

**UNITED NATIONS DEVELOPMENT PROGRAMME
GLOBAL ENVIRONMENT FACILITY**

**Project of the Government of
Tunisia**

PROJECT DOCUMENT

Number: TUN/97/G33/A/1G/99

Title: Conservation of Wetland and Coastal Ecosystems in the Mediterranean Region

Duration: 5 years

Project Site: Cap Bon

ACC/UNDP Sector and Sub-sector: 0400 Environment
0340 Biological resources

GEF Theme: Biodiversity

Government Implementing Agency: National Agency for the Protection and Development of the Tunisian Litoral

Executing Agency: Government of Tunisia

Estimated Starting Date: February 1999

UNDP/GEF:	\$ 2,575,000
National contribution (in kind):	\$ 8,193,000
(TD20,993,000)	
FFEM:	\$ 667,000
(FF4,000,000)	
Total	\$11,435,000

Brief Description:

This project is the Tunisian component of a Mediterranean regional initiative involving Albania, Egypt, Lebanon, Morocco, the Palestinian Authority and Tunisia. The overall initiative is aimed at ensuring the sustainable management the biological diversity of the coastal areas and wetlands in 6 Mediterranean countries/ Authority, through the development of adequate legal and regulatory frameworks, the creation of institutional organizations adapted to the complexity of the issues at stake, capacity-building and the development of an exchange network at the regional level both to achieve economies of scale and to save time when implementing and replicating the innovating actions undertaken.

The objective of the project is to create or enhance the exchange structures and fora concerned with this general management:

- ◆ By establishing interministerial coordination mechanisms for projects undertaken at the local and national levels;
- ◆ By developing demonstration activities at the most significant sites;
- ◆ By awareness-raising, training and networking of the population groups and the social and economic actors and establishing linkages between them around the Mediterranean basin.

On behalf of	Signature	Date	Name/Title
Government:	_____	_____	_____
UNDP:	_____	_____	_____

Table of Contents

ACRONYMS

A. CONTEXT

1. DESCRIPTION OF SUBSECTOR
2. HOST COUNTRY STRATEGY
 - 2.1 Recent developments
 - 2.2 Policy documents
 - 2.3 **Management of sensitive areas by APAL**
3. PRIOR OR ONGOING ASSISTANCE
4. INSTITUTIONAL FRAMEWORK FOR SUBSECTOR
 - 4.1 Competent institutions
 - 4.2 Legal framework
 - 4.3 **Legislation pertaining to protected areas**
 - 4.4 International conventions, agreements and protocols

B. PROJECT JUSTIFICATION

1. PROBLEMS TO BE ADDRESSED AND PRESENT SITUATION
 - 1.0 Situation and regional approach
 - 1.1 Institutional domains and implementation of integrated policies
 - 1.2 Sites selected for the project
 - 1.2.1 Dar Chichou, Oued Abid
 - 1.2.2 Korba, Kelibia (lagoons east of Cap Bon)
 - 1.2.3 El Haouaria, and the Isles of Zembra and Zembretta
2. EXPECTED END-OF-PROJECT SITUATION
 - 2.1 Biodiversity benefits
 - 2.2 Institutional benefits
 - 2.3 Human/socioeconomic benefits
 - 2.4 **Benefits for the Mediterranean Basin**
3. TARGET BENEFICIARIES
4. PROJECT STRATEGY AND IMPLEMENTATION ARRANGEMENTS
 - 4.1 Project strategy
 - 4.2 Institutional framework for project implementation
 - 4.2.1 Local level
 - 4.2.1.1 *Management, implementation and concertation*
 - 4.2.2 National level
 - 4.2.2.2 *Concertation*
 - 4.3 Regional strategy and arrangements for project implementation
 - 4.3.1 Regional strategy
 - 4.3.2 Regional Advisory Committee
 - 4.3.3 Regional facilitator
 - 4.3.4 **Roles of Tour du Valat and Conservatoire du Littoral**

Direction of program
Host COUNTRY STRATEGY
Research/development

2.2 Salary components
2.3 Management of sensitive
EQUIPMENT OR ONGOING ASSISTANCE

4.1 Competent staff
4.2 Legal framework

Legislation
Regulations

ACT JUSTIFICATION

PROGRAMS TO BE

education and regional and
institutional domains and
staff selected for the project

1.2.1 for Central, West, and

1.2.2 for the Eastern, Southern and

1.2.3 for the Eastern, Southern and

2.1 Biodiversity data
2.2 Institutional data

2.3 Financial requirements for
the Medical

TARGET

PROJECT STRATEGY AND IMPLEMENTATION APPROACH

4.1 Project
4.2 Institutional framework for project implementation

4.2.1 Local level
4.2.1.1 National level
4.2.2 National level

4.2.2.1 Conception
4.2.2.2 Regional strategy and
4.2.1 Regional strategy

4.2 Regional Advisory Committee

4.3 Regional facilities

4.4 Role of the National Conservation

5. REASONS FOR ASSISTANCE FROM UNDP/GEF AND FFEM
6. SPECIAL CONSIDERATIONS
7. CO-ORDINATION ARRANGEMENTS
8. COUNTERPART SUPPORT CAPACITY

C. DEVELOPMENT OBJECTIVES

D. IMMEDIATE OBJECTIVES, OUTPUTS AND ACTIVITIES

E. INPUTS

F. RISKS

G. PRIOR OBLIGATIONS AND PREREQUISITES

H. PROJECT REVIEWS, REPORTING AND EVALUATION

I. LEGAL CONTEXT

J. BUDGET

K. ANNEXES

- | | | |
|-----------|---|---|
| ANNEX I | - | WORK PLAN |
| ANNEX II | - | SCHEDULE OF PROJECT REVIEWS, REPORTING AND EVALUATION |
| ANNEX III | - | TRAINING PROGRAMME |
| ANNEX IV | - | EQUIPMENT REQUIREMENTS |
| ANNEX V | - | TERMS OF REFERENCE |

ACRONYMS

ADB:	African Development Bank
ANPE:	National Environmental Agency (Agence Nationale pour l'Environnement)
APAL:	National Agency for Coastal Protection and Planning (Agence Nationale de Protection et d'Aménagement du Littoral)
CBD:	Biodiversity and Desertification Unit (Cellule Biodiversité et Désertification)
CITET :	Centre International de technologie de l'Environnement de Tunis
CNDD:	National Commission for Sustainable Development (Commission Nationale pour le Développement Durable)
CRDA:	Regional Centre for Agricultural Development (Centre Régional pour le Développement Agricole)
DGAT:	General Directorate for Land-Planning (Direction Générale de l'Aménagement du Territoire)
EIB:	European Investment Bank
ENB:	National Study on Biodiversity (Étude Nationale sur la Biodiversité)
EU:	European Union
FFEM:	French Global Environment Fund (Fonds Français pour l'Environnement Mondial)
GDP:	Gross Domestic Product
GEF:	Global Environment Facility
IMT:	International Maritime Territory
IUCN:	International Union for Conservation of Nature and Natural Resources
MAB:	Man and the Biosphere Programme
MAP:	Mediterranean Action Plan
MEDPOL:	Mediterranean Pollution Monitoring and Research Programme (of MAP)
METAP:	Mediterranean Technical Assistance Programme
NC:	National Coordinator
NEAP:	National Environmental Action Plan
NGO:	Non-Governmental Organization
ONAS:	National Sanitation Authority (Office National d'Assainissement)
ONTT :	National Office of Tunisian Tourism (Office National du Tourisme Tunisien)
PMT:	Public Maritime Territory
RAC/SPA:	Regional Activity Centre for Specially Protected Areas (MAP)
SDAZS:	Master Plans for the Development of Sensitive Areas (Schémas Directeurs d'Aménagement des Zones Sensibles)
UNDP:	United Nations Development Programme
UNEP:	United Nations Environment Programme
WWF:	World Wide Fund for Nature

A. CONTEXT

1. REGIONALITY OF PROJECT

The main objective of this project is to build capacity in the participating countries in the Mediterranean region to conserve threatened, globally significant biodiversity in coastal and wetland eco-systems within the framework of sustainable coastal development. The project therefore aims at «closing the Mediterranean circle», in terms of wetland and coastal conservation initiative. The project will ensure that lessons learned and experiences made in the northern rim of the Mediterranean can be effectively transferred and, where applicable, applied and/or adapted to the prevailing circumstances in the participating countries. The regionality of the project provides a greater cost effectiveness and effectiveness for such information and experience transfers both on a north-south basis as well as on a south-south basis.

For the purposes of this project, eligible wetlands, primarily of lagoon type, are those whose flows are interconnected with the Mediterranean Sea, while coastal areas are the terrestrial components of the coastal zone in the vicinity, and under the influence of the Mediterranean Sea. The project does therefore not address navigational and marine pollution issues and nor marine biodiversity. These are presently covered by other existing and planned programmes, in particular under MAP/UNEP (GEF PDF B: Formulation of a strategic action programme for the Mediterranean Sea to address pollution from land-based activities).

This proposal addresses conservation of globally threatened biodiversity in 16 important wetland and coastal sites in five Mediterranean countries and in the Palestinian Authority. Through a combination of innovative land-use and wetland policies at national level, site protection and management at local level and regional networking and exchange of experience the proposal will provide a biodiversity protection increment to other brown programme addressing pollution and water resource issues in the beneficiary countries/authority. At site level mechanisms for taking account of local concerns and ensuring local participation and economic returns are built into the project from the outset.

The Mediterranean region has seen the rise and fall of many empires over the last 2500 years. Numerous invasions and commercial links, many of them by sea, have seen eastern traders found cities in the western basin, Catalan influence extend as far as Greece, and Arabic culture penetrate well into the Iberian peninsula. These fluxes, together with the enclosed nature of the sea, have led to the establishment of a common Mediterranean identity and culture. This identity is reinforced by the circum-Mediterranean climate of hot dry summers and rainy winters, which is also responsible for the development of ecosystems characteristic of the region.

The Mediterranean coastline (26,000 km) is an area of high biodiversity, where more than 50% of the 25,000 plant species are endemic to the region. It is also a critical area for migratory birds in the Africa-Palearctic flyway as wetlands in the region provide an essential flyway stepping stone on either side of the Mediterranean Sea and between the sea and the vast expanse of the Sahara desert to the south.

The major threats to the exceptional biodiversity of these wetland and coastal ecosystems related to uncontrolled development, urbanization, increasing national and international tourism, land-based pollution, and unplanned or over-exploitation of natural resources, in particular freshwater.

Aware of their common heritage, the Mediterranean States and European Union have developed common programmes and policies for the sustainable development and conservation of the coast since 1975. The Mediterranean Action Plan (UNEP Regional Seas Programme), the Mediterranean Commission on Sustainable Development, METAP, LIFE, MedWet, Natura 2000 and MEDA (EU) are some of these regional initiatives.

The MedWet programme for the conservation of Mediterranean wetlands originated from the Grado Conference (Italy, 1991). The initiative was recently widened (Venice, 1996) where all the riparian States present endorsed a common strategy for the conservation of Mediterranean wetlands. In parallel, the Mediterranean Action Plan,

Conservatoire du Littoral (France) and Ramsar Convention secretariat held a joint technical meeting on coastal zone management (Hyeres, 1995) where 12 countries agreed on the need to develop land use policies for effective management of the coastal zone.

Today, the States of the Mediterranean region are at different stages of economic and institutional development and therefore differ in their capacity to address biodiversity issues within the context of sustainable development. Incremental funding is required to allow them to implement agreed regional policies in the field.

The overall GEF-funded Wetlands and Coastal project includes six countries/authorities, namely Albania, Egypt, Tunisia, Morocco, Lebanon, and the Palestinian Authority.

2. DESCRIPTION OF SUBSECTOR AND HOST COUNTRY STRATEGY

2.1 Recent developments

Among the major recent changes, mention must be made of the creation in 1995 of the National Agency for Coastal Protection and Planning (APAL) which is responsible for the following actions:

- Harmonization/coordination of projects and programmes concerning the coastal areas,
- Removal of the infractions to the law on the Maritime Public Territory,
- Serving as an instrument for land management of the coastal zones,
- Acting as an observatory of the evolution of coastal ecosystems,
- Evaluating impact studies.

In addition, within the framework of the Ninth Plan (1997-2001), the APAL programme includes:

- The establishment of the Observatory of the Littoral,
- The elaboration of comprehensive beach development plans,
- Studies and rehabilitation operations in the coastal zones,
- Land acquisition for the protection of sensitive and threatened sites in coastal areas,
- Various studies.

National Agency for Coastal Area Protection and Planning (APAL):

APAL currently has a staff of 72 with very diverse backgrounds. Fifteen of its staff members, from the Ministry of Equipment are in charge of the Maritime Public Territory (MPT).

It is operating under its 1997 budget, which includes a State allocation of Dh 600 000 which will be complemented in the future by core resources constituted by the receipts from occupancy taxes on DPM concessions which can be estimated at Dh 300,000. These tax receipts from concessions and related receipts should then increase to Dh 1 million/year.

Investments are estimated at Dh 600,000 in 1997 and should reach Dh 2.5 million in 1998. A land acquisition policy will become effective as of 1998.

Durability of APAL funding

The long-term objective for APAL is self-financing on core resources obtained through concession and other receipts as is the case for the other public agencies such as ANPE or ONAS which have likewise specific systems for internal funding.

The Law on the Maritime Public Territory provides for the payment of royalties for any occupancy of these public territories. The royalties are set forth and defined in several legal texts, including in particular:

- The decree of 25 May 1950;
- The decree of 01 June 1951;
- The orders of 11 September 1956, 11 October 1956, 15 May 1992 and 6 October 1993.

In addition, as provided by the APAL organization decree, conventions are signed between APAL and all occupants of the MPD, establishing the modalities and costs for:

- the monitoring and control of temporary occupancy and concessions;
- the monitoring of the work performed on the MPD within the concessions.

The implementation and further development of these concessions require the establishment of a structured operational framework.

2.2 Policy documents

There are several general policy documents on the environment and development which form the basis for specific short or long term actions.

The most important of those is the National Strategy for Environmental Protection and Sustainable Development which defines the priority areas and indicators to be monitored for its implementation. This Strategy recommended the execution of a National Study on Biodiversity (ENB) and the development of the National Environmental Action Plan (NEAP).

Various sectorial strategies are being currently implemented, including the National Strategy for Water and Soil Conservation (1991-2000), the National Strategy for Hydraulic Resource Mobilization and the National Strategy for Reforestation and against Desertification (1990-2000).

The Policy for Tourism programmed several zones for the development of tourism in the coastal area (Tabarka, Bizerte, Tunis Nord, Tunis Sud, Nabeul-Hammamet, Monastir-Sousse and Djerba-Zarzis).

In the field of environment, Tunisian policy has attained a high level of efficiency in the sanitation area (with over 65% of waste water currently treated). The Ministry develops integrated policies for the management and treatment of waste with the local communities and carries out land-use planning in sensitive areas with the DGAT.

2.3 Management of sensitive areas by APAL

Since 1995, Tunisia has undertaken the implementation of Master Plans for the Management of Sensitive Areas (SDAZS) for all of its coastal areas, under the authority of the Ministry of the Environment and Land-Use Management. All of these master plans are either completed or in their last phase.

They define for each region, on the basis of a detailed diagnostic study, the sensitive natural areas that need to be protected. They are the subject of local and regional consultation processes. In addition, it must be noted that, like all planning and development and equipment projects, the SDASZ are subject to prior approval from APAL.

The SDAZS will be approved by decree, during the first quarter of 1998, defining the sensitive areas (characteristic areas of the country's natural heritage or areas containing fragile ecosystems or constituting a remarkable physical landscape) that are threatened by degradation or unsustainable use.

After they have been classified as sensitive areas, responsibility for their management is transferred to APAL, which must ensure their conservation and preservation according to the provisions of Law 72/95 of 25 July 1997.

For this purpose, APAL may acquire ownership of real estate. It may also, as it sees fit, enter into partnership agreements with the owners of the land located in the sensitive areas. Under these agreements, the owners undertake to manage their lands according to specifications elaborated by APAL and approved by the Ministry of

the Environment. APAL may subcontract the use of the developed areas to a private entity or an approved organization, within the framework of an agreement determining in particular the management and preservation modalities.

3. PRIOR OR ONGOING ASSISTANCE

Most donors making contributions in Tunisia in the area of environment do so to support and complement actions undertaken by the Tunisian authorities, who have made this sector a priority.

It must be stressed, and this explains the sustained efforts made by the Tunisian Government, that the population is very much concentrated in the coastal areas (78% of the population is established in the East Coast governorates); as a result, an substantial share of the funds allocated for environment is concentrated in the coastal area where this projet is to be implemented.

This contributes to the elaboration of legal and institutional instruments and training of the actors, in particular in the areas of impact studies, water cycle management, knowledge, prevention and control of pollution, establishing standards, monitoring and evaluation.

Total international aid received was US\$ 748 million in 1994 and 858 million in 1993. This foreign aid represents 4.6% of the GDP and is distributed by source as follows: 67% from multilateral sources, 32.4% from bilateral sources and 0,6% by NGOs For the natural resource sector, inputs amounted approximatly to US\$ 90 million in 1994. UNDP is a major donor in the environmental protection area, with a 20% share.

The major donors include the UN system, and specifically UNDP, UNPE, the World Bank (in particular through the METAP programme which, in its Phase III has focused on capacity-building for the management of industrial pollution and urbanism in the coastal areas and on regional synergy), FFEM, GEF, the European Investment Bank (EIB), the European Union, France, Canada, Italy and Germany. Most donors support activities geared toward capacity-building, the elaboration of integrated policies and training.

Among the main programmes being implemented or in preparation, the following include components that are such as to complement the activities to be undertaken within the framework of the GEF project and to achieve a synergistic effect:

- a) For the coastal area, UNEP's Mediterranean Action Plan (MAP) has a project for a management plan of the coastal area around Sfax and the MEDPOL programme is active in monitoring and combatting pollution. One of the MAP national centres with regional scope, the Regional Activity Centre for Specially Protected Areas (RAC/SPA) is located in Tunisia.
- b) With funding from the Global Environment Facility (GEF) administered by UNDP, within a programme covering Morocco, Algeria and Tunisia, a National Study on Biodiversity is being conducted for the 1995-1996 period. The GEF is also active in the fight against oil pollution in marine environments, which is of particular interest for Cap Bon, the southern coast of the Strait of Sicily.
- c) The financial cooperation agreement with Germany for the protection of the Ichkeul National Park was ratified by the Law of 13 March 1991 (18/1991). The support provided under the agreement made it possible to elaborate all the components of the park's management plan. The implementation phase should begin in the near future.
- d) Numerous programmes concerning sanitation are funded by the World Bank, the European Union, the European Investment Bank, and Germany, among others. They are targeted particularly at the Gulf of Tunis and the Cap Bon area. The European Union took a special interest in the study of the disposal of effluents at sea and sanitation improvements at Kelibia.
- e) Germany, in addition to general technical assistance, is also active in waste management to improve the treatment process, from the collection to the disposal stages, in collaboration with the Ministry of the Environment and local communities.

- f) Within the METAP programme, through the World Bank and in cooperation with APAL, an inventory of the wetlands of the Gulf of Hammamet and an assessment of the environmental impact of tourism have been undertaken.
- g) Other programmes are being implemented in the areas of coastal erosion control, the delimitation of the Public Maritime Domain and beach management (Canada).
- h) Within the framework of Franco-Tunisian cooperation, in addition to the support provided to APAL, a programme is to be developed in 1997 on fresh water fish (systematic inventory, biology, ecology and economic value of European species introduced in Tunisia).

4. INSTITUTIONAL FRAMEWORK FOR SUBSECTOR

4.1. Competent institutions

The ministries with competency in environmental matters include:

- The Ministry of the Environment and Land-Use Management
- The Ministry of the Interior,
- The Ministry of Agriculture,
- The Ministry of Equipment and Habitat
- The Ministry of State Domains and Land Affairs
- The Ministry of Tourism
- The Ministry of Transportation,
- The Secretariat of State for Scientific Research and Technology

The other entity with authority on environmental issues is the National Commission for Sustainable Development (CND) which replaces the National Commission for Environment.

The functions and services of the main Ministries concerned with environmental matters are as follows:

Ministry of the Environment and Land-Use Management. It was created in 1991 and oversees four public agencies: the National Sanitation Authority (ONAS), the National Agency for Environmental Protection (ANPE), the Agency for Coastal Protection and Planning (APAL), and the International Centre for Environment Technology of Tunis (CITET). Within the Ministry, the General Directorate for National Development is in charge of land planning, including for protected areas.

Ministry of Agriculture. This ministry comprises the following technical entities: the General Directorate for Forestry, the General Directorate for Water Resources, the General Directorate for Hydraulic Studies and Capital Works, the General Directorate for Fisheries and Aquaculture.

Ministry of Equipment and Habitat. This ministry is in charge of ports and the delimitation of the Maritime Public Domain.

Ministry of Tourism. Through the Tunisian National Tourism Office (ONTT), it develops and implements the national tourism policy which includes an increasingly important environmental component.

Secretariat for Scientific Research and Technology; National Institute for Marine Sciences and Technologies.

There are also 3 specialized land agencies: the Land Agency for Industry, the Land Agency for Tourism, and the Land Agency for Habitat, housed respectively within the Ministries of Industry, Tourism, and Equipment.

4.2. Legal Framework

The national legislation pertaining to the environment is being revised and improved with a view to harmonizing it with the new instruments signed by the country and in particular the Convention on Biological Diversity. The legislators are preparing the various texts dealing with environmental issues within this context. The national policy orientation established within the framework of the Seventh economic and social development plan (1992-1996) took environmental issues into account; this orientation is reinforced under the Ninth plan (1997-2001), which provides in particular for the determination and study of sensitive areas, the Master Plans for coastal area development, and the operations in connection with the rehabilitation and equipment of beaches and dunes.

A number of legal texts on the environment and the conservation of the natural and cultural heritage are in effect, including in particular:

- Law 88-91 of 2 August 1988 instituting the National Agency for Environmental Protection (ANPE).
- Decree 93-2061 of 11 October 1993 instituting the National Commission for Sustainable Development (CNDD).
- Decree 94-1223 of 28 November 1994 promulgating the Code of national planning and urbanism.
- Law 94-13 of 31 January 1994 concerning the exercise of fishing activities and Orders of the Ministry of Agriculture.
- Law 94-35 of 24 February 1994 concerning the Code of archeological, historical and traditional arts heritage.
- Law 95-72 of 24 July 1995 instituting the Agency for the Protection and Development of the Littoral (APAL).
- Decree of 27 November 1995 nominating the General Director of APAL.
- Decree of 11 December 1995 establishing the administrative and financial organization and operational procedures of APAL.
- Law 95-73 of 24 July 1995 concerning the Maritime Public Domain and decrees under preparation delimiting the littoral zone.
- Law 95-75 of 7 August 1995, authorizing adhesion of the Republic of Tunisia to the Bern Convention on the Conservation of European Wildlife and Natural Habitats.
- Law 96-29 of 3 April 1996, instituting a national emergency action plan to combat marine pollution.

Among the texts and guidelines under preparation, mention should be made of the Master Plan for National Land Development, the "Littoral Law" and the revision of the Code of Water (dating back to 1975).

As regards legal and regulatory texts more specifically concerned with coastal area management, mention must be made of the elaboration of an entire corpus of laws on the littoral; those still require a number of implementation provisions currently being drafted and for which funding is being sought:

- The decree on the delimitation of the coastal area;
- The decree setting forth the modalities and conditions of temporary occupancy of the MPD;
- The revision of texts regarding royalties for temporary occupancy and concessions.

4.3 Legislation on Protected Areas

National parks are created by decree and natural preserves by an order of the Ministry of Agriculture, according to the provisions of the Code of Forestry. The Code of Forestry established by Law 88-20 of 13 April 1988 (which abrogated Law 66-60 of 4 July 1966, amended 9 August 1974), in its Title III, sets forth guidelines concerning nature and wildlife. Chapter III of Title III contains the legal provisions concerning the national parks, nature preserves and forests. Chapter IV deals with the protection of wetlands and Chapter V defines the activities of the National Council for the Protection of Nature.

Seven national parks were created by presidential decrees, of which three are in the coastal zone: the National Park of the Isles of Zembra and Zembretta, the Ichkeul National Park and the Boukornine National Park. Tunisia also possesses a fully protected Natural Marine Preserve, the Galiton.

4.4 International Conventions, Agreements and Protocols

As regards the coastal environment, Tunisia is a party to the following conventions, protocols and agreements:

- African Convention on the Conservation of Nature and Natural Resources (1968 - Algiers) adhesion in 1977;
- Convention on Wetlands of international importance (Ramsar - 1971), ratification in 1981. One site, the Ichkeul, was designated a Ramsar site;
- Convention for the Protection of the World Cultural and Natural Heritage (World Heritage Convention, Paris - 1972), ratified in 1975;
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES, Washington, 1973), ratified in 1975;
- Convention for the Protection of the Mediterranean Sea against Pollution (Barcelona - 1976), ratified in 1977;
- Protocol concerning Mediterranean Specially Protected Areas (to the Barcelona Convention, Geneva, 1982), ratified in 1983;
- Convention on migratory species (Bonn, 1979), ratified in 1986;
- Convention on Climate Change (New York - 1992), signed in 1993;
- Convention on Biological Diversity (Rio - 1992), ratified in 1993.
- Convention of Bern on the conservation of wildlife and the natural environment of Europe, signed in 1995

B. PROJECT JUSTIFICATION

1. PROBLEMS TO BE ADDRESSED AND THE PRESENT SITUATION

1.0 Present situation and regional approach

Although linked to sites located in diverse countries, the problems to be addressed in the Mediterranean regions are generally homogeneous both as regards the aggressions and the institutional and legal difficulties. The approach selected for this project is such as to enable the various actors to combat identical or similar threats in six countries / territories, with a permanent capacity for exchange at the regional level, thereby allowing gains in efficiency and time in the process.

The table below summarizes the current threats on biodiversity and the responses to be implemented under the project to eliminate them or to mitigate their impacts.

THREATS ON BIODIVERSITY	PROJECT RESPONSES	OBJECTIVES
LEGAL		
Gaps in laws and regulations in the areas of planning, land-use planning and protection of natural sites.	<ul style="list-style-type: none"> - Reinforcement and/or development of legislation and regulations on natural areas. - Establishment and/or enhancement of land-use planning tools. - Mechanism for the control of land use and activities. - Incentives for the establishment of land-property and land-use registry systems. - Mechanisms for acquisition, easements, and compensation. - Mechanisms for public involvement. 	Establishment of a legal framework for the sustainable protection of areas and species.
Lack of legal protection for the sites.	<ul style="list-style-type: none"> - Granting legal protection (under law or regulation). State intervention in land matters. 	Durable site protection.
PARTICIPATION, CONCERTATION, AWARENESS-RAISING		
Lack of awareness or insufficient consideration given to development issues by the social actors.	<ul style="list-style-type: none"> - Development of concertation units at the local and national levels. - Information regarding planning options. - Involvement of the population groups in discussions. - Conducting impact studies and public hearings. - Creation of monitoring indicators, upstream and downstream, for the general public. 	<p>Integration of environmental protection as a factor of social and economic development.</p> <p>Integration of the sustainability concept in the collective decision-making process.</p> <p>Participation of the population in policy choices.</p>
SITE MANAGEMENT		
Urban development within sensitive natural areas.	Alternative urban planning	Form of urban development compatible with site preservation.
Illegal construction on the sites, incursions, urban sprawl, sub-standard housing construction	<ul style="list-style-type: none"> - Creation of construction-free zones. - Monitoring of illegal constructions and abusive use. 	Preservation of natural integrity of the sites.
Solid pollution	<ul style="list-style-type: none"> - Waste planning and management (looking for alternative solutions for storage and processing) 	Elimination of wild dumps on the sites.
Liquid pollution	<ul style="list-style-type: none"> - Water treatment (sanitation networks, treatment plants – national contribution) 	Improved water quality on the sites.
Agricultural pollution	<ul style="list-style-type: none"> - Plans for water and resource management. - Training farmers in resource management. - Monitoring 	Preservation of water quality on the sites.

Excessive withdrawal from aquifers. Abusive drainage	- Training farmers in resource management. - Sustainable management of irrigation	Water conservation.
Overgrazing	- Training farmers in resource management.	Controlled grazing, compatible with biodiversity conservation.
Water flow problems	- Water system management. - Dredging channels. - Sustainable management of irrigation	Regeneration of natural water flow.
Excessive erosion of coastal dunes	- Natural dune fixation.	Erosion control and preservation of space integrity.
Sand extraction	- Reinforcing regulations. - Search for alternative solutions. - Monitoring/Control.	Preservation of sites' natural integrity.
Hunting and/or removal of biodiversity (capture of birds, etc.)	- Hunting regulations (from total interdiction to control of hunting periods, and quantity and quality of culling)	Preservation of endangered species.
Absence of management or increased pressures from tourism	- Planning and management of tourism flows.	- Modelling of tourism development at a level compatible with the preservation of necessary natural habitats.

REGIONAL COORDINATION		
Spot management of regional problems sometimes with potentially incompatible measures.	<ul style="list-style-type: none"> - Networking of project actors. - Prioritization of conservation actions of biodiversity assets under the authority of the most suitable/competent national partner. 	Overall coherence of management for improved efficiency of use of regional biodiversity
Waste of energy, time and money as a result of the recreation of the biodiversity protection process due to a lack of adequate transfer of policy measures and actions conducted by other international actors (reinventing the wheel).	<ul style="list-style-type: none"> - Regional and international exchanges of information and training. - Diffusion of documentary and technical data. - Transfer of know-how. 	Facilitation and acceleration of the regional biodiversity conservation process. Economies of scale. Similarity of the instruments. Adoption of common indicators and evaluation tools.
Failure to recognize the actors involved in the protection of biodiversity in other countries.	<ul style="list-style-type: none"> - Networking and facilitation of linkages among the actors (colloquia, seminars, Internet, Web sites, etc.). 	Creation of relational systems between actors in the area of integrated management, similar to those in other areas (medicine, sciences, etc.), with increased horizontal integration of the more specialized participants (fauna, flora, ornithology, marine, terrestrial, land development and planning, development, etc.).

1.1 Institutional domains and implementation of integrated policies

The principles of the integrated management of coastal areas or wetlands are yet to become generally operationalized in Tunisia, as in the other countries of the Mediterranean basin. This is due to the fact that it requires the coordinated involvement of numerous actors, the intervention of various levels of public action, and the integration of the socioeconomic context. The management of the coastal area, one particularly prone to conflicts of various sorts, does not readily adapt to sectoral imperatives and requires a type of general planning and land-use planning which rises above the traditional fragmented, isolated administrative actions.

In addition, the incipient drive towards decentralization requires an integration of the issues regarding the coastal areas at all decision-making and concertation levels.

Tunisia is, in this area, among the most advanced countries. Its initiatives in the area of land-use management, with the creation of APAL, and its increased capacities for integrated management of coastal areas make it a leader in the Mediterranean Basin.

However, this coherent legislative framework and this innovative institutional structure now need to be consolidated in their first practical applications. This will be achieved by providing support to entities which are still in their development phase and which acquire the technical and human resources and the know-how required to carry out their missions.

1.2 Sites selected for the project

The sites selected for the project are all located in the Cap Bon peninsula, close to Tunis, in view of their significance in terms of biodiversity, the multiple pressures bearing upon them, and the fact that they belong to the same administrative region.

Based on assessments of global and regional biodiversity, 35% of the species under threat on the coast of Tunisia, i.e. 22 species, are present within the perimeter of the 3 sites of Cap Bon. Most importantly, this tight network of sites integrates within its limits a total of 8 globally threatened plant species, of which 3 are endemic to Tunisia. In addition, the beaches and cliffs at the 3 sites contain 4 species of invertebrates considered threatened. Finally, the perimeter, and even the whole peninsula, is frequented each spring by thousands of migratory birds of prey belonging to numerous species, of which 3 are indeed globally threatened.

The list of Tunisian biodiversity drawn up by MedWet - Tour du Valat (last update 12/11/96) includes 110 "candidate" taxa potentially threatened at the global level. These taxa were selected by reference to the literature and upon consultation with experts, and for each of these taxa, at least one indicator suggested that it might be globally threatened. Among these 110 potentially threatened taxa, 63 are globally threatened taxa present on the Mediterranean coast of Tunisia, i.e. 57.3%.

Of these 63 taxa, 22 may be present at the Cap Bon sites, i.e. 35% of the globally threatened taxa present on the Mediterranean coast and 20.0% of all threatened taxa.

<i>PLANTS</i>	<i>MAMMALS</i>	<i>BIRDS</i>	<i>REPT. & AMPHIB.</i>
<i>Erodium mumbyanum</i>	<i>Lutra lutra</i>	<i>Circus macrourus (near-T)</i>	<i>Testudo graeca (V)</i>
<i>Anthyllis barba-jovis</i>	<i>Rinolophus blasii</i>	<i>Larus audouini (R)</i>	
<i>Silene barrattei</i>		<i>Falco naumanni (R)</i>	<i>Acanthodactylus blanci</i>
<i>Scabiosa farinosa</i>	INVERTEBRATES	<i>Milvus milvus (K)</i>	
<i>Isoetes velata dubia</i>	<i>Pinna nobilis</i>	<i>Phalacrocorax aristotelis desmarestii</i>	<i>Emys orbicularis occidentalis</i>
<i>Isoetes velata adspersa</i>	<i>Patella ferruginea</i>		
<i>Iberis semperflorens (R)</i>	<i>Talitus saltator</i>		
<i>Limonium clupearum</i>	<i>Orchestia sp</i>		

In the table above, the letters included in parentheses after the names of most taxa indicate their IUCN status. It should be noted, however, that this status may change within a few years' time and that some taxa may acquire a new status.

Particular mention should be made of the cases of *Numenius tenuirostris* and *Caretta caretta*. As regards, *Numenius tenuirostris*, its recent presence (1980's, 1990's) shows that the Cap Bon sites are potentially favourable; in view of the extreme rarity of the species, it is mentioned on those sites where appropriate conservation measures would contribute to its return. As regards *Caretta caretta*, the southern coast of the Cap Bon peninsula is considered very favourable and, there also, appropriate protection could promote its sustainable recovery.

Finally, it should be noted that the Kelibia lagoon (in the south-west, just north of the hamlet of Skalba) is of interest because of the presence of *Marmaronetta angustirostris* and *Oxyura leucocephala*.

1.2.1 Dar Chichou, Oued Abid

Physical features

This is a site of approximately 6,350 ha, cutting across Cap Bon and consisting of:

- A forest formation for the fixation of dunal massifs including ancient thalwegs barred by fields of dunes in their upstream course. The area is fed by numerous little wadis and by the aquifer. This string of wetlands (approximately 40) extending between strips of blow sand is the second Mediterranean site of this type together with the Coto Donana site in Spain. The rehabilitation of the peripheral forest cover improved the site's function as a refuge both for migratory and nesting species. Within the site, the 100-ha forest has been protected as a preserve since 1964.
- The Oued Abid valley which, in its lower course (3 km), offers a particularly interesting type of riparian forest as it benefits from the permanent flow of the stream, providing habitats that are especially suitable for the avifauna (migratory species in particular);

- The combination of the dunal ridges and beaches and the cliffs located east of these sites from Marsa Men Nakhla (Port Prince) to Awinat Lagha, nearly 25 km in length.

Site significance in terms of biodiversity

This site owes its interest to the presence of three little-known taxa confined to the Maghreb: the plant *Erodium mumbyanum*, the reptiles *Acanthodactylus blanci* and *Emys orbicularis occidentalis*, a threatened Maghreb subspecies. In addition to the species generally observed in the Cap Bon area, the otter *Lutra lutra* and the mongoose *Herpestes ichneum* were also reported.

Uses, dysfunctions and threats

The site is mainly agricultural. The ancestral irrigation technique is that of submersion. The most serious problems are related to human population pressure, the expansion of areas under cultivation with its attending consequences on the water resources (increased pumping, borehole drilling, underground table salinification). Appropriate management of the water resources would allow a reduction of the withdrawals from 7,000 m³/ha to 4,000 m³/ha, which is necessary for the preservation of intradunal wetlands. In addition to the problems stemming from the overdraft of underground water, plans to build a dam on Oued Abid could have an impact on the site's ecological balance. Also noteworthy is the beginning of tourism with the erection of light cabanas on the beaches.

1.2.2 Korba , Kelibia (eastern Cap Bon lagoons)

Physical features

The eastern section of Cap Bon contains over some fifty kilometres a string of lagoons extending of 10 to 15 km in length and occupying the low-lying sections of the littoral plain whose width does not exceed 1 km. They are isolated from the sea by two dunal formation of low elevation separated by lowlands which are flooded by the sea during the winter storms. The lagoons dry up almost entirely in the summer except for the Korba lagoon.

The dunal ridges and the wetlands proper are part of the Public Maritime Territory; the land sections between the lagoon and the national highway to the east are private property.

Site significance in terms of biodiversity

Six globally threatened species can be encountered in the area. In particular, two duck species under severe threat, classified "vulnerable" by IUCN, use this site regularly: *Oxyora leucocephala* and *Marmaronetta angustirostris*. The El Maamoura-Kélibia site is also the only known area for *Limonium clupearum*, a plant species endemic to Tunisia. Audouin's gull *Larus audouinii* and the Maghrebine reptiles *Acanthodactylus blanci* and *Emys orbicularis occidentalis* are also present.

Finally, this area of the coastline is potentially favourable as a nesting site for the sea turtle *Caretta caretta* and could serve as a migration refuge for *Numenius tenuirostris*, an endangered species which has already been observed there.

Uses, dysfunctions and threats

The pressures on this zone are many due to the expansion of urban areas with backfilling of the lagoons, tourism development projects and illegal urban development. Added to this are various forms of pollution due to the disposal of liquid and solid waste from household or industrial origin (canning) in the lagoons where fresh water inputs and sediments are reduced as a result of the construction of several dams in the hills. This is further aggravated by excessive withdrawals and salinification of ground water. Coastal erosion is severe and the pressures caused by hunting are heavy.

In the Korba lagoon, the only one with an permanent inlet from the sea, hydrological problems are linked to the gradual filling of the inlet and accumulation of sediment impinging on water flow.

1.2.3 El Haouaria and Zembra Isles

Physical features

This site extends over 1,362 ha of which 392 ha for the isles of Zembra and Zembretta and 970 ha for the continental portion.

The isles of Zembra and Zembretta (National Park, public forest) are the extension of Cap Bon and form, together with the El Haouaria site (hunting preserve) and its cliffs, a coherent entity both as regards biodiversity and the topography, actually one of the most remarkable sites in the entire Mediterranean region. The isles are a National Park since 1977 and are on the list of Biosphere reserves (MAB programme); they are under military control and the land areas are subject to little pressure.

The El Haouaria subsite (970 ha) includes a nature preserve (1993) consisting of a series of three successive caves on an area of 1 ha inhabited by over 10,000 bats belonging to 5 of the 6 species known in Tunisia, and a combination of cliffs, beaches and a mountainous area forming a particularly interesting biotope for birds of prey (migration and nesting).

The continental protected area would thus include all of the end section of Cap Bon from the Roman quarries in the east (the underground quarries which provided stone for the Coliseum in Rome are a cultural and aesthetic asset of great value) to Ras Ad Drag in the east.

Site significance in terms of biodiversity

Isles of Zembra and Zembretta subsite:

Seven globally threatened species are present on the archipelago. Those are mainly 4 plant species of which 2 are endemic to Tunisia: *Silene barrattei*, *Anthyllis barba-jovis*, *Scabiosa farinosa* and *Iberis semperflorens*. The Zembra and Zembretta archipelago is, together with the Galite archipelago, the only reproduction site in Tunisia for Audouin's gull *Larus audouinii*, globally threatened. The invertebrate *Patella ferruginea* is also present, as is the Mediterranean cormorant *Phalacrocorax aristotelis desmarestii*.

El Haouaria subsite:

A total of 11 globally threatened species are regularly present at El Haouaria, making it the richest area in Tunisia for the number of globally threatened wetland and coastal taxa. The two major attractions are the plants and migratory birds. Five threatened plant species, of which 2 are endemic to Tunisia, are present: *Scabiosa farinosa*, *Isoetes velata dubia*, *Isoetes velata adpersa*, *Anthyllis barbajovis* and *Limonium clupeanum*. El Haouaria is, together with the El Maamoura-Kélibia site, the only known station for *Limonium clupeanum*. The area is visited each spring by thousands of migratory birds, particularly birds of prey which also use it as a nesting site (peregrine falcon) and the globally threatened *Circus macrourus*, *Falco naumanni* and *Milvus milvus*. Finally, the bat *Rinolophus blasii*, a threatened species, is also present.

Uses, dysfunctions and threats

The El Haouaria zone is adversely affected by the increased use of water resources and overgrazing. The intensifying agricultural activities are causing disturbing deterioration of two major natural resources: water and land. There has been a marked reduction of the water resource, with an annual deficit of 72 Mm³ of the phreatic groundwater. The salt content in a few coastal areas has risen to 12g/l. In order to mitigate this phenomenon, if not to stop it altogether, it is necessary to reduce the rate of water consumption without reducing agricultural productivity, i.e. through better use of the available resources.

Despite the presence of nature preserves, the analysis of the site in terms of biodiversity is yet to be completed. The capture of birds of prey, to train them for hunting, had reached significant levels, but the action of NGOs for bird protection and public awareness-raising have produced positive changes which need to be confirmed.

2. EXPECTED END OF PROJECT SITUATION

Developed and institutionalized a sustainable framework for the management, policies and protection of the wetland and coastal biodiversity, contributing to “ closing the Mediterranean circle” in close networking with the other participating countries.

Specific achievements will be:

- Legal, regulatory and institutional instruments and tools will have been established for the protection and conservation of threatened biodiversity in the coastal and wetlands areas of the Mediterranean basin.
- Regional networks will have been established for exchange of experiences and for mutual reinforcement of actions.
- On-site protection of globally significant biodiversity will have been achieved in the project sites, and actions will have been taken to broaden these initiatives beyond the selected priority sites to others in the country.
- Improved knowledge of biodiversity, habitats and ecosystems, interlinkages, distribution, threats and uses
- Improved capacity at the local and national levels to address biodiversity issues in lateral and integrated planning levels
- A solid legal framework for the protected/conservation areas will have been established
- A detailed assessment of threatened species and appropriate measures (Management Plan) for their preservation will have been developed
- A general public awareness campaign for stressing the importance of natural environment resources protection will have been undertaken
- Grassroots involvement in biodiversity protection will have been ensured.
- A monitoring system for globally threatened biodiversity will have been set up
- A series of training for biodiversity experts and other relevant participatory bodies will have been accomplished
- Local level management structures will have been established/strengthened to ensure sustainable long term management of the globally significant biodiversity in the selected sites
- Cross-sectoral structures and policies for the effective management of biodiversity and wetland and coastal resources will have been developed.
- Indirect benefits, such as human health improvements, employment creation, increased tourism, etc. will also be associated with this initiative.

3. TARGET BENEFICIARIES

The main beneficiaries are the people of Tunisia who will gain from having a well-managed network of conservation areas. Those who live in and around the sites, and those who harvest the natural resources (such as herders and fishermen) will benefit from the long term sustainable management of those resources. These are often people with precarious livelihoods.

Protected areas are important for regional development. It is recognised that international tourists are increasingly vacationing in or near to natural, unspoiled areas, many spending their holidays experiencing nature and observing wildlife. Tunisia is seeking to increase nature based tourism (i.e. ecotourism) (in complementarity to the existing cultural and leisure tours) and the Mediterranean tourism sector will benefit from the proposed network.

Other national beneficiaries include all the project participants: the Ministry of environment, National Planning and Development, APAL, other governmental organizations, universities, scientific institutes, NGOs and national experts. At international level, exchanges between the countries involved in this project and the common approach to conserving part of the Mediterranean region's biodiversity will increase regional collaboration and the cross-fertilization of ideas and approaches. At the level of the individual participants this will broaden understanding of others problems, break down cultural or political barriers, and promote the feeling of belonging to a regional network faced with, and solving similar problems.

4. PROJECT STRATEGY AND IMPLEMENTATION ARRANGEMENTS

4.1 Strategy at the regional level

The priority sites identified in each country/Authority provide the basis for urgent actions to protect threatened biodiversity. They also provide a framework to which further sites can be added in future in order to address coastal and biodiversity issues in the country/Authority in accordance with the requirements of the Convention on Biological Diversity.

The project will develop, within the Mediterranean region, the instruments and management policies for wetlands and coastal zones whose conservation is of common interest to all the riparian countries. The experience from site level will feed into the activities for addressing root causes of biodiversity loss at national level and provide the case studies necessary for justifying the need for policy change. The combination of regional, national and local activities will allow the development of a set of legal, technical, regulatory and organisational frameworks which are individually specific but which serve to achieve a common goal.

The regional team will be a full technical partner to UNDP and the executing governments/authority, to provide advice on terms of reference, project planning through the TPR and to give technical guidance to both national and local actions. The main issues to be addressed at regional level are the horizontal themes which are relevant to all participating parties and where economies of scale can be made by undertaking these activities at regional level. The project will therefore emphasise exchange of the best available experience through technical assistance and networking, regional seminars on key topics of relevance to this project, training initiatives, and publication of guidance on management issues.

The regional activities will support the national actions by promoting exchange of experience within the region and by demonstrating how different countries (from north and south) have resolved or addressed similar problems. The regional team will also seek to promote information exchange concerning project activities at regional, national and site level through web-sites on the Internet.

A number of networks exist within the region and through their key positions in these technical and political networks, the Conservatoire du Littoral and the Tour du Valat are able to mobilise their members to support country actions, and to disseminate the results of the project in ways that will benefit stakeholders in other countries. Both organisations are committed to the sustainable development of coastal and wetland ecosystems within the Mediterranean region.

The implementation strategy adopted for this project is aimed at decentralizing to the appropriate national entities all actions that can be conducted and monitored at the local level. Each beneficiary country will manage the funds allocated to UNDP by the GEF through Government implementing agencies for national activities in Albania, Egypt, Morocco and Tunisia. In the case of Lebanon, FFEM allocated the funds to a project governmental agency through the UNDP Beirut office and the French Embassy. For the Palestinian Authority, PAPP/UNDP of Jerusalem will be the executing agency and the Regional Project component will be managed by UNOPS.

The presence of a Regional Facilitator will impart substantial added value to the project through the regional use of national actions, the efficiency gains obtained by avoiding the repetition of errors and the dissemination of good practices to be emulated; this regional action will be supported by a Regional Advisory Committee. This will be achieved:

- ◆ In the area of training, where the national actors will benefit from inputs and the experience of their colleagues in other countries, to whom they will also communicate their own experience;
- ◆ In the common preparation of methodology documents (guidelines) and in their distribution;
- ◆ In many other areas, such as feedback information, harmonizing databases, establishing common scientific procedures, whose availability will be enhanced by state-of-the-art communication systems such as the Internet.

The goal is therefore to create an actual network between the actors concerned in the various countries and to establish exchanges and partnerships between them. Likewise, information on the activities carried out and the programmes undertaken will be communicated to the other riparian countries, thus contributing to the actions conducted within the framework of the international conventions and activities in the Mediterranean Basin (Mediterranean Action Plan, Barcelona Convention, Ramsar Convention and MedWet).

Regional activity will make it possible to capitalize on, enhance and transfer experience at a lower cost and with greater efficiency.

4.1.1 Regional Advisory Committee

In order to maintain the coherence of the regional approach while capitalizing on the experience of each of the participants, it is crucial, throughout the implementation of the project, to adhere to a regional vision sustained by a *Regional Advisory Committee* which will ensure, at the highest level, that the regional approach be maintained, one which will have a synergistic effect increasing the efficiency of the actions conducted at the national level.

The composition of the Regional Advisory Committee will include:

- One representative of each of the Ministries or entities in charge of the environment in each country/Authority (if possible the Chief or Assistant Chief of the delegation to the MAP meeting)
- The National Project Coordinator;
- GEF/UNDP,
- UNOPS
- FFEM/AFD,
- French Environment Ministry;
- The Coordinator of the Mediterranean Action Plan or his representative;
- The Secretary General of the Ramsar Convention or his representative.
- Tour du Valat
- Conservatoire du Littoral

The *Regional Advisory Committee* may invite the participation, at their own expense, of other partners or qualified authorities: European Union, IUCN, WWF or any other person whose presence might be considered appropriate.

The expenses incurred by the members of the *Regional Advisory Committee* for their participation in the Committee's annual meeting are charged to their respective national budgets.

4.1.2 Regional Facilitator

The need to establish relations between project actors in the various countries/Authority, the organization of training activities and exchanges, and the monitoring for consistency have given rise to the necessity of appointing Regional Facilitator for this purpose. This person will be based at la Tour du Valat, the Mediterranean centre for research and conservation of wetlands, located in the Camargue region of France.

The Regional Facilitator assists each of the governments/Authority reach the objectives set within the framework of the project, in close collaboration with UNDP country offices and FFEM local representatives. This is essentially a technical task, involving no administrative support and backstopping and reporting. On behalf of GEF/UNDP, the Facilitator also monitors the use of GEF/UNDP funds and will provide reports on such use., based on the regular reports which he/she will receive from the National Coordinators.

He/She maintains contact with all project actors in each of the countries/Authority at the local and national levels, as well as all of the ministries concerned and the UNDP office and FFEM local representatives. The national responsible parties will provide the Regional Facilitator with the elements required to accomplish his/her mission and in particular with a copy of all sectoral studies, reports in connection with the project, records of the various

national and local committees, and any other documents which might serve to ensure efficient monitoring of the project implementation.

At the completion of the project, the results of all operations conducted in the beneficiary countries/Authority will be reviewed at the regional level and a synthetic summary of the lessons learned will be established by the Regional Facilitator. This summary will be distributed in the Mediterranean region via the existing networks.

4.1.3 Roles of Tour du Valat and Conservatoire du Littoral.

The tasks entrusted to the Regional Facilitator will be numerous and varied. He/She will be supported in his/her activities by a team of experts in training, wetland management, biodiversity, integrated management of coastal areas and land-use policies. All of these experts will make their technical knowledge available to the Facilitator to support the development of regional activities and will also provide access to their own regional expert networks. The technical coordination of this team of experts will be ensured by Tour du Valat/MedWet for the wetland component and the Conservatoire du Littoral for matters pertaining to coastal management and the development of land policies.

There are numerous networks in place in the Mediterranean region and, thanks to their central position within those technical and institutional networks, the Conservatoire du littoral and the Tour du Valat Centre are able to support the project by calling on their counterparts throughout the region. These two not-for-profit organizations were created for the purpose of conducting integrated actions for the development of coastal areas and wetlands and to protect biodiversity.

4.2 Institutional framework for project implementation

4.2.1 Local level

4.2.1.1- Management, implementation and concertation

APAL, a specialized public institution created by Law 72/95 of 25/07/1995, decentralized some of its activities to the various regions within Tunisia; it is thus represented in the Cap Bon region by a local office with a staff of 5, established at Nabeul, the regional seat. This local office will constitute the **Local Operational Unit**, headed by the **Local Coordinator** (Cap Bon). Staff salaries for this unit will be charged to the APAL budget.

The **Local Coordinator** in charge of the **Local Operational Unit**, under the authority of the **National Coordinator**, oversees the implementation of the project at the local level, and in particular:

- ◆ Ensures the monitoring of project activities at the local level;
- ◆ Contributes with the National Coordinator to the preparation of the terms of reference for the studies and work in concertation with the appropriate technical departments and project management.
- ◆ Circulates the draft reports from studies for comments at the local level (technical services, Local Management Advisory Council, etc.) and national level (Project Steering Committee and upon request);
- ◆ Organizes and prepares the seminars, workshops and other concertation meetings at the local level (Local Management Advisory Council);
- ◆ Prepares the technical and financial activity programmes and reports at the local level, in conformity with donors' procedures;
- ◆ Assumes financial responsibility for the project at the local level;
- ◆ Transmits all information pertaining to the project directly to the technical departments requesting it and keeps informed the Project Manager, the National Coordinator and, upon request the Regional Facilitator.

He provides leadership and manages the secretariat of a **Local Management Advisory Council** consisting of:

- ◆ The National Coordinator,
- ◆ A representative of the Nabeul Regional Council,
- ◆ A representative of ONAS,

- ◆ A representative of the CRDA at Nabeul,
- ◆ A representative of the Ministry of State Domain and Land Affairs,
- ◆ A representative of the Ministry of Culture,
- ◆ A representative of the Regional Directorate of Tourism at Nabeul,
- ◆ A representative of the Regional Directorate of Equipment,
- ◆ Representatives of the Municipalities of Korba, Takelsa, Haouaria and Kelibia,
- ◆ Representatives of the NGOs active in the region,
- ◆ Representatives of the University.

Under the chairmanship of the *National Coordinator*, the *Local Management Advisory Council* will meet at his/her request and at least twice a year. It will be responsible for the following actions at each site:

- ◆ Validating the yearly programme of actions proposed by the local operational unit and the project management team.
- ◆ Ensuring concertation and the consistency of the policies and local sectoral programmes with the primary project objective, which is the preservation of the sites within the context of sustainable development.
- ◆ Validating the studies and their recommendations.

The Council may procure additional services or enlist the cooperation of any qualified personality as may be required to carry out its tasks successfully.

4.2.2 National level

Under the authority of the Ministry of the Environment and Land-Use Management, the General Director of APAL will assume the role of *Project Manager*...

The Project Manager:

- ◆ is responsible for the management and implementation of the project;
- ◆ appoints a National Coordinator within his public institution;
- ◆ is responsible for the administrative and financial monitoring of the project; for this purpose, APAL will open a special account to receive the funds in conformity with the donors' accounting procedures;
- ◆ proposes the yearly work programme and the draft operating and investment budgets to the *Project Steering Committee*;
- ◆ manages the funds allocated to the project once the programme has been approved by the *Project Steering Committee*;
- ◆ issues the calls for bids for project studies and activities and identifies the actors best positioned to carry out the work;
- ◆ circulates the draft reports from studies for comments at the national and regional levels (Regional Facilitator);
- ◆ organizes the seminars, workshops and other concertation meetings at the national level;
- ◆ ensures the preparation of the documents in conformity with the project management cycle as requested by the donors (Section H: (Project reviews, reporting and evaluation));
- ◆ prepares the quarterly work programme in conformity with donors' procedures;
- ◆ maintains contact with the Regional Facilitator;
- ◆ undertakes all actions required to implement the project.

The National Coordinator, under the authority of the Project Manager:

- ◆ ensures the operational implementation of the project;
- ◆ ensures the coordination of the various project actors at the national and local levels;
- ◆ provides guidance to the *Local Coordinator* in order to ensure the completion of the tasks and studies undertaken at the local level;
- ◆ provides support for the preparation, by the *Local Coordinator*, of the terms of reference for the studies and tasks in concertation with the project management if necessary;
- ◆ chairs the *Local Management Advisory Council*;

- ◆ is the technical correspondent of the *Regional Facilitator*, responds to his requests for information regarding work status and calls upon him as needed.

A *Project Steering Committee* will be established at the national level and will oversee the implementation of the project activities in conformity with the provisions of the project document. Its membership will consist of:

- ◆ The members of the APAL Advisory Council:
 - Prime Minister
 - Ministry of the Environment and Land-Use Management
 - Ministry of National Defense
 - Ministry of the Interior
 - Ministry of Finance
 - Ministry of Industry
 - Ministry of Agriculture
 - Ministry of State Domains and Land Affairs
 - Ministry of Equipment and Housing
 - Ministry of Transportation
 - Ministry of Tourism and Handicrafts
- ◆ Representatives of the following organizations:
 - ANPE
 - ONAS
 - Regional Council

This committee is responsible for steering the project; as such, it:

- ◆ validates the yearly activity programme proposed by the Project Manager;
- ◆ Reviews and comments on the draft operating and investment budgets proposed by the Project Manager;
- ◆ Approves the programmes and monitors their implementation;
- ◆ Approves, within the framework of the legal applicable provisions, the contracts and agreements entered into within the framework of the project;
- ◆ Constitutes a forum for exchanges on and harmonization of the sectoral activities at the national level on the sites concerned by the project;
- ◆ Reviews and discusses the minutes of the meetings of the *Local Management Advisory Council*.

In addition, this committee will issue opinions, regarding in particular:

- The activity programmes that APAL intends to implement within the framework of the project;
- The acquisitions and transactions and all operations regarding real estate within framework of the project;
- The site management and development plans;
- The proposals concerning temporary occupancy title and concession grants on the sites;
- And all other actions or proposals which could be submitted to it by the Minister of Environment, National Planning and Development.

The Steering Committee will meet at the Project Manager's request and at least once a year. At each meeting, minutes of the proceedings will be recorded and a copy of the minutes will be transmitted to the Minister of Environment and the Regional Facilitator.

4.2.2.2 Concertation

The *National Committee for Sustainable Development* has a major role to play in the development of an integrated coastal policy. Therefore, reports will be submitted to it by the National Coordinator on the activities of the Local Management Advisory Council and the Project Steering Committee.

Creation of a Coastal Area Commission, or an ad hoc entity, within the National Committee for Sustainable Development should be given consideration.

5. REASONS FOR ASSISTANCE FROM GEF AND FFEM

The narrow Mediterranean coastline and its associated wetlands is a limited area increasingly colonised by human presence. The most frequent, and irreversible, trend is urbanisation which wipes out the potential for biodiversity and natural habitats.

This occupation of space is virtually irreversible as a return to natural habitats is largely impossible. At the other end of the spectrum, however, other dangerous threats, for example pollution, can be reversed with appropriate resources. It is therefore essential to develop planning and management policies, natural resource management and sustainable development initiatives that aim to limit the loss of natural habitats, especially wetlands.

All the beneficiaries of this project have ratified the Convention on Biological diversity, and the Ramsar Convention. This project also complies with principles of biodiversity protection, the GEF operational strategy and the programmes on coastal, marine and freshwater agreed at the second conference of the parties to CBD (Jakarta, Indonesia, Nov 1995).

The incremental contribution of the GEF and FFEM will accelerate the implementation of policies whose costs could not otherwise be carried by the states alone, considering the substantial funds committed by them to address existing brown issues.

In addition, the development of pilot management methods for the coastal zone, and the development of structured exchanges through a regional network, will allow a number of Mediterranean countries to avoid the need to reinvent the wheel in addressing their own national issues, hence promoting accelerated replication of experience gained elsewhere.

6. SPECIAL CONSIDERATIONS

During the implementation of the project, specific emphasis will be put on strengthening the dialogue, information exchange and cooperation among all the relevant stakeholders, including central and local governmental, non-governmental, academic, and private sectors.

The ultimate criteria of success will be how the results of the project will be incorporated in the broader development goals of Tunisia. The project tries to address this by establishing an institutional framework for cooperation and involvement of all the relevant partners.

Along with France, Tunisia is currently the only Mediterranean country where land-use management and environment are united within the same government ministry. This is a favourable condition which will promote efficient action, as any activity aimed at protecting biodiversity must be based on land-planning provisions to safeguard natural areas confronted by the irreversible aggression of urbanism and infrastructure development.

The Tunisian authorities have confirmed that the implementation of the project requires the participation of all competent parties, in order to ensure durability. In this regard, the NGOs are absolutely indispensable. In the Cap Bon area, three organizations are particularly active; they are: WWF, the Tunisian Association for the Protection of Nature and Environment (ATPNE) and the "Association des Amis des Oiseaux" (Friends of the Birds).

Furthermore, through constant efforts in the field of education and through its policy for the promotion of women, Tunisia has opened access for women to positions of leadership at all social levels, in particular within entities addressing environmental issues. Special efforts will be made to ensure that this project reflect the aggressive policy already implemented in this area.

7. COORDINATION ARRANGEMENTS

At the national level, the project will benefit from similar experiences in terms of site management, through the establishment of close contacts with managers or actors associated with coastal areas or wetlands.

In addition, it will benefit from the inputs of the various ministries within the Steering Committee, which will allow for the harmonization of the various sectoral policies within the project area.

At the Mediterranean level, beside the constant information exchanges between the six participating countries/territories, the project will establish relations with the Mediterranean Commission on Sustainable Development (MCS D) of MAP, (it will stand to benefit in particular from the experience of the Office of Special Protected Areas of MAP, whose seat is in Tunis), METAP, and the various programmes undertaken by a number of donors, as well as with initiatives targeting the Mediterranean region such as those undertaken by IUCN or conducted by the WWF. These networking activities will be one of the missions assigned to the Regional Facilitator.

8. COUNTERPART SUPPORT CAPACITY

In addition to its inputs as part of the national contribution to the project, APAL has a role and a function that will extend well beyond the planned duration of the project, over all of Tunisia's coastal area.

In this regard, APAL is committed, upon the completion of the project, to integrate within its permanent staff the personnel initially hired and financed by the project.

In addition, the aggressive policies adopted by the Ministry of Environment in water management, waste management and pollution control will also remain in effect long after the project is completed.

As regards financing, as was done for the other environmental agencies, the sustainability of their intervention will be supported in part by financial inputs based on the "polluter pays principle", as is the case for ANPE and ONAS, and user fees for ANPAL.

C. DEVELOPMENT OBJECTIVES

The project's overall development objective is to conserve globally endangered species and their habitats, recognising nature conservation as an integral part of sustainable human development while improving the capacity of governmental and non-governmental agencies to address biodiversity conservation issues.

D. IMMEDIATE OBJECTIVES, OUTPUTS AND ACTIVITIES

1. Promotion and capacity building for development of national policies to address policy-related root causes of the loss of wetland and coastal biodiversity.

The project aims at establishing the institutional, legal and regulatory means required to address the root causes of biodiversity degradation and to bring specific solutions for the management of coastal areas and wetlands, integrating the protection of biodiversity as a priority.

Output 1.1 (FFEM Contribution): Development of a coherent legal and regulatory framework using in particular land policies to allow, in addition to the regulations in effect or to be established (urbanism, law on coastal areas, etc.), the acquisition, the protection and the sustainable management of the use of public or private lands required for the protection and the preservation of ecosystem biodiversity in the coastal areas and wetlands.

This concrete phase is concerned with the operational applications, after the recent phase of legal creation, via the definition of tools aimed at ensuring daily implementation and enforcement.

It will entail, inter alia, the transfer of the management of significant public areas to APAL, budgetary or extra-budgetary resources, (concession fees or occupancy royalties, conventions, various levies, etc.), and the research of new financial resources for APAL.

Activity 1.1.1: Legal assistance aimed at:

- drafting the decree on the delineation of the coastal area;
- determining the practical modalities for the transfer of public property to APAL's domain, the acquisition of private land and the management arrangements with the owners;
- analyzing and drafting proposals regarding occupancy of the Public Maritime Domain (Concessions, temporary occupancy, criteria for occupancy value, nature of leases, termination procedures, etc.).
- analyzing and drafting proposals for financial resources for APAL from PMD occupancy or other potential sources (conventions and direct or indirect taxes); amending legal texts on government royalties (decrees of 25 May 1950, 1 June 1951, orders of 11 September 1956, 11 October 1986, 15 May 1992 and 6 October 1993)
- analyzing and defining procedures for management by third parties (ministries, municipalities, individuals, NGOs, etc.), elaborating procedures' manuals, methodology for specifications.

Activity 1.1.2: Based on the preceding analyses and taking into consideration APAL's competency, propose a regulatory text providing for the establishment of different categories of protection for sensitive areas (from total reserves to Regional Natural Parks) as required for the integrated management of areas impacted by human activities.

Responsible party: Ministry of the Environment and Land-Use Management, Project Manager.

Output 1.2 (FFEM Contribution) : Reinforce the capacities of the Agency for Coastal Protection and Planning (APAL).

This is aimed at ensuring the institutional and operational development of this entity and to allow it to adopt and adapt the most appropriate instruments to better administer, monitor, control and plan the integrated development of the coastal areas.

Activity 1.2.1: Technical assistance aimed at operationalizing the most appropriate management instruments to better administer, monitor, control and plan the integrated development of the coastal areas. Provision of methodology instruments, equipment and training for their use, facilitating the application and monitoring of management policies for wetlands and coastal areas.

Particular emphasis will be placed on exchanges of know-how with entities implementing similar approaches, such as Regional Conservatories, Plant Conservatories and Coastal Area Conservatories.

Activity 1.2.2 : Creation of an Observatory of the Littoral within APAL.

The law establishing APAL entrusted it with the mission of monitoring and controlling coastal ecosystems and using specialized computerized systems.

The assistance for the creation of the Observatory of the Littoral (OL) will comprise the following components: organizing training for the management of Geographic Information Systems, assistance for the establishment of this monitoring and control unit for coastal systems and provision of indispensable equipment for operating such a unit.

The goals of the assistance for the creation of the OL are the following:

1. Monitoring

This function will consist in monitoring the changes occurring in the coastal areas in general and the sensitive sites in particular, through a series of pre-identified indicators. It is actually subdivided into two components:

◆ **Environnemental watch:**

By establishing a network for observation and measurements, using modelling tools, the CAO will be able to detect the signs of environmental degradation or environmental imbalances and to respond appropriately.

◆ **Monitoring:**

By reference to the baseline conditions, coastal ecosystems will be assessed periodically through specific studies in order to determine the evolutionary trends.

2. Control

The control function will be concerned with:

- ◆ The enforcement of the regulations in effect in coastal areas and compliance of the users of the coastal areas;
- ◆ The application of the development and planning tools;
- ◆ The occupancy of the Public Maritime Territory.

Rationale for a GPS

In order to elaborate a national policy for the protection of coastal areas, APAL must produce detailed, current maps of the sites. For this purpose, it needs a precise positioning tool capable of detecting promptly and reliably possible encroachments, in particular in those areas which, because of the existing physical constraints, cannot be protected by enclosures (e.g. coastal dunes, beaches, etc.). This requires the acquisition within the project of a differential GPS which will also serve to control compliance with the SDAZS and the management/development plans.

Continuous monitoring of the encroachments and illegal occupancy by various project actors and APAL in particular must be maintained.

3. Land-use management and planning

The Observatory will also play a vital role in the decisions regarding the development and planning activities through its role as a data repository and its capacity to conduct computerized simulation exercises.

4. Capitalization and use of information

This function concerns the use of the information collected by APAL and its systematic dissemination, and on request, under various formats and on various supports.

Responsible party: Project Manager

Output 1.3 (GEF Contribution): Development of the "National Strategy for wetland conservation" in conformity with the obligations undertaken by the Parties to the Ramsar Convention.

The Ramsar Convention provides for the creation by the Contracting Parties of a national strategy aimed at ensuring the rational use of all wetlands located within their territory.

This strategy will include an evaluation of the impact of public policies on wetlands and will be aimed at integrating the sectoral interests influencing the use of water and areas currently occupied by marshes, lagoons and other wetlands. It will endeavour, through studies and detailed proposal, to balance local development, the use of the water resource and the protection of wetlands within the context of sustainable development.

This strategy, which will benefit from the inputs of the innovative approach implemented in the wetlands at Cap Bon, will be elaborated within the National Sustainable Development Commission where all actors involved in water issues are represented.

Activity 1.3.1: Analysis of the existing policies and legislation regarding the protection and development of the wetlands and the management of water resources, and assessment of their impact on the country's wetlands.

Identification of factors leading to the loss or degradation of the country's wetlands.

Activity 1.3.2: Organization of a national seminar, with the assistance of the national coordination team and the Regional Facilitator, to discuss the strategy to be formulated for wetlands. This seminar will involve the line ministries and technical services concerned by the issues of water management and use and will endeavour to balance the preservation of wetlands with a rational use of water resources.

Dissemination of the contents of the discussions on the "national strategy for wetlands", through the production and publication of information monographs and of the text of the National Strategy of Tunisia for Wetlands.

Activity 1.3.3: Definition, elaboration and proposal of a legislative and regulatory framework providing the basis for a durable, efficient protection of wetlands with significant biodiversity. This framework will comprize a formal "National strategy for wetlands", emphasizing the need to take into consideration the specific features of these special areas in development projects and the corrective measures to be applied in order to mitigate their degradation.

This activity will require the input of international expertise, common to several countries if possible, to complement national capacities.

Responsible party: Sustainable Development Network and Ministry of the Environment and Land-Use Management.

Output 1.4 (GEF Contribution): Definition and proposal regarding appropriate methodology tools for the establishment of local Agenda 21 programmes responding, inter alia, to the needs of the areas of concern within this project and such as could be duplicated in other areas of Tunisia.

The local Agenda 21 programmes are tools for the efficient fight against the threats on biodiversity and their root causes, while retaining or enhancing local capacities for economic and social development.

These documents will be established according to the principles set forth in Rio in 1992 within the framework of the Agenda 21 programme, adapting them to the local legislation as defined in the prior exercise aimed at defining the legislative framework.

Activity 1.4.1: This activity will lead to the drafting of a methodology manual, describing the procedures and emphasizing pragmatic approaches to facilitate the implementation of local agendas for sustainable development in Tunisia.

This activity will be conducted on an experimental basis in the Cap Bon area; its purpose will be to harmonize the various development and protection policies over the entire area in order to foster and optimize measures in favour of the protection of biodiversity. It will thus serve as a pilot activity initiating the creation of local Agenda 21 programmes, according to the obligations of the signatories of the Rio conventions (Agenda 21).

Responsible party: Ministry of the Environment and Land-Use Management and National Sustainable Development Commission.

2. **Prompt implementation of urgent measures required for the protection and removal of root causes in key demonstration sites selected in view of their global significance and of their variety in terms of threats and accompanying actions.**

The selected sites are pilot sites whose purpose is to serve as examples for Tunisia, but also for the entire Mediterranean Basin. The economies of scale achieved as a result of the exchanges of information and the parallel development of projects to protect coastal and wetland ecosystems will make it possible to protect other areas subsequently.

Output 2.1 (GEF Contribution): Reinforcement of the Local Operational Unit, whose mission will be to coordinate operations over all selected sites in order to carry out the activities and obtain the expected outputs regarding development, concertation, planning, monitoring and local management of the sites or site complexes.

Activity 2.1.1: Recruitment or assignment of technical administrative personnel and field staff.

Elaboration with CRDA (Regional Commissariat for Agriculture Development) of a convention regarding the Water and Forestry personnel.

Activity 2.1.2 : Provision of equipment and logistical means required to enable the Local Operational Unit to operate.

Activity 2.1.3 : "Induction" training for the Local Operational Unit and familiarization with land management as targeted by the project.

The training will be associated with the provision of the basic written material (scientific and pedagogic) required to initiate the management of the sites or site complexes: publications, guidelines, etc. This material will be provided during the induction training. The preparation of the "induction" packet will be undertaken by the Regional Facilitator.

Responsible party: Project Manager

Output 2.2 (GEF Contribution): Fine delineation of the sites and implementation of the SDAZS (land transfert to APAL).

The work will be performed by project personnel in cooperation with institutional personnel on an ad hoc basis.

Activity 2.2.1: Surveys of the limits of the peripheral zones and exact boundary marking of the protected areas. Precise mapping of the land limits, owners and uses.

Activity 2.2.2: On the sites targeted by the project, transfer to APAL of the management of public lands determined to be sensitive areas in the SDAZS.

Activity 2.2.3: Inventory of private lots required for site protection to be acquired by APAL or to be placed under conventional protection (use control), and drawing up of acquisition agreement or land management convention.

These three activities will be carried out in coordination with the Ministry of State Domain and Land Affairs.

Responsible party: Project Manager

Output 2.3 (GEF Contribution) : Detailed diagnostic study to prepare for the management of sensitive natural areas.

This study will assess the ecological status and trends and will determine the main components of a zoning plan balancing protection and development. It will define urgent measures that need to be implemented in order to stem the most serious forms of environmental degradation to protect biodiversity.

The mapping data will be processed on the GIS of the Observatory of the Littoral.

Activity 2.3.1: Definition of a computerized base map on which all field data collected during the study will be recorded and the various parameters will be monitored. The Diagnostic Coordinator will cooperate with the Observatory of the Littoral on the GIS with the Local Coordinator to establish the mapping parameters.

Activity 2.3.2: Multidisciplinary teams of national and international experts will undertake a site diagnostic study including a field inventory of the globally threatened species, the mapping of the main plant strata, the identification of all internal or external factors with a positive or negative influence on site habitats and species.

This diagnostic study will define urgent measures that need to be implemented immediately in order to stem the most serious forms of environmental degradation to protect biodiversity. It will also define the main indicators that will be used to track the changes in the sites' ecological condition, and their globally threatened wildlife (both fauna and flora).

Activity 2.3.3: The Local Operational Units will be tasked with the mission of recording non-biological data: number of tourists, visitors, bathers, or campers, number of fishermen and catches, number of grazing animals, number and surface area of farms, etc., and to determine the trends and changes. The data will be integrated in the GIS of the Observatory of the Littoral.

Activity 2.3.4: Qualitative and quantitative analysis of the parameters characterizing water quality on the sites, and establishment of provisional water management schemes initiating urgent work (2.3.6) which can be refined when the Integrated Management Plans are implemented.

- ◆ Collection of existing data on hydrological parameters (rainfall, evaporation, heights and flows, water table levels, water quality, levels in dam impoundments, etc.), on the existing water projects and the use of the water resources from sensitive sites' watersheds. The sources of pollution impacting the sites and their habitats will be identified.
- ◆ Field studies will need to be conducted to collect more complete data on water quality, sediments and pollutants where present (content of heavy metals, nitrates, nitrogen, phosphates, water table level, bathymetry, etc.). This diagnostic study will focus more particularly on the flow of water in the lagoons.
- ◆ Elaboration and implementation of provisional water management schemes.
Special priority will be granted to the Korba lagoon, in order to obtain rapid improvement of the flow in the lagoon and to eliminate polluted sediment.
The water management plan of El Haouaria / Oued Abid will be mainly concerned with the rational resource management, particularly in the agricultural sector, and will complement the effort undertaken in this area by CRDA with the local farming population. More specifically, it will provide for the improvement of the irrigation network in those areas of overdraft, by organizing controls on the water level and quality and by encouraging the farmers to use localized irrigation schemes and training them to water management and conservation techniques.

This activity will also be aimed at providing a list of indicators that will be measured during this initial study and that will need to be monitored over the entire duration of the project.
The study will be conducted under the authority of the Diagnostic Coordinator.

Activity 2.3.5: Study of the potential for socio-economic development activities compatible with the preservation of biodiversity.

This study will focus in particular on the possibilities afforded by forms of light tourism without negative effects on biodiversity.

Activity 2.3.6: A provisional management programme will be established by the Diagnostic Coordinator, taking into account the findings of the various sectoral diagnostic studies and proposing the implementation of the most urgent actions for site development and habitat rehabilitation, allowing the preservation or the increase of gravely threatened biodiversity in accordance with the results and recommendations of activities 2.3.1, 2.3.2, 2.3.3, 2.3.4 and 2.3.5.

Responsible party: National Coordinator

Output 2.4 (FFEM Contribution): Improvement of water flow in the Korba lagoon.

Activity 2.4.1 : In accordance with the work performed by INAT and WWF in 1996 in preparation for the creation of a nature preserve in the Korba Lagoon, and with the diagnostic studies and analyses and the Provisional Water Management Scheme of the Korba Lagoon, and taking into consideration the urgency and the need for prompt action on this site to mitigate the eutrophication and anoxia phenomena, work will be undertaken in order to bring about rapid improvement of the hydrodynamic behaviour of the lagoon, thus contributing to the elimination of one of the causes of the loss of biodiversity.

One of the major problems analyzed in the WWF/INAT study is the intermittent communication of the lagoon with the sea. This is due to the fact that, because of sedimentation, the inlets do not provide any water exchange, which accelerates the drying of the lagoon, causing mortality among the resident fauna. Periodic dredging of the channels is therefore needed, with continuous monitoring of the water level.

For many years, the lagoon has received solid waste of different kinds. These waste materials and debris are present on the banks and in the water. A clean up and dredging programme must be implemented to eliminate these pollutants and jams from the lagoon. It will entail extensive superficial dredging and cleaning the banks.

In order to isolate the laying sites of the migratory birds and the areas frequented by the human population and to provide quality nesting sites, the plan for the ecological improvement of the Korba Lagoon will include the creation of islets recreating the habitats required for nesting, thus promoting increased biodiversity.

Responsible party: National Coordinator

Output 2.5 (GEF Contribution) :Proposed policy orientations for urban development of the cities located in the periphery of the sites or site complexes, compatible with the protection of the biodiversity of the sites selected by the project.

Activity 2.5.1: Historical and prospective study of the urban evolution of the municipalities adjacent to the sites. The consultant will be required to provide a document summarizing the conditions of the area, maps, land register (or similar), evolutionary trends, existing planning documents.

Activity 2.5.2: Formulation of proposal and discussion with the local authorities and the population regarding policy orientations for urban development that are compatible with the sites' long-term protection. Contribution to the elaboration or revision of the urbanism documents (as needed).

Responsible party: Local Coordinator

Output 2.6 (GEF Contribution) : Elaboration of a waste management plan for the sites or site complex. Negotiation and discussion of implementation modalities with the local authorities and contiguous local communities, in order to eliminate uncontrolled dumping on the selected sites and to envision alternative solutions for waste management within a sustainable development context.

Activity 2.6.1: Analysis of waste issues (quantity, quality, change) on the site and their relations with the surrounding areas.

Activity 2.6.2: Formulation of proposal and discussion with the local authorities and the population regarding available options to implement waste management systems that are compatible with the sites' long-term protection.

Elaboration of a local waste management plan in order to eliminate uncontrolled dumping on the selected sites and to envision alternative solutions for waste management within a sustainable development context.

Responsible party: Local Coordinator

Output 2.7 (GEF Contribution) : Equipment required for the activities and operations of the Local Operational Unit aimed at the implementation of site or site complex management plans.

Activity 2.7.1: Procurement of equipment and supplies required for the day-to-day management of the projects on each site or site complex.

Flexibility in the selection of the equipment required for the implementation of the project will be encouraged, within the limits of the total budget allocation for equipment.

Responsible party: National Coordinator

Output 2.8 (GEF Contribution) : Elaboration and implementation of an integrated management plan for each site or site complex.

It is highly desirable that the Diagnostic Coordinator supervise this activity.

Activity 2.8.1: Elaboration of an integrated management plan for each pilot site or site complex. These plans will define the modalities for the management of land and biological resources and for land-use (leisure activity planning, hunting, fishing, regulation of pastoral activities, overgrazing, etc.). They will establish the tasks to be undertaken and the work programme, as well as the budget allocations required for the rehabilitation and development of the sites with a view to realizing the project's objective, i.e. the preservation of wetland and coastal ecosystems.

The management plan will define actions and orientations over a period of 5 years.

Each management plan will take into consideration the inventories, descriptions, findings and recommendations of the initial diagnostic studies (Output 2.3), as well as those of the schemes pertaining to urban development (Output 2.5) and waste management (Output 2.6). Each document will describe the programmes and actions to be implemented in order to obtain clear and measurable results, situating those programmes and actions within the national and regional contexts.

Particular attention will be accorded to water control and savings, with actions targetting the farmers, such as the improvement of the irrigation networks, in order to save resources. Any approach aimed at combatting the depletion of water serves to preserve wetland integrity, thereby avoiding their loss and that of the species they support.

The Korba/Kelibia management plan will envision the creation of a botanical garden, to preserve rare or threatened plant species. Afforestation measures, using local species, compatible with the management plan may be considered for dune fixation.

Activity 2.8.2: Assistance to APAL and the Local Operational Unit to help them prepare yearly management programmes based on the five-year management plan. The yearly management programmes are aimed at facilitating the management of each site by anticipating the actions and budget needs for the year ahead, taking into account the natural and ecological variables. For this purpose, the plans and budgets will need to be flexible enough to provide for contingencies:

Activity 2.8.3: Based on the preceding activities (2.8.1 et 2.8.2), implementation of the actions identified by the management plan and included in the yearly management.

Responsible party: Local Coordinator

Output 2.9 (GEF Contribution) : Infrastructure development of the sites and surrounding areas to receive the public and facilitate the management of the flow of visitors and tourists and their containment in areas defined during the elaboration of the integrated management plans. These site development activities will grant preference to local businesses whether already existing or possibly to be created.

Activity 2.9.1: Infrastructure development aimed at managing the flow of the visitors and users. These infrastructure components will be based upon the findings and recommendations of the diagnostic study and carried out according to the management plans (signage / discovery paths / ecological trail / orientation table / visitors' containment zone / animal observation posts / environmentally friendly installations for site crossing, etc.)

Activity 2.9.2 : Creation of an eco-cultural park on the Korba Lagoon site. This park will improve the tourism and economic value of the site as a result of the creation of a cultural area centred on nature. It will promote the development of an ecology culture in this area by focussing its activities on awareness-raising for schools and the general public.

Responsible party: Local Coordinator

Output 2.10 (GEF Contribution) : Monitoring of physical and biological parameters (according to protocols defined in Output 2.3)

Activity 2.10.1: Training sessions on scientific techniques for ecosystem and biotope monitoring. This training will target various audiences based on specific needs at each site (wardens, engineers, scientists, etc.). These needs will be assessed by the Regional Facilitator during regular missions.

Activity 2.10.2: Provision of essential monitoring instruments in order to obtain reliable data on biodiversity, physico-chemical parameters, occupancy/use, etc., so as to define appropriate management actions for the preservation of the site and its biodiversity.

(The list of the equipment required for the ecological site monitoring will be drawn up as part of the activities undertaken to produce Output 2.3.)

Responsible party: Local Coordinator

3 Contributing to the implementation of a Mediterranean policy in the fields of biodiversity protection and sustainable management of wetlands and coastal zones through the networking of actors, transfer of lessons learned, exchanges and training

The goal, by capitalizing on local, national and regional experience, is to create a regional network capable of integrating the innovative elements of the actions conducted at these various levels, and to promote, through information, exchanges and training, a transfer of know-how so as to ensure economies of scale, replicability and synergy.

Output 3.1 (GEF and FFEM Contributions): Strengthening the capacities of each of the actors of the regional network in terms of management and use of sensitive environments (coastal areas, wetlands)

Activity 3.1.1: (GEF CONTRIBUTION) Training of the national actors and the members of the Local Operational Unit. Some of the "basic knowledge" training components have already been identified (training in biological monitoring, sensitive wetland management, management plan design, coastal area management -and development). Within this pre-established programme, specific training activities will be prepared by the Regional Facilitator who will provide the trainers and didactic materials required.

Activity 3.1.2: (FFEM CONTRIBUTION) In addition to the training sessions to be conducted under Activity 3.1.1, demand for specific training sessions for the various project actors may be expected; those needs, which will emerge from the field, cannot be determined at this point.

Therefore, provisions should be made for "customized" training programmes which will be organized by the Regional Facilitator within the framework of this mission.

These training workshops will be prepared and conducted at the request of the Tunisian party or upon a proposal from the Regional Training Team (Regional Facilitator) who will have noted the need therefor, in view of the technical problems which will arise and whose solution will require an additional input of experience and capacity-building.

Activity 3.1.3: (GEF CONTRIBUTION) Training sessions for professional users (farmers, fishermen, foresters, etc.) in practices for the sustainable use of the resources. They will be based on the programmes undertaken for this purpose by CRDA. They will also be geared towards the development of new activities such as ecological forest management by micro-enterprises.

These training activities will be complemented, as appropriate, by the provision of techniques and materials aimed at encouraging small farmers to adopt localized irrigation and sustainable resources management approaches.

These capacity-building activities will be supported by training sessions organized by the Regional Facilitator according to local needs and expectations.

Responsible party: Regional Facilitator, National Coordinator

Output 3.2 (GEF Contribution): Public awareness-raising as to the importance of biodiversity preservation through activities targeting the various audiences and associating them with the project, whose success is conditional, to a large extent, upon their involvement.

Regional harmonization of the information/awareness products between the participating countries, in order to benefit from synergistic effects with regards to the image.

Activity 3.2.1: An awareness-raising programme will be implemented, with special focus on the youth and the local communities. In the design of this programme, the Project Manager will give an important role to

the NGOs active in the area, including WWF-Tunisia, ATPNE, Association des Amis des oiseaux, etc. The programme will focus mainly on the following themes:

- ◆ Importance of biodiversity
- ◆ Site protection
- ◆ Water control
- ◆ Solid waste

Responsible parties: Regional Facilitator, National Coordinator

Output 3.3 (GEF Contribution): Participation of the Tunisian actors in and contribution to the common regional activities of the GEF and FFEM project.

Activity 3.3.1: Participation of the Project Manager, Coordinators and actors in the six 6 information exchange and training seminars and other training activities organized by the Regional Facilitator.

Activity 3.3.2: Organization and hosting of one of the 6 information exchange and training seminars with the 5 other countries/territories, whose contents and list of participants will be established in collaboration with the Regional Facilitator.

The scheduling of the six seminars will be determined in consultation with the Regional Facilitator.

Activity 3.3.3: Participation of the Tunisian responsible parties (representative of the Ministry of the Environment and Project Manager) to the annual meeting of the Regional Monitoring Committee. Whenever possible, these meetings will be held in conjunction with the meetings organized by the Secretariat to the Barcelona Convention.

Responsible party: Regional Facilitator, Project Manager

E. INPUTS

1. Government contribution

The amounts of the Government contribution are indicated in Tunisian Dinars. (1TD = ~1USD)

1.1 Personnel

Profile	Origin	Sex	No. m/m	Unit cost/month	Total cost
Project Manager	APAL	M	15	4,500	67,500
National Coordinator	APAL	M	60	3,000	180,000
Secretary	APAL	F	30	700	21,000
Accountant	APAL	F	15	1,500	22,500
Administrative Agent	APAL	F	15	1,500	22,500
Hydrology Expert	APAL	F	15	1,800	27,000
Land-Use Architect	APAL	M	15	1,800	27,000
Landscape Architect	APAL	F	30	1,800	54,000
Legal Expert (Land-Use)	APAL	M	15	1,500	22,500
Computer Expert	APAL	F	15	1,800	27,000
Forestry Expert	CRDA	M	15	1,800	27,000
Rural Engineer	CRDA	M	15	1,800	27,000
Game Warden	CRDA	M	30	700	21,000

Rangers	CRDA	M	300	300	90,000
Labourers	CRDA/APAL	M	360	400	144,000
Total					780,000

1.2 Operating Costs

Item	Cost
Office rent (National and local)	60,000
Electricity	15,000
Water	6,000
Telephone	10,000
Consumables	10,000
Repairs and maintenance	15,000
Insurance	20,000
Fuel	10,000
Total	146,000

1.3 Awareness-raising

Item	Cost
Television advertising spot	20,000
Signage	8,000
Pamphlet	10,000
Poster, Sticker	5,000
Print media	10,000
Publication of didactic documents	20,000
Miscellaneous	25,000
Total	98,000

1.4 Equipment

Item	Qty	Unit Price(TD)	Total (DT)
Service car	01	20,000	20,000
4WD vehicle	01	30,000	30,000
Office furniture (general)	08	2,000	16,000
Office equipment (fax, photocopier, telephone switchboard, computer hardware, etc.)	01		15,000
Miscellaneous			8,000
Total			89,000

1.5 Information processing

Item	Cost (TD)
Database creation	20,000
Data entry	30,000
Analysis and processing	20,000
Total	70,000

1.6 Studies

Item	Cost
Wetlands of the Gulf of Hammamet	80,000
Land Control	100,000
Mapping Database	100,000
Total	280,000

1.7 Works

Item	Total Price (DT)
Improvement of hydrodynamics in the Korba Lagoon and clean up: <ul style="list-style-type: none"> • Clean up of lagoon banks 	60,000
Infrastructure and development <ul style="list-style-type: none"> • Creation of a botanical garden • Contribution to the creation of the eco-cultural park 	30,000
Establishment of a monitoring and control programme: <ul style="list-style-type: none"> • Monitoring of key indicators of ecosystem evolution • Quantitative and qualitative observation of the avifauna • Control of illegal occupancy and compliance with development tools 	30,000
Total	120,000

1.8 Land control

Item	Cost
Land acquisition	600,000
Total	600,000

1.9 Water control

Type of action	Number	Location	Cost (TD)
State contribution to water conservation	7,500 ha	Project perimeter	54,00000
Maintenance of existing infrastructure	03	Project perimeter	6,00000
Total			60,00000

1.10 Other Expenses

Item	Cost
Reception expenses	5,000
Meetings	5,000
Total	10,000

Total Direct National Contribution: TD 8,193,000
(POLLUTION MANAGEMENT NOT INCLUDED) (ITD ≈ 1USD ≈ 6FF)

1.11 Pollution management

The Ninth Five-Year Development Plan (1997-2001) provides for the treatment of over 30,000 m³/day of waste water in the Cap Bon area. According to the projections of the National Sanitation Authority, in the year 2001, 60% of the treated volume of water will be used for agriculture, irrigation of green areas and possible aquifer replenishment. Pilot projects for the use of processes such as irradiation aimed at improving the microbiological quality are underway.

Also, by the end of this planning period, sewage collection on the perimeter of the Korba Kelibia Lagoon will be completely under control.

Plant	Treated Volume (m ³ /day)	Cost (TD)
Korba	4,400	3,500,000
Maamoura	1,000	1,800,000
Haouaria	1,000	3,000,000
Menzel Temime	4,250	4,500,000
Existing plants in the area	18,000	-
Total	28,650	12,800,000

2. **FFEM contribution**

The amounts for the FFEM contribution are indicated in French Francs (1US\$=-6FF=1TD)

2.1 Output 1.1: Institutional and legal assistance

Implementation of existing regulations	National / International	No. m/m	Cost m/m*	Total
Legal expert (administration)	international	4	93,000	372,000
Legal expert (administration)	national	2	24,500	49,000
Legal expert (environment)	international	3	93,000	279,000
Legal expert (environment)	national	2	16,500	33,000
Legal expert (land-use)	national	6	16,500	99,000
Total				832,000

*maximum

2.2 Output 1.2: Capacity-building for the Agency for Coastal Protection and Planning

Activity 1.2.1: Technical Assistance to APAL

APAL Capacity-building	National / International	No. m/m	Cost m/m*	Total
Expert in coastal area management	international	3	80,000	240,000
Total				240,000

*maximum

Activity 1.2.2: Creation of an Observatory of the Littoral

Assistance for the development of the Observatory	National / International	No. m/m	Cost m/m*	Total
Expert Gestion du littoral	international	1	80,000	80,000
Total				80,000

*maximum

Equipment for APAL's Observatory of the Littoral	Qty	Unit Price*	Total
Micro-computer /modem	02	13,750	27,500
GPS and equipment		247,500	247,500
Total			275,000

*maximum

Training	Total
GIS training for APAL's Observatory of the Littoral	80,000
Total	80,000

2.3 Output 2.4: Improvement of water circulation in the Korba Lagoon

Hydrodynamic improvements in the Korba Lagoon	Total
Dredging of inlets, channel, creation of nesting islets	1,960,000
Total	1,960,000

2.4 Output 3.1: Capacity-building for regional network actors in management and preservation of sensitive areas

Training	Total
"Customized" training	303,000
Total	303,000

2.5 - Miscellaneous

	coût
Miscellaneous	230,000
Total	230,000

TOTAL FFEM Contribution: 4 000 000 FF (1USD≈6FF≈1DT)

3. **GEF contribution**

The amounts for the GEF contribution are indicated in US Dollars (1US\$≈6FF ≈1DT)

3.1 Project personnel

Profile	National / International	No.	No. m/m	Cost m/m	Total
Local Coordinator (Cap Bon)	national	01	60	1,500	90,000
Senior Technician	national	03	180	800	144,000
Secretary	national	01	60	600	36,000
Administrative Agent	national	01	60	500	30,000
Ornithology Expert	national	01	8	2,500	20,000
Geomorphology Expert	national	01	8	3,000	24,000
Coastal ecosystems Expert	national	01	8	3,000	24,000
Forestry Expert	national	01	8	2,000	16,000

Socio-economy Expert	national	01	8	3,000	24,000
Guard/Ranger	national	05	300	300	90,000
Labourer	national	04	240	400	96,000
Total					594,000

Travels	60,000
Missions	75,000
Mission costs (regional)	15,000
Mission costs (international)	10,000
Total	160,000

3.2 Subcontracts

Output 1.3:	National /	No.	No. m/m	Cost m/m	Total
National Wetland Strategy	International				
Wetland Specialist	international	01	2	15,000	30,000
Legal Consultant	international	01	1	15,000	15,000
Public policy evaluation	international				30,000
Wetland Workshop					20,000
Result dissemination					10,000
Total					105,000

Output 1.4:	National /	No.	No. m/m	Cost m/m	Total
Local Agenda 21 Programmes	International				
Sustainable Development Consultant	international	01	2	15,000	30,000
Methodology manual					10,000
Total					40,000

Output 2.4:	National /	No.	No. m/m	Cost m/m	Total
Diagnostic Study	International				
Diagnostic Coordinator	international	01	6	17,000	102,000
Botanist	national	01	3	3,000	9,000
Botanist	international	01	0.75	12,000	9,000
Herpetologist	national	01	2	3,000	6,000
Herpetologist	international	01	0.75	12,000	9,000
Mammologist	national	01	1.5	3,000	4,500
Team for water quality and quantity study and research	national		5	3,000	15,000
Team for technical analysis and water management plan	international		2	15,000	30,000
Urgent Work					160,000
Total					344,500

Output 2.5:	National /	No.	No. m/m	Cost m/m	Total
Urban studies	International				
Urbanism Expert	national	01	4	3,000	12,000
Total					12,000

Output 2.6:	National / International	No.	No. m/m	Cost m/m	Total
Waste Management Studies					
Waste Management Expert	national	01	4	3,000	12,000
Total					12,000

Output 2.8:	National / International	No. m/m	Cost m/m	Total
Management plans				
Assistance for management plan design	International	2	17,000	34,000
Assistance for yearly programming	International	4	15,000	60,000
Implementation of management plans				180,000
Dune fixation				55,000
Total				329,000

Output 2.8:	Detail	Location	Cost
Water control			
Improvement of the irrigation network			
Rehabilitation of branch piping	Renovation of piping and flowmeters	Dar Chichou	30,000
Installation of additional individual turnouts	Some 250 meters to be installed on 3 PPIs	Dar Allouche Korba Oued Abid	60,000
Encouragement to small farmers in favour of using localized irrigation and sustainable resource management			90,000
Total			180,000

Output 2.9:	Total
Installations for public access	
Eco-cultural Park of the Korba Lagoon	50,000
Installations for visitors' flow management	110,000
Total	160,000

Output 2.10:	National / International	No.	Cost	Total
Monitoring				
Monitoring and control programme	national	3	10,000	30,000
Total				30,000

Output 3.2:	Cost
Awareness-raising and methodology manual	
Awareness-raising	35,000
Manuals , publications, signage	20,000
Awareness-raising days (X5)	50,000
Total	105,000

2.3 Training

Activities 3.1.1 and 3.1.3:	National / International	No.	Cost	Total
Training				
"Induction" training	international	1	9,000	9,000
Specific training courses (monitoring, sensitive area management, management plan, coastal planning and development)	international	4	15,000	60,000
Total				69,000

2.4 Equipment (Output 2.7)

2.4.1 Expendable

Item	Quantity	Unit Price	Total Price
Uniforms and work clothes	50	150	7,500
Binoculars	10	400	4,000
Photo camera	02	400	800
Miscellaneous small tools			10,000
Total			22,300

2.4.2 Non-expendable

Item	Quantity	Unit Price	Total Price
Liaison vehicle	01	18,000	18,000
Service vehicle	02	16,000	32,000
4WD vehicle	01	28,000	28,000
Trail motorcycle	06	2,000	12,000
Micro-computer/modem	02	2,500	5,000
Printer	01	900	900
Overhead projector	01	2,500	2,500
Projection screen	01	1,000	1,000
Telescope	03	1,500	4,500
TV set	01	1,700	1,700
Video tape recorder	01	1,300	1,300
Camcorder	01	1,800	1,800
Office equipment	04	1,000	4,000
Boat	01	15,000	15,000
Radio communication system	10	500	5,000
Ground water monitoring equipment (water stage recorders, piezometers, sensors, etc.)			20,000
Total			152,700

2.5 Miscellaneous

Item	Cost
(Activity 3.3.2) Organizing and hosting one of the 6 regional seminars	25,000
Meeting expenses	10,000
Communications	2,000
Contingency	56,000
Reports	5,000
Miscellaneous	47,000
Operations and maintenance	39,500
Project support costs	75,000
Total	259,500

TOTAL FEM Contribution: US\$ 2,575,000 (1US\$≈1DT ≈6FF)

F. RISKS

Adapting legislation and regulation concerning land-use rights is a longterm and complex process. The creation of new structures specialised in the protection of the coastline may also generate opposition within the administration and therefore requires substantial commitment from government to succeed. The support of local people and of the media may also contribute, and in this sense the image and international nature of the project is an important feature.

The active participation of local people and local government in decision-making on land-use and water issues is essential as it is at this level that the main pressures on remaining natural areas occur. This purpose is rendered difficult by lack of resources to allow full participation and the weakness of analytical, consultative and inter-administrative systems.

In addition, effective coordination between all administrative levels (local and national) is essential for project success and this will require a sustained effort from all project participants and strong political will. Building on the interest shown by all the participating countries/authority, the project preparation process has nevertheless improved the awareness of these issues and attention should remain focussed on promoting this in each of the project sites.

G. PRIOR OBLIGATIONS AND PREREQUISITES

1. Prior obligations

- ◆ Available land register indicating uses and ownership of lands on each site.
- ◆ Adoption and publication of the Master Plans for the Development of Sensitive Areas (SDAZS).

2. Prerequisites

- ◆ In the sites included in the project, transfer to APAL of the management of public lands determined to be sensitive areas according to the SDAZS before the end of the first year of project implementation.
- ◆ Nomination of *the Project Manager, the National Coordinator, the Local Coordinator* and installation of *the Local Operational Unit, the Local Management Advisory Council, and the Project Steering Committee* within 6 months of project start-up. This will be a pre-condition of the appropriation of funds for equipment goods and works as planned for the project.

- ◆ Guarantee that no heavy infrastructure components will be constructed within the sites.
- ◆ Implementation of the process aimed at terminating illegal occupancy of public lands on the sites prior to the mid-term evaluation. This termination of illegal occupancy concerned first and foremost those activities or buildings of a commercial or speculative nature or related to leisure or aimed at deriving profits directly from the illegal activity. Illegal occupancy linked to the principal residence of low-income population groups will be accorded specific treatment, in particular by way of compensatory offers made by the competent authorities.
- ◆ Annual presentation of the reports and programmes pertaining to technical and financial activities, APAL's organization chart, capital budget and operating budget, in conformity with project objectives.
- ◆ Guarantee of efficiency and durability of the investments made through the adoption of d'efficacité et de pérennité des investissements réalisés grâce à l'adoption de statuts et d'obligations adaptés (APAL, sites...).
- ◆ Funding of salaries for project personnel recruited by APAL upon project completion.
- ◆ Initiation of the mobilization of the national counterpart contribution and other contributions.
- ◆ Designation of wetlands under the Ramsar Convention prior to the mid-term evaluation.
- ◆ Designation of the sites as ASPIM (MAP) prior to the mid-term evaluation.
- ◆ Prohibition of hunting on project wetlands prior to project completion.

Assistance for the project will be provided only if the obligations and prerequisites stipulated above have been fulfilled or are likely to be fulfilled. When anticipated fulfilment of one or more prerequisites fails to materialize, UNDP may, at its discretion, either suspend or terminate its assistance.

H. PROJECT REVIEWS, REPORTING AND EVALUATION

In view of the regional nature of the project and the specific linkages between the 6 countries/territories involved, special conditions for monitoring and reporting have been established.

As has already been described in the Regional Project Document, the Regional Facilitator will provide assistance and advice and will ensure the networking of the national projects. The Regional Facilitator will be responsible for drafting and submitting various technical reports to GEF/UNDP, to UNOPS and the FFEM. In addition the Regional Facilitator will also provide comments to national *Project Reviews* and will also attend the annual meeting of the Regional Advisory Committee.

Project Review –PR (also called TPR in regular national projects)

This project will be subject to annual Project Reviews (PR) which will take place at least every twelve months, with the first such meeting to take place within the first twelve months following actual project start-up.

The participants to these Annual Project Reviews (APR) will include: representatives of the Government, the implementing agency, UNDP, FFEM secretariat and/or the French Ministry of the Environment and the Regional Facilitator. Upon the initiative of the representatives of the Government, the implementing agency, UNDP or FFEM, two national coordinators for other countries or any other national or international actor participating in the regional project may be invited to attend.

Annual Performance Report

The Project Manager will be responsible for preparing and submitting to each Project Review (PR) an Annual Performance Report (APR). Other evaluation reports may be requested, as needed, during the implementation of the project. Each project partner (representatives of the Government, the implementing agency, UNDP, FFEM secretariat – under the Agence Française de Développement – and the Regional Facilitator) as well as the GEF/RBAS New York) will be provided with copies of the Evaluation Reports before the Project Reviews (PR).

The APRs from each national project component will be submitted to the Regional Facilitator, so that she/he may write a combined and summarized APR for the entire project to be submitted to GEF/RBAS.

A project completion report will be prepared to be discussed at the last Project Review (PR). This report will need to be prepared in advance, so as to enable the implementing agency to provide technical inputs and to make comments, at least four months before this last tripartite review.

Mid-term evaluation

The project will be subject to a mid-term evaluation, i.e. during the third year after actual project start-up. The organization, the terms of reference and the timing will be determined after consultation with the participants in the APR preceding the mid-term evaluation.

The consultants who will carry out this evaluation exercise will normally be selected from the GEF STAP roster after consultation with project partners. This evaluation will be independent. Particular attention will be paid to the selection of regional consultants to the extent possible. The evaluation team will consist of no more than 3 people. The same team will visit all of the countries participating in the project in order to produce a coherent evaluation. The results of the mid-term evaluation will be made publicly available according to the GEF's principles of transparency and free access.

Clearing House Mechanism

The National Coordinator will work with the project's national partners to establish biodiversity indicators and monitoring indicators during the first year of the project. These indicators will be submitted to the Regional Facilitator for his assent as to the type of biodiversity to be monitored, the frequency of the measurements and the periodicity of the reports to be submitted to him. This information will be shared with the focal point of the "Clearing House Mechanism", GEF / UNDP and the FFEM as well as the other project partners.

The monitoring information will be reviewed and summarized by the Project Manager and submitted to the Regional Facilitator for further analysis and review.

GEF Project Implementation Review

The project will also be subject to the GEF Project Implementation Review (PIR) process. This involves filling out a computerized questionnaire (to be submitted each year in July/August). In view of the fact that this regional project will be treated as a single entity, each national component, through its National Coordinator, will submit the information required by the Regional Facilitator in a timely manner so that the GEF PIR process may be completed on time.

FFEM monitoring of FFEM-funded project activities

It should be noted that FFEM will also monitor the project components it supports. The budgetary and financial monitoring will be conducted by the Agence Française de Développement (in Tunisia and Morocco) in parallel with the monitoring process described above, in conformity with FFEM procedures. It should be noted that FFEM has accepted the principle of joint monitoring of its contributions and will therefore participate as a full partner in all monitoring activities (APR, PR, PIR, and the Regional Advisory Committee meetings, etc).

FFEM has entrusted the technical monitoring of the project to the Conservatoire du littoral, which will carry out these functions in Lebanon, Morocco and Tunisia. The technical assistance missions will be coordinated in consultation with the Regional Facilitator, UNDP and Tour du Valat in a spirit of constructive partnership, so as to avoid redundancies and duplication of efforts.

UNDP monitoring of GEF-funded project activities

Ad hoc monitoring missions may be undertaken, in coordination with the Regional Facilitator, FFEM, Tour du Valat / Conservatoire du Littoral, by the UNDP/GEF group of New York in all countries concerned by the activities funded by UNDP/GEF (Albania, Egypt, Lebanon, Morocco, Palestinian Authority and Tunisia). The UNDP Country Offices in these countries/Authority will be responsible for day-to-day monitoring and dialogue with the national authorities during the implementation of the project.

Regional Advisory Committee annual meetings

The purpose of the annual meetings of the Regional Advisory Committee is to provide a forum for dialogue contributing to a project global strategic vision, and for exchanges of ideas between the participants in order to transfer good practices and the lessons learned within each of the Mediterranean countries. The Regional Advisory Committee may issue recommendations in line with project objectives. UNOPS and UNDP/GEF will implement them taking into consideration the existing conditions, the GEF eligibility criteria and the budget constraints.

The composition of the Regional Advisory Committee will include:

- One representative of each of the Ministries or entities in charge of the environment in each country/Authority (if possible the Chief or Assistant Chief of the delegation to the MAP meeting)
- The National Project Coordinator;
- GEF/UNDP,
- UNOPS
- FFEM/AFD,
- French Environment Ministry;
- The Coordinator of the Mediterranean Action Plan or his representative;
- The Secretary General of the Ramsar Convention or his representative.
- Tour du Valat
- Conservatoire du Littoral

The *Regional Advisory Committee* may invite the participation, at their own expense, of other partners or qualified authorities: European Union, IUCN, WWF or any other person whose presence might be considered appropriate.

The expenses incurred by the members of the *Regional Advisory Committee* for their participation in the Committee's annual meeting are charged to their respective national budgets.

Financial Reporting

The Government will provide UNDP with certified periodic financial statements relating to the status of UNDP/GEF funds, including an annual audit of these financial statements, according to the procedures set out in Section 30503 of the UNDP Policies and Procedures Manual (PPM) and Section 10404 of the UNDP Finance Manual, and any revision of these Manuals. The audit will be conducted by the legally recognized auditor of the Government, or by a commercial auditor engaged by the Government.

I. LEGAL CONTEXT

This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of Morocco and the United Nations Development signed by the parties on 13 May 1982. The host country implementing agency shall for the purposes of the Standard Basic Assistance Agreement refer to the government cooperating agency described in that agreement.

J. BUDGET

Code	Description	Total		Year 1		Year 2		Year 3		Year 4		Year 5	
		m/m	US\$										
10.00	Project Personnel												
13.00	Administrative support personnel												
13.01	Secrétaire (1)	60	36,000	12	7,200	12	7,200	12	7,200	12	7,200	12	7,200
13.02	Agent administratif (1)	60	30,000	12	6,000	12	6,000	12	6,000	12	6,000	12	6,000
13.99	Subtotal administrative support	120	66,000	24	13,200								
15.00	Duty travel												
15.01	Duty Travel		60,000		12,000		12,000		12,000		12,000		12,000
15.99	Subtotal duty travel	0	60,000	0	12,000								
16.00	Mission costs												
16.01	Mission costs		75,000		15,000		15,000		15,000		15,000		15,000
16.02	Evaluation		15,000						15,000				
16.99	Subtotal mission costs	0	90,000	0	15,000	0	15,000	0	30,000	0	15,000	0	15,000
17.00	Long Term National Professionals												
17.01	Coordinateur Local	60	90,000	12	18,000	12	18,000	12	18,000	12	18,000	12	18,000
17.02	Technicien supérieur (3)	180	144,000	36	28,800	36	28,800	36	28,800	36	28,800	36	28,800
17.03	Experts (5)	40	108,000	20	54,000	10	27,000	5	13,500	5	13,500	0	0
17.04	Garde (5)	300	90,000	60	18,000	60	18,000	60	18,000	60	18,000	60	18,000
17.05	Ouvriers (4)	240	96,000	48	19,200	48	19,200	48	19,200	48	19,200	48	19,200
17.99	Subtotal NPPP	820	528,000	176	138,000	166	111,000	161	97,500	161	97,500	156	84,000
19.00	Personnel component total	940	744,000	200	178,200	190	151,200	185	152,700	185	137,700	180	124,200
20.00	Sub-contracts												
21.00	Sub-Contract A - Stratégie Nationale Zones humides												
21.01	Etudes et évaluations		75,000	1	35,000	2	40,000						
21.02	Dissémination des résultats		30,000				20,000		10,000				
21.99	Subtotal Sub-Contract A - Stratégie Nationale et Zones humides		105,000	1	35,000	2	60,000	0	10,000	0	0	0	0
22.00	Sub-Contract B - agendas 21 Locaux												
22.01	Consultant développement durable		30,000							1	15,000	1	15,000
22.02	Guide méthodologique		10,000										10,000
22.99	Subtotal Sub-Contract B - Agendas 21 Locaux		40,000	0	0	0	0	0	0	1	15,000	1	25,000
23.00	Sub-Contract C - Diagnostic												
23.01	Coordinateur diagnosticien	6	102,000		68,000		34,000						
23.02	Consultants diagnostic	8	37,500		20,000		17,500						
23.03	Analyse et plan de gestion des eaux		45,000		25,000		20,000						
23.04	Travaux urgents		160,000		15,000		100,000		45,000				

23.99	Subtotal Sub-Contract C - Diagnostic		344,500	0	128,000	0	171,500	0	45,000	0	0	0	0
24.00	Sub-Contract D - Développement urbain												
24.01	Consultant urbaniste	4	12,000			4	12,000						
24.99	Subtotal Sub-Contract D - Développement urbain		12,000	0	0	4	12,000	0	0	0	0	0	0
25.00	Sub-Contract E - gestion déchets												
25.01	Consultant déchets		12,000			4	12,000						
25.99	Subtotal Sub-Contract E - gestion déchets		12,000	0	0	4	12,000	0	0	0	0	0	0
26.00	Sub-Contract F - Plans de gestion												
26.01	Assistance conception plans de gestion		34,000				34,000						
26.02	Assistance programmation annuelle		60,000				15,000		15,000		15,000		15,000
26.03	Mise en œuvre plan de gestion		180,000						45,000		80,000		55,000
26.04	Fixation des dunes		55,000				20,000		20,000		15,000		
26.99	Subtotal Sub-Contract F - Plans de gestion		329,000	0	0	0	69,000	0	80,000	0	110,000	0	70,000
27.00	Sub-Contract G- Maitrise de l'eau												
27.01	amélioration réseau irrigation		180,000						80,000		50,000		50,000
27.99	Sub total Sub-Contract G- Maitrise de l'eau		180,000		0		0		80,000		50,000		50,000
28.00	Sub-Contract H - Aménagements accueil public												
28.01	Parc Eco-culturel lagune de Korba		50,000						50,000		0		
28.02	Aménagement gestion des flux		110,000						30,000		60,000		20,000
28.09	Subtotal Sub-Contract H - Aménagements Accueil du public		160,000	0	0	0	0	0	80,000	0	60,000	0	20,000
28.10	Sub-Contract I - Suivi Ecologique												
28.11	Programme de suivi		30,000				10,000		10,000		5,000		5,000
28.19	Subtotal Sub-Contract I - Suivi Ecologique		30,000	0	0	0	10,000	0	10,000	0	5,000	0	5,000
28.20	Sub-Contract J - Sensibilisation												
28.21	Guides et publications		20,000				5,000		5,000		5,000		5,000
28.22	Programme de sensibilisation		35,000				10,000		10,000		10,000		5,000
28.23	Journées de sensibilisation		50,000				10,000		20,000		10,000		10,000
28.29	Subtotal Sub-Contract J - Sensibilisation		105,000	0	0	0	25,000	0	35,000	0	25,000	0	20,000
29.00	Component total		1,317,500	1	163,000	10	359,500	0	340,000	1	265,000	1	190,000
30.00	TRAINING												
33.00	In-service training												
33.01	Formation prise de poste		9,000		9,000								
33.02	Formations spécifiques (4)		60,000				15,000		15,000		15,000		15,000
33.99	Subtotal In-service training		69,000	0	9,000	0	15,000	0	15,000	0	15,000	0	15,000
34.00	Conferences and Meetings												
34.01	Séminaires régionaux		25,000				25,000						
34.02	Frais de réunions		10,000		2,000		2,000		2,000		2,000		2,000
34.99	Subtotal Conferences and Meetings		35,000	0	2,000	0	27,000	0	2,000	0	2,000	0	2,000
39.00	Component total		104,000	0	11,000	0	42,000	0	17,000	0	17,000	0	17,000
40.00	Equipment												
41.00	Expendable equipment												
41.01	Uniformes et vêtements de travail (50)		7,500		4,000						3,500		

41.02	Jumelles (10)		4,000		4,000								
41.03	Appareils photos (2)		800		800								
41.04	Divers petit matériel		10,000		2,000		2,000		2,000		2,000	2,000	
41.99	Subtotal Expendable equipment		22,300	0	10,800	0	2,000	0	2,000	0	5,500	0	2,000
42.00	Non-expendable equipment												
42.01	Véhicules		90,000		18,000		72,000						
42.02	Micro ordinateur et accessoires		5,900		5,900								
42.03	Matériel Vidéo		12,800				4,500		8,300				
42.04	Equipement de bureau (6)		4,000		2,500		1,500						
42.05	Bateaux		15,000				15,000						
42.06	Système de communication (10)		5,000				5,000						
42.07	Equipement de suivi et contrôle des nappes		20,000		5,000		10,000		5,000				
42.99	Subtotal Non-expendable equipment		152,700	0	31,400	0	108,000	0	13,300	0	0	0	0
49.00	Component total		175,000	0	42,200	0	110,000	0	15,300	0	5,500	0	2,000
50.00	Miscellaneous												
51.00	Operation & Maintenance of Equipment												
51.01	Maintenance equipment		39,500		7,500		8,000		8,000		8,000	8,000	
51.02	Communication		2,000		1,000		1,000						
51.99	Subtotal Op & Maint of Equipment		41,500	0	8,500	0	9,000	0	8,000	0	8,000	0	8,000
52.00	Reporting Costs												
52.01	Mid Term Evaluation		10,000						10,000				
52.02	Reporting Costs		5,000		1,000		1,000		1,000		1,000	1,000	
52.99	Subtotal reporting costs		15,000	0	1,000	0	1,000	0	11,000	0	1,000	0	1,000
53.00	Sundries												
53.01	Sundries		47,000		9,400		9,400		9,400		9,400	9,400	
53.02	Contingence		56,000		11,000		11,000		11,000		11,000	12,000	
53.99	Subtotal Sundries		103,000	0	20,400	0	20,400	0	20,400	0	20,400	0	21,400
54.00	Project Support Services												
54.01	Project Support Services		75,000		75,000								
54.99	Subtotal Project Support Services		75,000	0	75,000	0	0	0	0	0	0	0	0
59.00	Component total		234,500	0	104,900	0	30,400	0	39,400	0	29,400	0	30,400
99.00	BUDGET TOTAL		2,575,000		499,300		693,100		564,400		454,600		363,600

K. ANNEXES

ANNEXES

Conservation of Wetland and Coastal Ecosystems in the Mediterranean Region
TUN/97/G33/A/1G/99

#	Objectives	Expected Results	Activities	Year 1				Year 2				Year 3				Year 4				Year 5			
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
16			1.4.1/ Drafting of experimental methodology manual for Cap Bon																				
17			Reinforcement of the local operational unit																				
18	Objective 2	Output 2.1	2.1.1/ Hiring or assignment of staff after elaboration of a convention between CRDA and APAL regarding Water and Forestry personnel																				
19																							

Conservation of Wetland and Coastal Ecosystems in the Mediterranean Region

TUN/97/G33/A/1G/99

#	Objectives	Expected Results	Activities	Year 1				Year 2				Year 3				Year 4				Year 5			
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
36			2.4.1/ Rehabilitation work to improve hydrodynamic conditions																				
37			<i>Proposed urban development of peripheral zones.</i>																				
38		Output 2.5	2.5.1/ Historical and prospective study of urban evolution																				
39			2.5.2/ Proposal formulation and discussion with local authorities and population																				
40																							
41																							
42		Output 2.6	<i>Waste management plan</i>																				
43			2.6.1/ Analysis of waste issues																				
44			2.6.2/ Proposal formulation and discussion with local authorities and population																				
45																							
46		Output 2.7	<i>Equipment required for the implementation of the management plans</i>																				
47			2.7.1/ Procurement of equipment and supplies																				
48																							
49		Output 2.8	<i>Elaboration and implementation of integrated management plans</i>																				
50			2.8.1/ Elaboration of integrated management plans																				
51			2.8.2/ Yearly assistance for management programme preparation																				

Conservation of Wetland and Coastal Ecosystems in the Mediterranean Region
TUN/97/G33/A/1G/99

#	Objectives	Expected Results	Activities	Year 1				Year 2				Year 3				Year 4				Year 5			
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
				52			2.8.3/ Implementation of actions identified in management plans and programmes																
53																							
54		Output 2.9	Site infrastructure development to accommodate the public																				
55			2.9.1/ Installations to manage the flow of tourists and visitors																				
56			2.9.2/ Creation of the eco-cultural park on the Korba Lagoon site																				
57																							
58		Output 2.10	Monitoring of physico-biological parameters																				
59			2.10.1/ Training in monitoring techniques																				
60			2.10.2/ Provision of monitoring instruments and monitoring																				

Annex II. Schedule of Project Reviews, Reporting and Evaluation

**Conservation of Wetland and Coastal Ecosystems in the Mediterranean Region
TUN/97/G33/A/IG/99**

Activities	Year 1				Year 2				Year 3				Year 4				Year 5			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1 Project initial report																				
2 APPR – Annual Project Performance Report																				
3 APR – Annual Project Reviews																				
4 APPR – Annual Project Performance Report																				
5 APR – Annual Project Reviews																				
6 APPR – Annual Project Performance Report																				
7 Mid-term Evaluation																				
8 APPR – Annual Project Performance Report																				
9 APR – Annual Project Reviews																				
10 APPR – Annual Project Performance Report																				
11 APR – Annual Project Reviews																				

Annex III. Training Programme

Training is an essential component of this project as its success or failure hinges on the ability of the site managers to address the threats to the different sites in a sustainable manner. This will, in many cases, require personnel to acquire new skills and especially to develop the habit of intersectoral collaboration and decision-making in their daily activities. The programme has components aimed at training of trainers, but will also directly train national staff through an appropriate training focal point. The training programme does not aim to train large numbers of people in generalities, but rather to assist either specialists to adapt their knowledge to new situations, or to give generalists some specific understanding of how to manage coastal and wetland sites. Cross-cultural (inter-disciplinary) training will be emphasized as an aid to multi-sectoral planning.

The training component of the programme has four main aims :

1. Support to the development of a training focal point for protected areas management in each country.
2. Training as a means to acquire knowledge and methodologies appropriate to intersectoral management planning for coastal and wetland areas.
3. Training as a tool within the site management process (i.e as an opportunity to put stakeholders around a table and to promote exchanges on a topic of common concern as a way to remove obstacles in the management process "creating a common culture").
4. Promote the capacity of a national institution to provide training sessions for wetland and coastal conservation

For the training programme to be effective, it requires to be clearly focussed on needs at local level. These needs can be expected to evolve during the project cycle, and the intervention of the training activities must therefore be developed and applied on an annual basis. For example, when the site management committees are convened, a training session may be organised in order to create a "common culture", and to help the local dynamics of management plan preparation and implementation. The precise needs of the members of that committee can only clearly be identified once it is established.

The training programme will emphasise a hands-on practical problem-solving style, with "general knowledge" issues kept to a minimum. This means that it will also be strictly targeted at those who will use their improved skills in their daily work. Selection of the profile of trainees will therefore be decided in consultation with the regional training team to ensure maximum effectiveness.

The regional team will provide the design, content and material for the local training courses, while all the local costs will be covered by the national budget. To facilitate the implementation of the courses and improve capacity-building at national level, a training focal point will be designated by the National Project Director. This focal point will be responsible for mobilising national experts to deal with different themes, when such expertise is available locally, and for ensuring the smooth local logistics of the training operation.

In addition to the local courses, six regional courses will be held on the following themes :

1. Designing a national wetland strategy
2. Coastal zone planning tools
3. Integrated management planning
4. EIA techniques for Mediterranean wetlands

Annex V. Terms of reference

Project Personnel

PROJECT MANAGER:

Director of the Agency for Coastal Protection and Planning, he/she:

- ◆ assumes general direction of operations and is the operational project executive vis-a-vis the donors;
- ◆ ensures the management and implementation of the project;
- ◆ is responsible for the administrative and financial monitoring of the project;
- ◆ proposes the yearly work programme and the draft operating and investment budgets to the Project Steering Committee;
- ◆ manages project funds after the programme has been approved by the Project Steering Committee;
- ◆ issues the calls for bids for project studies and activities and identifies the most appropriate actors to perform the work;
- ◆ maintains contact with the Regional Facilitator.

NATIONAL COORDINATOR:

Membre of the Ministry of the Environment and Land-Use Management or a public entity under the Ministry's control. Tunisian national, at least 5 years' experience in the field of natural area management, space planning and contact with local communities and the local population.

Good knowledge of computer science. Knowledge of Arabic, French and if possible English.

Experience in team leadership.

Under the authority of the Project Manager, the National Coordinator:

- ◆ ensures the operational implementation of the project;
- ◆ ensures coordination between the various project actors at the national and local levels;
- ◆ supervises and supports the Local Coordinator in order to ensure the implementation of the local work activities and studies;
- ◆ oversees the preparation, by the Local Coordinator, of the terms of reference for the studies and work activities, in concertation with the project management as required;
- ◆ chairs the Local Management Advisory Council;
- ◆ is the technical contact for the Regional Facilitator, responds to this requests for information regarding work progress and calls upon him as needed.

ASSOCIATED EXPERTS:

(Made available by APAL and CRDA: hydrologist, development architect, landscape architect, legal expert on land issues, computer expert, forestry expert, rural engineer)

(Ornithology expert, geomorphology expert, coastal ecosystems' expert, forestry expert, socio-economy expert)

Engineers or higher education graduates, of Tunisian nationality, with 10 years' experience in their areas of specialization.

They provide support to the project in their respective fields within short-term missions, through:

- ◆ Technical and scientific assistance at the request of the National Coordinator an/or the Local Coordinator;
- ◆ Linkages with the international experts;
- ◆ Definition of monitoring procedures (quantitative surveys, evaluation, parameters, indicators, etc.);
- ◆ Scientific linkages with the Regional Facilitator and the scientists of other project countries;
- ◆ Scientific linkages with national and regional research institutions;
- ◆ Joint drafting of an annual report on the changes occurring in the environment, under the direction of the National Coordinator.

LOCAL COORDINATOR:

Engineer or or higher education graduate, of Tunisian nationality, with at least 5 years' experience in the management of natural areas and/or forests and agricultural areas.

Good knowledge of computer science. Knowledge of Arabic, French and if possible English.

Experience in the area of land-use planning and contact with local communities and the public.

Experience in team leadership.

Under the responsibility of the National Coordinator, the Local Coordinator:

- ◆ Ensures the monitoring of project activities at the local level;
- ◆ Contributes with the *National Coordinator* to the preparation of the terms of reference for the studies and work in concertation with the appropriate technical departments, the local operational units and project management;
- ◆ Circulates the draft reports on studies for comments at the local level (to the technical departments, the Local Management Advisory Council, etc.) and at the national level (Project Steering Committee, and on request);
- ◆ Organizes and prepares the seminars, workshops and other concertation meetings at the local level (Local Management Advisory Council);
- ◆ Prepares, at the local level, the financial and technical programmes and progress reports in conformity with donors' procedures;
- ◆ Transmits all information pertaining to the project directly to the technical services so requesting and keeps informed the Project Manager, the National Coordinator and, on request, the Regional Facilitator;
- ◆ Is responsible for hiring at the local level.

SENIOR TECHNICIANS:

Advanced degree in biology, natural and environmental science, agriculture and forestry. Tunisian nationality. Experience in the field of natural area management.

Good knowledge of computer science. Knowledge of Arabic, French and, if possible, English.

They are responsible for one site and, under the authority of the Local Coordinator, they hire, lead, organize and control the operational teams (game warden, rangers and labourers

- Subcontractors:

The experts, consultants, business entities, associations or any other actor subcontracted to carry out a project activity will be required to provide their reports in six copies plus one unbound original copy and an electronic file on disk (PC Word/IBM compatible). These reports will be transmitted to the National Coordinator and the Regional Facilitator.

TERMS OF REFERENCE FOR THE ELABORATION OF THE LEGAL AND REGULATORY FRAMEWORK

Legal experts specializing in the administrative, environmental and real property fields, that are knowledgeable in public law, with practical knowledge of the adoption process of new laws and regulations, particularly in the area of real property and public land law in all its aspects, including fiscal, also specializing in the areas of public/private easements and contract law.

They are to provide legal assistance aimed at:

- drafting the decree setting forth the delineation of the coastal area;
- determining the practical modalities for the transfer of public property to APAL's domain, the acquisition of private land and the management arrangements with the owners;

- analyzing and drafting proposals regarding occupancy of the Public Maritime Domain (concessions, temporary occupancy, criteria for occupancy value, nature of leases, termination procedures, etc.).
- analyzing and drafting proposals for financial resources for APAL from PMD occupancy or other potential sources (conventions and direct or indirect taxes);
- possibly amending legal texts on government royalties (decrees of 25 May 1950, 1 June 1951, orders of 11 September 1956, 11 October 1986, 15 May 1992 and 6 October 1993);
- analyzing and providing legal definitions of the procedures for management of the sites by third parties (ministries, municipalities, individuals, NGOs, etc.);
- elaborating procedure manuals and a methodology for drafting contract specifications; and
- based on the preceding analyses and taking into consideration APAL's competency, proposing a regulatory text providing for the establishment of various categories of protection for sensitive areas (from total reserves to Regional Natural Parks) as required for the integrated management of areas impacted by human activities.

TERMS OF REFERENCE FOR TECHNICAL ASSISTANCE FOR CAPACITY-BUILDING FOR APAL

The expert in coastal area management will hold an advanced degree in engineering or higher education, with over 10 years' experience in the fields of coastal area management and/or local communities or public establishments. He will be required to:

- provide technical assistance allowing for the operationalization of the most appropriate management instruments, to better administer, monitor, control and plan the integrated development of the coastal areas;
- provide methodology instruments, equipment and training for their use, facilitating the application and monitoring of management policies for wetlands and coastal areas.

Particular emphasis will be placed on exchanges of know-how with entities implementing similar approaches, such as Regional Conservatories, Plant Conservatories and Coastal Area Conservatories.

TERMS OF REFERENCE FOR THE ASSISTANCE FOR THE DEVELOPMENT OF THE OBSERVATORY

The expert in coastal area management, if possible the same person as the one in charge of APAL's capacity-building, will hold an advanced degree in engineering or higher education, with over 10 years' experience in the fields of coastal area management and/or local communities or public establishments. He will be required to:

- provide various types of assistance for the creation of the Observatory of the Littoral: organize training in management of Geographic Information Systems, assist in the establishment of this unit in charge of monitoring and control of coastal systems, and in the provision of equipment required for the operation of this unit.

TERMS OF REFERENCE FOR THE ELABORATION OF THE NATIONAL STRATEGY FOR WETLAND CONSERVATION:

Wetlands specialist, with engineering or university degree and over 5 years' practical experience in wetlands preservation and/or management.

Legal consultant, with training in public law, having contributed to the establishment of a legal and regulatory system for wetlands or for the protection of sensitive areas in a riparian Mediterranean country.

They will be required to:

- Review the existing policies and legislation regarding the protection and development of wetlands and water management and analyze their impact on the country's wetlands.
- Identify the factors leading to the loss or degradation of the country's wetlands.
- With assistance from the national coordination team and the Regional Facilitator, conduct a national seminar to discuss a possible strategy for wetlands. This seminar will involve the line ministries and technical services

concerned by the issues of water management and use and will endeavour to balance the preservation of wetlands with a rational use of water resources.

It will be followed by the dissemination of the contents of the discussions on the "national strategy for wetlands" through the production and publication of information monographs and of the text of the National Strategy of Tunisia for Wetlands.

- Define, elaborate and propose a legislative and regulatory framework providing the basis for a durable, efficient protection of wetlands with significant biodiversity. This framework will comprise a formal "National strategy for wetlands", emphasizing the need to take into consideration the specific features of these special areas in development projects and the corrective measures to be applied in order to mitigate their degradation..

These activities will require the input of international expertise, if possible common to several countries, to complement national capacities.

TERMS OF REFERENCE FOR THE SITE DIAGNOSTIC STUDIES:

The site diagnostic study is an important phase in the process of establishing a site management plan.

It is aimed at four major objectives:

1. Determine the distribution of the threatened species, the number of individuals and the important areas for each threatened group or species.
2. Identify and measure the threats on the various species and their habitats (e.g. visitors on the beaches).
3. Select a method for the monitoring of key parameters with impacts on the species and for the species themselves.
4. Constitute a group of scientists/naturalists who will be able to provide advice to the site managers on a regular basis in their areas of expertise (Water and Forestry).

It is important to establish a group of national and international experts, in parallel to the associated experts, for each of the disciplines, creating or strengthening linkages between university researchers, and international NGOs (e.g. PlantLife, BirdLife, Royal Society for Protection of Birds, Ligue pour la protection des oiseaux, etc.). It is a well-known fact that the knowledge of nature is always commensurate with the importance of the observation activities: time spent in the field translates to an increase and improvement of knowledge.

Practical training sessions for students are to be encouraged, as are visits from naturalists. This will be a good way of mobilizing international expertise, sometimes on a pro bono basis, if one is able to provide lodging and transportation, within joint missions with national experts.

It is important, prior to the field studies, to establish a standard base map which is compatible with the GIS (or perhaps several maps with different scales depending on the site), which will serve to record the collected data.

	Activities
Regional Facilitator	Provide a model baseline document for all countries; This document will be presented at the "induction" meeting;
Diagnostic Coordinator (international)	Coordinate the activities of the team; Compile the final report; Establish scales of base maps; Make zoning proposals; Provide liaison with the various studies (land registry, legal, hydrology, etc.); Work in close concertation with the local coordinator;

2 botanists (at least one Tunisian national)	<p>Establish the distribution of threatened flora; Make map of main vegetation communities (aerial photography); Research other valuable species; Identify three zones of interest (high, medium, low) for the flora; Define a monitoring system for threatened flora; Identify the factors influencing the species;</p>
2 herpetologists (at least one Tunisian national)	<p>Establish the distribution of reptiles and amphibians; Define a monitoring system for threatened reptiles; Identify the factors influencing the species; Identify three zones of interest (high, medium, low) for reptiles and amphibians;</p>
Ornithologist (Tunisian national)	<p>Establish count and distribution of threatened birds; Define a monitoring system for threatened birds; Identify the factors influencing the species; Identify three zones of interest (high, medium, low) for birds;</p>
Mammologist (Tunisian national)	<p>Establish count and distribution of threatened mammals; Define a monitoring system for threatened mammals; Identify the factors influencing the species; Identify three zones of interest (high, medium, low) for mammals;</p>
Socio-economist (Tunisian national)	<p>His mission will be defined in relation to the Diagnostic Coordinator, the Local Coordinator and the Regional Facilitator</p>
Research team for analysis of parameters regarding water quality and quantity	<p>- Collection of existing data on hydrological parameters (rainfall, evaporation, heights and flows, water table levels, water quality, levels in dam impoundments, etc.), on the existing water projects and the use of the water resources from sensitive sites' watersheds. The sources of pollution impacting the sites and their habitats will be identified. - Field work to provide more complete data on water quality, sediments and pollutants where present (content of heavy metals, nitrates, nitrogen, phosphates, water table level, bathymetry, etc.). This diagnostic study will focus more particularly on water flow in the lagoons.</p>
Team in charge of technical analysis and implementation of provisional water management schemes, undertaking urgent water management actions.	<p>Elaboration and implementation of provisional water management schemes. - Special priority will be accorded to water management in the Korba Lagoon, with a view to ensuring rapid improvement of water flows in the lagoon and eliminated polluted sediment. - The water management plan of El Haouaria / Oued Abid will be mainly concerned with the rational resource management, particularly in the agricultural sector, and will complement the effort undertaken in this area by CRDA with the local farming population. This plan will focus particularly on future improvements of the irrigation network in areas with ground-water overdrafts by establishing controls on water levels and quality, encouraging the farmers to use localized irrigation and planning to provide them with training in water management and water-saving techniques. This activity will also serve to provide a list of indicators to be measured during the initial survey, then monitored throughout the duration of the project.</p>

The scientific team assembled around the Diagnostic Coordinator during the diagnostic study will need to remain in contact with project members during the implementation phase in order to contribute to other studies and monitoring activities and to provide advice on the measures to be implemented.

TERMS OF REFERENCE FOR THE MANAGEMENT PLANS

Under unified leadership (a highly desirable option would be to have the Diagnostic Coordinator assume leadership for the elaboration of the management plan), the person or persons in charge of this activity will need to have the skills required to and experience of actually establishing a technically, scientifically and financially successful development and management plan for sensitive coastal areas, with international actors in one of the Mediterranean riparian countries.

They will be required to:

- Elaborate an integrated management plan for each pilot site or site complex. These plans will define the modalities for the management of land and biological resources and for land-use (leisure activity planning, hunting, fishing, regulation of pastoral activities, overgrazing, etc.). They will establish the tasks to be undertaken and the work programme, as well as the budget allocations required for the rehabilitation and development of the sites with a view to realizing the project's objective, i.e. the preservation of wetland and coastal ecosystems.

The management plan will define the actions and orientations over a period of 5 years.

Each management plan will take into consideration the inventories, descriptions, findings and recommendations of the initial diagnostic studies (Output 2.3), as well as those of the schemes pertaining to urban development (Output 2.5) and waste management (Output 2.6). Each document will describe the programmes and actions to be implemented in order to obtain clear and measurable results, situating those programmes and actions within the national and regional contexts.

In particular, the Korba/Kelibia management plan will envision the creation of a botanical garden, to preserve rare or threatened plant species. Afforestation measures, using local species, compatible with the management plan may be considered for dune fixation.

- Assist APAL and the Local Operational Unit to help them prepare yearly management programmes based on the five-year management plan. The yearly management programmes are aimed at facilitating the management of each site by anticipating the actions and budget needs for the year ahead, taking into account the natural and ecological variables. For this purpose, the plans and budgets will need to be flexible enough to provide for contingencies.

TERMS OF REFERENCE FOR THE DEFINITION OF AN ECOLOGICAL MONITORING PROGRAMME

The task to be completed is the following:

Develop, in close cooperation with the appropriate technical or scientific departments, for all of the sites a programme to monitor both the sites and their peripheral areas, meeting the following requirements:

- Strict application of the MedWet/BIROE monitoring methodology,
- Ability to meet the monitoring needs of the site managers and departments involved,
- Ease of use by the managers, without constant necessity to call upon outside laboratories.

The first phase will consist in conducting an objective review of the monitoring programmes currently in effect or projected for the area (entity, location, responsible parties, monitoring objectives, methodology, results).

The second phase will consist in formulating a monitoring programme in strict conformity with the MedWet/BIROE methodology, applying the following logical steps:

1. Identify the problem/issue
2. Set the objective

3. Establish the hypothesis
4. Select methods and variables
5. Assess feasibility and cost-effectiveness
6. Conduct a pilot study
7. Collect samples
8. Analyze samples
9. Produce report on results
10. Apply management measures and evaluate the project.

Based on the assessed demand and needs at the local level, assistance will need to be provided to the manager or department concerned in order to implement the priority monitoring mechanisms. The monitoring programme will have to be realistic, suited to the capacities of the departments available to implement the programme and to the decision-making process aimed at regulating uses.

10. Apply management measures and evaluate the project.
9. Produce report on results.
8. Analyse samples.
7. Collect samples.
6. Conduct a pilot study.
5. Assess feasibility and cost-effectiveness.
4. Select methods and variables.
3. Establish the hypothesis.

Based on the assessed demand and needs at the local level, assistance will need to be provided to the manager of government concerned in order to implement the priority monitoring mechanism. The monitoring programme will have to be realistic, suited to the capacities of the departments available to implement the programme and to the decision-making process aimed at regulating water.