutional support. Regular consultation with the PSC to elicit, address and incorporate feedback.
Awareness Raising	Campaigns may not be successful in changing people's attitudes towards conservation.	Low - medium	Several worthy initiatives compete with conservation issues in Pakistani society and hence people may not pay enough attention to them.	Detailed social surveys will determine the most effective means of propagating conservation. Technically competent organisations and individuals will be co-opted for the awareness raising campaigns. Famous people may be co-opted as "spokespersons" for conservation.
Site level Activities	Communities may not co-opt into conservation activities.	Medium -High	In areas where the Project makes a fresh start, communities may not become convinced that curbs on resource-use and other Project activities are in their benefit.	Intensive initial period of community consultation involving all types of resource-users will aim to build community support. This will include explaining Project benefits and forming VCCs. Site level and wider awareness of benefits and actual benefit sharing will further enlist community support.
	Conflicts within communities may jeopardise site level activities	Medium	-	All levels and groups of people will be involved in Project activities. Training on conflict resolution will be provided to social mobilisers.

360. **Institutional Sustainability:** Improving the commitment, skills and knowledge of the people who run Pakistan's key institutions is the most effective Project intervention for institutional sustainability. Enhancing the policy framework and institutional co-ordination for wetlands management will also ensure strengthened institutional responsibilities for executing conservation measures.

361. In the short-term, ensuring that designated officials are pledged to participating in the PSC for the duration of the life of the Project will sustain the continuity and momentum of the Project.

362. In the long-term, the envisaged metamorphosis of the PSC, PMU and TREC into the National Wetlands Conservation Council with its Secretariat within the NCCW will cement institutional sustainability of the programme and enhance the probability that provincial and territorial government conservation agencies will implement similar institutional changes.

363. Strengthened cross-links with CBOs, Rural Support Networks and creation of representative VCCs will also ensure institutional sustainability.

11. Incremental Costs

364. The total Project cost amounts to US \$12,159,000, including the financing provided by GEF and UNDP for the preparatory phase of PDF (B), of which agreed incremental costs to be financed by the GEF amount to US \$2,991,350, excluding preparatory assistance. Co-financing amounting to US \$8,800,650 has been identified. The full *Project Budget*, including the *Incremental Cost Analysis*, has been appended as *Appendix A and 4*.

12. Budget

Table 3: A summary of projected expenditure for the PWP, itemised by outputs.

	Project Outputs	Investment (US\$)		
		GEF	Co-financing	Total
1	Project Coordinating Mechanism, Management Units and Technical Resource and Equipment Centre	491,500	1,430,500	1,922,000
2	Pakistan wetlands surveys GIS-database	543,250	1,005,750	1,549,000
3	National Wetlands Conservation Strategy	224,250	140,750	365,000
4	Training and Capacity-building Initiative	559,450	700,550	1,260,000
5	Nation-wide Wetlands Awareness Campaign	398,400	643,600	1,042,000
6	Long-term Fund-raising Campaign	64,000	191,000	255,000
7	Makran Coastal Wetlands Complex	318,750	1,032,250	1,351,000
8	Central Indus Wetlands Complex	391,750	1,237,250	1,629,000
9	Salt Range Wetlands Complex	0	1,345,000	1,345,000
10	North-west Alpine Wetlands Complex	0	1,074,000	1,074,000
11	Total	2,991,350	8,800,650	11,792,000

13. Monitoring, Evaluation and Lessons Learned

13.1 Monitoring and Evaluation

365. The PSC and, during the final two years of the Project the NWMC will oversee the process of *Monitoring and Evaluation* during the seven year life of the Project. The benchmarks for achievement of Project objectives will be clearly identified by PY 1.0, after baseline surveys are complete. Monitoring and Evaluation will take place by means of the following:

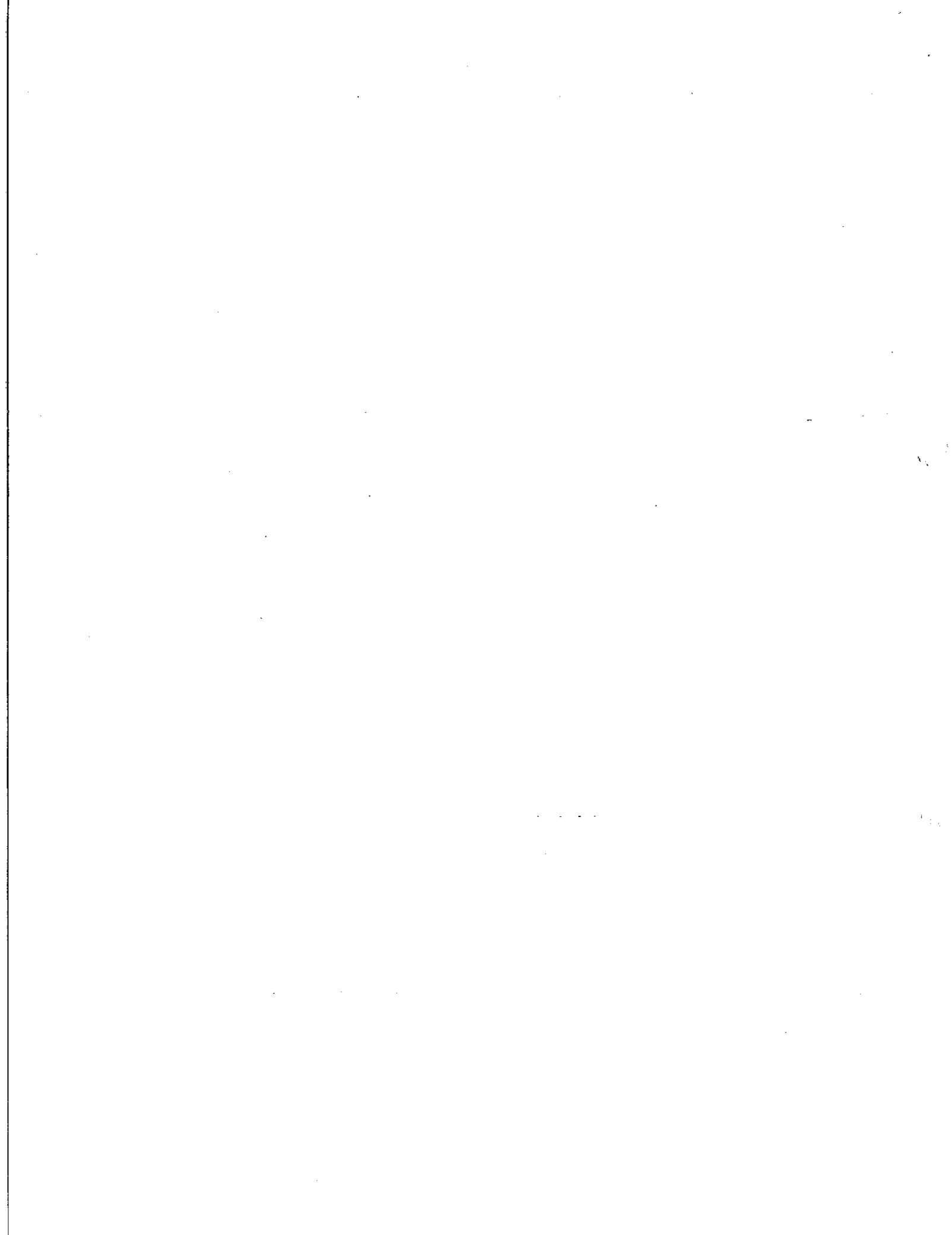
- **Quarterly Reports:** The *Project Implementing Agency* will provide *Quarterly Reports* summarising Project progress to the PSC according to the format specified in the *UNDP-Pakistan Project Cycle Operations Manual*, as revised. These will include reporting on progress with Project activities and targets, as outlined, on a quarterly basis. Corrective action will be proposed to rectify problems and will be presented to the PSC for approval and, if necessary, for government action.
- **Annual Report:** Based on a review of the Project's performance, an *Annual Report* will be presented to UNDP and the PSC. This will be reviewed at the first meeting of the PSC in each successive Project year but will be prepared annually in mid-December to meet with the requirements of the UN's annual reporting cycle. It will follow the standard UNDP format and elaborate on the Project's successes as well as failures in achieving designated targets for the year under review.
- **Mid-term Review:** A *Tripartite Mid-term Review* undertaken by a mission composed of independent members will take place in PY 4.0. In a comprehensive evaluation, this team will highlight the Project's achievements, accomplishment of goals and effectiveness in meeting objectives. The review may also recommend rescheduling of activities to accommodate exogenous, unexpected or new factors. A set of indicators to track Project progress at the mid-term level will be defined at the outset of the Project, based on the Project's *Logical Framework Analysis*.
- **Surveys:** Detailed *biological and socio-economic surveys* will be undertaken at the beginning of the Project to establish a baseline against which future progress may be measured. These surveys will be repeated at the mid-term stage, immediately prior to the *Mid-term Review*, to provide a *before and after* assessment of Project activities and to adapt or even replace specific Project interventions for increased effectiveness. Biological surveys will assess the changes in species richness and density, improvements in range and habitat and the overall health of the

ecosystems. Where practical, a system of fixed-point photographic monitoring will be implemented and, if warranted by the scale and scope of an intervention, remote sensed images may also be used. Socio-economic surveys will focus on the success of awareness-raising activities, changes in income and livelihood stability for wetlands dependent communities. Reduction in unsustainable resource-use practices, effectiveness of community institutions in resolving conflict and sharing of benefits with vulnerable groups, such as women and the landless poor, will be other key parameters. After the mid-term evaluations, such surveys may be wholly or partially repeated as deemed necessary by PSC and *Project Implementing Agency*.

- **Final Review:** A *Final Tripartite Review* will take place at the end of the Project. This review will evaluate the PWP's success and impact and will document the lessons learned for further projects or policy development. UNDP will, as is customary, produce an annual *Project Implementation Review (PIR)* for the GEF portfolio.

13.2 Lessons Learned

366. Lessons learned during the PDF (B) phase and from other similar projects have been instrumental in guiding Project design.
367. Experience dictates that a project such as the PWP benefits substantially from the overall technical and institutional guidance of an NPD who is able to exercise an advanced level of control over the decision-making process. The NPD's level of autonomy within the government hierarchy should be relatively high and clearly defined and his/her level of awareness of the day-to-day progress with the Project should be as complete as possible.
368. Secondly, due to an inherently high level of staff turnover in government departments, the PSC during the PDF (B) phase suffered from a lack of continuity of effort and associated institutional memory. This situation necessitated repeated efforts to update new PSC members on earlier decisions and actions of the PSC. To ease this situation, the Project recommends the appointment, on merit, of a *quorum* of senior staff from appropriate departments as permanent members of the PSC for the entire duration of the Project.
369. Thirdly, few conservation projects currently under implementation in Pakistan have introduced measures for long-term financial sustainability which has resulted in piecemeal efforts that tend to seize up as funds dissipate. Learning from this drawback, the Project supports the recruitment of a professional fundraiser and a financial advisory sub-committee of the PSC to establish mechanisms for long-term financial sustainability of the PWP.
370. Fourthly, earlier NRM projects have been hampered by a lack of technical capacity to implement activities and an inadequate knowledge of local conditions. To overcome this limitation, the Project provides for an inception period prior to commencement of any major interventions. This will enable staff in government and partner agencies to acquire a modicum of local knowledge and appropriate skills before the pace of the Project picks up. Additionally, the Project will involve a range of partners – NGOs, CBOs, research institutions and others - during implementation in order to benefit from the relevant capacity of various organisations. Contracting out the implementation of such Project components as may be effectively undertaken by partner organisations will ensure that the technical capacities of various organisations are used under the Project. This will also serve to transfer skills to and strengthen technical capacity of government agencies.
371. Fifthly, the Project proposes to improve cost-effectiveness by maintaining a central pool of equipment that will be available to site-level Project teams and other agencies as and when required.
372. Finally, several conservation projects that have been implemented in Pakistan in the past have undertaken community participation without an adequate gender framework. As a result, women's roles in NRM and conservation have been ignored or, at best, marginally addressed. The PWP has actively included consultations with women as part of the preparation phase and will continue to maintain this effort by placing a special emphasis on the integration of women into Project activities wherever feasible.



APPENDIX

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Pakistan Wetlands Project Budget

Project Outputs	Total Required (US\$)	GEF Funding (US\$)	Co-financing (US\$)	Baseline (US\$)	GEF Alternate (US\$)
Output 1	1,922,000	491,500	1,430,500	420,000	2,342,000
Output 1.1	950,000	237,500	712,500		950,000
Output 1.2	952,000	238,000	714,000		952,000
Output 1.3	20,000	16,000	4,000		20,000
Output 2	1,549,000	543,250	1,005,750	14,000	1,563,000
Output 2.1	769,000	192,250	576,750		769,000
Output 2.2	480,000	216,000	264,000		480,000
Output 2.3	300,000	135,000	165,000		300,000
Output 3	365,000	224,250	140,750	12,500	377,500
Output 3.1	0	0	0		0
Output 3.2	255,000	191,250	63,750		255,000
Output 3.3	110,000	33,000	77,000		110,000
Output 4	1,260,000	559,450	700,550	661,500	1,921,500
Output 4.1	183,000	45,750	137,250		183,000
Output 4.2	100,000	100,000	0		100,000
Output 4.3	100,000	15,000	85,000		100,000
Output 4.4	104,000	41,600	62,400		104,000
Output 4.5	40,000	16,000	24,000		40,000
Output 4.6	60,000	24,000	36,000		60,000
Output 4.7	130,000	52,000	78,000		130,000
Output 4.8	112,000	56,000	56,000		112,000
Output 4.9	95,000	47,500	47,500		95,000
Output 4.10	296,000	137,600	158,400		296,000
Output 4.11	40,000	24,000	16,000		40,000
Output 5	1,042,000	398,400	643,600	330,500	1,372,500
Output 5.1	162,000	40,500	121,500		162,000
Output 5.2	60,000	45,000	15,000		60,000
Output 5.3	30,000	13,500	16,500		30,000
Output 5.4	20,000	9,000	11,000		20,000
Output 5.5	142,000	63,900	78,100		142,000
Output 5.6	45,000	20,250	24,750		45,000
Output 5.7	140,000	56,000	84,000		140,000
Output 5.8	30,000	12,000	18,000		30,000
Output 5.9	40,000	18,000	22,000		40,000
Output 5.10	193,000	48,250	144,750		193,000
Output 5.11	180,000	72,000	108,000		180,000
Output 6	255,000	64,000	191,000	0	255,000
Output 6.1	160,000	40,000	120,000		160,000
Output 6.2	30,000	24,000	6,000		30,000
Output 6.3	65,000	0	65,000		65,000

	Total Required (US\$)	GEF Funding (US\$)	Co-financing (US\$)	Baseline (US\$)	GEF Alternate (US\$)
Output 7	1,351,000	318,750	1,032,250	179,500	1,530,500
Output 7.1	515,000	128,750	386,250		515,000
Output 7.2	10,000	5,000	5,000		10,000
Output 7.3	40,000	18,000	22,000		40,000
Output 7.4	200,000	60,000	140,000		200,000
Output 7.5	200,000	40,000	160,000		200,000
Output 7.6	30,000	0	30,000		30,000
Output 7.7	30,000	9,000	21,000		30,000
Output 7.8	80,000	12,000	68,000		80,000
Output 7.9	16,000	0	16,000		16,000
Output 7.10	50,000	10,000	40,000		50,000
Output 7.11	120,000	24,000	96,000		120,000
Output 7.12	60,000	12,000	48,000		60,000
Output 8	1,629,000	391,750	1,237,250	6,698,800	8,327,800
Output 8.1	335,000	83,750	251,250		335,000
Output 8.2	10,000	5,000	5,000		10,000
Output 8.3	90,000	40,500	49,500		90,000
Output 8.4	175,000	52,500	122,500		175,000
Output 8.5	200,000	40,000	160,000		200,000
Output 8.6	30,000	0	30,000		30,000
Output 8.7	90,000	27,000	63,000		90,000
Output 8.8	75,000	11,250	63,750		75,000
Output 8.9	16,000	0	16,000		16,000
Output 8.10	108,000	27,000	81,000		108,000
Output 8.11	35,000	8,750	26,250		35,000
Output 8.12	60,000	15,000	45,000		60,000
Output 8.13	45,000	9,000	36,000		45,000
Output 8.14	120,000	24,000	96,000		120,000
Output 8.15	120,000	24,000	96,000		120,000
Output 8.16	120,000	24,000	96,000		120,000
Output 9	1,345,000	0	1,345,000	255,500	1,600,500
Output 9.1	310,000	0	310,000		310,000
Output 9.2	10,000	0	10,000		10,000
Output 9.3	40,000	0	40,000		40,000
Output 9.4	200,000	0	200,000		200,000
Output 9.5	200,000	0	200,000		200,000
Output 9.6	30,000	0	30,000		30,000
Output 9.7	90,000	0	90,000		90,000
Output 9.8	75,000	0	75,000		75,000
Output 9.9	20,000	0	20,000		20,000
Output 9.10	210,000	0	210,000		210,000
Output 9.11	10,000	0	10,000		10,000
Output 9.12	50,000	0	50,000		50,000
Output 9.13	100,000	0	100,000		100,000

Project Outputs	Total Required (US\$)	GEF Funding (US\$)	Co-financing (US\$)	Baseline (US\$)	GEF Alternate (US\$)
Output 10	1,074,000	0	1,074,000	820,500	1,894,500
Output 10.1	316,000	0	316,000		316,000
Output 10.2	10,000	0	10,000		10,000
Output 10.3	40,000	0	40,000		40,000
Output 10.4	200,000	0	200,000		200,000
Output 10.5	200,000	0	200,000		200,000
Output 10.6	30,000	0	30,000		30,000
Output 10.7	90,000	0	90,000		90,000
Output 10.8	75,000	0	75,000		75,000
Output 10.9	8,000	0	8,000		8,000
Output 10.10	50,000	0	50,000		50,000
Output 10.11	55,000	0	55,000		55,000
Total	11,792,000	2,991,350	8,800,650	9,392,800	21,184,800

Response to the Comments Raised by the GEF Council Member for the United States of America

A. General Issues of Concern		
	Comment	Response from Project Proponents
1.	General: For all projects, the U.S. would like to see, consistent with the GEF-3 Replenishment Agreement:	See: specific responses 1.1 to 1.7 below.
	In general, our review of the project documents focused on results measurement, and found that many of the indicators listed are "output" rather than "outcome" indicators	We accept that semantic differences exist over the classification of indicators into process, output, outcome and impact. Action taken: In the revised version of the LFA, we have defined, categorised and defined the inter-relationships between levels of indicators and in doing so have endeavoured to comply as fully as possible as with the request from the US member on the GEF Council. Please refer to the footnote explaining the indicators used in the revised LFA.
1.1	Baselines	The PDF (B) Phase of the Project did not permit the establishment of comprehensive baselines in sufficient detail to serve as yardsticks for Project progress. In most cases such data sets were not available from secondary sources either. The Project Brief, therefore, makes specific provision for the establishment of baseline data in the form of comprehensive surveys embodied in Outputs 2.1, 2.2 and 2.3. At the national level, these include activities described in Outputs 5.2 and 6.2. Furthermore, the establishment of baseline data is an important primary component of the site-specific outputs (Outputs 7.2., 8.2, 9.2 and 10.2).
1.2	Quantitative target outputs and outcomes (or rates of change)	The original LFA attached to the Project Brief appears to be adequate in terms of <i>Output Indicators</i> but the Project Team concedes that there is a need to collate these into a set of more definitive <i>Outcome indicators</i> . Action taken: The Project's LFA has been amended to include more detail on quantitative targets appropriate to <i>Outcome Indicators</i> .
1.3	Deadlines for when the target is expected to be achieved	Almost all indicators included in the original LFA are indeed time-bound. The units of time are generally <i>Project Years (PY)</i> calculated from the Project inception date. Action taken: The amended LFA incorporates further definitions of time-bound results for Immediate Objectives and Main Outputs. In most cases, these results are expected to be measured either over successive years, thus indicating a trend, or mention a definite time by when the final result for a specific Output is expected to be achieved.
1.4	The identification of risks and provisions for risk mitigation	A relatively exhaustive evaluation of major risks was included in the original LFA text. Action taken: Several additional assumptions and risks have been described in the revised LFA (See: for example <i>Immediate Objective B</i> and Principal Outputs 7, 8, 9 and 10)

A. General Issues of Concern		
	Comment	Response from Project Proponents
1.5	A strong monitoring and evaluation framework	<p>From the outset, monitoring and evaluation has been regarded as a critical necessity for the success of the PWP, especially since the implementation of the Conservancy Management Plans embodies a strongly iterative approach.</p> <p>Action taken: Although the general framework for Monitoring and Evaluation arrangements was provided in the Project Brief, this has now been expanded to include further details and will be further elaborated upon in the Project Implementation Arrangements described in the Project Document.</p>
1.6	Annual reporting of outcomes.	<p>This comment has been interpreted as a request that successive annual reports for the PWP should include specific assessment of progress with the achievement of identified outcomes indicators described in the LFA.</p> <p>Action taken: This requirement will be specifically identified in the reporting framework described in the Project Implementation Arrangements.</p>
	Ideally, the outcomes will correspond with the targets set out in the GEF-3 Replenishment Agreement. In instances where the baseline is to be developed during implementation, the document should at least offer some sense of the current baseline data an a timeframe (on a priority basis) when the full baseline will be developed.	

B. Specific Issues of Concern		
	Comment	Response from Project Proponents
2.	Most of the indicators are processed (<i>sic</i>) focused, rather than actual outcomes. Some indicators would benefit from greater quantification.	The amended LFA has placed special emphasis on clearly defining the three categories of indicators that are now used. These include Outcome, Output and Impact Indicators. Both quality- and quantity- related considerations have been carefully assessed in defining these indicators. In particular, <i>Outcome Indicators</i> have been defined with quantifiable targets e.g. 2.3, 4.3, 6.3, 7.3 - 7.6, 8.3 - 8.7, 9.3 - 9.7 and 10.3-10.6). <i>Impact Indicators</i> are also provided for each <i>Immediate Objective</i> and <i>Principal Output</i> e.g. A1, A2, A3, 2.1, 3.1, 4.1, 5.1-2, 6.1, 7.1, 8.1, 9.1 and 10.1. <i>Output indicators</i> have been limited to one per <i>Output</i> e.g. B1, 2.2, 3.2, 4.2, 5.3, 6.2, 7.2, 8.2, 9.2 and 10.2.
3.	Most of indicators are process or output indicators, not outcome indicators. How much area is expected to be placed under protection (or restored) as a result of the project? Not enough detail about the current baseline data, monitoring and evaluations and responsibilities.	See: response to Specific Comment 2 above. The detail required to adequately qualify and quantify progress with the conservation in the four conservancies will emerge from detailed baseline surveys that are expected to be conducted in Project Year 1. The LFA, however, provides broad indications of quantifiable targets, such as the following: <i>By PY 6.0, the MCWC Conservancy is established to include 100% of globally important wetlands and 75% of those of national importance. By PY 5.0, the immediate conservation action plan leads to a 50% reduction in those dire threats to wetlands and their biodiversity that are identified in PY 1.0. By PY 5.0, vulnerable species and ecosystem components also indicate a statistically significant improvement over PY 1.0 levels as a consequence of proactive conservation measures. Ecosystem health and levels of protection measures permit safe re-introduction of captive bred endangered species by PY 6.0.</i> See: response to General Comment 1.1 above for baseline information and General Comment 1.5 for Monitoring and Evaluation.
4.	Also, the log frame is so complicated that it is difficult to tell the important indicators from the minor procedural ones.	Action taken: The LFA has now been amended to focus on Immediate Objectives and Principal Outputs. This allows for greater clarity on important outputs and their indicators. In the Project Team's assessment the original LFA is an important source of monitoring and evaluation for project implementation and has been retained as an appendix to the Project Brief.
5.	There is a monitoring and evaluation process but it does not appear to be spelled out in much detail.	See: response to General Comment 1.5 above.
6.	Also, it is unclear when the baseline will be completed.	The baseline studies are expected to be complete by PY 1.5 as mentioned in sections 2.3 and 4.2 in the amended LFA. While items 7.3, 8.3, 9.3 and 10.3 do not specifically mention the completion of baseline studies, the targets set in terms of these will be achieved and measured on the basis of baseline information made available by Project Year 1.

Response to the Comments Raised by the GEF Council Member for Switzerland

Principal Issues of Concern		
#	Comments	Responses from Proponents
1.	<p>a) The proposed stakeholder and community participation in the planning and management of the wetlands.</p> <p>The participatory approach that intends to involve communities and stakeholders in the planning and management process and that envisages the creation of "custodian communities" to be entrusted the responsibility for the proposed conservation management of the target areas sounds good in theory but the proposal does not convincingly prove how this may be achieved. It is self-evident that the overall success of the project is at high risk if the communities and stakeholders will not develop ownership. It is not clear why the communities are expected to develop ownership if their traditional resource- and land user rights will be curtailed by the project without providing incentives/anything in exchange. How can the project offer the promised "win-win" situation for stakeholders?</p>	<p>We agree that the overall success of the Project is likely to be closely associated with the effectiveness of community involvement and participation.</p> <p>Community involvement will be implemented through the formation of Village level institutions or <i>Village Conservation Committees</i>, as alluded to in Outputs 7.4, 8.4, 9.4 and 10.4 and described in detail in the <i>Stakeholder Participation Plans</i> (Annex 9). The VCCs will provide the focal instrument for community involvement and project activities will be undertaken with their consultation, approval and active support. Specific capacity building and training initiatives (Output 4.8) will also develop the capacity of VCCs so that by PY 6, such institutions are sufficiently competent to manage conservancies proactively.</p> <p>Action taken: The implementation section of the <i>Project Brief</i> (Para XX) has been amended to include detail on the formation and operation of VCCs.</p> <p>Three main aspects of project activities aim to cement community involvement and create incentives for "ownership". These include:</p> <p>(a) the legal protection of traditional user rights, where-ever possible, (Output 3.2);</p> <p>(b) awareness raising activities (Outputs 5.5 – 5.7 and 5.11); and</p> <p>(c) development of alternative livelihoods (Outputs 7.5, 8.5, 9.5 and 10.5).</p> <p>While awareness raising activities will be aimed at improving current utilisation of resources and promotion of best resource use practices, the protection of rights of access and introduction of alternative livelihoods will be closely linked to limits on resource use in vulnerable areas and in relation to specific conservation problems. In consultation with VCCs, such livelihoods will be introduced to sections of the community that are currently forced to over extract resources in order to meet their daily, subsistence needs. Agreements will be concluded with VCCs on the utilisation limits and formalised through memoranda of understanding. These agreements will bind communities to adopt changes in extraction of resources in exchange for new income generation opportunities.</p>

- Notes:** (1) To enable cross-referencing, each separate comment has been allocated a serial number in the column headed '#';
- (2) Where specific amendments to the *Project Brief* have been made in direct response to a comment, this has been highlighted in blue/bold as: "Action taken";
- (3) This document has been prepared in *US Letter Format* (215.9 x 279.4 mm). If it is reformatted for *European A4 Format* (210 x 297 mm), the layout of the tables may be adversely affected.

#	Comments	Responses from Proponents
2.	<p>(b) The proposed development of economic alternatives for the rural poor in the target areas.</p> <p>Although (this) point is considered critical for the much needed "buy-in" by locals into the project concept, it is highly doubtful that this may be achieved without concrete, tangible and sustainable benefits to be derived from the project by the stakeholders. The proposed activities that promise to focus on the development of cottage industry, eco-tourism and the involvement of women, are rather vague, stereo-type(d), poorly researched and in the overall not very convincing. Furthermore, the funds allocated to these most important activities are comparatively insignificant. The proposal cross-references experience from similar projects in Pakistan but fails to recognize the need to custom-tailor programs and does not specify how this may be achieved.</p>	<p>The baseline surveys planned to take place in PY 1 (Output 2.2) and the specific investigations of Project demonstration sites (Outputs 7.2, 8.2, 9.2, 10.2) are expected to identify and assess the prevailing socio-economic conditions in detail soon after the Project starts. The precise form of the interventions on alternative livelihoods will be detailed once the baselines peculiar to each site have been adequately established.</p> <p>The <i>Stakeholder Participation Plans</i> (Annex 9) have identified several activities on the basis of preliminary surveys conducted during the PDF (B) Phase of the Project. These include the augmenting of existing alternative income generation ventures, such as boat-based eco-tourism on the Indus River, the introduction of value-added activities such as the provision of facilities for on-boat fish catch cold storage, and development of improved marketing of existing traditional crafts, crops and catches. In the judgement of the Project Team, it would, however, have been too prescriptive to provide a comprehensive and detailed list of such activities without the availability of detailed information on specific socio-economic conditions of target households, detailed assessment of "marketability" and cultural acceptance of such interventions. The accumulation of such detail is an extensive operation and was beyond the scope of work during the PDF (B) Phase. Further, in line with the best principles of community involvement, the VCCs themselves will be encouraged and supported to identify and plan such interventions. The Project can screen and support those interventions that have a defined link with wetlands conservation and stand a realistic chance of success.</p> <p>It should also be noted that while these interventions could not be discussed in detail with the communities in the absence of an approved Project, this process will be entirely feasible during the early stages of project implementation.</p> <p>Regarding the funding issue, we wish to point out that the infrastructure and staffing development for all components have been budgeted for separately in Outputs 1.1, 1.2, 7.1, 8.1, 9.1 and 10.1. The amounts budgeted for Outputs such as Outputs 7.4 and 7.5, therefore, represent output specific expenditure in the narrowest sense.</p> <p>In respect of the custom tailoring of programmes, we contend that the high level of customisation inherent in Outputs 7, 8, 9 and 10 is a special feature of the Project. This is reflected in the reluctance of the Project Proponents to specify the detail for such interventions in advance and without adequate community participation or seasonal perspective.</p>

#	Comments	Responses from Proponents
3.	<p>(c) The lack of integrated development plans (management plans) for the targeted wetlands.</p> <p>The proposal does not address the need for comprehensive integrated management plans for the four selected wetland complexes (long-term perspective) although the project summary clearly states the need for "progressive, participatory management plans for the four independent demonstration sites". Instead, the proposal suggests the elaboration of an "immediate action plan" for each of the areas (short-term perspective), which indicates a "brushfire approach" without providing long-term solutions to the problems.</p>	<p>The PWP's activities related to wetlands management and conservation in the four demonstration sites are all elements of individual <i>Management Plans</i>, circumscribed by between 11 and 16 specific outputs in each case.</p> <p>As is evident from the Frontispiece of the <i>Project Brief</i>, the overall goal of interventions in each demonstration site is to implement a viable <i>Management Plan</i> that will be strongly iterative in nature and will be readily updated on the basis of fresh information emerging from formal and informal monitoring and feedback.</p> <p>Action taken: The amended <i>Project Brief</i> now clearly specifies the production of a <i>Management Plan</i> in the headers of Outputs 7, 8, 9 and 10.</p> <p>The "immediate conservation action plans" (Outputs 7.3, 8.3, 9.3 and 10.3) are an essential component of the Project. They serve to halt, or otherwise mitigate obvious degradation that is taking place and in so-doing "buy time" for the long-term, comprehensive <i>Management Plans</i> to be implemented and the conservancies to be formed (Outputs 7.7, 8.7, 9.7 and 10.7).</p>
4.	<p>(d) The financial sustainability of several project components.</p>	<p>Financial sustainability of conservation initiatives in the Developing World is a pervasive concern. The Project does not envisage that all its outputs will require long-term financial support. Interventions such as training and capacity building will incorporate "one-off" activities" such as <i>curriculum</i> development and training of trainers in government agencies and other organisations that will, in turn, enhance the capacity of other staff members. Similarly, the development of the <i>National Wetlands Conservation Strategy</i> is an essential initiative but does not require sustained funding once it has been adopted.</p> <p>We agree that financial sustainability requires long-term and sustained efforts. In view of the complexity of sustainability issues the Project has provided for specific expertise and outputs in Output 6. The Project envisages that those initiatives that require long-term funding will receive special attention from the Financial Sustainability and Fund Raising Section. By PY 7, the Project envisages the establishment of institutional mechanisms, social conditions and financial momentum necessary for securing financial sustainability.</p>

Further Comments and Responses		
#	Comments	Responses
5.	<p>Paragraph 33: The idea of establishing community run "conservancies" is excellent; the proposed equity sharing scheme however needs clarification. What will be the actual benefits to the affected communities/stakeholders over and above the current traditional use rights?</p> <p><i>Note: Paragraph number in revised text is 39</i></p>	<p>As explained in the response to Comment # 2 above, it was not practical to accumulate adequate detail to support the specific design of equity-sharing mechanisms during the PDF (B) Phase of the Project. We do, however, envisage that during Project implementation a substantial level of attention will be given to the division of benefits as related to traditional but sustainable user rights.</p> <p>The Project will assist the Village Conservation Committees (VCCs) to define and set up equity sharing measures. As these are likely to differ for each conservancy, only broad measures for equity sharing have been identified in the <i>Stakeholder Participation Plans</i> (Annex 9). These will be refined and further developed once detailed baseline socio-economic surveys have been undertaken and will be reflected in the VCC Directives defining the <i>modus operandi</i> of these institutions. These will also be highlighted in the memoranda of understanding concluded between the VCCs and the Project/Government Agencies.</p> <p>The Project approach embodies a "no net loss of livelihoods for local communities" principle. In accordance with the absolute need to address the <i>poverty-resource use nexus</i>, the following measures will be implemented:</p> <ul style="list-style-type: none"> (a) Protection of traditional user rights, where possible, (Output 3.2); (b) Reduction of post harvest/catch losses (e.g. Outputs 8.10, 8.11 and 10.11) and improvement of efficiency of operations; (c) Introduction of value-added activities through improving technical know-how and small scale investments. <p>Over time, such ventures are also likely to remove the barriers to income enhancement such as seasonality of occupations, restricted market access and lack of bargaining power.</p>

#	Comments	Responses
6.	<p>Paragraph 38- 40: The proposed centralized equipment centre does not appear practical or feasible. Furthermore, the equipment needs should be itemized and justified; owned and to be operated by whom?</p> <p><i>Note: Paragraph numbers in revised text are 44-46</i></p>	<p><i>The Technical and Equipment Resource Centre (TREC), to be operated under the auspices of the National Council for the Conservation of Wildlife (NCCW), aims to address two significant issues that have affected implementation of other similar projects:</i></p> <p>(a) piecemeal and inefficient procurement of costly equipment that leads to time delays in implementation; and</p> <p>(b) lack of proper servicing, maintenance and periodic upgrading of equipment. The TREC will act as a central purchasing and acquisition facility for all equipment required by the Project. A detailed equipment specification has been prepared and a comprehensive inventory of equipment will be maintained in accordance with UNDP's procedures as specified in the Project Cycle Operations Manual. Equipment required for routine implementation at the four demonstration sites will be allocated to the <i>Site Management Teams</i> but periodically recalled for renovation and upgrading.</p> <p>Some specialised and expensive equipment such as Quantum Water Samplers will be housed within the TREC and used for nationwide surveys as and when required. The TREC also addresses the seasonality of equipment needs, for example, the alpine areas are accessible for surveys during the summer months while the arid areas will be surveyed during winter.</p> <p>At the end of the Project, the equipment will be disposed off as per UNDP's rules.</p>
7.	<p>Paragraph 48: A national wetland survey: why dilute the project and not concentrate on the four selected demonstration sites?</p> <p><i>Note: Paragraph number in revised text is 54</i></p>	<p>The PWP consists of two major initiatives:</p> <p>(a) the creation of an enabling environment at the national level; and</p> <p>(b) the implementation of community-based management plan in four demonstration sites.</p> <p>The national wetlands surveys described in Output 2.2 will provide the envisaged national decision-making body with vital information related to the disposition and condition of Pakistan's wetlands. This will be essential to enable replication of the techniques developed at the demonstration sites and will facilitate prioritisation of national conservation efforts and expenditure.</p> <p>Site and service specific surveys will be carried out in the four demonstration sites as specifically mentioned in Outputs 7.1, 8.1, 9.1 and 10.1 and other interventions.</p>

#	Comments	Responses from Proponents
8.	<p>Paragraph 58: Output 3.2 appears much too ambitious and is kept much too general. It appears more logical to start with a training need assessment by target group before designing training modules and programs. Training should be demand-driven. The training program appears overly ambitious and complex.</p> <p><i>Note: Paragraph number in revised text is 64</i></p>	<p>We assume that this comment, although identified as Output 3.2, actually refers to Output 4, generally, and 4.1, in particular.</p> <p>The training programme is indeed, both complex and ambitious but is also essential. It has been developed in response to existing needs that are either self-evident or have been clearly exposed during the PDF (B) Phase and in other resource conservation projects currently under implementation.</p> <p>Although the conduct of a training needs assessment was implied in Output 4.1, we concur with the comment that this was not clearly stated.</p> <p>Action taken: The Project Brief has been amended to include specific outputs for a needs-assessment exercise and the preparation of a Training Strategy for the Project.</p> <p>It should, however, be stated that a level of flexibility must be retained as it is anticipated that site specific training needs will emerge in consultation with stakeholders at an advanced stage in the Project.</p>
9.	<p>Paragraph 96: Who will deliver the awareness building campaign?</p> <p><i>Note: Paragraph number in revised text is 107</i></p>	<p>An organisation competent and sufficiently experienced in the implementation of awareness campaigns of a similar nature and scope in Pakistan will be contracted, as per UNDP procedures.</p>
10.	<p>Paragraph 110: It is unclear how hunter education/awareness building can be delivered unless hunters undergo mandatory training courses before obtaining a hunting license/permit. The same applies to the training of several other referenced target groups.</p> <p><i>Note: Paragraph number in revised text is 121</i></p>	<p>We agree fundamentally with the view that hunters should undergo a modicum of mandatory training as a pre-requisite for obtaining a hunting permit. WWF-Pakistan is in the process of establishing several formal hunters' organisations in the country. Initiatives are also underway to introduce mandatory training on conservation of wildlife, fire arms safety and hunting ethics before obtaining a permit. These initiatives will be supported, extended and formalised during the implementation phase.</p>
11.	<p>Paragraph 116: To establish a website is an excellent idea but who will maintain the site on completion of the project?</p> <p><i>Note: Paragraph number in revised text is 128</i></p>	<p>It is anticipated that the NCCW will take over responsibility for maintaining the website prior to Project completion. Senior NCCW representatives have already indicated their willingness to do so.</p>
12.	<p>Paragraph 122: The proposed fund-raising by a professional is an excellent idea; but funds to be located should focus on the demo sites rather than the entire country and institutional framework.</p> <p><i>Note: Paragraph number in revised text is 133</i></p>	<p>The project Team agrees with this comment in principle. The Fundraising and Financial Sustainability Section will address the financial needs of all significant Project interventions and devise a strategy for sustaining these by PY 6. Most of this effort will be directed at ensuring financial sustainability for the four demonstration sites but the on-going funding of certain deserving national level initiatives such as Output 4.2 (the postgraduate wetlands course) will also be addressed.</p>

#	Comments	Responses from Proponents
13.	<p>Paragraph 132 and 142: Who will train the "Site Management Teams" for the four target areas and how will they be sustained financially after project termination?</p> <p><i>Note: Paragraph numbers in revised text are 145 and 155</i></p>	<p>A distinction must be drawn between short-term project activities and long-term institutionalised community-based initiatives. The Site Management Teams will be trained and guided by the Project's senior technical staff. The community-based entities that will undertake long-term management of the sites will initially be trained by the Site Managers assisted by the <i>Training and Capacity Building Section</i>. On-going training after termination of the Project will be provided by the various training courses that will have been set up (Outputs 4.2, 4.3, 4.4 and 4.7) and supported by the preparation of a comprehensive wetlands management manual (Output 4.10)</p>
14.	<p>Paragraph 148 (also 174): It is unclear how the project will achieve the required "buy-in" by stakeholders without providing tangible benefits over and above the current benefits derived from the four target areas and without providing incentives outweighing the losses expected from use restrictions.</p> <p><i>Note: Paragraph number in revised text is 161 (also 188)</i></p>	<p>Please refer to the Project Team's response to specific Comments # 1 and # 2.</p>
15.	<p>Paragraph 151: Training villagers to service tourists is of little use without a proper opportunity and market assessment that would identify realistic needs (equally applies to all four areas).</p> <p><i>Note: Paragraph number in revised text is 164</i></p>	<p>The Project Team agrees. Output 7.8 states that "the MCWC Site Team will make an evaluation of the potential for various eco-tourism activities in the Complex. As no viable market has, as yet, been developed for such facilities, the PWP will design and promote a local eco-tourism programme and provide communities training in the necessary skills". It should be stated that WWF-Pakistan has already, as a bridging activity, initiated an Indus Dolphin Safari with the assistance of the Adventure Foundation-Pakistan.</p> <p>The development of marketing links, assessment of viable eco-tourism related ventures and associated small business opportunities for local communities will be a key part of the eco-tourism planning and promotion exercises envisaged in Outputs 7.8, 8.8, 9.8 and 10.8.</p>
16.	<p>Paragraph 157: Who is the "PWP"? The bird-ringing should involve locals to be remunerated for their assistance. This also would help to develop much needed ownership.</p> <p><i>Note: Paragraph number in revised text is 170</i></p>	<p>"PWP" is an acronym for the <i>Pakistan Wetlands Project</i>.</p> <p>The Project Team agrees that the local communities should be remunerated for their assistance rendered to activities such as the bird-ringing programme. Moreover, as a matter of principle, the Project employment activities will, generally, be preferentially offered to custodian community members.</p>

#	Comments	Responses from Proponents
17.	<p>Paragraph 163 (and 207): Captive crocodile/gharial (gharial) breeding is a highly sophisticated and costly exercise that requires special skills. Who would provide training to whom and how can the facilities be sustained? Would the expected results justify the effort?</p> <p><i>Note: Paragraph number in revised text is 176 (and 221)</i></p>	<p>It is difficult to place a price on the extinction of a species. It is the Project Team's contention that, given the ecological and socio-economic realities of the region, the establishment of such breeding facilities is a viable proposition. In the case of the Gharial, the initiative may amount to nothing more than providing a modest amount of short-term assistance to several zoos in Pakistan. Lahore and Karachi zoo have male and female Gharials that may be bred in captivity. Further, the government Wildlife Training Institute in Gatwala, Punjab, has crocodile breeding facilities which are currently under-utilised. The Project will facilitate these initiatives and ensure that they are cost-effectively used to breed endangered and nearly extinct wildlife.</p> <p>Regarding the skills and capacity-building, this will be provided by the <i>Site Management Teams</i> with support from Chief Technical Advisor.</p>
18.	<p>Paragraph 192-193: Who exactly will be responsible for the assessment, training and provision of seed money and for which revenue generating pilot projects?</p> <p><i>Note: Paragraph number in revised text is 206</i></p>	<p>The Project's <i>Site Management Team</i> will screen and prepare potential income generation projects in conjunction with the VCCs. The criteria for the approval of such potential projects are broadly identified in the <i>Stakeholder Participation Plans</i>. Such plans will be assessed and approved by the concerned <i>Wetlands Complex Conservation Committee</i>.</p> <p>Action taken: The process of screening and preparing income generating projects together with the roles of the <i>Site Management Teams</i>, VCCs and the <i>Wetlands Complex Conservation Committees</i> has been clarified in the Project Brief in Section 9 on Execution Arrangements.</p> <p>Requisite training for these projects will be facilitated by the <i>Site Management Teams</i>. Seed money for such ventures will also be leveraged through existing programmes such as the Khushal Pakistan Programme, National Rural Support Programmes and other sources. <i>The Fundraising and Financial Sustainability Section</i> will also provide a platform for raising seed money and channelling it to the four demonstration sites.</p>
19.	<p>Paragraph 204: Please explain the purpose of the annual surveys of the Indus Dolphins. Are the surveys to continue on termination of the project? Please properly justify this activity.</p> <p><i>Note: Paragraph number in revised text is 218</i></p>	<p>The Indus River Dolphin (<i>Platanista minor</i>) is an endangered, endemic and key flagship species in the <i>Central Indus Wetlands Complex</i>. As it is at the top of the trophic pyramid, it is an effective indicator of the health of this large river ecosystem. The purpose of the annual surveys of the Indus Dolphin is to directly monitor the distribution and health of the population and, indirectly, assess the state of the ecosystem by comparison of the results with WWF-Pakistan's existing baseline information.</p>
20.	<p>Paragraph 210: Experimental hog deer breeding for re-introduction purposes makes little sense without solving the root problems responsible for the population decline.</p> <p><i>Note: Paragraph number in revised text is 224</i></p>	<p>The Project Team agrees. The subsistence hunting of hog deer that currently takes place is a direct consequence of poverty. Several components of the Project address this root cause of biodiversity loss. It is expected that an element of absolute protection for wildlife will be provided by the proclamation of new Protected Areas and the enhancement of existing ones. No hog deer re-establishment in community areas will take place until conservation awareness levels have reached an advanced stage i.e. by PY 6.</p>

#	Comments	Responses from Proponents
21.	<p>Paragraph 213: If all target wetlands are privately owned what would be the incentive for owners to change current system?</p> <p><i>Note: Paragraph number in revised text is 227</i></p>	<p>First, it should be noted that significant tracts of wetlands in all four demonstration sites and the adjacent catchment areas remain directly under local government control. Secondly, land ownership or tenure does not necessarily translate into resource access and control, for example, that land occupied by some lakes in SRWC is claimed privately by local people but is rarely available for productive use. This land only becomes available under dry protracted conditions when the volume of water in the wetlands is low. Even under such conditions, the land is of little use, if any, to the claimants as it is unsuitable for cultivation.</p> <p>In social surveys conducted during the PDF (B) Phase, local people clearly conveyed the reality that such land was of little benefit to them. They also supported the conservation of wetlands as this was perceived to recharge the ground water in the area - a critical need in the region. The primary issue of concern is agricultural practices in the private farmland situated adjacent to the lakes in SRWC. The Project will build incentives for water conservation in these areas by introducing better water management practices to prevent losses in water supply to farms and encourage alternative farming practices that involve the use of fewer agrochemicals without decreasing crop yields. Water availability, including potable water, is a major problem in the region and enhanced water management practices will benefit local farmers greatly while re-generating the wetlands. Through these measures, the Project will demonstrate the level of private benefits that are likely to accrue to private land owners through appropriate management of wetlands.</p>
22.	<p>Paragraph 232: Why would the community be interested in a "conservancy" if the land and resources are already community owned?</p> <p><i>Note: Paragraph number in revised text is 246</i></p>	<p>Kindly refer to the response to Comment # 21.</p>
23.	<p>Paragraph 236: Please provide a proper justification for the construction of enclosure plots. Why not just develop a realistic rehabilitation/use plan for over-grazed areas? What would enclosure plots add or prove?</p> <p><i>Note: Paragraph number in revised text is 250</i></p>	<p>The grazing pressure is high in the SRWC and NAWC and the range-land has been in a severely degraded state for more than a generation. Few people in the current generation have any idea of the natural potential of the range-land vegetation. The purpose of the enclosure plots is to prove to them that the range-land can and will recover if properly managed.</p> <p>In this activity, the Project is applying a lesson learnt in other similar projects where the practical demonstration of a technique has effectively convinced resource users to change their practices. As a matter of course, practical demonstrations are more effective than oral persuasion.</p>
24.	<p>Paragraph 241: Will the project pay for the labour involved?</p> <p><i>Note: Paragraph number in revised text is 255</i></p>	<p>No. It is anticipated that the communities will provide the labour as their part of the investment, especially with an understanding of the private benefits that is likely to yield to them. This is a routine approach adopted in similar projects in other areas, for example, the GEF funded Mountain Areas Conservation Project. Incentives for community participation will focus on the tangible benefits that will emerge from control of erosion etc, for example, recharge of the water table.</p>
25.	<p>Paragraph 292: To establish "Custodian Communities" without proper incentive system appears unlikely.</p> <p><i>Note: Paragraph number in revised text is 305</i></p>	<p>Please see the responses to Comments # 1, 2 and 21 above. We would regard the creation of <i>Custodian Communities</i> without proper incentives as improbable. The Project will provide diverse incentives in a wide variety of circumstances.</p>

7	Comments	Responses from Proponents
26.	<p>Paragraph 293 The financial sustainability is doubtful.</p> <p><i>Note: Paragraph number in revised text is 307</i></p>	<p>Please see the response to specific Comment # 4, above.</p>
27.	<p>Paragraph 312: The assumption is made that "economic benefits begin to accumulate in wetland dependent communities" as result of the project. This is not very convincingly proven by the proposal.</p> <p><i>Note: Paragraph number in revised text is 352</i></p>	<p>Please see the responses to Comment # 2 above and the <i>Stakeholder Participation Plans</i> (See: Annex 9).</p>
28.	<p>Paragraph 314: According to the cost-table no funds appear to be allocated to two of the four sites (i.e., Salt Range and North-West Alpine Complexes). Why not?</p> <p><i>Note: Paragraph number in revised text is 362</i></p>	<p>During the early stages of Project formulation, it emerged that the GEF was not in a financial position to fund all four <i>Demonstration Sites</i>. The <i>Project Steering Committee</i>, however, could not in good conscience reduce the scope of the Project to only two sites and the decision was taken to seek alternative funding for the sites that could not be supported by the GEF at the time. With GEF resources having been adequately replenished, we would welcome a proposal from the Swiss Council Member for the extension of GEF support for these sites.</p>
		<p>The Project Team wishes to thank the Swiss GEF Council Member for this detailed and thought provoking review and explicit comments and observations. These have resulted in several significant improvements to the Project design.</p>

Pakistan Wetlands Project Detailed Budget

SR. No.	Category	Description	Unit	Quantity	Unit Price	Total Cost	UNEP		RNE	
							UNEP	RNE	UNEP	RNE
1	EQUIP	72200 Equipment, Vehicles & Furniture								
2		Vehicle, 4x4, Heavy	No.	20,000	10148	40,000				9,852
3		Vehicle, 4x4, Medium	No.	15,000	30444	120,000				29,556
4		Vehicle, 4x4, Light	No.	10,000	5074	20,000				4,926
5		Vehicle, Microbus, Medium	No.	12,000	6086.8	24,000				5,811
6		Vehicle, Microbus, Light	No.	5,800	4414.38	17,400				4,286
7		Vehicle, Dune Buggy (Locally manufactured)	No.	5,000	2537	10,000				2,483
8		Motorcycles, 4-stroke, Off-road, 125cc	No.	1,500	1902.75	7,500				1,847
9		Boat, Inflatable, 8-person	No.	4,350	621.37	28,100				6,428
10		Boats, Deep Vee, Semi-gallop	No.	14,500	7937.3	14,500				7,143
11		Boats, Fibreglass, Utility	No.	2,500	2537	10,000				2,463
12		Boats, Jet-drive	No.	16,000	4056.2	16,000				3,941
13		Boats, Swamp, Air-drive (Locally manufactured)	No.	8,000	2029.6	4,000				1,970
14		Motor, Outboard, 50 hp, Electric Start	No.	4,000	4056.2	8,000				3,941
15		Motors, Outboard, 25 hp	No.	1,800	4566.6	9,000				4,433
16		Trailers, Boat, Light	No.	1,200	1828.64	3,600				1,773
17		Trailers, Boat, Medium	No.	1,800	1369.98	2,700				1,330
18		Life jackets	No.	17	310.5288	612				301
19		Fax Machines	No.	600	761.1	1,500				739
20		Photocopiers	No.	1,200	1522.2	3,000				1,478
21		Radios, Hand-held, VHF Simplex/Duplex	No.	300	2739.96	5,400				2,660
22		Telephones, Desk Sets	No.	500	634.25	1,250				616
23		Telephones, Mobile	No.	85	862.58	1,700				637
24		Telephones, Satellite	No.	900	456.66	900				443
25		Telephones, Switch Board (PABX)	No.	1,200	1522.2	3,000				1,478
26		Computers, Desktop, P4	No.	1,000	7611	15,000				7,389
27		GIS-Module, National Wetlands Database, NCCW	No.	157,000	39830.9	76,500				38,669
28		GIS-Module, National Wetlands Database, PWP	No.	158,000	40084.6	79,000				38,915
29		GIS-Module, National Wetlands Database, Provinces, etc.	No.	22,800	52059.24	102,600				50,641
30		LAN Server	No.	8,000	2028.6	4,000				1,970
31		Computers, Laptops	No.	1,800	5479.92	10,800				5,320
32		Printers, Inkjet, A3 format (Hewlett Packard)	No.	490	1491.766	2,940				1,448
33		Scanners A3	No.	550	1395.35	2,750				1,355
34		Generators, Portable	No.	500	761.1	1,500				739
35		Generators, Standby	No.	2,000	2029.6	4,000				1,970
36		Generator, Standby, Heavy Duty	No.	12,000	3044.4	6,000				2,956
37		Solar voltaic battery charging panels, Portable	No.	150	228.33	450				222
38		Solar voltaic power supplies, Domestic	No.	12,000	12177.6	24,000				11,922
39		Airconditioners	No.	450	2283.3	4,500				2,217
40		Heaters	No.	40	365.328	720				355
41		Furniture, Project Management Unit	Sets	16,000	4059.2	8,000				3,941
42		Furniture, Field Offices	No.	10,000	10148	20,000				9,852
43		Shelving, Office, Custom Built	Sets	1,500	1902.75	3,750				1,847
44		GPS Receivers with vehicle accessories, external antennas	No.	400	1420.72	2,800				1,379
45		Water Samplers (Quantum)	No.	850	1319.24	2,600				1,281
46		Depth Sounder/GPS receivers	No.	550	837.21	1,650				813
47		Inclinometers	No.	60	720	360				177
48		Sub total				1,160,912				285,746
49		73400 Rental, Maintenance, Agreements, Operational Cost								
50		Supplies, Consumable	Annual	3,000	7,547	28,746				7,437

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for ensuring transparency and accountability in financial operations.

2. The second part of the document outlines the various methods and techniques used to collect and analyze data. It highlights the need for consistent and reliable data collection processes to support effective decision-making.

3. The third part of the document focuses on the analysis and interpretation of the collected data. It discusses the various statistical and analytical tools used to identify trends, patterns, and insights from the data.

4. The fourth part of the document addresses the challenges and limitations of data analysis. It notes that while data analysis provides valuable insights, it is not without its challenges, such as data quality issues and the complexity of interpreting results.

5. The fifth part of the document provides a summary of the key findings and conclusions. It reiterates the importance of data-driven decision-making and the need for ongoing monitoring and evaluation of the data analysis process.

SR No.	Category	Description	Unit	Quantity	Rate	Amount	Departmental			Total
							GEF	UNDP	RNE	
51		Maintenance and Running Expenses, Boats	Annual	1,400	6.5	9,100	2,509		2,275	4,516
52		Maintenance and Running expenses, Vehicles	Annual	18,723	6.5	121,700	27,577		27,175	53,948
53		Maintenance, Office Equipment	Annual	5,000	7.0	35,000	8,880		8,750	17,371
54		Operation and Maintenance	Annual	8,000	7.0	56,000	14,207		14,000	27,783
55		Rental, Equipment	Annual	600	7.0	4,200	1,066		1,050	2,084
56		Sub Total				242,746	51,595		50,866	120,475
57	MISC	Miscellaneous								
58		Sundries	Annual	6,000	7.0	42,000	10,655		-	10,345
59		Sub Total				42,000	10,655		-	10,345
60		72000 Communications & AV Equipment								
61		Boards, White, Portable	No.	40	24.0	960	244		480	288
62		Projectors, Overhead	No.	400	5.0	2,000	507		1,000	493
63		Projectors, Multi-media	No.	4,000	5.0	20,000	5,074		10,000	4,926
64		Tape recorders	No.	60	12.0	720	183		360	177
65		Television Sets, 28" diagonal	No.	450	8.0	3,600	913		1,800	887
66		Multimedia Players	No.	400	8.0	3,200	812		1,600	768
67		Compressors, Portable	No.	700	2.0	1,400	355		700	345
68		Compressors, Scuba	No.	3,900	2.0	7,800	1,979		3,900	1,921
69		Computers, Dive, Multifunction	No.	200	8.0	1,600	406		800	384
70		Gauges, Depth	No.	150	8.0	1,200	304		600	286
71		Tanks, Compressed Air, Twinsets	No.	400	8.0	3,200	812		1,600	788
72		Valves, Demand (Occupus)	No.	300	8.0	2,400	609		1,200	581
73		Welders, Rubber	No.	25	32.0	800	203		400	197
74		Wetsuits, Masks, Fins, Buoyancy Compensators, Sets	No.	400	8.0	3,200	812		1,600	788
75		Tents	No.	200	24.0	4,800	1,218		2,400	1,182
76		Rucksacks	No.	50	72.0	3,600	913		1,800	887
77		Sleeping bags	No.	40	72.0	2,880	731		1,440	709
78		Field Gear, Sets	No.	60	72.0	4,320	1,098		2,196	1,084
79		First-aid, Kits	No.	200	12.0	2,400	609		1,200	591
80		Binoscopes 8 x 40	No.	200	36.0	7,200	1,827		3,600	1,773
81		Cameras, 35 mm	No.	900	6.0	5,400	1,370		2,700	1,330
82		Cameras, Digital	No.	850	12.0	10,200	2,568		5,100	2,512
83		Field Scopes	No.	450	12.0	5,400	1,370		2,700	1,330
84		Range Finders, Laser	No.	200	12.0	2,400	609		1,200	591
85		Lenses, 1000 mm telephoto	No.	2,400	2.0	4,800	1,218		2,400	1,182
86		Tipods, Heavy Duty	No.	40	24.0	960	244		480	286
87		Utilities - Electricity / Gas / Water	Annual	21,600	7.0	151,200	38,359		75,600	37,241
88		Communications	Annual	8,200	7.0	57,400	14,562		28,700	14,138
89		Postage and Courier Services	Annual	7,400	7.0	51,800	13,241		26,086	12,864
90		Sub Total				367,230	93,166		183,815	90,449
91		Foreign Exchange Losses								
92	73100									
93		Premises Rental and Maintenance	Annual	19,000	7.0	133,000	33,742		66,500	32,798
94		Sub Total				133,000	33,742		66,500	32,798
95		74100 Professional Services								
96		Annual Audits	Annual	4,000	7.0	28,000	7,104			20,896
97		Monitoring and Evaluation, External	Lump Sum	55,000	1.0	55,000	13,954			28,950
98		Reporting Costs	Annual	1,200	7.0	8,400	1,851		8,400	6,549
99		Sub Total				91,400	22,908			55,805
100	PERADM	71400 Admin Personnel								
101		Administrative Assistants	Mean months	250	84.0	28,836	11,047			17,789
102		Executive Secretaries	Mean months	300	84.0	29,200	10,393			18,807
103		Workers, Unskilled	Mean months	80	469.0	37,440	9,489			27,941

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2. The second part of the document outlines the various methods and tools used to collect and analyze data. It highlights the need for consistent data collection procedures and the use of advanced analytical techniques to derive meaningful insights from the data.

3. The third part of the document focuses on the role of technology in data management and analysis. It discusses how modern software solutions can streamline data collection, storage, and analysis processes, thereby improving efficiency and accuracy.

4. The fourth part of the document addresses the challenges associated with data management, such as data quality, security, and privacy. It provides strategies to mitigate these risks and ensure that the data remains reliable and secure throughout its lifecycle.

5. The fifth part of the document discusses the importance of data governance and the role of various stakeholders in ensuring that data is used ethically and in compliance with relevant regulations and standards.

6. The sixth part of the document provides a detailed overview of the data lifecycle, from data creation and collection to storage, analysis, and eventual archiving or deletion. It emphasizes the need for clear policies and procedures to govern each stage of the data lifecycle.

7. The seventh part of the document discusses the role of data in decision-making and strategic planning. It highlights how data-driven insights can help organizations identify trends, opportunities, and risks, enabling them to make more informed and effective decisions.

8. The eighth part of the document provides a summary of the key findings and recommendations from the study. It emphasizes the need for a holistic approach to data management and the importance of ongoing monitoring and evaluation to ensure that data practices remain effective and relevant over time.

9. The final part of the document includes a list of references and a list of figures and tables. The references cite various academic and industry sources that provide additional context and support for the findings and recommendations presented in the document.

SR. No.	Code	Category	Description	Man months	Rate	Total	FTE	Financial Summary				Output
								UND	RNE	GR	GR	
104		Technician		Man months		27,583	10,070			17,463		
105	71200	Sub Total				123,009	41,009	0	0	92,000		
106	PERINT	Technical Advisors		Man months		162,000	41,089	120,901				
107		Technical Advisors, Chief (NPM)		Man months		546,000	138,520	407,450				
108		Sub Total				708,000	179,620	528,380				
110	PERLOC	Local Personnel		Man months		234,510	63,164	149,851	21,455			
111		Managers, Administrators, National & Regional programs		Man months		35,280	13,259	27,745	11,257			
112		Technical resource & equipment support, human resource and contract coordinators		Man months		300	117.0	35,100	8,905	26,195		
113		Research Assistant, NPM and GIS Analysts, NCCW		Man months		34,420	11,719	22,702				
114		PMU, Procurement & Site Administrative Offices		Man months		500	46,133	14,788	31,345			
115		PMU, Financial Coordinators		Man months		28,090	7,124	20,956				
116		PMU, Site Accounts Offices		Man months		430,503	116,357	177,586	21,465	112,455		
117		Sub Total				95,000	24,102	26,680	70,899			
118	SERCT	Services Contracts/Sub-contracts, Activities		Output		35,750	9,070	26,680	17,787			
119		Long-term Fundraising Campaign		Man months		284	84.0	23,833	6,046	17,787		
120		Coordinator, Fundraising campaign		Man months		284	84.0	23,833	6,046	17,787		
121		Fundraising Administrative Assistant		Man months		1,079,851	279,363	800,488	337,500	161,927		
122		Malran Coastal Wetlands Complex Management Plan		Man months		26	84.0	35,750	9,070	26,680		
123		Coordinator, Malran Coastal Wetlands Complex Site		Man months		284	84.0	23,833	6,046	17,787		
124		Malran Coastal Wetlands Complex Site Assistant		Man months		324	84.0	28,080	7,124	20,956		
125		Malran Coastal Wetlands Complex Site Accountant		Man months		362	84.0	30,420	7,718	22,702		
126		Malran Coastal Wetlands Complex Site Administrative Assistant		Man months		504	84.0	50,700	12,663	37,837		
127		Malran Coastal Wetlands Complex Site Drivers, Boat Operators, Workers, etc.		Man months		1,179,000	299,112	879,888	589,500	290,388		
128		Coordinator, Central Indus Wetlands Complex Site		Man months		428	84.0	35,750	9,070	26,680		
129		Coordinator, Central Indus Wetlands Complex Site		Man months		284	84.0	23,833	6,046	17,787		
130		Central Indus Wetlands Complex Site Assistant		Man months		334	84.0	28,080	7,124	20,956		
131		Central Indus Wetlands Complex Site Accountant		Man months		362	84.0	30,420	7,718	22,702		
132		Central Indus Wetlands Complex Site Administrative Assistant		Man months		504	84.0	50,700	12,663	37,837		
133		Central Indus Wetlands Complex Site Drivers, Boat Operators, Workers, etc.		Man months		1,179,000	299,112	879,888	589,500	290,388		
134		Coordinator, Salt Range Wetlands Complex Site		Man months		26	84.0	35,750	9,070	26,680		
135		Coordinator, Salt Range Wetlands Complex Site		Man months		284	84.0	23,833	6,046	17,787		
136		Salt Range Wetlands Complex Site Assistant		Man months		334	84.0	28,080	7,124	20,956		
137		Salt Range Wetlands Complex Site Accountant		Man months		362	84.0	30,420	7,718	22,702		
138		Salt Range Wetlands Complex Site Administrative Assistant		Man months		504	84.0	50,700	12,663	37,837		
139		Salt Range Wetlands Complex Site Drivers, Boat Operators, Workers, etc.		Man months		1,179,000	299,112	879,888	589,500	290,388		
140		Coordinator, North-west Alpine Wetlands Complex Site		Man months		26	84.0	35,750	9,070	26,680		
141		Coordinator, North-west Alpine Wetlands Complex Site		Man months		284	84.0	23,833	6,046	17,787		
142		North-west Alpine Wetlands Complex Site Assistant		Man months		334	84.0	28,080	7,124	20,956		
143		North-west Alpine Wetlands Complex Site Accountant		Man months		362	84.0	30,420	7,718	22,702		
144		North-west Alpine Wetlands Complex Site Administrative Assistant		Man months		504	84.0	50,700	12,663	37,837		
145		North-west Alpine Wetlands Complex Site Drivers, Boat Operators, Workers, etc.		Man months		1,179,000	299,112	879,888	589,500	290,388		
146		National Wetlands Survey Programme		Man months		35,750	9,070	26,680	17,787			
147		Coordinator, Wetlands Survey Programme		Man months		284	84.0	23,833	6,046	17,787		
148		Wetlands Survey Programme Assistant		Man months		334	84.0	28,080	7,124	20,956		
149		National Wetlands Conservation Strategy		Man months		362	84.0	30,420	7,718	22,702		
150		Training and Capacity Building Initiative		Man months		504	84.0	50,700	12,663	37,837		
151		Coordinator, Training and Capacity Building		Man months		780,000	197,988	582,012	390,000	192,114		
152		Capacity building and training Assistant		Man months		26	84.0	35,750	9,070	26,680		
153		Nation-wide Wetlands Awareness Campaign		Man months		284	84.0	23,833	6,046	17,787		
154		Coordinator, Wetlands Awareness Campaign		Man months		857,210	223,256	633,954	440,000	293,954		
155		Wetlands Awareness and Advocacy Assistant		Man months		284	84.0	23,833	6,046	17,787		
156		PMU and Technical Resource and Equipment Centre Technical Training		Man months		20,000	5,074	20,000	5,074	14,926		
157		Sub Total				7,595,676	1,907,435	213,442	3,255,500	731,290	1,488,011	

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for transparency and accountability, particularly in the context of public administration and financial management.

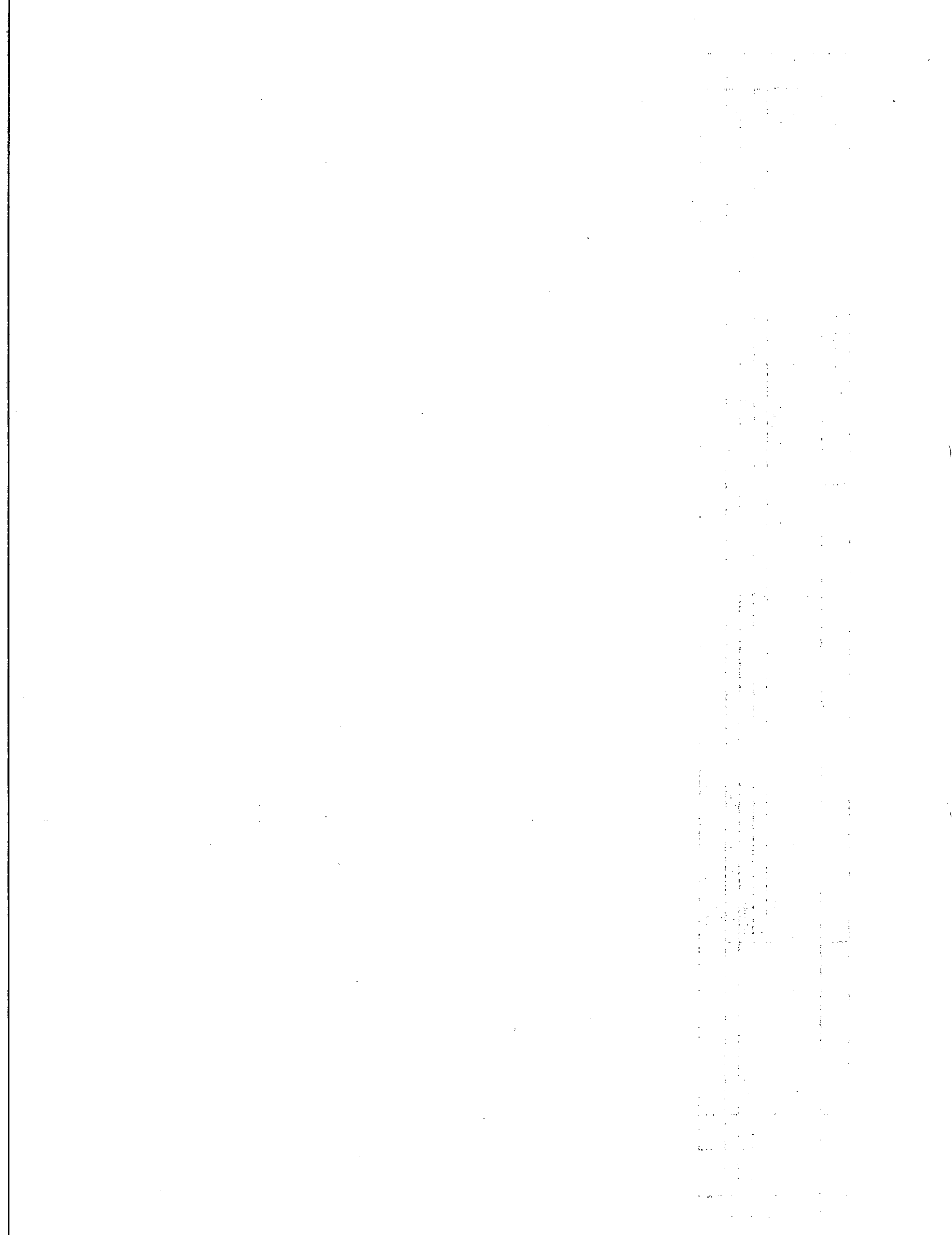
2. The second part of the document outlines the various methods and tools used to collect, analyze, and report data. It highlights the need for standardized procedures and the use of modern technology to ensure the reliability and accuracy of the information gathered.

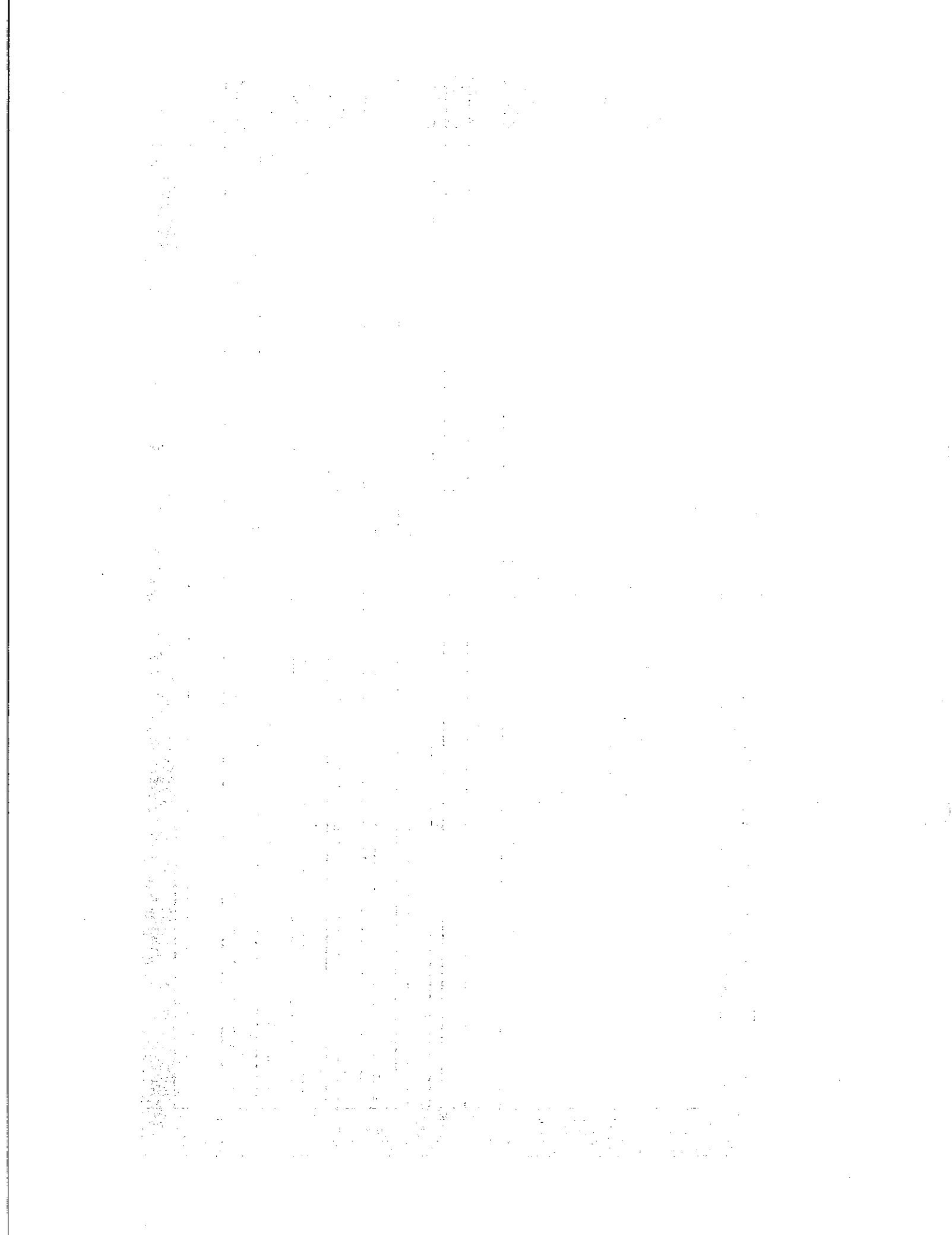
3. The third part of the document focuses on the role of the audit committee and the internal control system. It discusses how these mechanisms are designed to identify and mitigate risks, prevent fraud, and ensure that the organization's resources are used efficiently and effectively.

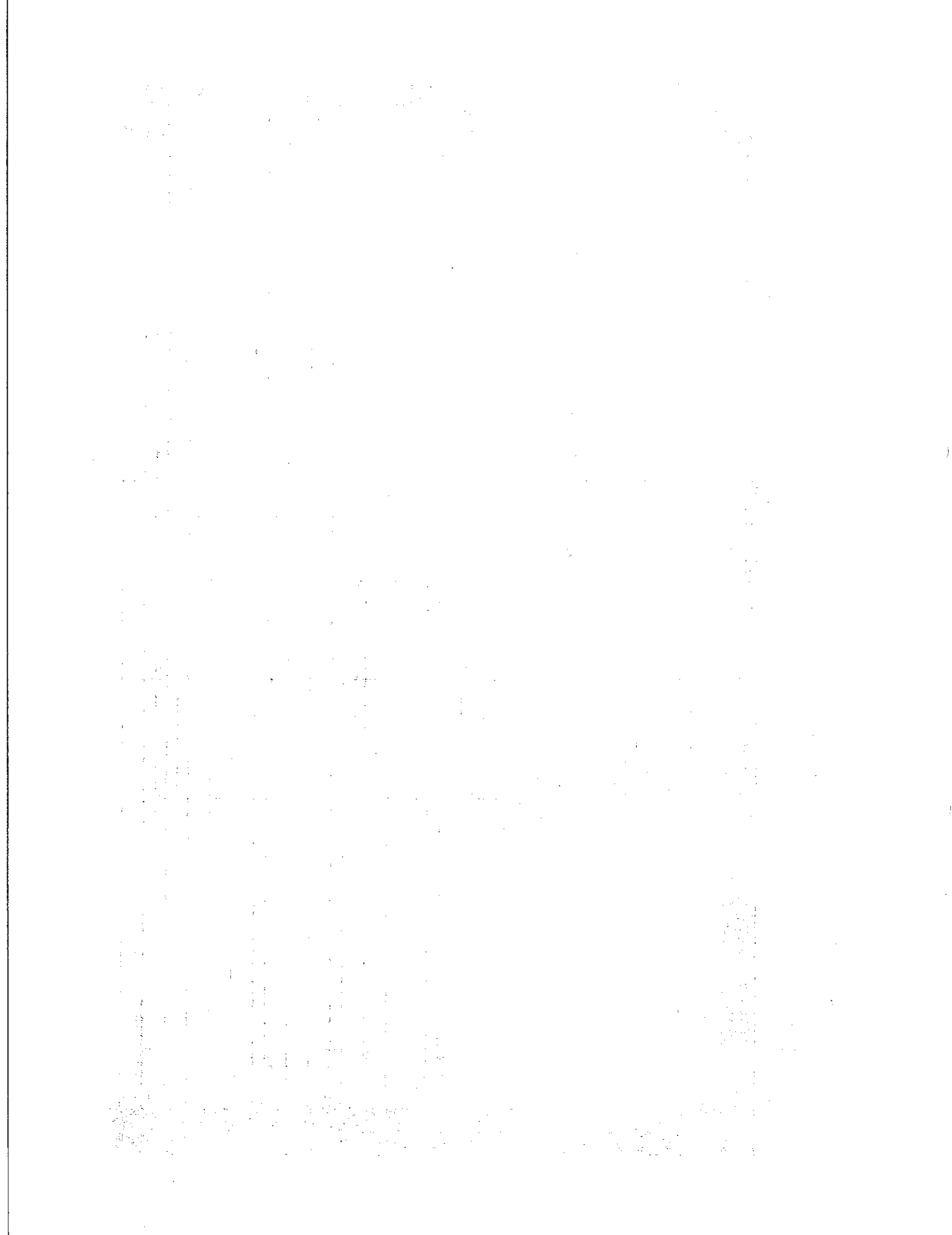
4. The fourth part of the document addresses the challenges and opportunities associated with digital transformation. It explores how the integration of digital technologies can streamline processes, improve communication, and enhance the overall performance of the organization.

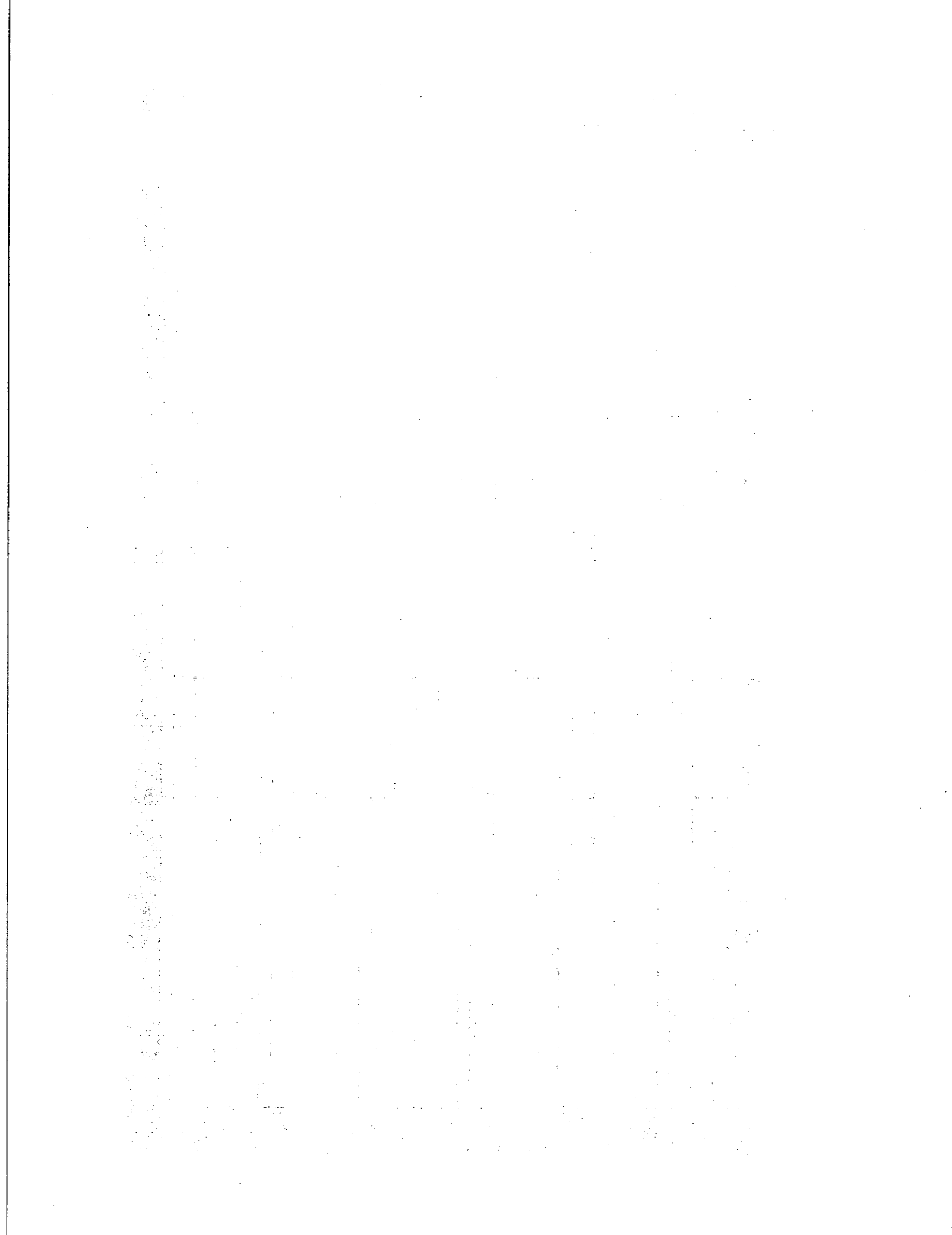
5. The fifth part of the document provides a summary of the key findings and recommendations. It stresses the importance of continuous improvement and the need for regular reviews and updates to the internal control system to adapt to changing circumstances and emerging risks.

SR. No.	Category	Code	Description	Activity	Unit	Rate	Qty	Budget	Subproject Contributions						
									GER	UNDP	RNE	WWF/Other			
158	TRAV	71800	Implementation Supports Costs												
160			Travel, in and outside country												
161		75100	Duty Travel				48,000	338,000							
162	GMS		Sub Total				7.0	338,000	85,243			160,458	7,542		82,757
			General Management Fee					338,000	85,243			160,458	7,542		82,757
			WWF's Management Fee					561,524	142,445						419,079
			Sub Total				7.0	561,524	142,445						419,079
			Grand Total					1,000,000	250,000			500,000	200,000		200,000
			Activity Costs												
			Operational Costs												









Work Plan - Pakistan Wetlands Project

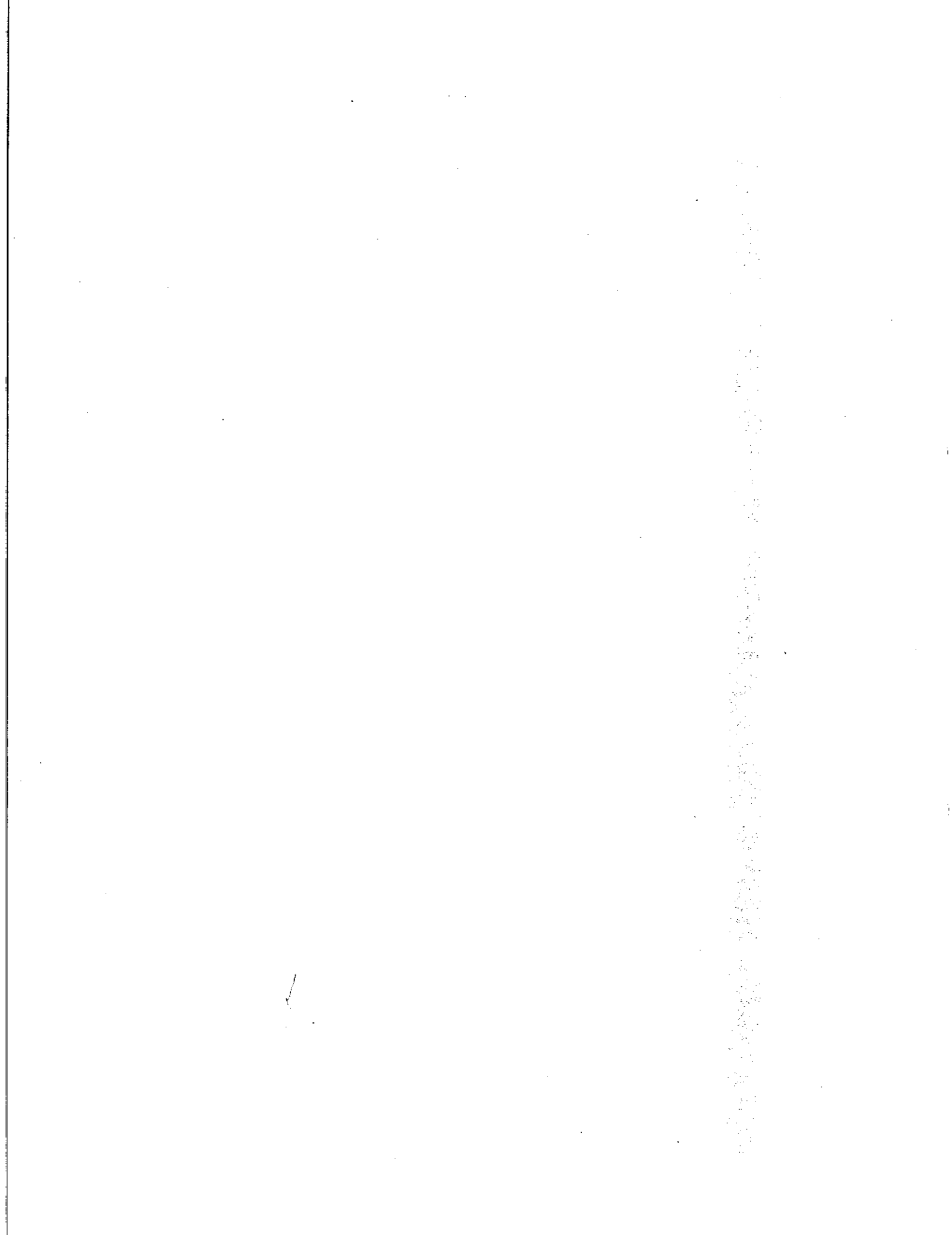
UNDAF Outcome: A comprehensive approach integrating Environmentally Sustainable Development, Global Environmental concerns and commitments in National Development Planning with Emphasis on Poverty Reduction and Quality Gender Analysis
Country Programme Output: Commitments under Global Convention on Biodiversity being implemented

Planned Budget
[REDACTED]

*Donors:
UNDP
RNE
WWF-International
Others

00012
00321
10082
01482

** National Execution with Ministry of Environment as the Executing Agency and WWF-Pakistan as the Implementing Agency



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ANNEXES

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ANNEXES

- Annex 1: All Endorsement and Co-financing Commitment letter**
 - Annex 2: Logical Framework Analysis / Project Planning Matrix**
 - Annex 3: Project Workplan**
 - Annex 4: Incremental Cost Analysis**
 - Annex 5: Terms of Reference**
 - Annex 6: Response to STAP Review**
 - Annex 7: Organigramme**
 - Annex 8: Monitoring and Evaluation Plan**
 - Annex 9: Stakeholder Participation Plan**
-

Annex 1: GEF Focal Point Endorsement Letter¹

Tel: +92-51 9202574
Fax: +92-51 9202211



No.F.1(40)/2002-Tech-I
Government of Pakistan
Ministry of Environment

Islamabad, the March 07, 2003

Director General (Environment)

Sub:- PAKISTAN WETLANDS PROJECT

Dear Mr. Yucer,

In pursuance of this Ministry's letter No. F.9-1/2000-NCW dated August 1st, 2002 regarding the above subject.

I am pleased to forward the endorsement letter of the Pakistan Wetlands Project by the Ministry of Environment in my capacity as GEF Focal Point, in Pakistan. Further necessary action may kindly be taken under intimation to this Ministry.

With best regards,

A handwritten signature in black ink, appearing to read 'Jawed Ali Khan'.

Yours Sincerely,

(Jawed Ali Khan)
Director General (Env.) /
Official Focal Point for GEF

Mr. Onder Yucer,
Resident Representative,
UNDP, Islamabad.

Tel: 92-051-9224581
Fax: 92-051-9202211



→ RN
w/enc for

No. F.9-1/2000-NCW
Government of Pakistan
Ministry of Environment,
Local Government and Rural Development

Islamabad August 01, 2002

ADDITIONAL SECRETARY

SUBJECT: PAKISTAN WETLANDS PROJECT.

Dear Mr. Yucer.

This is with reference to GEF Full Scale Project Brief discussed in the Project Steering Committee (PSC) meeting on 27 June 2002 for the "Protection of Pakistan Wetlands".

The Project aims to promote the conservation of freshwater and marine wetlands and associated globally important biodiversity resources in Pakistan. The project provides capacity building of the national and provincial institutions to protect important wetlands that are of great global significance. It also provides for the management of four selected wetlands complexes, carefully selected to broadly represent condition in each of four wetlands eco-regions in the country.

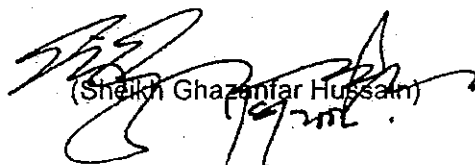
Given the endorsement of the project by PSC and subsequent incorporation of the comments by the project team, the Ministry of Environment, Local Government and Rural Development, as the national focal point of GEF initiatives in Pakistan endorses the project for Full Scale GEF funding.

With best regards,

Mr. Onder Yucer
Resident Representative,
UNDP,
Islamabad.

UNDP, ISLAMABAD
FILE
01 AUG 2002
AAA

Yours sincerely,


(Sheikh Ghazamfar Hussain)



Ambassade van het

Koninkrijk der Nederlanden

→ RN
Wetlands for
AD

02 SEP 2004

Mr. Arif Alauddin
Assistant Resident Representative
Chief Environment Unit
UNDP Offices, 9-10 Floors, Saudi Pak Towers
61-A, Jinnah Avenue, Islamabad
Tel # 051-2800133

Development Cooperation
Royal Netherlands Embassy
P.O. Box 1065
Islamabad
Pakistan

Date 01 September 2004
Our ref. ISL/TDML-084/04
Page 1/2
Encl.
Re Protection and Management of Pakistan Wetlands
Project (10379)
Cc Mr. Abdul Qadir, Programme Officer, UNDP

Contact Niels Veenis
Tel. 051-2279511
Fax 051-2279512
niels.veenis@minbuza.nl

Dear Mr. Alauddin,

Reference is made to our meeting on 12 August 2004 on the above mentioned project. Please be informed that the Embassy is tentatively considering to co-finance the Pakistan Wetlands Project for an amount of USD 4,034,000= . As per UN General Agreement 5% overhead UNDP charges will be deducted from RNE's contribution, which amounts to USD 201,700= . Thus the net RNE contribution to the project activities would amount to USD 3,832,300= , subject to final approval from the Embassy.

With this in mind, the total cost of the project will then amount to USD 9,750,761= instead of USD 11,792,000= . You are kindly requested to send the Embassy as soon as possible a revised budget, detailing the budget per output so that we may approve.

Also with respect to the budget, and for the sake of clarity and transparency, the Embassy would like to see a detailing of the project cost components under the following heads (for the overall project cost only):

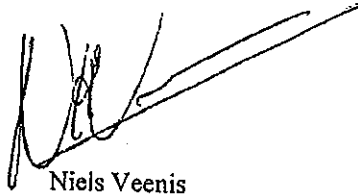
1. Personnel
2. Equipment, vehicles & furniture
3. Travel
4. Operational cost
5. Activities

6. Contingencies.

We suggest you may ask WWF-Pakistan to provide you with these details.

We hope to receive the revised budget soonest.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'Niels Veenis', written over a horizontal line.

Niels Veenis
First Secretary Development



PAKISTAN POVERTY ALLEVIATION FUND

(A Company set up under section 42 of the Companies Ordinance, 1984)

May 5, 2004

✓ Mr. Ali Hassan Habib,
Director General,
WWF Pakistan,
Ferozpur Road,
Lahore

UNDP/GEF Pakistan Wetlands Project

Dear Mr. Ali Habib,


This is a follow-up to the very useful meeting between PPAF, WWF and UNDP on 15 April 2004 to discuss possible PPAF collaboration in the proposed GEF/UNDP Pakistan Wetlands Project in which WWF Pakistan is expected to be the Implementing Agency.

As mentioned in the agreement signed between our two organizations for collaboration in the Soan Valley (part of the Salt Range Wetlands Complex), PPAF fully supports the objectives of the Pakistan Wetlands Project. In this Region, we have arranged to undertake community support initiatives through one of our partner organizations, namely Soan Valley Development Program.

In financial terms PPAF expects to channel about US \$ 750,000 for sustainable development of community infrastructure in the Soan Valley. This will be done *inter-alia* through the technical support of WWF Pakistan. This investment will be made in the period 2004-2007, and is envisioned to contribute to the community development objectives of the Pakistan Wetlands Project.

Based upon our experience of collaboration in the Salt Range, PPAF would also be willing to explore additional areas of collaboration in the other three complexes identified by the Pakistan Wetlands Project; the Makran Coast Wetlands Complex, the Central Indus Wetlands Complex and the North-West Alpine Wetlands Complex.

We look forward to an early start of the Pakistan Wetlands Project and collaborating with WWF Pakistan in the above endeavors, with an overarching objective of poverty reduction in the country.


Muhammad Zafar P. Sabri
General Manager,
Community Physical Infrastructure

- Cc: 1. Ms Lena Lindburg, Deputy Resident Representative, UNDP Pakistan, Islamabad
2. CEO, PPAF

3/10

Salma U



WWF International
 Avenue du Mont-Blanc
 1196 Gland
 Switzerland

Tel: +41 22 364 9111
 Direct: +41 22 364 9326
 Fax: +41 22 364 0624
 louise@wwfint.org
 Director, Asia/Pacific
 Regional Programme
 www.panda.org

Mr. Onder Yucer
 Resident Representative
 UNDP Pakistan
 Saudi Pak Tower
 G1-A Jinnah Avenue
 Islamabad
 Pakistan

May 15, 2002

Re: WWF Support for:
PAK/99/942; - Protection and Management of Pakistan Wetland Project

Dear Mr Yucer,

Thank you for your letter dated 9 May 2002, hand delivered to me by the Director General of WWF Pakistan.

We, at WWF International, have been following with interest the developments in this important wetlands project. The WWF Network, collectively, is pleased to contribute co-financing support for this project during its implementation.

This will represent the collective contributions from various WWF organisations throughout the world. Since most WWF donor organisations make financial commitments for 2-3 year periods, the present financing contracts for WWF Pakistan are generally covering the period up till June 2003.

A table showing the expected break-up and scheduling of the WWF financial support for at least US\$ 1.2 million is attached.

Financing contracts with the network beyond 2003 will continue to be negotiated with the WWF Network, and we will provide you with updates of this table.

I look forward to the approval of this project by GEF and to the commencement of this important programme as well as to meeting you in Pakistan in the near future and strengthening our partnership.

Sincerely,

Dr. Isabelle Louis
 Director, Asia Pacific Programme
 WWF International

cc: Brig. Mukhtar Ahmed
 President, WWF Pakistan
 Ali Hassan Habib

inspired for info:
 1. Brig. Mukhtar
 2. Ali Hassan Habib
 3. Ammar Nasser

*WWF Network co-financing
 commitment of US \$1.2 million
 for the wetlands project.*

*4. f.b WWF-International
 5. f.b UNDP*

At. 22.05.02

President:
 Chief Executive Officer:
 Vice-President: Rodney Wagner
 Director General, Dr. Claudio Martin

Headquarters:
 WWF-World Wide Fund For Nature
 WWF-Fondo Mundial por la Naturaleza
 WWF-Fonds Mondial pour la Nature
 WWF-Fondo Mundial para la Naturaleza

WWF Network Co-Financing Support for PAK/99/942 - Protection and Management of Pakistan Wetland Project (USD '000)									
WWF Organisation	2002	2003	2004	2005	2006	2007	2008	Totals	
WWF International	30	20						50	
WWF-Netherlands	50	50						100	
WWF-UK	10	10	10					30	
WWF Sweden	20	20						40	
WWF Switzerland	15	15						30	
WWF Japan	50	50						100	
WWF Pakistan	40	30	30					100	
To be formalised			150	150	150	150	150	750	
Totals:	215	195	190	150	150	150	150	1200	

United Nations Development Programme
in Pakistan
Sustainable human development



PAK/99/G42

9 May, 2002

Dear Dr. Louis,

PAK/99/G42: - Protection and Management of Pakistan Wetlands

I am writing to you with reference to the status of one of the initiatives being formulated for the protection and management of selected wetlands of Pakistan, with the assistance of UNDP and the Global Environment Facility (GEF).

The formulation phase of the project involved extensive consultations with key stakeholders across Pakistan. These consultations helped in zeroing-in on the four most critical wetland complexes of the country, where targeted interventions are required to protect the natural resources while addressing the socio-economic needs of the local communities. These wetland complexes have a broad national, ecological and geographical coverage, thereby, typifying a national project to test innovative approaches that can be replicated elsewhere. These wetland complexes, selected by the National Steering Committee, include:

- Jiwani Coastal Wetlands Complex in Balochistan
- Central Indus Wetlands extending from Chashma Barrage to Sukkur Barrage
- Uchali Wetlands Complex in Kalar Kahar, Sakesar & Khewra Salt Range Mountains
- Alpine Wetlands Complex of NWFP

The Government of Pakistan has executed the formulation phase, with technical expertise being provided by WWF-Pakistan. Based on the existing capacities in WWF-Pakistan, with particular reference to the work conducted during the formulation phase in compiling the data for the wetlands of Pakistan using GIS, policy level recommendations and on-ground implementation of management plans for selected wetlands complexes, WWF-Pakistan is expected to have a major role during the implementation phase. We appreciate the efforts made by WWF-Pakistan to bring about the ownership for this initiative by the national and in some cases regional and international institutions.

.. / 2.....

Dr. Isabelle Louis
Director Asia/Pacific Programme
WWF-International
Avenue des Mont-Blanc
CH-1196 Gland
Switzerland

UNITED NATIONS  NATIONS UNIES

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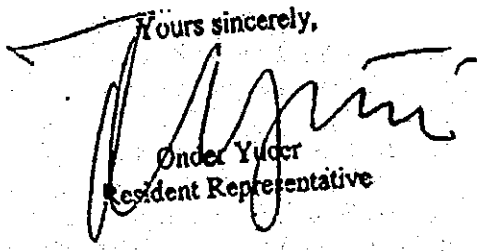
It is also expected that the implementation phase of the project would bring together a range of partners with UNDP/GEF being one of the major funding sources. At the same time, we have the indication that other partner donors would be interested to pool resources in support of this unique and important national initiative. As you are aware, this aspect of co-financing is also important from the GEF perspective, as GEF picks the cost of activities designed for the conservation of species of global significance, whereas, the local level social & economic development activities are to be supported by partner donors. Due to this very reason, WWF-Pakistan has been able to get funding commitments from WWF-Japan for the coastal site, WWF-Sweden for Central Indus, WWF-Netherlands for bridge financing and WWF-International for a broader national level wetlands conservation.

Although the above commitments are encouraging, there still remains sufficient room for securing additional commitments, which can be targeted towards this conservation related initiative. We envisage that the total project cost will be around US \$ 10 million spread over a time frame of 7 years, for the period 2003-2009. In this regard, we would appreciate if the WWF network can consider committing US \$ 1.0 to 2.0 million in support of the project over 7 years.

I am sure the Director General, WWF-Pakistan, can brief you with further details and we can count on your support to strengthen our partnership under the wetlands project.

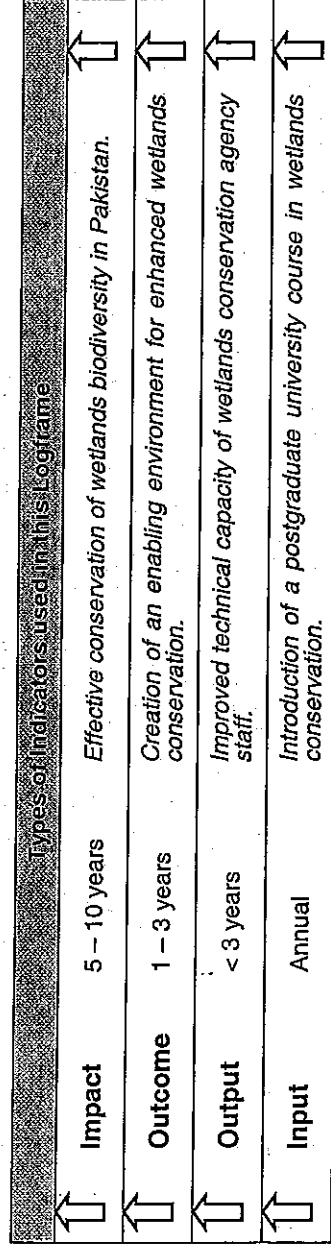
With best regards,

Yours sincerely,


Onder Yücer
Resident Representative

Annex 2: Logical Framework Analysis/Project Planning Matrix – Principal Components

Project Strategy	Sources of Co-financing	Output, Outcome and Impact Indicators	Sources of Verification	Assumptions
Development Objective To conserve globally significant wetlands biodiversity in Pakistan while alleviating poverty.				
Immediate Objectives A. To create and maintain an enabling environment for effective and sustainable conservation of natural wetlands at federal, provincial/territorial and local levels. (<i>Outputs 1-6</i>)	(See: co-financing for respective outputs, below)	A 1: From PY 1.0 to PY 7.0, a positive trend in public opinion favours increased government and private support for and investment in the conservation of wetlands. A 2: By PY 7.0, federal, provincial/territorial and community institutions concerned with wetlands conservation implementing enhanced wetlands conservations measures with increased technical capacity and financial security. A 3: By PY 7.0, the principles and policy of Pakistan National Wetlands Conservation Strategy are integrated into wetlands conservation and other sectoral planning.	A 1: Public opinion polls in PY 1.0, 3.0, 5.0 and 7.0 A 2: Commissioned independent Monitoring and Evaluation reports, Project plans etc. A 3: Environmental Impact Assessments, Sectoral Plans and revisions to sectoral policies.	• None
B. To implement sustainable wetlands conservation at four representative sites that will serve as replicable models for subsequent nationwide wetlands conservation initiatives. (<i>Outputs 7-10</i>)	(See: co-financing for respective outputs, below)	B 1: By PY 7.0, important wetlands resources are being sustainably conserved in four proactively managed conservancies by innovative, highly replicable public/private sector and community-driven initiatives.	B 2: Government records.	• GoP stays committed to wetlands conservation. • Population growth rate does not exceed 2003 levels.



1 Explanation of Indicators: • Output Indicators are shown in conventional text • Outcome Indicators are italicised. • Impact Indicators are shown in bold text. Output indicators measure quantity of goods and services created or provided with inputs. Outcome indicators measure the "results (quantity and quality) from the goods and services produced by the project. Impact indicators measure the highest objectives such as improved welfare and living standards. • Wherever possible, references to time are expressed in whole or fractions of Project Years as represented in this example: PY 1.5. This should be read as "by the end of the first 1½ years or 18 months of the Pakistan Wetlands Project".

Project Strategy	Sources of Co-financing	Output, Outcome and Impact Indicators	Sources of Verification	Assumptions
<p>Principal Outputs</p> <p>2. Planning and land-use decision-making of Wetlands Conservation Agencies at all levels is enhanced through the provision of comprehensive, current wetlands information, decision support systems and tools utilising spatial and other data from the Wetlands GIS Database (W-GIS).</p>	<p>EU, UNDP, WWF</p>	<p>2.1: Proactive, informed and participatory planning and decision-making in wetlands management in response to resource degradation and overuse leads to a reduction of threats in vulnerable areas and positive trends reflected in an increase in number of appropriate indicator species.</p> <p>2.2: GIS facilities established and functional in federal NRM agencies by PY 4.0. Other decision-making support systems based on data generated by GIS, e.g. gap analyses, Pressure-State-Response Analyses and impact evaluation tools applicable by PY 6.0. Management Plans based on GIS and other related decision-making tools produced.</p> <p>2.3: By PY 1.5, comprehensive baseline information is available through surveys of four demonstration sites. By PY 5.0, 100% of Pakistan's internationally significant wetlands and 75% of wetlands of national importance are comprehensively surveyed and geo-referenced data sets for these wetlands are available to decision makers.</p> <p>2.4: Significant Pakistan NRM agencies have ready access to GIS-based data and other tools on wetlands and use same in enhanced decision-making processes and other wetlands management tools by PY 5.0.</p>	<p>2.1: Independent biological and socio-economic surveys indicating reduction of threats to wetlands e.g. decrease in water pollution and deforestation in areas where conservation planning has been actively implemented.</p> <p>2.2: Presence of GIS facilities (software and hardware) in federal NRM agencies offices. Data acquisition records and files. Planning reports.</p> <p>2.3: Extracts from records of any recognised NRM agency showing use of W-GIS outputs or data.</p> <p>2.4: Management Plans showing conservation interventions based on information from GIS datasets.</p>	<p>Governmental agencies support and apply GIS and other decision-making tools for conservation of wetlands.</p>
<p>3. National Wetlands Conservation Strategy (NWCS) developed, officially adopted and implemented at federal, provincial/territorial and community levels.</p>	<p>EU, UNDP, WWF</p>	<p>3.1: By PY 6.0, an increasing trend in policy re alignment in various sectors leads to greater integration of wetlands conservation issues in national and sectoral planning in general and wetlands conservation planning in particular.</p> <p>3.2: Official document expected to be entitled "Pakistan National Wetlands Conservation Strategy" launched by PY 3.0 and forms the basis of a new approach to wetlands conservation.</p> <p>3.3: By PY 5.0, P-NWCS used actively to consider the appropriateness and design of wetlands conservation and other developmental initiatives.</p> <p>3.4: By PY 6.0, significant sectoral policies such as those for water and marine resources, land, agriculture and other sectors include wetlands conservation issues.</p> <p>3.5: By PY 3.5, Government conservation acts and ordinances amended to provide for the proclamation of wetlands Conservancies.</p>	<p>3.1: Progressive increase in PY 5.0, 6.0 and 7.0 in the number and area of wetlands managed according to guidelines contained in P-NWCS.</p> <p>3.2: Planning and feasibility reports, EIA records.</p> <p>3.3 and 3.4: Revisions to sectoral policies in line with recommendations from P-NWCS. Application of P-NWCS in Management Plans for four demonstration sites.</p> <p>3.5: Notification in Government gazettes.</p>	<p>No major impediments are faced in the official approval process for P-NWCS.</p>

Project Strategy	Sources of Co-financing	Output, Outcome and Impact Indicators	Sources of Verification	Assumptions
<p>4. Technical competence of government, agencies and CBO conservation staff enhanced through comprehensive training and capacity building programme.</p> <p>Principal Outputs</p>	<p>EU, GoP, UNDP, WWF</p>	<p>4.1: By PY 7.0, institutional deficiencies in the conservation of wetlands emanating from lack of technically skilled staff and stakeholders is no longer a root cause of wetlands degradation.</p> <p>4.2: Training needs-assessment conducted by PY 1.0, a training plan produced by PY 1.5, training modules delivered by PY 5.0, curricula developed and introduced by PY 3.0 and manuals produced for key stakeholders by PY 6.0.</p> <p>4.3: By PY 4.0, at least 50% of all GoP, partner agency and CBO technical staff concerned with wetlands conservation are technically proficient and demonstrate improved capacity to conserve wetlands effectively compared to PY 1.0 levels.</p> <p>4.4: By PY 5.0, knowledge retention and skill application surveys indicate that trained stakeholders – especially governmental agency staff and custodian communities – display the capacity and skills to conserve wetlands and their associated biodiversity.</p>	<p>4.1: Independent monitoring and evaluation reports.</p> <p>4.2: Copy of Training Plan. School text books incorporating the new curricula. Records and reports on training workshops.</p> <p>4.3 and 4.4 :Specific knowledge retention surveys of a representative sample of trained stakeholders including government agency staff and local communities.</p>	<ul style="list-style-type: none"> • None
<p>5. Nation-wide wetlands awareness campaign designed and implemented.</p>	<p>EU, GoP, UNDP, WWF</p>	<p>5.1: Public actions reflect greater awareness of the value of biodiversity conservation through reduction in harmful practices such as illegal hunting and other unsustainable forms of resource utilisation.</p> <p>5.2: Biennial public opinion polls indicate a statistically significant positive trend in public and private sector awareness levels from PY 1.0 until PY 7.0.</p> <p>5.3: By PY 7.0, effective multi-media based public awareness campaign on wetlands, and their associated biodiversity is delivered to the public at large and to key decision-makers in particular.</p>	<p>5.1 and 5.2: Specific nation-wide public opinion surveys and polls.</p> <p>5.3: Minutes of air time for television and radio broadcasts. Number of visitors to the functional website. Number of schools adopting new curricula.</p> <p>5.3: Internet communication groups set up and number of research papers, case studies etc. posted on the web through the network of wetlands agencies.</p> <p>5.3: Number of religious publications and duration of media broadcasts on wetlands conservation.</p> <p>5.3: Number of hunters attending conservation courses as a pre-requisite for obtaining a hunting permit.</p> <p>5.3: Number of street theatre performances on conservation of the Indus Dolphin.</p> <p>5.3: Number of visitors to wetlands biomes displays.</p>	<ul style="list-style-type: none"> • Pakistan's current trend towards greater democratisation and devolution of political power continues.

Project Strategy	Sources of Cost-financing	Output, Outcome and Impact Indicators	Sources of Verification	Assumptions
<p>6. Elements of long-term sustainability of wetlands conservation initiatives developed and adopted.</p> <p>Principal Outputs</p>	<p>EU, UNDP, WWF</p>	<p>6.1: Funds secured for continued management and maintenance of wetland sites.</p> <p>6.2: A financial instrument for securing annual recurrent costs of appropriate wetlands management activities established, legally registered, financially operational and managed by independent parties by PY 6.0.</p> <p>6.3: By PY 5.0, 100% of annual recurrent costs of ongoing conservation measures not secured from GoP are covered through sustainable financial arrangements.</p>	<p>6.1: Records of financial investments for securing wetlands conservation activities.</p> <p>6.2: Financial statements, income stream and legal registration of a financial instrument. Audit reports.</p> <p>6.3: Bank statements. Audit reports. Government account and budgets.</p> <p>6.3: Number of project activities receiving financial support by PY 6.0.</p> <p>6.3: CBO project progress reports reflect support for capacity building from a strategic small grants fund.</p>	<ul style="list-style-type: none"> • Pakistan's GDP levels do not recede below FY 2003 and inflation levels do not increase above FY 2003.
<p>7. Wetlands biodiversity sustainably conserved in the Makran Coastal Wetlands Complex (MCWC).</p>	<p>EU, UNDP, WWF</p>	<p>7.1: The ecological health of the MCWC indicates significant and continued improvement compared to PY 1.0 level due to reduction in the number and severity of threats and success of community-based conservation initiatives.</p> <p>7.2: MCWC Conservancy formed, a Management Plan produced and elements of a Management Plan delivered such as conservation of key ecosystems, habitats and species, formation of community-based institutions in stakeholder villages and introduction of eco-tourism ventures by PY 7.0.</p> <p>7.3: By PY 6.0, the MCWC Conservancy is established to include 100% of globally important wetlands and 75% of those of national importance. By PY 5.0, the immediate conservation action plan leads to a 50% reduction in those dire threats to wetlands and their biodiversity that are identified in PY 1.0. By PY 5.0, vulnerable species and ecosystem components also indicate a statistically significant improvement over PY 1.0 levels as a consequence of proactive conservation measures. Ecosystem health and levels of protection measures permit safe re-introduction of captive bred endangered species by PY 6.0.</p> <p>7.4: By PY 3.5 and 5.0, respectively, CBOs functional in at least 50% and 75% of the target villages of MCWC and Terms of Partnership concluded with at least 90% of these.</p> <p>7.5: By PY 5.0, household income levels of at least 20% of households formerly dependent on exploitation of resources e.g. fishermen, indicate a real increase in the proportion of income from alternative livelihoods and a decrease of income from unsustainable resource intensive livelihoods.</p> <p>7.6: By PY 6.0, numbers of tourists visiting MCWC, e.g. to participate in water-based recreational sports, show a statistically significant increase compared to baseline levels in PY 1.0. By PY 6.0, at least 50% of the employment opportunities from eco-tourism ventures accrue to women.</p>	<p>7.1: Independent monitoring and evaluation reports.</p> <p>7.2: Government notification proclaiming NAWC as a conservancy.</p> <p>7.2 and 7.3: Biological surveys of critical sites and vulnerable species.</p> <p>7.4 and 7.5: Socio-economic and household income surveys.</p> <p>7.6: Tourism related surveys.</p>	<ul style="list-style-type: none"> • Governments of NWFP, Punjab and Sindh remain positively disposed towards wetlands conservation. • Human population growth rate in Wetlands Conservancies does not exceed 2003 levels.

Project Strategy	Sources of Co-financing	Output, Outcome and Impact Indicators	Sources of Verification	Assumptions
<p>8. Wetlands biodiversity sustainably conserved in the Central Indus Wetlands Complex (CIWC).</p> <p>Principal Outputs</p>	<p>EU, UNDP, WWF</p>	<p>8.1: The ecological health of the CIWC indicates significant and continued improvement compared to PY 1.0 level due to reduction in the number and severity of threats and success of community-based conservation initiatives.</p> <p>8.2: CIWC Conservancy formed, a Management Plan produced and elements of a Management Plan delivered such as conservation of key ecosystems, habitats and species, formation of community-based institutions in stakeholder villages and introduction of eco-tourism ventures by PY 7.0.</p> <p>8.3: By PY 6.0, the CIWC Conservancy is established to include 100% of globally important wetlands and 75% of those of national importance. By PY 5.0, the immediate conservation action plan leads to 50% reduction in those dire threats to wetlands and their biodiversity that are identified in PY 1.0. By PY 5.0, vulnerable species and ecosystem components also indicate a statistically significant improvement over PY 1.0 levels as a consequence of proactive conservation measures. Ecosystem health and levels of protection measures permit safe re-introduction of captive bred endangered species by PY 6.0.</p> <p>8.4: By PY 3.5 and 5.0, respectively, community-based village level institutions functional in at least 50% and 75% of the target villages of CIWC and Terms of Partnership concluded with at least 90% of these.</p> <p>8.5: By PY 5.0, household income levels of at least 20% of households formerly dependent on exploitation of resources e.g. fishermen, indicate a real increase in the proportion of income from alternative livelihoods and a decrease of income from unsustainable resource intensive livelihoods.</p> <p>8.6: By PY 6.0, numbers of tourists visiting CIWC, e.g. to participate in the Indus Boat Safari, show a statistically significant increase compared to baseline levels in PY 1.0. By PY 6.0, at least 50% of the employment opportunities from eco-tourism ventures accruing to women.</p> <p>8.7: By PY 6.0, the mean mass of fuel wood consumed at the household level in the Conservancy reduced by at least 25%.</p>	<p>8.1: Independent monitoring and evaluation reports.</p> <p>8.2: Government notification proclaiming CIWC as a conservancy.</p> <p>8.3: Repeated biological surveys of critical sites and vulnerable species.</p> <p>8.4 and 8.5: Repeated socio-economic and household income surveys.</p> <p>8.6: Tourism related surveys.</p> <p>8.7: Household fuel consumption surveys.</p>	<ul style="list-style-type: none"> • Governments of NWFP, Punjab and Sindh remain positively disposed towards wetlands conservation. • Human population growth rate in Wetlands Conservancies does not exceed 2003 levels.

Project Strategy	Sources of co-financing	Output, Outcome and Impact Indicators	Sources of Verification	Assumptions
<p>9. Wetlands biodiversity sustainably conserved in the Salt Range Wetlands Complex (SRWC).</p> <p>Principal Outputs</p>	<p>EU, GoP, UNDP, WWF</p>	<p>9.1: The ecological health of the SRWC indicates significant and continued improvement compared to PY 1.0 level due to reduction in the number and severity of threats and success of community-based conservation initiatives.</p> <p>9.2: SRWC Conservancy formed, a Management Plan produced and elements of a Management Plan delivered such as conservation of key ecosystems, habitats and species, formation of community-based institutions in stakeholder villages and introduction of eco-tourism ventures by PY 7.0.</p> <p>9.3: By PY 6.0, the SRWC Conservancy is established to include 100% of globally important wetlands and 75% of those of national importance. By PY 5.0, the immediate conservation action plan leads to a 50% reduction in those dire threats to wetlands and their biodiversity that are identified in PY 1.0. By PY 5.0, vulnerable species and ecosystem components also indicate a statistically significant improvement over PY 1.0 levels as a consequence of proactive conservation measures. Ecosystem health and levels of protection measures permit safe re-introduction of captive bred endangered species by PY 6.0.</p> <p>9.4: By PY 3.5 and 5.0, respectively, community-based village level institutions functional in at least 50% and 75% of the target villages of SRWC and Terms of Partnership concluded with at least 90% of these.</p> <p>9.5: By PY 5.0, household income levels of at least 20% of households formerly dependent on exploitation of resources e.g. wood extraction, indicate a real increase in the proportion of income from alternative livelihoods and a decrease of income from unsustainable resource intensive livelihoods.</p> <p>9.6: By PY 6.0, numbers of tourists visiting SRWC, e.g. for camping holidays, show a statistically significant increase compared to baseline levels in PY 1.0. By PY 6.0 at least 50% of the employment opportunities from eco-tourism ventures accrue to women.</p> <p>9.7: By PY 5.0, 50% of degraded grazing areas under rotational grazing agreements and 50% of badly degraded catchment areas under soil conservation management.</p>	<p>9.1: Independent monitoring and evaluation reports.</p> <p>9.2: Government notification proclaiming CIWC as a conservancy.</p> <p>9.3: Repeated biological surveys of critical sites and vulnerable species.</p> <p>9.4 and 9.5: Repeated socio-economic and household income surveys.</p> <p>9.6: Tourism related surveys.</p>	<ul style="list-style-type: none"> Government of Punjab remains positively disposed towards wetland conservation. Human population growth rate in Wetlands Conservancies does not exceed 2003 levels.

Project Strategy Principal Outputs	Sources of Co-financing	Output, Outcome and Impact Indicators	Sources of Verification	Assumptions
<p>10. Wetlands biodiversity sustainably conserved in the North-west Alpine Wetlands Complex (NAWC).</p>	<p>EU, GoP, UNDP, WWF</p>	<p>10.1: The ecological health of the NAWC indicates significant and continued improvement compared to PY 1.0 level due to reduction in the number and severity of threats and success of community-based conservation initiatives.</p> <p>10.2: NAWC Conservancy formed, a Management Plan produced and elements of a Management Plan delivered such as conservation of key ecosystems, habitats and species, formation of community-based institutions in stakeholder villages and introduction of eco-tourism ventures by PY 7.0.</p> <p>10.3: By PY 6.0, the NA WC Conservancy is established to include 100% of globally important wetlands and 75% of those of national importance. By PY 5.0, the immediate conservation action plan leads to a 50% reduction in those dire threats to wetlands and their biodiversity that are identified in PY 1.0. PY 5.0, vulnerable species and ecosystem components also indicate a statistically significant improvement over PY 1.0 levels as a consequence of proactive conservation measures.</p> <p>10.4: By PY 3.5 and 5.0, respectively, community-based village level institutions functional in at least 50% and 75% of the target villages of NAWC and Terms of Partnership concluded with at least 90% of these.</p> <p>10.5: By PY 5.0, household income levels of at least 20% of households formerly dependent on exploitation of resources e.g. emergent wetlands vegetation, indicate a real increase in the proportion of income from alternative livelihoods and a decrease of income from unsustainable resource intensive livelihoods.</p> <p>10.6: By PY 6.0, numbers of tourists visiting NAWC, e.g. for trekking, show a statistically significant increase compared to baseline levels in PY 1.0. By PY 6.0, at least 50% of the employment opportunities from eco-tourism ventures accrue to women.</p>	<p>10.1: Independent monitoring and evaluation reports.</p> <p>10.2: Government notification proclaiming CIWC as a conservancy.</p> <p>10.3: Repeated biological surveys of critical sites and vulnerable species.</p> <p>10.4 and 10.5: Repeated socio-economic and household income surveys.</p> <p>10.6: Tourism related surveys.</p>	<ul style="list-style-type: none"> Government of NWFP remains positively disposed towards wetland conservation. Human population growth rate in Wetlands Conservancies does not exceed 2003 levels.

Annex 3: Indicative Work Plan for the *Pakistan Wetlands Project*

Outputs 1-3	Sub-Outputs For details see Project Brief	Project Years and Quarters											
		1				2				3			
		1	2	3	4	1	2	3	4	1	2	3	4
1	Wetlands Project management Unit and Technical Resource and Equipment Centre	///	///	///	///	///	///	///	///	///	///	///	///
	1.1 Project Co-ordination Mechanism and Mgmt. Unit	///	///	///	///	///	///	///	///	///	///	///	///
	1.2 Technical Resource and Equipment Centre												
2	1.3 Special equipment operator training courses												
	2.1 Wetlands Survey Section	///	///	///	///	///	///	///	///	///	///	///	///
	2.2 National wetlands survey programme												
3	2.3 Enhancement of Pakistan wetlands GIS - database												
	3.1 Award of Wetlands Conservation Strategy contract												
	3.2 Policy Development phase												
	3.3 Strategy adoption and implementation phase												

#	Output 4	Sub-Outputs For details see Project Brief	Project Years and Quarters																																			
			1				2				3				4				5				6				7											
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4								
4	Training and Capacity-building Initiative	4.1 Capacity-building and Training Section	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		
		4.2 Needs assessment for Government and Partners																																				
		4.3 Post-graduate course in wetlands management					■	■	■	■																												
		4.4 Pre-service and in-service public service training					■	■	■	■																												
		4.5 NRM and wetlands training modules for military					■	■	■	■																												
		4.6 Directorate level in-service training courses					■	■	■	■																												
		4.7 Field staff in-service training courses					■	■	■	■																												
		4.8 Proficiency course for non-professional field staff					■	■	■	■																												
		4.9 Custom-designed course for CBO representatives					■	■	■	■																												
		4.10 Participation in international professional training					■	■	■	■																												
		4.11 Preparation and Publication of Wetlands Manual																																				

#	Sub-Outputs For details see Project Brief	Project Years and Quarters																																
		1				2				3				4				5				6				7								
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
5	Nationwide Wetlands Awareness Campaign	5.1 Communications and Awareness Section	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶
		5.2 National public opinion surveys	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶
		5.3 Communications and awareness strategy	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶
		5.4 Wetlands computer network	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶
		5.5 Primary schools outreach programme	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶
		5.6 Religious leaders outreach programme	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶
		5.7 Mass media outreach programme	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶
		5.8 Sport hunters outreach programme	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶
		5.9 Dolphin Street theatre awareness programme	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶
		5.10 Pakistan Wetlands Website	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶
		5.11 Preparation of Wetlands teaching exhibits	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶
6	Long-term Funding Campaign	6.1 Financial Sustainability and Fundraising Campaign	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶
		6.2 Financial sustainability needs assessments	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶
		6.3 Fund-raising plan and initiatives	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶

#	Output 7	Sub-Outputs For details see Project Brief	Project Years and Quarters																											
			2		3		4		5		6		7																	
			1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2		
7	Makran Coastal Wetlands Complex Management Plan.	7.1 Establishment of MCWC Site Management Team	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
		7.2 MCWC site exploration	/	/																										
		7.3 MCWC immediate action plan					/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
		7.4 MCWC community mobilisation initiatives					/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
		7.5 Alternate/diversified livelihoods initiative							/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
		7.6 NRM capacity building initiative for women					/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
		7.7 Establishment of MCWC Conservancy							/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
		7.8 MCWC ecotourism programme							/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
		7.9 Oil pollution disaster plan							/	/																				
		7.10 Bird-ringing programme																												
		7.11 Marine turtle tracking programme									/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
		7.12 Marsh crocodile re-establishment programme									/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

Forest Department.
GIS Training.

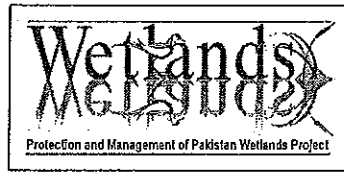
#	Output 8	Sub-Outputs For details see Project Brief	Project Years and Quarters																													
			1		2		3		4		5		6		7																	
			1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2		
8	Central Indus Wetlands Complex management plan.	8.1 Establishment of CIWC Site Management Team	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
		8.2 CIWC site exploration	■	■																												
		8.3 CIWC immediate action plan			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
		8.4 CIWC community mobilisation initiative			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
		8.5 Alternate/diversified livelihoods initiative					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
		8.6 NRM capacity building initiative for women							■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
		8.7 Establishment of CIWC Conservancy																														
		8.8 CIWC ecotourism programme																														
		8.9 River pollution disaster plan																														
		8.10 Social mobilisation of the fisher-folk (Mohannas)																														
		8.11 Appropriate energy programme																														
		8.12 Indus Dolphin translocation programme																														
		8.13 Sonar tracking of river dolphins																														
		8.14 Indus Dolphin survey																														
		8.15 Gharial re-introduction programme																														
		8.16 Hog Deer re-introduction programme																														

#	Output 9	Sub-Outputs For details see Project Brief	Project Years and Quarters																																			
			1				2				3				4				5				6				7											
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4								
9	Salt Range Wetlands Complex management plan.	9.1 Establishment of SRWC Site Management Team	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///
		9.2 SRWC site exploration	///	///	///	///																																
		9.3 SRWC Immediate Action Plan					///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///
		9.4 SRWC community mobilisation					///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///
		9.5 Alternate/diversified livelihoods initiative									///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///
		9.6 NRM capacity building initiative for women									///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///
		9.7 Establishment of SRWC Conservancy													///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///
		9.8 SRWC ecotourism programme													///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///
		9.9 Construction of vegetation exclosures									///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///
		9.10 Soil conservation demonstration sites									///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///
		9.11 SRWC lake beds survey									///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///
		9.12 Bird-ringing programme													///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///
		9.13 Crane breeding programme									///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///

#	Output 10	Sub-Outputs For details see Project Brief	Project Years and Quarters																																				
			1				2				3				4				5				6				7												
10	North West Alpine Wetlands Complex management plan	10.1 Establishment of NAWC Site Management Team	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
		10.2 NAWC site exploration	■	■	■	■																																	
		10.3 NAWC immediate action plan					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
		10.4 NAWC community mobilisation initiative					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
		10.5 Alternate/diversifies livelihoods initiatives									■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
		10.6 NRM capacity building initiative for women																					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
		10.7 Establishment of NAWC Conservancy																																					
		10.8 NAWC ecotourism programme																																					
		10.9 Ramsar status application for NAWC																																					
		10.10 NAWC Bird-ringing programme																																					
		10.11 Appropriate energy programme																																					

Work Plan Legend

Sustained high-intensity activity, e.g. site exploration	■
Sustained low-intensity activity, e.g. social mobilisation	▲
Short-term activity, e.g. a bird-ringing sortie	■
Milestone or key event, e.g. notification of a national park	◊



1. Overview

1. The Protection and Management of Pakistan Wetlands Project aims to promote the sustainable conservation of freshwater and marine wetlands and their associated globally important biodiversity in Pakistan. The Project strategy is based on two sub-sets of objectives. The first will provide the required policy, institutional, technical and financial framework and generate positive public support essential for the mainstreaming of wetlands conservation. The second involves the design and implementation of progressive, participatory management plans for four independent Demonstration Sites, each chosen to be representative of a broad eco-region in Pakistan. It includes specific mechanisms to secure financial sustainability and enhanced replication and proliferation of viable wetlands management interventions in a nation-wide, on-going wetlands conservation initiative.

2. Context and Broad Development Goals¹

2. Pakistan is classified as a low income country with a GNI per capita of US \$440. During 2001, the annual GDP growth rate was 2.7%. Although this was an improvement over previous years, the country lagged behind other Low Income Economies as a whole (4.7%). Within the macro economic context, Pakistan continues to be burdened by external debt and an overall budget deficit of 4.7% of GDP. Regional and internal political instability hamper investment, thus slowing economic growth.

3. The country has been saddled with both poverty and over-population since its independence in 1947. An estimated 84.7% and 31% of Pakistan's population lives below the international poverty lines of US \$2.00/day and US \$1.00/day, respectively. The level of human and social development is low with 51% of the population living without access to education, 22% without ready access to improved water source and 55% are unable to cost-effectively reach basic health services.

4. Poverty is exacerbated by a high population growth rate, which, at 2.4%, is substantially more than that of South Asia (1.9%) and other *Low Income Economies* (1.9%) as a whole. Fully 67% of Pakistan's human population resides in the rural areas that also support the majority of the poor.

5. A key development challenge for the country is to promote economic growth and an equitable distribution of income without further degrading its natural resources. Despite its prevailing economic constraints, Pakistan has striven to make environmental issues a priority. The country has ratified the *Convention on Biological Diversity* (CBD) and the *Ramsar Convention* on wetlands. A *National Conservation Strategy* was produced in 1992 and a *Wetlands Action Plan* has been adopted in 2000. Despite population and productive pressures that place a premium on land use, Pakistan has proclaimed 227 PAs in four classes for the conservation of biodiversity. The total area committed to conservation amounts to 2,753,375 ha or 11% of the land surface, which is substantially greater than the norm in most developing countries.

2. Global Environmental Objective

6. The Project will address the broader systemic barriers to the mainstreaming of wetlands biodiversity conservation at the national level while developing and applying initiatives to reduce threats to biodiversity at the site level. The Project aims to conserve globally important biodiversity in Pakistan by enhancing the national capacity to protect wetlands through creating an appropriate and sustainable enabling environment at the governmental, private sector and local community levels. The suite of initiatives for creating this enabling environment will lead to enhanced technical, institutional and financial capacity that will enable relevant stakeholders to implement wetlands conservation initiatives. The enabling environment will also be underpinned by implementation of a policy framework that will provide the basis for future and enhanced initiatives in wetlands conservation. From the perspective of cost-effectiveness, the Project presents an opportunity for the international community invest in long-term measures for wetlands conservation and establish a framework that encourages measures for domestic support of wetlands thus decreasing dependence on donors.

7. The site-based measures proposed under the Project will provide a replicable model for wetlands conservation elsewhere in Pakistan and other countries with similar conditions and constraints. The measures will ensure that globally important wetlands biodiversity is sustainably protected in Pakistan. Further, four wetland complexes which support a spectrum of endemic, threatened and vulnerable *flora* and *fauna* have been selected to serve as *Demonstration Sites* and a nation-wide awareness campaign is envisaged to create conditions conducive to the replication and proliferation of proven

¹ All statistics that are cited in this section have been retrieved from the *World Development Indicators* prepared by the World Bank (2002)

conservation techniques. The case for global interest is strengthened by the fact that without additional support than that available at present, this biodiversity may be lost to the world.

8. As poverty and subsistence uses are at the root of threats to wetland biodiversity, the goal of conservation initiatives within this Project is closely linked to community involvement in all appropriate interventions. A reduction in anthropogenic threats will be achieved through community enlightenment, agreements on the limiting of resource-use and investment diversification of livelihoods. The Project will support and strengthen community institutions to sustainably manage wetlands and their associated biodiversity.

3. Baseline Scenario

9. The baseline scenario for this Project consist of limited, uncoordinated wetlands conservation activities at both national and site level that are insufficient to secure globally important wetlands biodiversity resources. The current domestic circumstances do not allow for adequate investment to create an enabling environment for wetlands conservation in the country. Without appropriate investment in the establishment of an *enabling environment* – both public and private - the current state-of-affairs will lead to uncoordinated and disparate efforts in wetlands management, characterised by limited inter-agency co-ordination, policy and institutional deficiencies, inadequate investment in technical skills, equipment and financial mechanisms and a general lack of inertia - both in the public and private sector - to support and promote wetlands conservation.

10. At the *Demonstration Site* level, the current baseline scenario precludes significant physical improvements in the Protected Areas system thus retarding the introduction of necessary interventions and precluding synergy such as the establishment of corridors, trans-boundary initiatives and extension of habitat for globally important species. The effective long-term security of several globally important species found in the four *Demonstration Sites* is restricted due to a lack of investment in management planning, timely implementation of urgently required conservation measures and special attention to both threatened key species and the underlying causes of unsustainable human use.

4. GEF Alternative

11. The GEF alternative provides for effective, integrated management of Pakistan's wetlands resources, through a two-tiered approach of creating an enabling environment and demonstrating the effective conservation of wetlands biodiversity in two Demonstration Sites chosen to represent four ecological zones. Additional demonstrations will be undertaken at another two other sites but these do not form part of the GEF request and will be entirely co-financed.

12. The successful implementation of the Pakistan Wetlands Project will create an appropriate enabling environment that would facilitate and give impetus to enhanced wetlands conservation in Pakistan. This will enhance and strengthen the basic institutional, legal, policy, technical and financial framework necessary to mainstream wetlands conservation in the national policy-making process. There is a high probability that the following results will be achieved by the end of the project.

4.1 Institutional capacity for wetlands conservation

13. By the end of the project, the Project Management Unit (PMU) and Project Steering Committee (PSC) would have been absorbed within the government structure as a wetlands management entity under the National Council for the Conservation of Wildlife (NCCW) under the Ministry of Environment (MoE). Together with the technical resources developed under Technical Resource and Equipment Centre (TREC), this entity will be responsible for undertaking and co-ordinating initiatives for wetlands conservation.

4.2 Decision support systems and conservation

14. A GIS-based inventory of Pakistan's natural wetlands will have been established. This resource will include relatively high resolution data for more than 90% of the natural wetlands sites in Pakistan which are greater than 10 ha in extent. It will be accessible to all agencies that are directly or indirectly involved with wetlands conservation and will form the basis for informed planning and decision-making. Updated versions of the GIS will have been installed in all federal and provincial/territorial Wildlife Conservation Agencies and their staff trained to use this tool for enhanced planning and decision-making. These organisations will regularly receive updated operating versions of the database from the NCCW and have access to personnel that are trained to use this resource as a management tool.

4.3 Pakistan Wetlands Conservation Strategy

15. Pakistan will have formally adopted and implemented a comprehensive strategy for the conservation of naturally occurring wetlands. This document will:

- clarify intra- and extra-sectoral co-ordination between Government Departments relating to wetland management;
- define land tenure policies that apply to permanent and ephemeral wetlands with special reference to the legitimate user-rights of rural communities;
- make specific provision for progressive reorientation of government policies toward a consultative, community-based and gender equitable approach to wetlands conservation; and

- enhance the potential for transboundary wetlands conservation initiatives in both the national and international arena.

4.4 Wetlands Awareness

16. The level of general public awareness of wetlands and associated natural resource conservation issues will have been raised to the point that the general public are:

- aware of the true value and ecological significance of natural wetlands;
- in favour of proactive measures to conserve wetlands;
- fully appreciative of the all-important role that the Federal and Provincial/Territorial Governments of Pakistan play in the conservation of natural resources with specific reference to wetlands; and
- inclined to lend political support to those democratic processes that favour the wise and sustainable management of wetland resources in Pakistan.

4.5 Technical Capacity for Wetlands Conservation

17. A substantially enhanced level of human resource capacity will have been established in Pakistan by means of sustainable, on-going, pre-service and in-service training programmes at appropriate levels for governmental and partner agencies including local communities. This human capability will be supported by an adequate level of technical infrastructure which is within the nation's means to maintain.

4.6 Wetlands Management Techniques

18. Working in concert with the *Custodian Communities*, government and private sector, Pakistan's conservation agencies will have developed the capacity to sustainably manage suites of wetland resources in the form of wetland conservancies thus meeting their international obligations. This level of endeavour will have been developed to an optimum in the *Project Demonstration Sites* in each of the four *wetlands eco-regions* of Pakistan. The public and private sector partnerships at each site will have solved many of the idiosyncratic problems associated with wetlands conservation in each region. The sites will present effective, working models for replication and for solving wetlands conservation problems in similar environments elsewhere in the country. Proven existing techniques and effective new methods for wetlands conservation will have been described and publicised in a comprehensive manual on wetlands conservation in Pakistan. Many of these techniques will be applicable for regional trans-boundary initiatives.

4.7 Sustainability

19. Financial sustainability of wetlands conservation initiatives will have been ensured through the investigation and recommendation of financing measures for each intervention. This is likely to include public and private partnerships and the introduction of eco-tourism and other innovative financial sustainability measures. There is a high probability that this last measure will necessitate the establishment of a *National Wetlands Conservation Trust Fund* or similar financial instrument under the control of the envisaged *National Wetlands Management Council*.

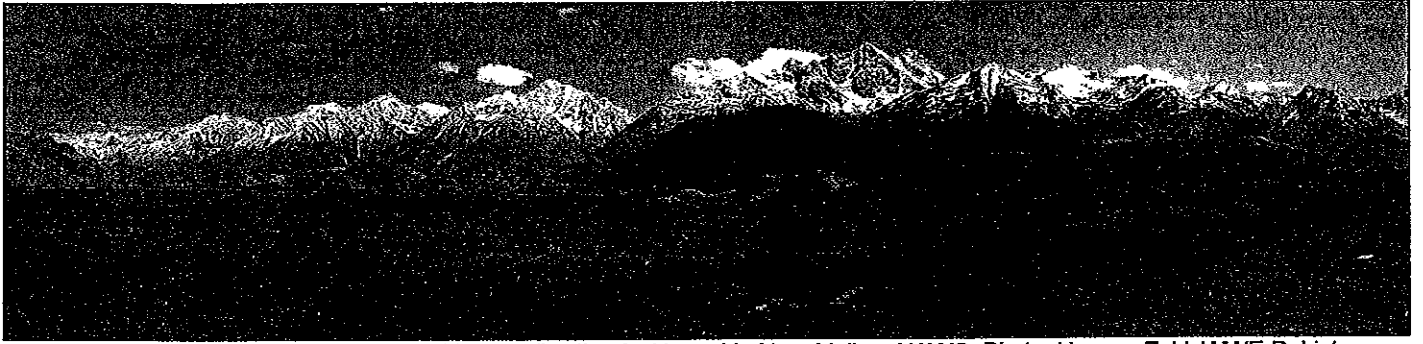
20. Recognising that some important components of wetlands biodiversity or habitat do not have the inherent potential to be financially self sustaining, the funding programme will also seek, secure and manage long-term donor support from national and international sources.

5. Incremental Costs

21. The incremental cost of the GEF Alternative is 11,792,000 of which the request to the GEF is for US \$2,991,350. The GEF request will be used to finance project activities and outputs which contribute most directly to global benefits, including the improvement of technical capacities, policy reviews and site conservation demonstrations at two sites.

22. US \$8,800,650 of the GEF Alternative will be required to address Sustainable Baseline activities, and these funds will be sourced from national sources as well as support from project partners such as European Union (EU), UNDP-Pakistan, WWF International and British Petroleum-Pakistan (BP).

23. A breakdown of global and national benefits and an analysis of attendant costs by individual *Project Outputs* is provided in Table 1: *Evaluation of Incremental Costs and Environmental Benefits for the Pakistan Wetlands Project*.



Lashkargaz Peatlands, Upper Yarkhun Valley, NAWC. Photo: Hassan Zaki, WWF-Pakistan

Table 1: Evaluation of Incremental Costs and Environmental Efforts for the Pakistan Wetlands Project.

Component	Cost Component	Cost (USD)	Domestic Scenario/Benefit	Global Scenario/Benefit
Output 1: Sustainable institutions are established to provide national level coordination for the conservation of wetlands and biodiversity in Pakistan and to promote the dissemination of lessons learned, especially from Project Demonstration Sites.	Baseline	\$420,000	Federal oversight and compliance with international conventions and agreements is weak in Pakistan. Inter-sectoral and inter-agency co-ordination is absent or poor. Such successful conservation interventions as may exist remain in isolation and are seldom replicated or proliferated. Few conservation initiatives extend across internal administrative boundaries and no international trans-boundary efforts exist. Technical equipment is limited and inadequate for effective management of project sites.	The benefits of this state-of-affairs to the global community are limited. Low key efforts to sustain globally important and endangered species such as the Indus Dolphin and migratory birds. Limited compliance with biodiversity related international treaties and conventions. Incipient efforts in trans-boundary conservation. Site managers are also hampered by a lack of modern equipment.
	GEF Alternative	\$2,342,000	New and strengthened institutions with technical back-up and expertise for wetlands conservation established as pre-cursors to permanent, dedicated government conservation bodies. Effective inter-agency and inter-sectoral collaboration.	An innovative and effective trend in wetlands conservation and management is established in South Asia's arid and semi-arid zone. Improved prospects of data exchange with the global community on replicable conservation techniques and the status of globally important biodiversity especially migratory species and wetlands dependent endemics.
Output 2: Planning and land-use decision-making of wetlands conservation agencies at all levels is enhanced through the provision of comprehensive, current wetlands information, decision support systems and tools utilising spatial and other data from the Wetlands GIS Database.	Increment	GEF: \$491,500 Co-financing: \$1,430,500		
	Baseline	\$14,000	Wetlands surveys are irregular, sporadic and uncoordinated. Data collection and record-keeping techniques are inconsistent and data sets are not standardized. Decision support systems underpinned by accessible baseline information are non-existent. The full extent of Pakistan's wetlands inventory is unknown.	Systematic planning for the conservation of globally important biodiversity hampered by a lack of comprehensive, reliable information. Existing data sets are difficult to retrieve and data formats are incompatible with international norms. Representation of Pakistan's wetlands in international databases is extremely poor..
	GEF Alternative	\$1,563,000	All national wetlands are identified and boundary-surveyed. Comprehensive, standardized assessments of flora and fauna, water quality and socio-economic characteristics are conducted. A comprehensive Pakistan Wetlands GIS database is developed and utilised as a decision-making tool by wetlands stakeholders.	Globally significant biodiversity (flora, fauna and ecosystems) are identified, mapped and surveyed. Baseline data on wetlands biodiversity resources in Pakistan is aligned with the International Wetlands GIS data sets facilitating the determination of regional wetlands conservation priorities.
	Increment	GEF: \$543,250 Co-financing: \$1,005,750		

Component	Cost Component	Cost (USD)	Domestic Scenario/Benefit	Global Scenario/Benefit
<p>Output 3: A National Wetlands Conservation Strategy (NWCS) is developed, officially adopted and implemented at federal, provincial/territorial and community level.</p>	Baseline	\$12,500	<p>Draft Action Plan developed and adopted, Provincial-level conservation strategies developed in NWFP and Balochistan but no overall wetlands conservation strategy in place. National Wetlands Management Committee established in 1996 but inactive due to lack of resources. Inter-sectoral collaboration for wetlands management is poor.</p>	<p>A National Conservation Strategy developed with donor support, but does not specify an independent strategy for conserving wetlands. Compliance with international treatise and conventions on biodiversity conservation is weak. Cost-effectiveness of conservation measures is reduced resulting in increased dependence on donor support.</p>
	GEF Alternative	\$377,500	<p>Wetlands conservation in Pakistan mainstreamed through the implementation of A <i>National Wetlands Conservation Strategy</i> (NWCS). Cost-effectiveness of wetlands conservation measures enhanced by efficient inter-sectoral collaboration and policy re-alignment.</p>	<p>Compliance with international agreements and convention enhanced and secured through the implementation of NWCS.</p>
	Increment	GEF \$224,250 Co-financing \$140,750		
<p>Output 4: Technical competence of government agencies and CBO conservation staff is enhanced through comprehensive training and capacity building programmes.</p>	Baseline	\$661,500	<p>Limited proficiency due to non-availability of specific training in wetlands management managers or decision-makers in Government. Training of field staff is inadequate and community-based management skills are lacking.</p>	<p>Conservation and sustainable management of globally significant wetlands resources is hampered by insufficient technical capacity of field staff, managers and key decision-makers.</p>
	GEF Alternative	\$2,121,500	<p>Pakistan's wetlands conservation programme is enhanced by improved technical proficiency and capacity through comprehensive training of key staff at all levels in public and private sector wetlands conservation entities.</p>	<p>Conservation staff at all levels are provided with training to manage site areas sustainably and in accordance with prevailing global best practices. Decision-makers are equipped with the knowledge necessary to incorporate wetlands conservation priorities into developmental policy-making in a sustainable manner to ensure the protection of globally important biodiversity.</p>
	Increment	GEF: \$559,450 Co-financing \$700,550		

Component	Cost Component	Cost (US\$)	Domestic Scenario/Benefit	Global Scenario/Benefit
Output 5: A nation-wide wetlands awareness campaign is designed and implemented.	Baseline	\$330,500	Limited public and private sector awareness of the importance of Pakistan's wetlands, resulting in a lack of commitment and low levels of support for and investment in wetlands conservation.	Lack of awareness of the global significance of Pakistan's wetlands resources limits support for conservation. Key opinion-formers (teachers, religious leaders, etc.) have insufficient knowledge of the importance of wetlands conservation. This results in generally inadequate support for wetlands conservation measures and specifically globally important biodiversity and international biodiversity agreements.
	GEF Alternative	\$1,372,500	Substantial improvement in public awareness levels of the ecological importance of Pakistan's wetlands, resulting in strong, broad-based public, private and political commitment to wetlands conservation.	Widespread awareness of the global significance of Pakistan's unique wetlands resources, resulting in strong support for conservation of wetland areas and their globally-significant biodiversity. Pressure on international funding sources reduced due to enhanced commitment from in-country sources.
	Increment	GEF: \$398,400 Co-financing: \$643,600		
Output 6: Elements of long-term sustainability of wetlands conservation initiatives are developed and adopted.	Baseline	\$0	Sustained conservation of wetlands inhibited by the lack of a comprehensive, structured strategy or programme to provide long-term financial sustainability. Most significant conservation efforts sustained by donor support.	No accurate assessment of the financial requirements for longer-term conservation of wetlands resources. Financial resources for wetlands conservation are sporadic and uncoordinated.
	GEF Alternative	\$255,000	Financial sustainability of wetlands conservation measures ensured through (a) design and implementation of innovative self-liquidating strategies (b) a structured, fundraising campaign to support wetlands resources that have little or no capacity to be financially self-sustaining.	Long-term conservation of globally important wetlands sustained by independent financial mechanisms and dependence on international donor support substantially reduced.
	Increment	GEF: \$64,000 Co-financing: \$191,000		
Output 7: Wetlands biodiversity is sustainably conserved in the Makran Coastal Wetlands Complex (MCWC).	Baseline	\$179,500	Limited site management and conservation efforts due to resource constraints, restricted access and poor communication links. Biodiversity of the MCWC threatened by a range of factors including pollution, overexploitation of resources, uncontrolled predation by feral animals and unsustainable resource use, etc.	Global important biodiversity essentially unprotected due to limited conservation in the MCWC (e.g. marine turtles, migratory birds). Small-scale turtle and mangrove conservation programmes provide discontinuous localised protection for globally-significant biodiversity resources.

Component	Cost Component	Cost (USD)	Domestic Scenario/Benefit	Global Scenario/Benefit
Output 8: Wetlands biodiversity is sustainably conserved in the Central Indus Wetlands Complex (CIWC).	GEF Alternative	\$1,530,500	Conservation of wetlands biodiversity in MCWC is secured through improved and co-ordinated management according to a management plan developed in consultation with all key stakeholders especially custodian communities. Alternate livelihoods reduce pressure on wetlands resources without exacerbating poverty.	Globally-significant biodiversity resources in the MCWC are conserved and sustainably managed. Migratory species present in the area (marine turtles and mammals, migratory birds, etc.). Regionally extinct Marsh Crocodile re-established. Regionally replicable techniques for wetlands conservation developed. Probability of trans-boundary conservation initiatives enhanced.
	Increment	GEF: \$318,750 Co-financing \$1,032,250	Limited site management and conservation efforts due to limited resources. Biodiversity of the CIWC threatened by a range of factors including pollution, overexploitation of resources especially extraction of irrigation water and unsustainable resource use, etc. Degradation of naturally occurring wetlands partially mitigated by elements of the Indus Basin Irrigation Scheme.	Globally-significant biodiversity such as migratory birds and endangered freshwater reptiles threatened by inadequate management of wetlands resources. The critical role of the CIWC as a corridor for globally-significant migratory birds and economically important anadromous fish species inadequate. Small scale sustainable effort to conserve the Indus Dolphin.
Output 9: Wetlands biodiversity is sustainably conserved in the Salt Range Wetlands Complex (SRWC).	GEF Alternative	\$8,327,800	An integrated, inter-provincial wetlands conservancy is established. Illegal over-exploitation of wetlands resources is limited through more effective enforcement and improved management capacities. Resource use pressures from local communities are reduced through the provision of alternative livelihood resources.	Globally-significant biodiversity resources in the CIWC are conserved and sustainably managed. Migration routed of globally important fish, birds and the Indus Dolphin secured. Pressure on globally-significant biodiversity resources (particularly birds and the Indus Dolphin) is reduced to sustainable levels. Regionally extinct aquatic reptiles and Hog Deer re-established. Regionally replicable techniques for large river system wetlands conservation developed. Ecological integrity of the globally important Indus Delta Eco-region, downstream of CIWC, improved.
	Increment	GEF: \$391,750 Co-financing \$1,237,250	Geographic extent of wetlands and their associated biodiversity threatened by agricultural encroachment and overexploitation of natural resources (water, wildlife, forests) aggravated by ineffective watershed management.	Globally-significant biodiversity (e.g. migratory birds, endemic wild sheep) threatened due to over-exploitation and inefficient management of the SRWC, habitat fragmentation and hunting.

Component	Cost Component	Cost (US\$)	Domestic Scenario/Benefit	Global Scenario/Benefit
Output 10: Wetlands biodiversity is sustainably conserved in the North-west Alpine Wetlands Complex (NAWC).	GEF Alternative	\$1,600,500	Habitat fragmentation reduced by the formation of a contiguous wetlands conservancy. Agricultural encroachment of wetlands is controlled through more community consultation, effective enforcement and improved management capacities. Resource use pressures from local communities are reduced through the provision of alternative livelihood resources. An integrated watershed and groundwater management plan is formulated and implemented in cooperation with local communities, land landowners and refined inter-sectoral co-ordination.	Globally important biodiversity conserved by sustainable management of watersheds, groundwater sources and utilisation of wetland resources. Sustainable management SRWC leads to rehabilitation of wetland habitat, providing improved breeding and feeding areas for migratory bird-life e.g. White-headed Duck, crane species and Flamingos.
	Increment	GEF: \$0 Co-financing \$1,345,000		
	Baseline	\$820,500	Sensitive and easily degraded high alpine wetlands and their associated biodiversity (e.g. migratory birds, wild sheep) threatened by migrant pastoralism, extraction of peat, harvesting of wetlands vegetation for fuel and subsistence hunting. Water quality degraded by siltation.	Significant local and migratory fauna of global significance are found in the area, but populations are under pressure from hunting and loss of habitat through overgrazing.
	GEF Alternative	\$1,894,500	Living standards of <i>Wakhi</i> migrants are improved with concomitant reduction in dependence on pastoralism and wetlands resources such as peat and emergent vegetation. Eco-tourism introduced in an economically underdeveloped region. Improved communication links with other parts of Pakistan.	Globally important biodiversity conserved by sustainable management of mountain catchment areas and wetland margins and sustainable utilisation of wetland resources. Sustainable management of NAWC will lead to protection of the Yarkhoon/Mastuj/Chitral River Migratory Bird Flyway. Body of knowledge on high altitude wetlands substantially enhanced.
	Increment	GEF: \$0 Co-financing \$1,074,000		

Component	Cost Component	Cost (USD)	Domestic Scenario/Benefit	Global Scenario/Benefit
Total	Baseline	\$9,395,800		
	Co-financing	\$8,800,650		
	Increment	\$11,992,000		
	GEF Contribution	\$3,191,350		
	PDF (B)	\$342,000		
Total GEF Alternative		\$3,533,350		

Terms of Reference¹

Chief Technical Advisor

Pakistan Wetlands Project

Duties and Responsibilities

1. In general, manage the production of Pakistan Wetlands Project (PWP) outputs according to the Project Document (Prodoc) and the procedures in the *Project Cycle Operations Manual* (PCOM);
2. Select, recruit and supervise of PWP Technical and administrative staff;
3. In collaboration with the UNDP Country Office, ensuring that all implementing agency letters of agreement are prepared and negotiated with any participating UN agencies;
4. Initiate mobilization of all project inputs not covered by implementing agency letters of agreement in accordance with the relevant procedures in P-com; authorization of expenditures for these inputs;
5. Prepare and, as required revise the project work plans, budgets and financial plans;
6. Organise and manage of PWP activities according to the work plan in order to produce the outputs;
7. Coordinate and supervise PWP technical personnel;
8. Prepare and submit of the *Annual Project Report* (APR) and such other interim progress reports;
9. Assurance that reports prepared by project personnel or participants are prepared as required;
10. Report to the NPD regularly as required;
11. Identify and resolve implementation problems, with the assistance of the NPD, if necessary.

Selection Criteria

1. A through technical background and substantial experience with wetlands conservation;
2. At least five years of experience with wetlands or natural resource conservation in a developing country such as Pakistan;
3. Management skills and experience;
4. Problem-solving skills and results orientation;
5. English language reading, writing and speaking skills;

¹ These ToRs should be read with reference to the *Pakistan Wetlands Project Document* (ProDoc: http://www.wwfpak.org/pwp_prodoc.doc) the *UNDP Project Cycle Operations Manual* (PCOM: <http://www.undp.org/pcom.doc>) and *WWF-Pakistan's Human Resources Policy and Standard Operating Procedures* (http://www.wwfpak.org/hr_policy.doc).

6. Communication and leadership skills;
7. Sensitivity to gender issues;
8. A working knowledge of Pakistan's system of Government at all levels;

**Project Manager: National Programmes
Pakistan Wetlands Project**

Direct Supervisor: National Project Manager / Chief Technical Advisor

Alternate Supervisor²: National Project Director

Reporting Line: National Project Manger / Chief Technical Advisor/→ National Project Director
→ Project Steering Committee

Project Peer Group: Project Manager, Admin and Logistics; Project Manager, Regional Programmes

Terms of employment: according to the appropriate measures outlined in the UNDP *Project Cycle Operations Manual (PCOM)* and WWF-Pakistan's *Staff Rules and Standard Operating Procedures*;

WWF-Pakistan salary Grade Equivalent: TBD

Personnel Responsibilities: Seven permanent staff member and up to 45 contracted staff.

Financial Responsibilities: Approximately USD 4,216,000 over seven years

Duty Station: Islamabad.

Sphere of Activity: Pakistan and its Territories.

Duration of Contract: Provisionally, up to seven years.

Duties and Responsibilities:

1. In general, supervise the production of those *Pakistan Wetlands Project (PWP)* components described in *Outputs 2,3,4 and 5* of the *Project Document (ProDoc)*, hereafter referred to as the *PWP National Programmes*,
2. Coordinate the development of ToRs for the selection and recruitment of the three PWP *National Programme Coordinators*;
3. Coordinate the preparation of an appropriate contract for the NGO that will be engaged by the PWP to both develop a *National Wetlands Conservation Strategy* and manage the process of official adoption and implementation of this document
4. Supervise the preparation of ToRs for National Programmes contracted staff members;
5. Directly supervise the services of *Awareness and Advocacy Programmes* professional and administrative staff members for the duration of their short- or long-term contracts;
6. Facilitate the obtaining of *No Objection Certificates* and such other forms of official clearance as may be required for the three Coordinators of National Programmes staff to visit restricted areas or to have access to restricted information or data pertaining to natural wetlands in Pakistan.
7. Liaise closely with the Project Manager, Regional Programmes and Project manager, Admin and Logistic to facilitate smooth and effective interaction within the PWP;
8. In collaboration with the *National Project Manager*, ensure that all implementing agency letters of agreement that relate to the *PWP National Programmes* are prepared and negotiated with any participating UN agencies;
9. Prepare and, as required, revise the *PWP National Programmes* work plans, budgets and financial plans;

² The *Alternate Supervisor* is the next most senior person to the supervisor in the incumbent's *Reporting Line* and would be expected to deputise for the *Supervisor* in the latter's absence and to function as an arbitrator in the event of any unresolved dispute between the incumbent and the Supervisor.

10. Organise and manage *PWP National Programmes* activities according to the PWP's approved work plan in order to produce the required outputs;
11. Prepare and submit the *PWP National Programmes* component of the *Annual Project Report (APR)* and such other interim progress reports and *ad hoc* reports as may be required by the PSC, NPD, or NPM;
12. Ensure that the reports technical reports prepared by *PWP National Programmes* personnel or contractors are prepared on schedule and according to the established reporting procedures and conventions of the PWP;
13. Report formally and informally to the *National Project Manager* as regularly as required;
14. Motivate the staff of the *National Programmes Division* and identify and resolve implementation problems associated with the implementation of this component of the PWP with the assistance of the *National Project Manager*;
15. Deputise for the *National Project Manager*, as may be required in the absence of the NPM, reporting directly to the NPD, in these circumstances;
16. Carry out any other reasonable assignment associated with the aims and objectives of the *PWP* that may be assigned to the *Project Manager, National Programmes* by the PSC, NPD and NPM.

Selection Criteria

Candidates for the position of *PWP Project Manager, National Programmes* should ideally have:

1. An established personal commitment to the conservation of nature and ecological processes;
2. An appropriate post-graduate qualification in one of the following disciplines and a working knowledge of a majority of the others:

- Business Administration;
- Finance;
- Natural Sciences;
- Project Cycle Management.

2. At least seven years of appropriate experience in the management of major projects or programmes in the context of a developing country such as Pakistan;
3. Personnel management skills and experience;
4. Advanced Problem-solving skills and results orientation;
5. Superior English language reading, writing and speaking skills;
6. Demonstrated interpersonal communication and leadership skills;
7. Sensitivity to gender and other social issues;
8. A substantial working knowledge of Pakistan's system of Government at all levels, especially the education and training sector.

List of Acronyms and Abbreviations used in this Document

APR.....	Annual Progress Report for UNDP/GEF Projects
CTA.....	Chief Technical Advisor, Pakistan Wetlands Project
NOC.....	No Objection Certificate
NPD.....	National Project Director, Pakistan Wetlands Project
NPM.....	National Project Manager, Pakistan Wetlands Project
PCOM.....	UNDP Pakistan's Project Cycle Operations Manual
PMNP.....	Project Manager: National Programmes, Pakistan Wetlands Project
ProDoc.....	Project Document
PWP.....	Pakistan Wetlands Project
TBD.....	To be determined
ToRs.....	Terms of Reference
UN.....	United Nations
UNDP.....	United Nations Development Programmes
USD.....	United States Dollars
WWF-P.....	WWF-Pakistan (Pakistan Wetlands Project <i>Principal Implementing Agency</i>)

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Terms of Reference³

**Project Manager: Administration, Finance and Logistics
Pakistan Wetlands Project**

Direct Supervisor: National Project Manager / Chief Technical Advisor

Alternate Supervisor⁴: National Project Director

Reporting Line: National Project Manager / Chief Technical Advisor → National Project Director
→ Project Steering Committee

Project Peer Group: Project Manager, National Programmes; Project Manager, Regional Programmes

Terms of employment: according to the appropriate measures outlined in the UNDP *Project Cycle Operations Manual (PCOM)* and WWF-Pakistan's *Staff Rules and Standard Operating Procedures*;

WWF-Pakistan salary Grade Equivalent: TBD

Personnel Responsibilities: Fourteen permanent staff members and two contracted staff.

Financial Responsibilities: Approximately USD 1,922,000 over seven years

Duty Station: Islamabad.

Sphere of Activity: Pakistan and its Territories.

Duration of Contract: Provisionally, up to seven years.

Duties and Responsibilities:

1. In general, facilitate the orderly execution of the Administration, Finance and Logistics components of the PWP;
2. Specifically, supervise the production of those *Pakistan Wetlands Project (PWP)* components described in *Outputs 1 and 6* of the *Project Document (ProDoc)*, hereafter referred to as the *PWP Administration, Finance and Logistics Programmes*,
3. Coordinate the development of ToRs for the selection and recruitment of all PWP National *Administration, Finance and Logistics Programmes* staff;
4. Supervise the preparation of ToRs for *Administration, Finance and Logistics Programmes* contracted staff members;
5. Directly supervise the services of PWP *Administration, Finance and Logistics Programmes* full-time and contracted staff;
6. Facilitate the obtaining of *No Objection Certificates* and such other forms of official clearance as may be required for the *Administration, Finance and Logistics Programmes* staff to visit restricted areas or to have access to restricted information or data pertaining to natural wetlands in Pakistan.
7. Liaise closely with the Project Manager, National Programmes, and Project Manager, Regional Programmes to facilitate smooth and effective interaction within the PWP;

³ These ToRs should be read with reference to the *Pakistan Wetlands Project Document (ProDoc)*: http://www.wwfpak.org/pwp_prodoc.doc) the UNDP *Project Cycle Operations Manual (PCOM)*: <http://www.undp.org/pcom.doc>) and WWF-Pakistan's *Human Resources Policy and Standard Operating Procedures* (http://www.wwfpak.org/hr_policy.doc).

⁴ The *Alternate Supervisor* is the next most senior person to the supervisor in the incumbent's *Reporting Line* and would be expected to deputise for the *Supervisor* in the latter's absence and to function as an arbitrator in the event of any unresolved dispute between the incumbent and the Supervisor.

8. In collaboration with the *National Project Manager*, ensure that all implementing agency letters of agreement that relate to the *PWP Administration, Finance and Logistics Programmes* are prepared and negotiated with any participating UN agencies;
9. Prepare and, as required, revise the *PWP Administration, Finance and Logistics Programmes* work plans, budgets and financial plans;
10. Organise and manage *PWP Administration, Finance and Logistics Programmes* activities according to the PWP's approved work plan in order to produce the required outputs;
11. Prepare and submit the *PWP Administration, Finance and Logistics Programmes* component of the *Annual Project Report (APR)* and such other interim progress reports and *ad hoc* reports as may be required by the Project internal or external auditors, the PSC, NPD, or NPM;
12. Ensure that the technical, financial reports and inventory reports prepared by *PWP Administration, Finance and Logistics Programmes* personnel or contractors are prepared on schedule and according to the established reporting procedures and conventions of the PWP;
13. Report formally and informally to the *National Project Manager* as regularly as required;
14. Motivate the staff of the *Administration, Finance and Logistics Division* and identify and resolve implementation problems associated with the implementation of this component of the PWP with the assistance of the *National Project Manager*;
15. Deputise for the *National Project Manager*, as may be required in the simultaneous absence of both the Project manager, National Programmes and the NPM, reporting directly to the NPD, in these circumstances;
16. Carry out any other reasonable assignment associated with the aims and objectives of the *PWP* that may be assigned to the *Project Manager, Administration, Finance and Logistics Programmes* by the PSC, NPD and NPM.

Selection Criteria

Candidates for the position of *PWP Project Manager, Administration, Finance and Logistics Programmes* should ideally have:

1. An established personal commitment to the conservation of nature and ecological processes;
2. An appropriate post-graduate qualification in one of the following disciplines and a working knowledge of a majority of the others:
 - Business Administration;
 - Finance;
 - Accountancy;
 - Project Cycle Management.

2. At least seven years of appropriate experience in the management of major projects or programmes in the context of a developing country such as Pakistan;
3. Personnel management skills and experience;
4. Advanced Problem-solving skills and results orientation;
5. Good English language reading, writing and speaking skills;
6. Demonstrated interpersonal communication and leadership skills;
7. Sensitivity to gender and other social issues;
8. Familiarity with modern business administration and financial management software;
9. A substantial working knowledge of Pakistan's system of Government at all levels, especially the education and training sector.

List of Acronyms and Abbreviations used in this Document

APR.....	Annual Progress Report for UNDP/GEF Projects
CTA.....	Chief Technical Advisor, Pakistan Wetlands Project
NOC.....	No Objection Certificate
NPD.....	National Project Director, Pakistan Wetlands Project
NPM.....	National Project Manager, Pakistan Wetlands Project
PCOM.....	UNDP Pakistan's Project Cycle Operations Manual
PMAFL.....	Project Manager: Administration, Finance and Logistics Division, PWP
ProDoc.....	Project Document
PWP.....	Pakistan Wetlands Project
TBD.....	To be determined
ToRs.....	Terms of Reference
UN.....	United Nations
UNDP.....	United Nations Development Programmes
USD.....	United States Dollars
WWF-P.....	WWF-Pakistan (Pakistan Wetlands Project <i>Principal Implementing Agency</i>)

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Terms of Reference⁵

Coordinator Capacity-building and Training Programmes, Pakistan Wetlands Project

Direct Supervisor: Project Manager National Programmes

Alternate Supervisor⁶: National Project Manager / Chief Technical Advisor

Reporting Line: Project Manager National Programmes → National Project Manager / Chief Technical Advisor/→ National Project Director → Project Steering Committee

Project Peer Group: Project National Programme Coordinators and Demonstration Site Managers.

Terms of employment: according to the appropriate measures outlined in the UNDP *Project Cycle Operations Manual* (PCOM) and WWF-Pakistan's *Staff Rules and Standard Operating Procedures*;

WWF-Pakistan salary Grade Equivalent: TBD

Personnel Responsibilities: One permanent staff member and 5 – 10 contracted staff.

Financial Responsibilities: Approximately USD1,460,000 over seven years

Duty Station: Islamabad.

Sphere of Activity: Pakistan and its Territories.

Duration of Contract: Provisionally, up to seven years.

Duties and Responsibilities:

1. In general, manage the production of those *Pakistan Wetlands Project* (PWP) components described in *Outputs 4.1 - 4.11* of the *Project Document* (ProDoc), hereafter referred to as the *PWP Capacity-building and Training Programmes*,
2. Coordinate the development of ToRs for and the selection and recruitment of those PWP Technical and Administrative Staff associated directly with *PWP Capacity-building and Training Programmes*;
3. Directly supervise the services of *Capacity-building and Training* professional and administrative staff members for the duration of their short- or long-term contracts;
4. Facilitate the obtaining of *No Objection Certificates* and such other forms of official clearance as may be required for *Capacity-building and Training Programme* staff to visit restricted areas or to have access to restricted information or data pertaining to natural wetlands in Pakistan.
5. Organise such additional technical training as may be required to enhance the field teaching and training capacity of serving *Capacity-building and Training Programme* staff;
6. In collaboration with the *Project Manager National Programmes*, ensure that all implementing agency letters of agreement that relate to the *PWP Capacity-building and Training Programme* are prepared and negotiated with any participating UN agencies;

⁵ These ToRs should be read with reference to the *Pakistan Wetlands Project Document* (ProDoc: http://www.wwfpak.org/pwp_prodoc.doc) the UNDP *Project Cycle Operations Manual* (PCOM: <http://www.undp.org/pcom.doc>) and WWF-Pakistan's *Human Resources Policy and Standard Operating Procedures* (http://www.wwfpak.org/hr_policy.doc).

⁶ The *Alternate Supervisor* is the next most senior person to the supervisor in the incumbent's *Reporting Line* and would be expected to deputise for the *Supervisor* in the latter's absence and to function as an arbitrator in the event of any unresolved dispute between the incumbent and the Supervisor.

7. Initiate the mobilisation of all *PWP Capacity-building and Training Programme* inputs not covered by implementing agency letters of agreement in accordance with the relevant procedures in of the PCOM including the authorisation of expenditures for these inputs;
8. Prepare and, as required, revise the *PWP Capacity-building and Training Programme* work plans, budgets and financial plans;
9. Organise and manage *PWP Capacity-building and Training Programmes* activities according to the PWP's approved work plan in order to produce the required outputs;
10. Prepare and submit the *PWP Capacity-building and Training Programmes* component of the *Annual Project Report (APR)* and such other interim progress reports and *ad hoc* reports as may be required by the NPD, NPM or *Project Manager: National Programmes*;
11. Ensure that the reports technical reports prepared by *PWP Capacity-building and Training Programmes* personnel or contractors are prepared on schedule and according to the established reporting procedures and conventions of the PWP;
12. Report formally and informally to the *Project Manager: National Programmes* regularly as required;
13. Motivate the staff of the *Capacity-building and Training Programme Section* and identify and resolve implementation problems associated with the *PWP Capacity-building and Training Programme* with the assistance of the *Project Manager: National Programmes*, if necessary.
14. Carry out any other reasonable assignment associated with the aims and objectives of the *PWP* that may be assigned to the *Coordinator Capacity-building and Training Programmes* by the senior management of the PWP.

Selection Criteria

Candidates for the position of *PWP Coordinator: Capacity-building and Training Programmes* should ideally have:

1. An established personal commitment to the conservation of nature and ecological processes;
2. An appropriate post-graduate qualification in one of the following disciplines and a working knowledge of a majority of the others:

- | | |
|--|---|
| <input type="checkbox"/> Conservation Biology; | <input type="checkbox"/> Limnology; |
| <input type="checkbox"/> Earth Sciences; | <input type="checkbox"/> Plant or Animal Taxonomy; |
| <input type="checkbox"/> Environmental Sciences; | <input type="checkbox"/> Rural Geography; |
| <input type="checkbox"/> Environmental Education; | <input type="checkbox"/> Secondary or tertiary Education; |
| <input type="checkbox"/> Geographic Information Systems; | <input type="checkbox"/> Wetlands Conservation; |
| <input type="checkbox"/> Geology; | <input type="checkbox"/> Zoology. |

2. At least five years of appropriate experience in training and capacity-building in the context of a developing country such as Pakistan;
3. Project and personnel management skills and experience;
4. Problem-solving skills and results orientation;
5. Good English language reading, writing and speaking skills;
6. Demonstrated interpersonal communication and leadership skills;
7. Sensitivity to gender and other social issues;
8. A working knowledge of Pakistan's system of Government at all levels, especially the education and training sector.

List of Acronyms and Abbreviations used in this Document

APR	Annual Progress Report for UNDP/GEF Projects
CCTP	Coordinator Capacity-building and Training Programmes, Pakistan Wetlands Project
CTA	Chief Technical Advisor, Pakistan Wetlands Project
NOC	No Objection Certificate
NPD	National Project Director, Pakistan Wetlands Project
NPM	National Project Manager, Pakistan Wetlands Project
PCOM	UNDP Pakistan's Project Cycle Operations Manual
PMNP	Project Manager: National Programmes, Pakistan Wetlands Project
ProDoc	Project Document
PWP	Pakistan Wetlands Project
TBD	To be determined
ToRs	Terms of Reference
UN	United Nations
UNDP	United Nations Development Programme
USD	United States Dollars
WWF-P	WWF-Pakistan (Pakistan Wetlands Project <i>Principal Implementing Agency</i>)

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Terms of Reference⁷

Coordinator Survey Programmes, Pakistan Wetlands Project

Direct Supervisor: Project Manager National Programmes

Alternate Supervisor⁸: National Project Manager / Chief Technical Advisor

Reporting Line: Project Manager National Programmes → National Project Manger / Chief Technical Advisor/→ National Project Director → Project Steering Committee

Project Peer Group: Project National Programme Coordinators and Demonstration Site Managers.

Terms of employment: according to the appropriate measures outlined in the UNDP *Project Cycle Operations Manual* (PCOM) and WWF-Pakistan's *Staff Rules and Standard Operating Procedures*;

WWF-Pakistan salary Grade Equivalent: TBD

Personnel Responsibilities: One permanent staff member and 5 – 15 contracted staff.

Financial Responsibilities: Approximately USD1,550,000 over seven years

Duty Station: Islamabad.

Sphere of Activity: Pakistan and its Territories.

Duration of Contract: Provisionally, up to seven years.

Duties and Responsibilities:

1. In general, manage the production of those *Pakistan Wetlands Project* (PWP) components described in *Outputs 2.1, 2.2 and 2.3* of the *Project Document* (ProDoc), hereafter referred to as the *PWP Survey Programmes*,
2. Coordinate the development of ToRs for and the selection and recruitment of those PWP Technical and Administrative Staff associated directly with *PWP Survey Programmes*;
3. Directly supervise the services of *Survey Programme* professional and administrative staff members for the duration of their short- or long-term contracts;
4. Facilitate the obtaining of *No Objection Certificates* and such other forms of official clearance as may be required for *Survey Programme* staff to visit restricted areas or to have access to restricted information or data pertaining to natural wetlands in Pakistan.

⁷ These ToRs should be read with reference to the *Pakistan Wetlands Project Document* (ProDoc: http://www.wwf-pak.org/pwp_prodoc.doc) the UNDP *Project Cycle Operations Manual* (PCOM: <http://www.undp.org/pcom.doc>) and WWF-Pakistan's *Human Resources Policy and Standard Operating Procedures* (http://www.wwf-pak.org/hr_policy.doc).

⁸ The *Alternate Supervisor* is the next most senior person to the supervisor in the incumbent's *Reporting Line* and would be expected to deputise for the *Supervisor* in the latter's absence and to function as an arbitrator in the event of any unresolved dispute between the incumbent and the Supervisor.

5. Organise such additional technical training as may be required to enhance the field survey capacity of serving *Survey Programme* staff;
6. In collaboration with the *Project Manager National Programmes*, ensure that all implementing agency letters of agreement that relate to the *PWP Survey Programmes* are prepared and negotiated with any participating UN agencies;
7. Initiate the mobilisation of all *PWP Survey Programme* inputs not covered by implementing agency letters of agreement in accordance with the relevant procedures in of the PCOM including the authorisation of expenditures for these inputs;
8. Prepare and, as required, revise the *PWP Survey Programme* work plans, budgets and financial plans;
9. Organise and manage *PWP Survey Programmes* activities according to the PWP's approved work plan in order to produce the required outputs;
10. Prepare and submit the *PWP Survey Programmes* component of the *Annual Project Report (APR)* and such other interim progress reports and *ad hoc* reports as may be required by the NPD, NPM or *Project Manager: National Programmes*;
11. Ensure that the reports technical reports prepared by *PWP Survey Programmes* personnel or contractors are prepared on schedule and according to the established reporting procedures and conventions of the PWP;
12. Report formally and informally to the *Project Manager: National Programmes* regularly as required;
13. Motivate the staff of the *Survey Programme Section* and identify and resolve implementation problems associated with the *PWP Survey Programme* with the assistance of the *Project Manager: National Programmes*, if necessary.
14. Carry out any other reasonable assignment associated with the aims and objectives of the *PWP* that may be assigned to the CSP by the senior management of the PWP.

Selection Criteria

Candidates for the position of *PWP Coordinator: Survey Programmes* should ideally have:

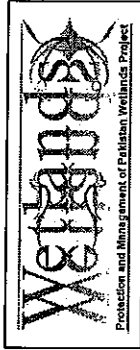
1. An established personal commitment to the conservation of nature and ecological processes;
2. An appropriate post-graduate qualification in one of the following disciplines and a working knowledge of a majority of the others:
 - Botany;
 - Conservation Biology;
 - Earth Sciences;
 - Environmental Sciences;
 - Geographic Information Systems;
 - Geology;
 - Limnology;
 - Plant or Animal Taxonomy;
 - Rural Geography;
 - Soil Science;
 - Wetlands Conservation;
 - Zoology.

2. At least five years of experience with natural resource or wetlands conservation in a developing country such as Pakistan;
3. Project and personnel management skills and experience;
4. Problem-solving skills and results orientation;
5. Good English language reading, writing and speaking skills;
6. Demonstrated interpersonal communication and leadership skills;
7. Sensitivity to gender and other social issues;
8. A working knowledge of Pakistan's system of Government at all levels.

List of Acronyms and Abbreviations used in this Document

APR.....	Annual Progress Report for UNDP/GEF Projects
CSP.....	Coordinator Survey Programmes, Pakistan Wetlands Project
CTA.....	Chief Technical Advisor, Pakistan Wetlands Project
NOC.....	No Objection Certificate
NPD.....	National Project Director, Pakistan Wetlands Project
NPM.....	National Project Manager, Pakistan Wetlands Project
PCOM.....	UNDP Pakistan's Project Cycle Operations Manual
PMNP.....	Project Manager: National Programmes, Pakistan Wetlands Project
ProDoc.....	Project Document
PWP.....	Pakistan Wetlands Project
TBD.....	To be determined
ToRs.....	Terms of Reference
UN.....	United Nations
UNDP.....	United Nations Development Programme
USD.....	United States Dollars
WWF-P.....	WWF-Pakistan (Pakistan Wetlands Project <i>Project Implementing Agency</i>)

Annex 6: Protection and Management of Pakistan Wetlands Project STAP Review and Response



STAP Review	Response
<p>The following STAP appraisal is based upon the Project Brief Document – GEF Focal area – Biodiversity; GEF Operational Programmes: OP 1, Arid and Semi-arid Zone Ecosystems; OP 2, Coastal, Freshwater and Marine Ecosystems; OP 3, Forest Ecosystems; and OP 4, Mountain Ecosystems.</p> <p>Overview: The Project Concept Document is well-written and sets out an ambitious series of initiatives to improve the conservation of biological diversity within wetland ecosystems. The proposal is comprehensive in that it attempts to integrate biological diversity conservation at national and more local levels with sustainable use of renewable wetland associated resources, and poverty alleviation and socio-economic development in four selected wetland complexes.</p> <p>The project is worthy of support, however, there are a number of points concerning actual means of promoting effective integration of a wide cross-section of stakeholders into the implementation of the planned activities that could be better addressed in project design. These are set out in the latter sections of this appraisal.</p>	<p>The following response to the STAP Reviewer's comments is based on the June 20th, 2003 version of the <i>Project Document</i> which has been enhanced and amended on the basis of the comments received.</p> <p>We welcome the STAP Reviewer's overall recommendation of support for the Project. We agree that some aspects of the Project required further detailed explanation and have addressed these through changes in the most recent version of the Project Brief and, in a few cases, by means of supplemental annexes. It is our observation that, generally speaking, the changes reflect the need for greater clarity rather than any major weaknesses in project design. The comments of the STAP Reviewer are presented in the left-hand column of this table and the responses of Project Proponents in the right-hand column.</p>

STAP Review	Response
<p>1. Scientific and Technical Soundness of the Project: The development and global objectives are sound. However, there are disconcerting phrases in the document, which raise questions about the sustainability of the initiative. Two key examples are: 1. "... While there has been substantial support in principle from the government conservation agencies and academic institutions for the monitoring and management of wetlands, the bulk of the funding for wetlands initiatives has been provided by external sources. Wetland conservation within Pakistan's depressed economic climate remains a luxury." (Paragraph 82) and "In this initiative, a concerted effort will be made to secure long-term donor support for wetlands conservation measures that are vital but unaffordable in Pakistan's foreseeable economic environment" (Paragraph 12).</p>	<p>Exploring and developing a wide range of solutions for financial sustainability of conservation initiatives is a key aspect of the Project. The purpose of Output 6 is to develop these solutions in two broad categories: (a) initiatives that are potentially self-sustaining and (b) initiatives that include globally significant biodiversity but are inherently incapable of being self-liquidating. We concede that the initial draft of the project document did not make this distinction clear. In the amended Brief, this had been rectified (Outputs 6.2 and 6.3).</p> <p>Further, an anticipated outcome of the Project's comprehensive awareness-raising programme (Output 5) is the creation of enhanced support for wetlands conservation in Pakistani society. This is likely to translate into a greater public and private sector investment in wetlands conservation that has hitherto been the case.</p>
<p>The Project Brief points out that "... the wetlands of the region are generally degrading under a broad spectrum of anthropogenic threats most of which are a direct product of poverty but many of which are exacerbated by human ignorance and mismanagement." Although the proposed project components will strengthen wetland management capacities at national and, to a lesser extent, more local levels associated with a demonstration sites, there remain other key issues relating to the sustainability of the proposed project outcomes which are not fully addressed. Specific examples include: major changes to the surface and groundwater hydrology, reclamation of wetlands systems, over exploitation of renewable wetland resources, and poverty alleviation. The latter points will be addressed by the project but the resources allocated appear to be insufficient to meet the complex challenges of helping people find alternative livelihoods, changing people's resource management practices and establishing community-based wetland stewardship.</p>	<p><i>Major changes to the surface and groundwater hydrology:</i> Adverse systemic surface and groundwater problems in Pakistan stem essentially from weak inter-sectoral coordination. This inadequacy will be fully addressed at the policy level during the formulation of the <i>National Wetlands Conservation Strategy</i> (NWCS) (Output 3). In terms of this <i>Strategy</i>, national policies that guide initiatives in land, water resources and the natural resource sector will be analysed to ensure their compatibility with wetlands conservation.</p> <p>The overall design of the Project makes the assumption that a component of <i>National Drainage Programme</i> (WB/ADB) will deal with most issues at the field level relating to unsustainable water extraction regimes (See: 2.3 <i>Ongoing Externally Assisted Projects</i> - para. 24). The CIWC and SRWC management plans (Outputs 8 and 9) will specifically deal with surface and groundwater extraction issues. The Project does not envisage undertaking any major land reclamation or the introduction of measures that would alter groundwater hydrology.</p> <p><i>Wetlands reclamation:</i> Again, systemic issues will be dealt with by the NWCS while site level problems will be addressed in the Site Management Plans. (Outputs: 7.7, 8.7, 9.7 and 10.7)</p> <p><i>Allocation of adequate resources:</i> The projected investment for social mobilisation and diversification of livelihoods in Outputs 7.5, 8.5, 9.5 and 10.5 has been increased to US \$ 175K - 200K.</p>

STAP Review	Response
<p>It may be that other donor initiatives (for example, the 10 TRAC-funded UNDP Sustainable Livelihoods Programme) will help address the need to have active stakeholder participation in the project and the GEF funding will be used primarily for promoting greater integration of project activities. However, if this is the case, then the document should be strengthened to better demonstrate how local communities whose welfare depends on sustainable wetlands conservation would form part of the management solutions to the key issues identified in the Project Brief.</p>	<p>Special provision has been made in the <i>NWCS</i> for the enhancement of legal measures to secure communal user rights (<i>Output 3</i>). <i>Outputs 7.4, 8.4, 9.4 and 10.4</i> now make specific reference to the implementation of management interventions through a cooperative framework effected at the local level by means of especially constituted <i>Village Conservation Committees (VCCs)</i>. <i>Output 6.3</i> now specifically calls for a detailed evaluation of financial sustainability options and the implementation of appropriate plans.</p>
<p>Unless there are effective solutions to the local issues, there is a danger that the project will not reduce Pakistan's dependence on long-term donor support to provide the "luxury" of wetlands conservation.</p>	<p>Agreed. As envisaged, the Project will undertake a greater level of analysis of local solutions, both those related to financial and management issues, that may be applied at each site. These will be developed in conjunction with local or <i>custodian communities</i> and other relevant stakeholders. The financial solutions are likely to include a range of options such as user charges, levies, contributions from polluters, etc. that will be developed and applied in accordance with the specific conditions in each site.</p>
<p>It should be noted that although there is a sustainable development goal mentioned in the Development Objective, this is not included on the Global Objectives (see page 25) and some explanation for this is required. Given the economic and political situation in the country the project is very ambitious and risk negation measures identified in the Critical Risks may not be complete.</p>	<p>The <i>Project Brief</i> has been strengthened to include sustainability as a global objective and additional measures to ensure sustainability have been included in relevant components of the Project. Similarly, the scope of the <i>Risk Analysis</i> given in Table 2 has been increased to include an evaluation of the potential impact of political and economic instability.</p>
<p>2. Identification of the global environmental benefits and/or drawbacks: The global environmental benefits and any potential drawbacks are well set out in the project proposal and raise no specific criticisms.</p>	<p>No comment (N/C)</p>
<p>3. Fit with GEF goals and operational strategies: The project proposal appears to fit the GEF goals and operational strategies. There are no specific criticisms to be addressed.</p>	<p>N/C</p>
<p>4. Regional context: The regional context as well set out in the project brief. Successful implementation of the project would have substantial regional and global significance. The issue of continuing donor dependency is a concern and raises questions of the sustainability of the planned outcomes. Emphasis on strengthening the institutional framework rather than focusing on increasing the scientific base for conservation is a positive feature.</p>	<p><i>Donor dependency:</i> The STAP Reviewer's comments notwithstanding, it is our contention that there will inevitably be an element of the globally important biodiversity in developing countries like Pakistan that has very limited inherent potential to be self liquidating in respect of appropriate conservation measures. Such elements will continue to require international support proportionate to the global benefits that they represent. An example of such a resource in Pakistan is the unique high altitude wetlands complex of the <i>Deosai Plateau</i>.</p>

STAP Review	Response
<p>5. Replicability of the project: There is heavy dependence on IUCN [WWF] and its offices in Pakistan for the implementation of the project. It is not clear how this arrangement will be integrated with the line responsibilities of key government and Pakistan agencies, or whether these agencies will gain valuable experience if an NGO is leading the initiative. If these arrangements are fully acceptable and [are] project activities are implemented in an effective manner, there is good potential to replicate the project within other areas of Pakistan and the surrounding region.</p>	<p>Although there is an initial dependence on the lead technical agency to implement components of the Project such as the <i>Immediate Action Plans (Outputs 7.3, 8.3, 9.3 and 10.3)</i> and resource analyses, the <i>Project Brief</i> has now been amended to clarify that this dependence will gradually decrease as the capacity of government and community-based institutions is enhanced (<i>Outputs: 1.1, 7.1, 8.1, 9.1 and 10.1</i>). It is envisaged that overall stewardship of wetlands resources in the <i>Demonstration Sites</i> will have passed from the Project to the NCCW, <i>Wetlands Management Committees</i> and <i>Village Conservation Committees</i> by the end of PY 5.</p>
<p>6. Secondary issues: There are a number of more secondary issues that could be better addressed, namely:</p>	<p>N/C</p>
<p>6.1 Linkages to other focal areas: The relationship of the proposed project to established GEF operational strategies for biodiversity and operational programmes for enhanced management of terrestrial, coastal and marine wetland ecosystems could be made more explicit.</p>	<p>The Project Brief has been substantially amended to describe links with GEF's <i>Operational Programmes (See: Section 7 – Eligibility under the CBD and Section 8 – Eligibility for GEF Financing)</i>.</p>
<p>6.2 Linkages to other programmes and action plans: The project is clearly linked to other current initiatives. For example that the TRAC -funded UNDP Sustainable Livelihoods Programme, the UNDP-financed <i>National Environmental Action Plan (NEAP) Support Programme, UNDP-funded Fuel Efficiency in Road Transport Sector Project, Kasur Tanneries Pollution Control Project and Institutional Strengthening for Implementation of the Montreal Protocol, Mountain Areas Conservancy Project (MACP) UNDP/GEF, Palas Conservation and Development project the (PCDP), DFID, and the Protected Areas Management Project (PAMP) World Bank/GEF.</i></p>	<p>N/C</p>
<p>There are significant potential benefits that could be derived from these linkages. However, the Project Brief, as set out indicates heavy dependence on these programmes for much of the innovative community-based conservation ideas and effort is required to support wetlands conservation.</p>	<p>The Project Brief has been strengthened to mention the linkages and benefits to project design from approaches followed in on-going initiatives elsewhere in Pakistan and the sub-region. We agree with the Reviewer's comment that the Project has replicated approaches to community-based management followed by other projects and consider this as a strong aspect of project design. Such adopted approaches will, however, be applied only in so far as they are appropriate to meet the socio-economic conditions at each site. The idiosyncrasies associated with wetlands management in Pakistan are likely to often require the development of unique site-based solutions.</p>

STAP Review	Response
<p>6.3 Other benefits or damaging environmental effects: A major potential benefit is that the proposed project is likely to demonstrate to different sectors and local communities the "worth" of wetlands conservation. This could be strengthened by undertakings in basic resources/environmental economics evaluations of the role of wetlands and wetland resources in sustaining the national as well as more local economies. This is alluded to in the text, but is not illustrated with any real numbers. If the environmental and pecuniary values of the wetlands could be illustrated, it would help to reinforce the general understanding of the benefits to be gained by improving wetlands conservation and sustainable use of wetlands resources.</p> <p>There are no perceived adverse environmental effects.</p>	<p>The comprehensive spectrum of surveys envisaged in <i>Outputs 2.2, 5.2, 7.2, 8.2, 9.2 and 10.2</i> will provide the ecological and socio-economic information necessary to prepare relatively detailed economic evaluations of wetlands resources and their management. These datasets will provide a basis for enhanced economic <i>decision support systems</i> and resource management tools.</p>

STAP Review

6.4 Degree of involvement of stakeholders in the project: The proposal is weak in this area and does not articulate how linkages will be established between primary, secondary and key stakeholders. Paragraph 522 outlines the consultation process used in developing the proposal. The Project Brief states "... poverty and subsistence uses are at the root of threats to wetlands biodiversity, the goal of conservation initiatives within this project is closely tied to community involvement within the chosen sites. A reduction in anthropogenic threats will be achieved through community agreements on limiting resource-use and investment in livelihood diversification. The project will support and strengthen community institutions to sustainably manage wetlands and their associated biodiversity."

However, the proposal does not give sufficient detail as to how the substantive stakeholder involvement will be implemented. Target populations should be clearly articulated for relevant project outputs. Mention is also made of developing alternative livelihoods for each of the selected wetlands complex is, but no substantive information is given as to how this will be undertaken.

Furthermore the project is heavily skewed to a top down approach – initiating an effective and sustainable institutional framework is important but the proposal does not give specific explanations as to how the needs and aspirations of the communities who will be impacted by the project activities will be addressed. Mention is made of consultations with stakeholder groups and activities such as developing local agreements on levels of natural resource use. However, the financial and human resources, time, and technical support required to develop effective community-based support and active participation in wetlands conservation may be underestimated.

The balance of investment appears to out of balance with the key issue of poverty driving people to misuse wetlands. For example, investment in local management committees (e.g. Output 7.1: A Site Management Team is established in or adjacent the MCWC and an Interim Wetlands Management Committee is constituted – US\$ 655.029K versus the investment in developing alternative diversified livelihoods (e.g. Output 7.5: An active programme to develop alternate or diversified livelihoods is implemented for communities that are wholly or partly dependent on wetlands resources or on resource-use patterns that lead to the indirect degradation of wetlands US\$ 50K).

Response

Stakeholder Involvement: We submit that it was beyond the scope of the PDF (B) phase of the Project to provide details of anticipated interrelationships between key stakeholders. Broad guidelines have been described in the Project Brief but detailed or individual solutions will depend on the outcome of specific investigations (Outputs 7.2, 8.2, 9.2 and 10.2) of the actual "mix" of stakeholders peculiar to each intervention or site. A preliminary evaluation of stakeholder involvement by Project Outputs has been developed in response to the STAP Reviewer's comments. This analysis is summarised in *Optional Annex 35*. The details have been based on a series of rapid appraisals, are essentially speculative and are intended to give only an idea of the scope of the Project.

Top down approach: We contend that the Project does not follow a "top down approach." The Project Brief contains provision for involving a wide spectrum of stakeholders from various echelons of society in the institutional arrangements. The aspirations of local communities will be met through their representation in VCCs. Even in the wake of recent political reforms, accelerating the devolution of administrative power, it must be recognised that Pakistan is traditionally an autocratic society. The Brief has effectively accommodated this reality by proposing in-depth training for leadership elements (Output 4) at all levels. In our view, this is a credible attempt to minimise the inadequacies of an autocratic system, not an enhancement of top down management. Furthermore, the extensive public awareness campaigns (Output 5) are most likely to raise wetlands conservation as a democratic, political issue which will mitigate against top down management and facilitate grassroots involvement in NRM.

Balance of investment: This comment has been addressed in the response to Section 1 of the STAP Review - *Scientific and Technical Soundness of the Project*.

STAP Review	Response
<p>6.5 Capacity-building: Although included as an integral component of the project, the detail of how this will be accomplished is weak. It is not clear how capacity-building developed during the life of the project will be maintained or even extended as a self-sustaining output beyond the life of the project.</p>	<p>The training aspects of the Project are designed to be as cost-effective as possible in order to be financially viable in the future. Most of the outputs related to formal training, such as the development of course <i>curricula</i>, would be complete by the end of the Project. The recurring costs associated with course presentation are expected to be low as many of the training programmes have been designed to form part of existing course <i>curricula</i> (e.g. <i>Outputs 4.3 and 4.4</i>). It is also expected that increased public awareness for the true worth of conservation measures will translate into a willingness to invest more in NRM.</p>
<p>6.6 Innovativeness of the project: The proposal has three innovative elements, namely:</p> <ul style="list-style-type: none"> 1 Establishment of a comprehensive programme to enhance the understanding that the country's leadership element has for the fundamental principles of and approaches to wetlands management institutional framework to support (and benefits from conservation) is in innovative feature; 1 Broad-based public awareness programme that will endeavour to energise the public at-large; <p>The project proposes to include entire complexes of associated wetlands in the demonstration sites rather than focusing on isolated resources.</p>	<p>N/C</p>

STAP Review	Response
<p>7. Conclusions: The proposed project is worthy of support. It is an ambitious undertaking that will depend largely upon close collaboration with a number of other donor-funded projects and a wide body of public support if it is to be successful and the outputs will be self-sustaining. Such support will require effective stakeholder involvement in the development of the planned activities and their ongoing implementation. The longer-term maintenance of proposed wetlands conservation activities will continue to depend on strong donor support.</p> <p>There is a lack of specific detail as to how Interested and Affected Parties (IAPs) and a wide cross-section of stakeholders will be encouraged to take an active part and work towards fulfilling the project's objectives. Experience elsewhere has demonstrated the importance of engaging IAPs and other stakeholders at an early stage in project formulation, and the need to empower these participants through effective information exchange and to enable them to play an active part in planned activities.</p> <p>Given that specific measures are taken to strengthen this part of the Project Brief Document, the project has good prospects of meeting its stated objectives and creating some self-sustaining outputs.</p>	<p>N/C</p>
<p>I trust that these comments will be of help in reviewing the proposal.</p> <p>Professor Peter R. Burbridge Centre for Coastal Management University of Newcastle upon Tyne England</p>	<p>We trust that the STAP reviewer's constructive criticism and recommendations have been adequately responded to.</p> <p>Richard Garstang, Project Manager, Pakistan Wetlands Project, Lahore, Pakistan</p>

MONITORING AND EVALUATION PLAN

Project monitoring and evaluation will be conducted in accordance with established UNDP and GEF procedures and will be provided by the project team and the UNDP Country Office (UNDP-CO) with support from UNDP/GEF. The Logical Framework Matrix in Annex 1 provides *performance* and *impact* indicators for project implementation along with their corresponding *means of verification*. These will form the basis on which the project's Monitoring and Evaluation system will be built.

The following sections outline the principle components of the Monitoring and Evaluation Plan and indicative cost estimates related to M&E activities. The project's Monitoring and Evaluation Plan will be presented and finalized at the Project's Inception Report following a collective fine-tuning of indicators, means of verification, and the full definition of project staff M&E responsibilities.

1. MONITORING AND REPORTING

1.1. Project Inception Phase

A Project Inception Workshop will be conducted with the full project team, relevant government counterparts, co-financing partners, the UNDP-CO and representation from the UNDP-GEF Regional Coordinating Unit, as well as UNDP-GEF (HQs) as appropriate.

A fundamental objective of this Inception Workshop will be to assist the project team to understand and take ownership of the project's goals and objectives, as well as finalize preparation of the project's first annual workplan on the basis of the project's logframe matrix. This will include reviewing the logframe (indicators, means of verification, assumptions), imparting additional detail as needed, and on the basis of this exercise finalize the Annual Work Plan (AWP) with precise and measurable performance indicators, and in a manner consistent with the expected outcomes for the project.

Additionally, the purpose and objective of the Inception Workshop (IW) will be to: (i) introduce project staff with the UNDP-GEF *expanded team* which will support the project during its implementation, namely the CO and responsible Regional Coordinating Unit staff; (ii) detail the roles, support services and complementary responsibilities of UNDP-CO and RCU staff vis a vis the project team; (iii) provide a detailed overview of UNDP-GEF reporting and monitoring and evaluation (M&E) requirements, with particular emphasis on the Annual Project Implementation Reviews (PIRs) and related documentation, the Annual Project Report (APR), Tripartite Review Meetings, as well as mid-term and final evaluations. Equally, the IW will provide an opportunity to inform the project team on UNDP project related budgetary planning, budget reviews, and mandatory budget rephasings.

The IW will also provide an opportunity for all parties to understand their roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff and decision-making structures will be discussed again, as needed, in order to clarify for all each parties responsibilities during the project's implementation phase.

1.2. Monitoring responsibilities and events

A detailed schedule of project reviews meetings will be developed by the project management, in consultation with project implementation partners and stakeholder representatives and incorporated in the Project Inception Report. Such a schedule will include: (i) tentative time frames for Tripartite Reviews, Steering Committee Meetings, (or relevant advisory and/or coordination mechanisms) and (ii) project related Monitoring and Evaluation activities.

Day to day monitoring of implementation progress will be the responsibility of the Project Coordinator, Director or CTA (depending on the established project structure) based on the project's Annual Workplan and its indicators. The Project Team will inform the UNDP-CO of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely and remedial fashion.

The Project Coordinator and the Project GEF Technical Advisor will fine-tune the progress and performance/impact indicators of the project in consultation with the full project team at the Inception Workshop with support from UNDP-CO and assisted by the UNDP-GEF Regional Coordinating Unit.. Specific targets for the first year implementation progress indicators together with their means of verification will be developed at this Workshop. These will be used to

assess whether implementation is proceeding at the intended pace and in the right direction and will form part of the Annual Workplan. The local implementing agencies will also take part in the Inception Workshop in which a common vision of overall project goals will be established. Targets and indicators for subsequent years would be defined annually as part of the internal evaluation and planning processes undertaken by the project team.

Measurement of impact indicators related to global benefits will occur according to the schedules defined in the Inception Workshop and tentatively outlined in the indicative Impact Measurement Template at the end of this Annex. The measurement, of these will be undertaken through subcontracts or retainers with relevant institutions (e.g. vegetation cover via analysis of satellite imagery, or populations of key species through inventories) or through specific studies that are to form part of the projects activities (e.g. measurement carbon benefits from improved efficiency of ovens or through surveys for capacity building efforts) or periodic sampling such as with sedimentation.

Periodic monitoring of implementation progress will be undertaken by the UNDP-CO through quarterly meetings with the project proponent, or more frequently as deemed necessary. This will allow parties to take stock and to troubleshoot any problems pertaining to the project in a timely fashion to ensure smooth implementation of project activities.

UNDP Country Offices and UNDP-GEF RCUs as appropriate, will conduct yearly visits to projects that have field sites, or more often based on an agreed upon schedule to be detailed in the project's Inception Report / Annual Workplan. to assess first hand project progress. Any other member of the Steering Committee can also accompany, as decided by the SC. A Field Visit Report will be prepared by the CO and circulated no less than one month after the visit to the project team, all SC members, and UNDP-GEF.

Annual Monitoring will occur through the **Tripartite Review (TPR)**. This is the highest policy-level meeting of parties directly involved in the implementation of a project. The project will be subject to Tripartite Review (TPR) least once every year. The first such meeting will be held within the first twelve months of the start of implementation. The project proponent will prepare an Annual Project Report (APR) and submit it to UNDP-CO and UNDP-GEF regional office at least two weeks prior to the TPR for review and comments.

The APR will be used as one of the basic documents for discussions in the TPR meeting. The project proponent present the APR to the TPR, highlighting policy issues and recommendations for the decision of the TPR participants. The project proponent also informs the participants of any agreement reached by stakeholders during the APR preparation on how to resolve operational issues. Separate reviews of each project component may also be conducted if necessary.

Terminal Tripartite Review (TTR)

The terminal tripartite review is held in the last month of project operations. The project proponent is responsible for preparing the Terminal Report and submitting it to UNDP-CO and LAC-GEF's Regional Coordinating Unit. It shall be prepared in draft at least two months in advance of the TTR in order to allow review, and will serve as the basis for discussions in the TTR. The terminal tripartite review considers the implementation of the project as a whole, paying particular attention to whether the project has achieved its stated objectives and contributed to the broader environmental objective. It decides whether any actions are still necessary, particularly in relation to sustainability of project results, and acts as a vehicle through which lessons learnt can be captured to feed into other projects under implementation of formulation.

The TPR has the authority to suspend disbursement if project performance benchmarks are not met. Benchmarks are provided in Annex .../will be developed at the Inception Workshop, based on delivery rates, and qualitative assessments of achievements of outputs.

1.3. Project Monitoring Reporting

The Project Coordinator in conjunction with the UNDP-GEF extended team will be responsible for the preparation and submission of the following reports that form part of the monitoring process. Items (a) through (f) are mandatory and strictly related to monitoring, while (g) through (h) have a broader function and the frequency and nature is project specific to be defined throughout implementation.

(a) Inception Report (IR)

A Project Inception Report will be prepared immediately following the Inception Workshop. It will include a detailed First Year/ Annual Work Plan divided in quarterly time-frames detailing the activities and progress indicators that will guide implementation during the first year of the project. This Work Plan would include the dates of specific field visits, support missions from the UNDP-CO or the Regional Coordinating Unit (RCU) or consultants, as well as time-frames for meetings of the project's decision making structures. The Report will also include the detailed project budget for the first full year of implementation, prepared on the basis of the Annual Work Plan, and including any monitoring and evaluation requirements to effectively measure project performance during the targeted 12 months time-frame.

The Inception Report will include a more detailed narrative on the institutional roles, responsibilities, coordinating actions and feedback mechanisms of project related partners. In addition, a section will be included on progress to date on project establishment and start-up activities and an update of any changed external conditions that may effect project implementation.

When finalized the report will be circulated to project counterparts who will be given a period of one calendar month in which to respond with comments or queries. Prior to this circulation of the IR, the UNDP Country Office and UNDP-GEF's Regional Coordinating Unit will review the document.

Annual Project Report (APR)

The APR is a UNDP requirement and part of UNDP's Country Office central oversight, monitoring and project management. It is a self-assessment report by project management to the CO and provides input to the country office reporting process and the ROAR, as well as forming a key input to the Tripartite Project Review. An APR will be prepared on an annual basis prior to the Tripartite Project Review, to reflect progress achieved in meeting the project's Annual Work Plan and assess performance of the project in contributing to intended outcomes through outputs and partnership work.

The format of the APR is flexible but should include the following:

- An analysis of project performance over the reporting period, including outputs produced and, where possible, information on the status of the outcome
- The constraints experienced in the progress towards results and the reasons for these
- The three (at most) major constraints to achievement of results
- AWP, CAE and other expenditure reports (ERP generated)
- Lessons learned
- Clear recommendations for future orientation in addressing key problems in lack of progress

(b) Project Implementation Review (PIR)

The PIR is an annual monitoring process mandated by the GEF. It has become an essential management monitoring tool for project managers and offers the main vehicle for extracting lessons from ongoing projects. Or project has been under implementation for a year, a Project Implementation Report must be completed by together with the project. The PIR can be prepared any time during the year (July-June) and ideally prior to the TPR. The PIR should then be discussed in the TPR so that the result would be a PIR that has been agreed upon by the project, the executing agency, UNDP CO and the concerned RC.

The individual PIRs are collected, reviewed and analysed by the RCs prior to sending them to the focal area clusters at the UNDP/GEF headquarters. The focal area clusters supported by the UNDP/GEF M&E Unit analyse the PIRs by focal area, theme and region for common issues/results and lessons. The TAs and PTAs play a key role in this consolidating analysis.

The focal area PIRs are then discussed in the GEF Interagency Focal Area Task Forces in or around November each year and consolidated reports by focal area are collated by the GEF Independent M&E Unit based on the Task Force findings.

The GEF M&E Unit provides the scope and content of the PIR. In light of the similarities of both APR and PIR, UNDP/GEF has prepared a harmonized format for reference. Please refer to Annex H-3.

(c) Quarterly Progress Reports

Short reports outlining main updates in project progress will be provided quarterly to the local UNDP Country Office and the UNDP-GEF regional office by the project team. See format attached.

(d) Periodic Thematic Reports

As and when called for by UNDP, UNDP-GEF or the Implementing Partner, the project team will prepare Sp Thematic Reports, focusing on specific issues or areas of activity. The request for a Thematic Report will be pro to the project team in written form by UNDP and will clearly state the issue or activities that need to be reporte These reports can be used as a form of lessons learnt exercise, specific oversight in key areas, or as troubleshc exercises to evaluate and overcome obstacles and difficulties encountered. UNDP is requested to minimiz requests for Thematic Reports, and when such are necessary will allow reasonable timeframes for their preparati the project team.

(e) Project Terminal Report

During the last three months of the project the project team will prepare the Project Terminal Report. This comprehensive report will summarize all activities, achievements and outputs of the Project, lessons learnt, objectives met, or not achieved, structures and systems implemented, etc. and will be the definitive statement of the Project's activities during its lifetime. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the Project's activities.

(f) Technical Reports (project specific- optional)

Technical Reports are detailed documents covering specific areas of analysis or scientific specializations within the overall project. As part of the Inception Report, the project team will prepare a draft Reports List, detailing the technical reports that are expected to be prepared on key areas of activity during the course of the Project, and tentative due dates. Where necessary this Reports List will be revised and updated, and included in subsequent APRs. Technical Reports may also be prepared by external consultants and should be comprehensive, specialized analyses of clearly defined areas of research within the framework of the project and its sites. These technical reports will represent, as appropriate, the project's substantive contribution to specific areas, and will be used in efforts to disseminate relevant information and best practices at local, national and international levels.

(g) Project Publications (project specific- optional)

Project Publications will form a key method of crystallizing and disseminating the results and achievements of the Project. These publications may be scientific or informational texts on the activities and achievements of the Project, in the form of journal articles, multimedia publications, etc. These publications can be based on Technical Reports, depending upon the relevance, scientific worth, etc. of these Reports, or may be summaries or compilations of a series of Technical Reports and other research. The project team will determine if any of the Technical Reports merit formal publication, and will also (in consultation with UNDP, the government and other relevant stakeholder groups) plan and produce these Publications in a consistent and recognizable format. Project resources will need to be defined and allocated for these activities as appropriate and in a manner commensurate with the project's budget.

2. INDEPENDENT EVALUATION

The project will be subjected to at least two independent external evaluations as follows:-

(i) Mid-term Evaluation

An independent Mid-Term Evaluation will be undertaken at the end of the second year of implementation. The Mi Term Evaluation will determine progress being made towards the achievement of outcomes and will identify courr correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation

will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

(ii) Final Evaluation

An independent Final Evaluation will take place three months prior to the terminal tripartite review meeting, and will focus on the same issues as the mid-term evaluation. The final evaluation will also look at impact and sustainability results, including the contribution to capacity development and the achievement of global environmental goals. The Final Evaluation should also provide recommendations for follow-up activities. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

Audit Clause

The Government will provide the Resident Representative with certified periodic financial statements, and with an annual audit of the financial statements relating to the status of UNDP (including GEF) funds according to the established procedures set out in the Programming and Finance manuals. The Audit will be conducted by the legally recognized auditor of the Government, or by a commercial auditor engaged by the Government.

3. LEARNING AND KNOWLEDGE SHARING

Results from the project will be disseminated within and beyond the project intervention zone through a number of existing information sharing networks and forums. In addition:

- ◆ The project will participate, as relevant and appropriate, in UNDP/GEF sponsored networks, organized for Senior Personnel working on projects that share common characteristics. UNDP/GEF shall establish a number of networks, such as Integrated Ecosystem Management, eco-tourism, co-management, etc, that will largely function on the basis of an electronic platform.
- ◆ The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation through lessons learned.

The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects. Identify and analyzing lessons learned is an on-going process, and the need to communicate such lessons as one of the project's central contributions is a requirement to be delivered not less frequently than once every 12 months. UNDP/GEF shall provide a format and assist the project team in categorizing, documenting and reporting on lessons learned. To this end a percentage of project resources will need to be allocated for these activities.

TABLE G-1 : INDICATIVE MONITORING AND EVALUATION WORK PLAN AND CORRESPONDING BUDGET

Type of M&E activity	Responsible Parties	Budget US\$ <i>Excluding project team Staff time</i>	Time frame
Inception Workshop	<ul style="list-style-type: none"> ▪ Project Coordinator ▪ UNDP CO ▪ UNDP GEF 		Within first two months of project start up
Inception Report	<ul style="list-style-type: none"> ▪ Project Team ▪ UNDP CO 	None	Immediately following IW
Measurement of Means of Verification for Project Purpose Indicators	<ul style="list-style-type: none"> ▪ Project Coordinator will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members 	To be finalized in Inception Phase and Workshop. Indicative cost XXXX	Start, mid and end of project
Measurement of Means of Verification for Project Progress and Performance (measured on an annual basis)	<ul style="list-style-type: none"> ▪ Oversight by Project GEF Technical Advisor and Project Coordinator ▪ Measurements by regional field officers and local IAs 	To be determined as part of the Annual Work Plan's preparation. Indicative cost xxxx.	Annually prior to APR/PIR and to the definition of annual work plans
APR and PIR	<ul style="list-style-type: none"> ▪ Project Team ▪ UNDP-CO ▪ UNDP-GEF 	None	Annually
TPR and TPR report	<ul style="list-style-type: none"> ▪ Government Counterparts ▪ UNDP CO ▪ Project team ▪ UNDP-GEF Regional Coordinating Unit 	None	Every year, upon receipt of APR
Steering Committee Meetings	<ul style="list-style-type: none"> ▪ Project Coordinator ▪ UNDP CO 	None	Following Project IW and subsequently at least once a year
Periodic status reports	<ul style="list-style-type: none"> ▪ Project team 	5,000	To be determined by Project team and UNDP CO
Technical reports	<ul style="list-style-type: none"> ▪ Project team ▪ Hired consultants as needed 	15,000	To be determined by Project Team and UNDP-CO
Mid-term External Evaluation	<ul style="list-style-type: none"> ▪ Project team ▪ UNDP- CO ▪ UNDP-GEF Regional Coordinating Unit ▪ External Consultants (i.e. evaluation team) 	20,000	At the mid-point of project implementation.
Final External Evaluation	<ul style="list-style-type: none"> ▪ Project team, ▪ UNDP-CO ▪ UNDP-GEF Regional Coordinating Unit ▪ External Consultants (i.e. evaluation team) 	30,000	At the end of project implementation
Terminal Report	<ul style="list-style-type: none"> ▪ Project team ▪ UNDP-CO ▪ External Consultant 	None	At least one month before the end of the project
Lessons learned	<ul style="list-style-type: none"> ▪ Project team ▪ UNDP-GEF Regional Coordinating Unit (suggested formats for 	15,000 (average 3,000 per year)	Yearly

	documenting best practices, etc)		
Audit	<ul style="list-style-type: none"> ▪ UNDP-CO ▪ Project team 	4,000 (average \$1000 per year)	Yearly
Visits to field sites (UNDP staff travel costs to be charged to IA fees)	<ul style="list-style-type: none"> ▪ UNDP Country Office ▪ UNDP-GEF Regional Coordinating Unit (as appropriate) ▪ Government representatives 	15,000 (average one visit per year)	Yearly
TOTAL INDICATIVE COST <i>Excluding project team staff time and UNDP staff and travel expenses</i>		US\$ 250,000 ¹	

ANNEX 9: STAKEHOLDER PARTICIPATION PLAN

Stakeholders Involved in Project Activities by Outputs

Outputs	Government Stakeholders	Other International Agencies and NGO Stakeholders	Private Sector Stakeholders	Custodian Community Stakeholders
Objective 1				
1.1	NCCW, MELGRD, Provincial and AJK Depts of Wildlife and Forestry	WWF-P, UNDP and other donors	-	-
1.2	NCCW, Provincial and AJK Depts of Wildlife and Forestry	WWF-P, UNDP and other donors	-	-
1.3	NCCW, Provincial and AJK Depts of Wildlife and Forestry	WWF-P, UNDP and other donors	-	-
Objective 2				
2.1-2.2	Provincial Departments of Wildlife, Forestry, EPAs, Pakistan Museum of Natural History, Zoological Survey Dept, Pakistan Forestry Dept and Punjab Wildlife Research Institute	WWF, IUCN, Wetlands International, National Rural Support Programme		Village Conservation Committees, Local CBOs
2.3	NCCW, MELGRD, AJK and Provincial Depts of Wildlife and Forestry	WWF, IUCN, Ramsar Secretariat, CIESEN,		
Objective 3				
3.1-3.3	Federal Cabinet, NCCW, MELGRD, AJK and Provincial Depts of Wildlife Forestry, Agriculture, Fisheries, Land Revenue and Registration and Irrigation, WAPDA, Armed Forces, Coast Guards	IUCN, WWF	Power companies, fertiliser plants etc	Custodian communities living near wetlands. Other stakeholders such as hunters and tourists interacting with wetlands occasionally

Objective 4				
4.1-4.9	MELGRD, NCCW, AJK and Provincial Wildlife, Forestry Depts, Pakistan Military Academy, Pakistan Civil Services Academy, National Institute of Public Administration	WWF-P, IUCN, Wetlands International, Wildfowl and Wetlands Trust.	Private schools, colleges and universities in Pakistan	CBOs in Wetland Complexes
Objective 5				
5.1-5.4 and 5.10	MELGRD, NCCW, AJK and Provincial Wildlife, Forestry Depts	DfID, WWF, Ramsar Secretariat, WI, WWT, Other international organisations		A cross section of society from urban and rural areas (survey)
5.5	MELGRD, NCCW, AJK and Provincial Wildlife, Forestry Depts	WWF, Ministry of Education, DfID, EU	Primary schools (private sector)	Children under 10 years of age
5.6	MELGRD, NCCW, AJK and Provincial Wildlife, Forestry Depts, Ministry of Religious Affairs	WWF, Teacher's Resource Centre (Karachi)	Mosques and Islamic Centres in major cities	Individual religious leaders and imams in mosques located in Wetland Complexes
5.7	MELGRD, NCCW, AJK and Provincial Wildlife, Forestry Depts, Ministry of Information and Broadcasting	DfID, WWF, EU	British Petroleum (Pakistan), Major English, Urdu and regional language dailies, independent multimedia programme producers, advertising and media agencies	Public at large, tourists visiting wetland sites
5.8	MELGRD, NCCW, AJK and Provincial Wildlife, Forestry Departments	Hunters Associations	Gun Manufacturers and Distributors	Individual landlords who undertake sport hunting
5.9	MELGRD, NCCW, AJK and Provincial Wildlife, Forestry Departments	WWF, GEF, UNDP, EU	Heerak Foundation, Punjab Lok RaHS (Street Theatre groups)	Custodian communities in CIWC
5.11	MELGRD, NCCW, AJK and Provincial Wildlife, Forestry Departments	WWF	Educational and scientific institutions	

Objective 6				
6.1-6.3	MELGRD, NCCW, AJK and Provincial Wildlife, Forestry Departments	WWF	Large international corporations (Shell Internat'l, ICI etc)	CBOs, custodian communities interacting with wetlands
Objective 7				
7.1-7.3 & 7.7	Balochistan Wildlife, Forestry and Fisheries Depts, District Nazims, Coast Guards, Pakistan Navy, Zoological Survey Dept, Marine Security Agency, National Institute of Oceanography, National Agriculture Research Council (Aquaculture and Fisheries Unit), Centre for Excellence in Marine Biology (Karachi University) and MCWC Conservation Committee	WWF, Houbara Foundation		Pakistan Fishermen's Forum, Representatives from Village Conservation Committees,
7.4-7.6 and 7.8	Balochistan Wildlife, Forestry and Fisheries Depts, District Nazims, Dept of Tourism and MCWC Conservation Committee	WWF, BRSP (NRSP), ENERCON (fuel technology solutions), GTZ, SIDA, UNDP, Adventure Foundation-Pakistan	ENGRO Ltd, Power companies	Tribal leaders, Village Conservation Committees, fishing communities, mangrove users, women.
7.9	Marine Security Agency, National Institute of Oceanography, Marine Security Agency, Coastal Development Authority and MCWC Conservation Committee	WWF, IUCN	Oil Corporations (Shell, BP, Pakistan State Oil), Fishing Trawlers (both private and commercial)	
7.10-7.12	Balochistan Wildlife, Forestry and Fisheries Depts, Karachi and Lahore Zoos, Pakistan Museum of Natural History	WWF, Houbara Foundation	Private Corporations (e.g. Mitsubishi-Pakistan,)	Village Conservation Committees, Fishing communities, hunters

Objective 8				
8.1, 8.3 and 8.7	NCCW, Sindh Wildlife and Forest Depts, District Nazims and CIWC Conservation Committee	WWF, Ornithological Society of Pakistan	AES Pakistan, British Petroleum (Pakistan), Kot Addu Power Plant, Engro Chemicals, Liberty Power Plant, Mitsubishi (Pakistan)	Village Conservation Committees, Local landlords, Tribal leaders, Migrant communities
8.2	NCCW, Provincial Wildlife, Forestry, Fisheries, Agriculture, Irrigation and Revenue Department (Land registry) and CIWC Conservation Committee	WWF, Ramsar Secretariat, Wetlands International,	Do	Village Conservation Committees, Farmers, land owners in the vicinity of wetlands
8.4-8.8 and 8.10	NCCW, Provincial Wildlife, Forestry, Fisheries and Agriculture Departments, Ministry of Tourism and CIWC Conservation Committee	WWF, Adventure Foundation-Pakistan, NRSP, UNDP, European Union, Food and Agriculture Organisation	Do	Village Conservation Committees, migrant communities, women, landless households using wetlands intensively
8.9, 8.11 and 8.12	Punjab and Sindh Wildlife and Forestry Depts. Zoological Survey Department, Punjab Wildlife Research Institute and CIWC Conservation Committee	WWF	Do	Village Conservation Committees
Objective 9				
9.1 – 9.3 and 9.7	NCCW, Punjab Wildlife, Forestry, Land Revenue and Agriculture Dept, National Herbarium, Zoological Survey Dept, District Nazims and SRWC Conservation Committee and SRWC Conservation Committee	WWF		Village Conservation Committees, Soan Valley Development Organisation,
9.4 – 9.6 and 9.8	Punjab Social Welfare Department, Punjab Tourism Corporation and SRWC Conservation Committee	WWF, Adventure Foundation of Pakistan, Food and Agriculture Organisation		Soan Valley Development Organisation, Retired Army Officers Welfare Organisation
9.9 - 9.13	NCCW, Punjab Wildlife, Forestry and	WWF		Village Conservation

	Livestock Departments, Punjab Wildlife Research Institute, Agriculture University (Faisalabad), Houbara Foundation and SRWC Conservation Committee			Committees, graziers, farmers
Objective 10				
10.1-10.3 and 10.7	NCCW, NWFP Wildlife and Forestry Departments, Pakistan Forestry Institute and NAWC Conservation Committee	WWF		Village Conservation Committees
10.4-10.6 and 10.8	NCCW, NWFP Wildlife and Forestry Departments, Pakistan Tourism Development Corporation	WWF, Agha Khan Rural Support Programme, Sunghi, Sarhad Rural Support Programme, Canadian International Development Agency		Village Conservation Committees, graziers, migrant tribes
10.9-10.11	NCCW, NWFP Wildlife and Forestry Depts, Pakistan Forestry Institute and NAWC Conservation Committee			

ANNEX 9.1: PROTECTION AND MANAGEMENT OF PAKISTAN WETLANDS PROJECT - STAKEHOLDER INVOLVEMENT BY OUTPUTS

Outputs		Categories of Stakeholders			
		Government	Projects, NGOs, National International and Other Agencies	Private Sector (Potential)	Custodian Communities
Output 1					
1.1	A Project Coordinating Mechanism and Management Unit are established as interim project management mechanisms leading to the establishment of permanent federal government wetlands conservation entities.	Ministry of Environment (MoE), National Council for the Conservation of Wildlife (NCCW), Provincial/Territorial Departments of Wildlife and Forest.	WWF-P, United Nations Development Programme (UNDP) and European Union (EU).	-	-
1.2	A comprehensive inventory of equipment is acquired, effectively deployed, maintained and regularly upgraded for the duration of the Project.	NCCW, Provincial/Territorial Departments of Wildlife and Forests.	WWF-P, UNDP and EU.	BP, ICI, Pakistan Burma Shell (PBS), Mitsubishi Motors, etc.	-
1.3	Training courses for users of specialised equipment are developed and presented.	NCCW, Provincial/Territorial Departments of Wildlife and Forests, Maritime Security Agency, Pakistan Navy.	WWF-P, UNDP and EU.	-	-
Output 2					
2.1	A Wetlands Survey Programme Section is set up within the PMU under the overall direction of the NCCW.	Provincial/Territorial Departments of Wildlife, Forests, Provincial Environmental Protection Agencies (EPAs), Pakistan Museum of Natural History (PMNH), Zoological Survey Department (ZSD), Pakistan Forest Institute (PFI), Punjab Wildlife Research Institute (PWRI), Pakistan Space and Upper Atmosphere Research Commission (SUPARCO)	WWF-P, International Union for Conservation of Nature (IUCN-P), Wetlands International (WI), Rural Support Programme Network (RSPN).	-	-
2.2	A national wetlands survey programme is designed and implemented.	Provincial/Territorial Departments of Wildlife, Forests, EPAs, PMNH, ZSD, PFI, District and Tehsil Nazims and Administration.	WWF-P, IUCN-P, Wetlands International (WI), Wetlands and Wildfowl Trust (WWWT), RSPN.	BP, ICI, PBS, Nestle BP, ICI, PBS, Nestle	Village Conservation Committees (VCCs), Local CBOs.

¹ For an explanation of the acronyms relating to agencies listed in this table, see attached List of Projects, NGOs, National, International and Other Agencies.

Outputs	Categories of Stakeholders			Private Sector (Potential)	Custodian Communities
	Government	Projects, NGOs, National, International and Other Agencies			
2.3	The Pakistan Wetlands Geographic Information System (W-GIS) Database is enhanced and deployed to conservation agencies.	MoE, NCCW, Provincial/Territorial Departments of Wildlife and Forests, PFI, PWRI, District and Tehsil Nazim.	WWF-P, IUCN-P, Ramsar Secretariat, Centre for International Earth Science Information Network (CIESEN), WI, WWF.	-	-
Output 3					
3.1	A detailed contract for the formulation of a National Wetlands Conservation Strategy is developed and awarded.	MoE, NCCW, Provincial/Territorial Departments of Wildlife, Forests, Planning and Development Division of Ministry of Finance (P&D).	IUCN-P, WWF-P, UNDP, Environmental Donors Coordination Group (EDCG).	-	Custodian communities living near wetlands.
3.2	NWCS policy development phase is implemented.	Federal Cabinet, MoE, NCCW, Provincial/Territorial Departments of Wildlife Forests, Agriculture, Fisheries, Land Revenue and Registration, Tourism, Irrigation, WAPDA, Armed Forces, Coast Guards, Federal Chamber of Commerce.	IUCN-P, WWF-P, UNDP, NRSP, Shirkat Gah, Sunghi, Sustainable Development Policy Institute (SDPI).	-	-
3.3	The formulated NWCS is officially adopted at federal, provincial/territorial and community level.	Federal Cabinet, MoE, NCCW, Provincial/Territorial Departments of Wildlife, Forests, Agriculture, Fisheries, Land Revenue and Registration, Tourism, Irrigation, Water And Power Development Authority (WAPDA), Armed Forces, Pakistan Coast Guards, Federal Chamber of Commerce.	IUCN-P, WWF-P, UNDP, NRSP, Shirkat Gah, Sunghi, SDPI.	-	-
Output 4					
4.1	A Training and Capacity Building Section is established within the PMU.	MoE, NCCW, PFI, Provincial/Territorial Wildlife and Forests Departments, ZSD.	WWF-P, WI, WWF.	-	-
4.2	Post-graduate university course in wetlands management is established.	MoE, NCCW, Provincial/Territorial Wildlife, Forests Departments, Peshawar University, Punjab University, Karachi University and Quaid-e-Azam University, Islamabad.	WWF-P, WI, WWF, Ramsar Secretariat.	Private universities in Pakistan.	-
4.3	Pre-service and in-service public service training for GoP bureaucrats is presented.	MoE, NCCW, Provincial/Territorial Wildlife, Forests Departments, PFI, Pakistan Civil Services Academy, National Institute of Public Administration.	WWF-P, WI, WWF.	-	-

Outputs		Categories of Stakeholders			
		Government	Projects, NGOs, National, International and Other Agencies	Private Sector (Potential)	Custodian Communities
4.4	NRM and wetlands training modules for military leader group are presented.	MoE, NCCW, Provincial/Territorial Wildlife and Forest Departments, Pakistan Military Academy, Pakistan Naval Academy, Pakistan Air Force Academy.	WWF-P, WI, WWT.	-	-
4.5	Directorate level in-service training courses for conservation agencies are presented.	MoE, NCCW, Provincial/Territorial Wildlife and Forest Departments, ZSD and National Herbarium (NH).	WWF-P, WI, WWT.	-	-
4.6	Professional field staff in-service field training courses are presented.	MoE, NCCW, Provincial/Territorial Wildlife and Forest Departments.	WWF-P, Sunghi, Agha Khan Rural Support Programme (AKRSP), NRSP, WI, WWT, South African National Parks Service (SANParks), EcoManage.	-	-
4.7	Proficiency courses for non-professional field staff are presented.	MoE, NCCW, Provincial/Territorial Wildlife and Forest Departments.	WWF-P, Sunghi, AKRSP, NRSP, RSPN.	-	CBOs in Wetland Complexes.
4.8	Custom-designed courses for CBOs are presented.	MoE, NCCW, Provincial/Territorial Wildlife and Forest Departments.	WWF-P, Sunghi, AKRSP, NRSP, RSPN.	-	CBOs in Wetland Complexes.
4.9	International in-service training courses for selected staff are arranged.	MoE, NCCW, Provincial/Territorial Wildlife and Forest Departments.	WWF-P, IUCN-P, Leadership for Environment and Development (LEAD), WI, WWT, Ramsar Secretariat, DFID.	-	CBOs in Wetland Complexes.
4.10	A comprehensive manual for conservation and management of wetlands in Pakistan is published.	MoE, NCCW, Provincial/Territorial Wildlife Departments, WAPDA, ZSD.	WW-P, IUCN-P.	Power companies, oil exploration companies.	CBOs in Wetland Complexes.
Output 5					
5.1	A Communications and Awareness Section is established within the PMU.	MoE, NCCW, Provincial/Territorial Wildlife, Forest Departments.	DFID, WWF-P, Ramsar Secretariat, WI, WWT, Other international organisations.	-	-
5.2	National public awareness and opinion surveys are conducted.	MoE, NCCW, Provincial/Territorial Wildlife and Forest Departments, Quaid-e-Azam University.	DFID, WWF-P, Ramsar Secretariat, WI, WWT, Sunghi, Shirkat Gah.	-	-
5.3	Communications and awareness building strategy is developed, approved and implemented.	MoE, NCCW, Provincial/Territorial Wildlife and Forest Departments, Ministry of Information and Media, Pakistan Television (PTV), Pakistan Radio.	DFID, WWF-P, Ramsar Secretariat, WI, WWT, Ducks Unlimited (DU).	-	-

Outputs		Categories of Stakeholders			Custodian Communities
		Government	Projects, NGOs, National, International and Other Agencies	Private Sector (Potential)	
5.4	A wetlands communication network is established.	MoE, NCCW, Provincial/Territorial Wildlife and Forest Departments, Ministry of Information and Media.	DFID, WWF-P, Ramsar Secretariat, WI, WWT, SDNPK of SDPI.	-	-
5.5	A primary schools outreach programme is designed and implemented.	MoE, NCCW, Provincial/Territorial Wildlife and Forest Departments, Ministry of Education.	WWF-P, Ministry of Education, DFID, Ali Institute of Education.	Beaconhouse School System, The City School System, Ali Institute of Education.	Children under 10 years of age.
5.6	A religious leaders outreach programme is implemented.	MoE, NCCW, Provincial/Territorial Wildlife and Forest Departments, Ministry of Religious Affairs.	WWF-P, Teacher's Resource Centre (Karachi).	Mosques and Islamic Centres in major cities, Jamia Ahrafiya, (Lahore).	Individual religious leaders and imams in mosques located in Wetland Complexes.
5.7	A comprehensive mass media outreach programme is implemented.	MoE, NCCW, Provincial/Territorial Wildlife and Forest Departments, Ministry of Information and Media, PTV, Pakistan Radio.	DFID, WWF-P, EU, Ajoka Theater.	BP (Pakistan), Major English, Urdu and regional language dailies, independent multimedia programme producers, advertising and media agencies.	Public at large and tourists visiting wetland sites.
5.8	A sports hunters outreach programme is designed and implemented.	MoE, NCCW, Provincial/Territorial Wildlife and Forest Departments.	Pakistan Hunters Forum, Safari Club International, DU.	Gun Manufacturers and Distributors.	Individual landlords who undertake sport hunting.
5.9	A public awareness programme based on street theatre performances is implemented.	MoE, NCCW, Provincial/Territorial Wildlife and Forest Departments.	WWF-P, EU.	Hirak Foundation, Punjab Lok Raahs, Ajoka Theatre, Pakistan Arts Council, Lok Virsa.	Custodian communities in CIWC.
5.10	A Pakistan wetlands website is commissioned and created.	MoE, NCCW, Provincial/Territorial Wildlife and Forest Departments.	WWF-P, DFID, Ramsar Secretariat, WI, WWT, SDNPK of SDPI.	-	A cross section of society from urban and rural areas.
5.11	Wetland exhibits for information centres are designed and installed.	MoE, NCCW, Provincial/Territorial Wildlife and Forest Departments, Pakistan Museum of Natural History, Lahore Zoo.	WWF-P.	National College of Arts.	Visitors to Zoos.

Outputs		Categories of Stakeholders			
		Government	Projects, NGOs, National, International and Other Agencies	Private Sector (Potential)	Custodian Communities
Output 6					
6.1	A Fundraising and Financial Sustainability Section is established.	MoE, NCCW, Provincial/Territorial Wildlife and Forest Departments.	WWF-P.	Lahore University of Management Sciences (LUMS), Nestle, PBS, ICI, etc.	-
6.2	Financial sustainability needs assessments are conducted.	MoE, NCCW, Provincial/Territorial Wildlife and Forest Departments.	WWF-P, IUCN-P, AKRSP.	LUMS, PBS, ICI, Nestle, etc.	CBOs, custodian communities interacting with wetlands.
6.3	Fund-raising options and initiatives are implemented.	MoE, NCCW, Provincial/Territorial Wildlife and Forest Departments.	WWF-P, AKRSP, NRSPs.	PBS, ICI, Nestle, etc.	-
Output 7					
7.1	Institutions are established to integrate wetland conservation into local and provincial land use planning in the MCWC.	Balochistan Wildlife, Forest and Fisheries Departments, District and Tehsil Nazims, Pakistan Coast Guards, Pakistan Navy, ZSD, Marine Security Agency, National Institute of Oceanography (NIO), Marine Reference Collection Centre of Karachi University (MRCC), Gwadar Port Trust Authority (GPTA).	WWF-P Houbara Foundation (HF), Human Welfare and Nature Conservation Society (HWNCS), Pakistan Fisher Folk Forum (PFFF).	-	Representatives from VCCs.
7.2	MCWC site explored and assessed.	Balochistan Wildlife, Forest and Fisheries Departments, District and Tehsil Nazims, Pakistan Coast Guards, Pakistan Navy, ZSD, Marine Security Agency, NIO, MRCC, GPTA.	WWF-P, HF, HWNCS, Balochistan Rural Support Programme (BRSP), PFFF.	-	VCCs.
7.3	MCWC immediate action plan for conservation is implemented.	Balochistan Wildlife, Forest and Fisheries Departments, District and Tehsil Nazims, Coast Guards, Pakistan Navy, ZSD, Marine Security Agency, NIO, MRCC, GPTA.	WWF-P, HF, HWNCS, BRSP, PFFF.	-	VCCs.
7.4	Communities are organised and mobilised into Village Conservation Committees (VCCs).	Balochistan Wildlife, Forest and Fisheries Departments, District and Tehsil Nazims.	WWF-P, BRSP, Adventure Foundation of Pakistan (AFP), HF, HWNCS.	-	Tribal leaders, VCCs, fishing communities, mangrove users.

	Outputs	Categories of Stakeholders		
		Government	Private Sector (Potential)	Custodian Communities
7.5	A programme for alternate/diversified livelihoods is developed and implemented.	Balochistan Wildlife, Forest and Fisheries Departments, District and Tehsil Nazims.	WWF-P, BRSP, AFP, HF, HWNCS, Khushali Bank, Small and Medium Enterprise Development Authority (SMEDA).	Tribal leaders, VCCs, fishing communities, mangrove users.
7.6	A NRM capacity-building initiative for women is implemented.	Balochistan Wildlife, Forest and Fisheries Departments, District and Tehsil Nazims.	WWF-P, BRSP, AFP, Pakistan, HF, HWNCS, Shirkat Gah, SMEDA.	Tribal leaders, VCCs, fishing communities, mangrove users, women.
7.7	A MCWC Conservancy is officially proclaimed and established.	Balochistan Wildlife, Forest and Fisheries Departments, District and Tehsil Nazims, Coast Guards, Pakistan Navy, ZSD, Marine Security Agency, MRCC.	WWF-P, HF, HWNCS, BRSP, PFFF.	VCCs.
7.8	A MCWC eco-tourism promotion is plan implemented.	Balochistan Wildlife, Forest and Fisheries Departments, District and Tehsil Nazims, Department of Tourism, Pakistan International Airlines.	WWF-P, BRSP, AFP, HF, HWNCS, SMEDA.	Tribal leaders, VCCs, fishing communities, mangrove users.
7.9	A Preliminary Oil Pollution Disaster Plan is developed.	Marine Security Agency, NIO, Marine Security Agency, Coastal Development Authority.	WWF-P, IUCN-P, SDPI.	Fishing Communities.
7.10	A bird-ringing programme is implemented.	Balochistan Wildlife, Forest and Fisheries Departments, Pakistan Museum of Natural History.	WWF-P, HF, HWNCS.	VCCs, Fishing communities, hunters.
7.11	A marine turtle tracking programme is implemented.	Balochistan Wildlife, Forest and Fisheries Departments, Pakistan Museum of Natural History, ZSD.	WWF-P, HF, HWNCS, WI, WWT.	VCCs, hunters.
7.12	A Marsh Crocodile (<i>Crocodylus palustris</i>) re-establishment programme is implemented.	Balochistan and Sindh Wildlife Conservation Agencies, Karachi Zoo, Pakistan Museum of Natural History, ZSD.	WWF-P, HF, HWNCS.	VCCs, Fishing communities, hunters.

Outputs		Categories of Stakeholders			Custodian Communities
		Government	Projects, NGOs, National International and Other Agencies	Private Sector (Potential)	
Output 8					
8.1	Institutions are established to integrate wetland conservation into local and provincial land-use planning in the CIWC.	NWFP, Punjab and Sindh Wildlife, Forest, Fisheries and Irrigation Departments, District and Tehsil Nazims.	WWF-P, Ornithological Society of Pakistan (OSP), NRSP, Indus Resource Centre (IRC), PFFF, Sindh Taraqqi Pasand Mallah Tanzeem (STPMT)	Power Companies, (AES Pakistan, Kot Addu Power Plant, Engro Chemicals, Liberty Power Plant), Engro Chemicals.	VCCs, local landlords, tribal leaders, migrant communities.
8.2	CIWC site is explored and assessed.	NWFP, Punjab and Sindh Wildlife, Forest, Fisheries, Agriculture, Irrigation and Revenue Department (Land registry), ZSD, NH.	WWF-P, OSP.	-	VCCs, farmers, land owners in the vicinity of wetlands.
8.3	CIWC immediate action plan for conservation is implemented.	NWFP, Punjab and Sindh Wildlife, Forest, Fisheries, Agriculture, Irrigation and Revenue Department (Land registry), District and Tehsil Nazims.	WWF-P, OSP, PFFF, STPMT.	-	VCCs, local landlords, tribal leaders, migrant communities.
8.4	CIWC communities are mobilised and organised into <i>Village Conservation Committees (VCCs)</i> .	NWFP, Punjab and Sindh Wildlife, Forest, Fisheries, Agriculture Departments, District and Tehsil Nazims.	WWF-P, AFP, NRSP, PFFF, STPMT.	Power Companies, (AES Pakistan, Kot Addu Power Plant, Engro Chemicals, Liberty Power Plant), Engro Chemicals).	VCCs, migrant communities, women, landless households using wetlands intensively.
8.5	A programme for alternate/diversified livelihoods is developed and implemented.	NWFP, Punjab and Sindh Wildlife, Forest, Fisheries, Agriculture Departments, District and Tehsil Nazims.	WWF-P, AFP, NRSP, Khushali Bank, SMEDA, PFFF, STPMT.	-	VCCs, migrant communities, women, landless households using wetlands intensively.
8.6	An NRM capacity-building initiative for women is implemented.	NWFP, Punjab and Sindh Wildlife, Forest, Fisheries, Agriculture Departments, District and Tehsil Nazims.	WWF-P, AFP, NRSP, Khushali Bank, Shirkat Gah, SMEDA.	-	VCCs, migrant communities, women, landless households using wetlands intensively.

Outputs		Categories of Stakeholders			Custodian Communities
	Government	Projects, NGOs, National International and Other Agencies	Private Sector (Potential)		
8.7	A CIWC Conservancy is officially proclaimed and established.	NWFP, Punjab and Sindh Wildlife, Forest, Fisheries, Agriculture, Irrigation and Revenue Department (Land registry), District and Tehsil Nazims.	WWF-P, AFP, NRSP, PFFF, STPMT.	AES Pakistan, British Petroleum (Pakistan), Kot Addu Power Plant, Engro Chemicals, Liberty Power Plant, Mitsubishi Motors).	VCCs, migrant communities, women, landless households using wetlands intensively.
8.8	A CIWC eco-tourism plan is implemented.	NWFP, Punjab and Sindh Wildlife, Forest, Fisheries, Tourism Departments, District and Tehsil Nazims.	WWF-P, AFP, NRSP, IRRC, SMEDA, PFFF, STPMT.	-	-
8.9	A River Pollution Disaster Plan is designed.	NWFP, Punjab and Sindh Wildlife, Forest Departments, EPAs.	WWF-P, IUCN-P, SDPI.	-	VCCs.
8.10	An enhanced income generation programme for fisher-folk is established.	NWFP, Punjab and Sindh Wildlife, Forest, Fisheries, Agriculture Departments, District and Tehsil Nazims.	WWF-P, AFP, NRSP, Khushail Bank, SMEDA, STPMT, PFFF.	Fishing contractors.	Fishing Communities.
8.11	An appropriate energy use programme is introduced to communities.	NWFP, Punjab and Sindh Wildlife and Forest Departments, ENERCON.	WWF-P, Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ).	-	VCCs.
8.12	Trapped Indus River Dolphins are translocated.	NWFP, Punjab and Sindh Wildlife and Forest Departments. ZSD, PWRI, Lahore Zoo.	WWF-P, Whale and Dolphin Conservation Society (WDCS), Ocean Park (Hong Kong), WWF-US.	AES Pakistan, BP, Kot Addu Power Plant, Engro Chemicals, Liberty Power Plant, Mitsubishi Motors (Pakistan).	VCCs.
8.13	The potential for SONAR tracking of River Dolphins is investigated.	NWFP, Punjab and Sindh Wildlife and Forest Departments. ZSD, PWRI, Lahore Zoo.	WWF-P, WDCS, Ocean Park (Hong Kong), WWF-US.	-	-
8.14	Comprehensive Indus Dolphin population surveys are conducted.	NWFP, Punjab and Sindh Wildlife and Forest Departments. ZSD, PWRI, Lahore Zoo.	WWF-P, WDCS, Ocean Park (Hong Kong), WWF-US.	-	-
8.15	A Gharial (<i>Gavialis gangeticus</i>) re-introduction programme is implemented.	NWFP, Punjab and Sindh Wildlife and Forest Departments. ZSD, PWRI, Lahore Zoo.	WWF-P.	-	-
8.16	A Hog Deer (<i>Axis porcinus</i>) re-introduction programme is implemented.	NWFP, Punjab and Sindh Wildlife and Forest Departments. ZSD, PWRI, Lahore Zoo.	WWF-P.	-	-

Outputs	Categories of Stakeholders			Private Sector (Potential)	Custodian Communities
	Government	Projects, NGOs, National/International and Other Agencies			
Output 9					
9.1	Institutions are established to integrate wetland conservation into local and provincial land use planning in the SRWC.	Punjab Wildlife, Forest, Land Revenue and Agriculture Departments, District and Tehsil Nazims.	WWF-P, Soan Valley Development Programme (SVDP), Pakistan ex-servicemen's League, Welfare Societies (Ucchali, Ugali, Dhaddar, Jhalar and Khabbeki) Society for Development and Environmental Protection (STEP).	-	VCCs.
9.2	SRWC site is explored and assessed.	Punjab Wildlife, Forest, Land Revenue and Agriculture Departments, NH, ZSD, PWRI, District and Tehsil Nazims.	WWF-P, SVDP, STEP.	-	VCCs.
9.3	SRWC immediate action plan for conservation is implemented.	Punjab Wildlife, Forest, Land Revenue and Agriculture Departments, NH, ZSD, PWRI, District and Tehsil Nazims.	WWF-P, SVDP, STEP.	-	VCCs, farmers, pastoralists.
9.4	SRWC communities are mobilised and organised into <i>Village Conservation Committees</i> (VCCs).	Punjab Wildlife, Forest and Social Welfare Departments.	WWF-P, SVDP, STEP, Welfare Societies (Ucchali, Ugali, Dhaddar, Jhalar and Khabbeki).	-	Farmers, pastoralists.
9.5	A programme for alternate/diversified livelihoods is developed and implemented.	Punjab Wildlife, Forest and Social Welfare Departments.	WWF-P, SVDP, STEP, NRSP, Welfare Societies (Ucchali, Ugali, Dhaddar, Jhalar and Khabbeki), Kasht Foundation (KF).	-	Farmers, pastoralists, forest users.
9.6	An NRM capacity-building initiative for women is implemented.	Punjab Wildlife, Forest and Social Welfare Department.	WWF-P, Women's Welfare Association, SVDP, STEP, NRSP, Welfare Societies (Ucchali, Ugali, Dhaddar, Jhalar and Khabbeki), KF.	-	Women (especially landless and poor).
9.7	SRWC Conservancy is officially proclaimed and established.	Punjab Wildlife, Forest, Land Revenue and Agriculture Departments, NH, ZSD, PWRI, District and Tehsil Nazims.	WWF-P, SVDP, STEP, NRSP, Welfare Societies (Ucchali, Ugali, Dhaddar, Jhalar and Khabbeki), KF.	-	VCCs.
9.8	SRWC eco-tourism promotion plan is implemented	Punjab Wildlife, Forest, Social Welfare Departments, Punjab Tourism Corporation.	WWF-P, AFP.	Private tour operators	-

Outputs		Categories of Stakeholders			
		Government	Projects, NGOs, National International and Other Agencies	Private Sector (Potential)	Custodian Communities
9.9	Vegetation enclosure plots are set up.	Punjab Wildlife, Forest, Land Revenue and Agriculture Departments, Agriculture University (Faisalabad), NH, ZSD, PWRI, District and Tehsil Nazims.	WWF-P, SVDP, STEP.	-	VCCs, farmers and pastoralists.
9.10	Catchment area soil conservation Demonstration Sites are established.	Punjab Wildlife, Forest, Land Revenue and Agriculture Departments, Agriculture University (Faisalabad), NH, ZSD, PWRI, District and Tehsil Nazims.	WWF-P, SVDP, STEP.	-	-
9.11	SRWC lake beds are surveyed.	Punjab Wildlife, Forest, Land Revenue and Agriculture Departments, Agriculture University (Faisalabad), NH, ZSD, PWRI, District and Tehsil Nazims.	WWF-P, SVDP, STEP.	-	-
9.12	A bird ringing programme is implemented.	Punjab Wildlife, Forest, Land Revenue and Agriculture Departments, ZSD, PWRI, District and Tehsil Nazims.	WWF-P, SVDP, STEP.	Private corporations (ICI, PBS, Nestle, Mitsubishi Motors).	-
9.13	An experimental programme for breeding endangered Cranes is implemented.	Punjab Wildlife, Forest, Land Revenue and Agriculture Departments, ZSD, PWRI, District and Tehsil Nazims.	WWF-P, SVDP, STEP.	Private corporations (ICI, PBS, Nestle, Mitsubishi Motors)	VCCs, farmers, pastoralists.
Output 10					
10.1	Institutions are established to integrate wetland conservation into local and provincial land use planning in the NAWC.	NWFP Wildlife and Forest Departments, PFI	WWF-P, AKRSP.	-	VCCs
10.2	An NAWC site is explored and assessed.	NWFP Wildlife and Forest Departments, PFI, ZSD, NH.	WWF-P, AKRSP.	-	VCCs
10.3	NAWC immediate action plan for conservation is implemented.	NWFP Wildlife and Forest Departments, PFI, ZSD, NH.	WWF-P, AKRSP.	-	VCCs
10.4	NAWC communities are mobilised and organised into Village Conservation Committees (VCCs).	NWFP Wildlife and Forest Departments, PFI.	WWF-P, AKRSP.	-	VCCs, pastoralists, migrant tribes
10.5	A programme for alternate/diversified livelihoods is developed and implemented.	NWFP Wildlife and Forest Departments, PFI.	WWF-P, AKRSP.	-	VCCs, pastoralists, migrant tribes
10.6	An NRM capacity-building initiative for women is implemented.	NWFP Wildlife and Forest Departments, PFI.	WWF-P, AKRSP.	-	VCCs, pastoralists.

Outputs	Categories of Stakeholders			Private Sector (Potential)	Custodian Communities
	Government	Projects, NGOs, National International and Other Agencies			
10.7 NAWC Conservancy is officially proclaimed and established.	NWFP Wildlife and Forest Departments, PFI, ZSD, NH.	WWF-P, AKRSP.	-	VCCs	
10.8 An NAWC eco-tourism promotion plan is implemented.	NWFP Wildlife and Forest Departments, PFI, Pakistan Tourism Corporation.	WWF-P, AKRSP, AFP.	Private tour operators	VCCs, pastoralists.	
10.9 A Ramsar status application for NAWC is proposed.	NCCW, NWFP Wildlife and Forest Departments, PFI.	WWF-P, IUCN-P.	-	-	
10.10 A bird ringing programme is implemented.	NWFP Wildlife and Forest Departments, PFI.	WWF-P.	Private companies (ICI PBS, Nestle, Mitsubishi Motors)	VCCs.	
10.11 Appropriate energy use programme is introduced to communities.	NWFP Wildlife and Forest Departments, PFI, ENERCON.	WWF-P, GTZ.	-	VCCs, women.	

LIST OF PROJECTS, NGOS, NATIONAL, INTERNATIONAL AND OTHER AGENCIES

#	Agency	Full Name of Institution	Principal Focus
1	AFP	Adventure Foundation of Pakistan	The AFP is an Islamabad based NGO that provides people with the means to develop their character in close contact with nature. The development of eco-tourism has recently become a major focus of their activities.
2	AIE	Ali Institute of Education	The Ali Institute of Education is a Lahore based institution that aims to improve the quality of primary school education in Pakistan through professional training and development of teachers.
3	AKRSP	Agha Khan Rural Support Programme	An internationally recognised community-based development organisation that has been working in northern Pakistan in the field of integrated rural development and micro-finance.
4	AT	Ajoka Theatre	A voluntary organisation based in Pakistan, working in the field of theatre and electronic media, providing high quality entertainment with a social purpose.
5	CIESIN	Centre for Int'l Earth Science Information Network	CIESIN works at the intersection of the social, natural, and information sciences, and specializes in on-line data and information management, spatial data integration and training, and interdisciplinary research related to human interactions in the environment.
6	DFID	Department for International Development (UK)	U.K. Government Department working on overseas development.
7	DU	Ducks Unlimited	Ducks Unlimited is a U.S. based NGO that conserves, restores, and manages wetlands and associated habitats for North America's waterfowl and for the benefit of other wildlife and people.
8	EcoManage	EcoManage	A consortium of international conservation biologists and protected area management specialists.
9	ENERCON	National Energy Conservation Centre	The ENERCON as a parastatal agency that serves as a focal point for all energy conservation activities in Pakistan including policy formulation.
10	GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit	The Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH is a government-owned corporation for international development that aims to improve the living conditions and perspectives of people in developing and transition countries.
11	HF	Houbara Foundation	The Houbara Foundation is an NGO working with conservationists in Central Asian countries where the bustards breed, as well as in the Gulf nations where the birds also migrate every year.
12	HWNCS	Human Welfare and Nature Conservation Society	A small Pakistan based NGO concerned specifically with community based conservation initiatives that alleviate poverty and encourage environmental awareness through enhanced education initiatives.

#	Agency	Full Name of Institution	Principal Focus
13	IRC	Indus Resource Centre	The Indus Resource Centre is Sukkur-based organization dedicated to fostering grassroots participation in the democratic process.
14	IUCN	The World Conservation Union	IUCN is an international organisation working to apply sound ecosystem management to demonstrate how this is the only way to sustainable livelihoods for those directly dependent on natural resources.
15	KB	Khushali Bank	The KB, is a micro-finance institution funded by the Asian Development Bank.. It extends credit to poor households especially women and is actively collaborating with the RSP Network in its planning and implementation.
16	KF	Kashf Foundation	Kashf Foundation is an NGO working to provide cost effective and quality microfinance services to poor women by adding value to women's existing economic opportunities in order to enhance their role in economic and social decision-making.
17	LEAD	Leadership for Environment and Development	LEAD Pakistan, a nonprofit and nonpartisan organization, is one of the 14 country/regional programs of LEAD International, to bring the environmental leadership development program to Pakistan.
18	Lok Virsa	National Institute of Folk & Traditional Heritage	Known as Lok Virsa, this Institute works towards preserving the living folk and traditional culture of Pakistan.
19	MACP	Mountain Areas Conservancy Project	The Mountain Areas Conservancy Project is a GEF/UNDP supported initiative that aims to protect biodiversity and ensure its sustainable use in Pakistan's Alpine regions through application of a community-based conservation approach.
20	NCCW	National Council for the Conservation of Wildlife	The National Council for the Conservation of Wildlife is a dedicated federal conservation agency responsible for coordination and liaison of conservation initiatives at the provincial and federal level and has played a major role in mainstreaming wildlife concerns in national policies.
21	NDP	National Drainage Programme	The NDP is a multi-donor supported programme under the auspices of WAPDA that aims to minimize drainable surplus and facilitate the eventual evacuation of all saline drainable surplus from the Indus Basin to the Arabian Sea.
22	NEAP	National Environmental Action Plan-Support Programme	A UNDP supported programme to support the implementation of National Environmental Action Plan aiming to contribute to economic growth while protecting the environment.
23	NH	National Herbarium	The National Herbarium is a reference institution that provides research facilities to scientist in related fields and is the primary source of information about plants of Pakistan. The Herbarium houses about 100,000 dried plant specimens.
24	OP	Ocean Park, Hong Kong	The OP is a commercial aquarium and eco-tourism venture with a technical department that has considerable technical experience in the capture of small cetaceans.

#	Acronym	Full Name of Institution	Principal Focus
25	OSP	Ornithological Society of Pakistan	The OSP is an NGO based in Central Punjab and concerned specifically with the monitoring of migratory bird movements but with recent experience in vulture ecology.
26	PAMP	Protected Areas Management Project	This GEF/World Bank supported project aims to develop Pakistan's capacity to conserve biodiversity in Protected Areas by developing and implementing management plans in three globally significant national parks of Pakistan.
27	PCDP	Palas Conservation and Development Project	The PCDP is an EU funded project that seeks to ensure that the biodiversity, extent and ecological processes of the Palas valley are maintained, and the forest used sustainably by local people
28	PFF	Pakistan Fisherfolk Forum	The Pakistan Fisherfolk Forum is a small organisation dedicated to promoting the rights of fishermen and alleviating poverty in fishing communities.
29	PFI	Pakistan Forest Institute	Pakistan Forest Institute is the premier institution of the country conducting research & training in forestry. It has expertise in forest management; water shed management, range management, forest engineering, silviculture, forest products and forest entomology. It also conducts training courses leading to B.Sc. and M.Sc. degrees in forestry as well as short-term courses in watershed management, range management and forest engineering.
30	PHF	Pakistan Hunters' Forum	A WWF-Pakistan initiative to organise and re-direct the activities of sport hunters into conservation.
31	PMNH	Pakistan Museum of Natural History	The Museum of Natural History, located on Garden Avenue, depicts the early human history, geology, and the wild life of Pakistan. The exhibits are of particular interest to students and children.
32	PRSP	Punjab Rural Support Programme	The PRSP is a non-government, non-profit and non-commercial organization, that aims at poverty alleviation and social and economic empowerment in the rural areas of Punjab through community participation.
33	PSL	Pakistan Ex-Servicemen's League	An agency dedicated to improving the welfare of ex-servicemen in Pakistan with a strong presence in the Soan Valley and Potohar Plateau of Punjab.
34	PWRI	Punjab Wildlife Research Institute	Conducts multi-faceted research on wildlife in Punjab and elsewhere in Pakistan, as appropriate. The principal focus is annual wildlife census programmes.
35	Ramsar	The Ramsar Convention on Wetlands	The Ramsar Convention on Wetlands, signed in Ramsar, Iran, in 1971, is an intergovernmental treaty which provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources.
36	RSPN	Rural Support Programme Network	A co-ordinating body for the Provincial Rural Support Programmes.
37	SANParks	South African National Parks	South African National Parks manages a system of parks which represents the indigenous fauna, flora, landscapes and associated cultural heritage of the

Agency	Full Name of Institution	Principal Focus
38	SCI Safari Club International	country. This agency has considerable experience with training conservation staff. Safari Club International is a U.S based non profit agency that is concerned with protecting the freedom to hunt and in the promotion of wildlife conservation worldwide.
39	SDF Sungi Development Foundation	Sungi is as a non-profit and non-governmental public interest organisation working to bring about policy and institutional changes by mobilizing deprived and marginalized communities with a view to creating an environment in which communities at the local level may be able to transform their lives through the equitable and sustainable use of resources.
40	SDPI Sustainable Development Policy Institute	The SDPI is a research institute that conducts policy advice, policy oriented research and advocacy from a broad multi-disciplinary perspective.
41	SG Shirkat Gah	Shirkat Gah is an NGO working on women's empowerment for social justice through promotion of women appropriate development schemes, programmes, policies and laws; enhancement of women's autonomy, access to resources, and all levels of decision-making; and helping to catalyse a socio-cultural perspective premised on gender equality at all levels.
42	SIDA Sindh Irrigation and Drainage Authority	Agency dedicated to improvement of water management in Sindh.
43	SMEDA Small and Medium Enterprise Development Authority	SMEDA aims to provide a fresh impetus to Pakistan's economy through the launch of an aggressive SME support programme.
44	STEP Society for Protection and Environment Development	STEP is a CBO based in the Soan Valley of Punjab working on conserving the environment of the region with community support.
45	STPMT Sindh Taraqqi Passand Mallah Tanzeem	The STPMT is a CBO working on raising awareness about fisherfolk rights in Sindh.
46	SUPARCO Pakistan Space and Upper Atmospheric Research Commission	SUPARCO - an autonomous R&D organization under the Federal Government - is Pakistan's national space agency. It is responsible for the execution of the space science and technology programs in the country, as approved by the Government of Pakistan.
47	SVDP Soan Valley Development Programme	The SDVP is a CBO active in the Soan Valley in the field of natural resource conservation with community development and participation.
48	TRC Teachers Resource Centre	A small Karachi based NGO specialising in the preparation and dissemination of resource material designed specifically for application in Pakistan.
49	WAPDA Water and Power Development Authority of Pakistan	A Semi-Autonomous Body for the purpose of coordinating and giving a unified direction to the development of schemes in Water and Power Sectors,
50	WCMC World Conservation Monitoring Centre	The UNEP World Conservation Monitoring Centre was established in 2000 as the world biodiversity information and assessment centre of the <u>United Nations Environment Programme</u> .

Acronym	Full Name of Institution	Principal Focus
51 WDCS	Whale and Dolphin Conservation Society	WDCS is the world's most active charity dedicated to the conservation and welfare of all whales, dolphins and porpoises. The agency has considerable expertise in the field of river dolphin conservation.
52 WI	Wetlands International	Wetlands International is a leading global non-profit organisation dedicated solely to the crucial work of wetland conservation and sustainable management
53 WWT	Wildlife and Wetlands Trust (formerly International Wetlands Research Bureau)	The Wildfowl & Wetlands Trust is the largest international wetland conservation charity in the UK. Its mission is to conserve wetlands and their biodiversity.
54 ZSD	Zoological Survey Department	The ZSD is responsible for obtaining and maintaining information on distribution, population dynamics and status of animal life of Pakistan, undertake research on the ecology, biology, physiology and biochemistry of important marine animals and impart wildlife education and create public awareness about wildlife conservation.