

**UNITED NATIONS DEVELOPMENT PROGRAMME  
PROJECT DOCUMENT**

<b>Project Title:</b> Conservation of biodiversity and sustainable development in the Federal Islamic Republic of the Comoros	<hr/> <table border="0" style="width: 100%;"><tr><td colspan="2" style="text-align: center;"><u>Source of Funds</u></td></tr><tr><td colspan="2"><b>GEF Financing</b></td></tr><tr><td style="text-align: left;">- Prep. Assist.</td><td style="text-align: right;">\$89,959</td></tr><tr><td style="text-align: left;">- Main Project</td><td style="text-align: right;">\$2,352,041</td></tr><tr><td colspan="2"><b>IPF</b></td></tr><tr><td style="text-align: left;">(Capacity 21)</td><td style="text-align: right;">\$595,000</td></tr><tr><td><b>TOTAL:</b></td><td style="text-align: right;"><b>\$3,037,000</b></td></tr></table>	<u>Source of Funds</u>		<b>GEF Financing</b>		- Prep. Assist.	\$89,959	- Main Project	\$2,352,041	<b>IPF</b>		(Capacity 21)	\$595,000	<b>TOTAL:</b>	<b>\$3,037,000</b>
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<b>TOTAL:</b>	<b>\$3,037,000</b>														
<b>Project number:</b> COI/97/G32/A/1G/99															
<b>Duration:</b> 5 years															
<b>Project Site:</b> Moroni, Comores; project to cover the islands of Grande Comore, Moheli and Anjouan															
<b>Sub-sectors:</b> Biodiversity and implementation of sustainable development strategies	<hr/> <b>1</b>														
<b>Executing agency:</b> Government of Comores - Ministry of Production, Fishing, Livestock, Forests and Environment															
<b>Implementing agency:</b> To be determined															
<b>Starting date:</b> September, 1997															
<b>Government inputs:</b> In kind, 103,120,000 FC															
<b>GEF Contribution:</b> \$2,442,000															

**BRIEF DESCRIPTION:**

The project aims to implement the biodiversity components of the Comores National Environmental Policy and Environmental Action Plan. The project objective is to develop capacity at all levels in the Comores and assist to establish the legal, financial, institutional and operational frameworks and essential technical skills for collaborative management and sustainable use of biodiversity. Key outputs of the project include establishing a model national park managed under a collaborative agreement, implementing at least two species recovery plans, and establishing a sustainable funding mechanism, such as a biodiversity trust fund, to cover recurrent protected area and species conservation costs.

Signature	Date	Name and Title
Government	_____	_____
UNDP	_____	_____

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## **ACRONYMS USED**

CBO	Community-based organization
CDO	Community Development Officer
CNCDD	National Committee for Coordination of Sustainable Development
CCRDD	Regional Consultative Committee for Sustainable Development
COI/FED	European Development Fund's Indian Ocean Commission Environment Programme
CTA	Chief Technical Advisor
DGE	Directorate General for the Environment (includes all national and regional staff)
FAO	Food and Agriculture Organization
FFI	Fauna and Flora International
FLE	Framework Law for the Environment
GEF	Global Environment Facility
IUCN	The World Conservation Union
IUCN EARO	The World Conservation Union, Eastern Africa Regional Office
JWPT	Jersey Wildlife Preservation Trust
LFM	Logical Framework Matrix
MPA	Marine protected area
MPPEFE	Ministry of Production, Fisheries, Livestock, Forests and the Environment
NGO	Non-governmental organization
NPC	National Programme Coordinator
NRM-TA	Natural Resources Management Technical Advisor
PA	Protected area
PAE	Environmental Action Plan
PET	Project evaluation team
PNE	National Environmental Policy
PRA	Participatory rural appraisal
SRE	Regional Environmental Services
UNDP	United Nations Development Programme
UNOPS	United Nations Office for Project Services
UNV	United Nations Volunteer
WWF	World Wildlife Fund



## **SUMMARY**

Lying in the Western Indian Ocean between northern Mozambique and Madagascar, the three islands of the Federal Islamic Republic of the Comores have a rich array of biodiversity and a multitude of habitats, both marine and terrestrial. However, the wealth of the country's biodiversity stands in stark contrast to the poverty of its people. Export earnings depend on the production of spices and other agricultural products, whose prices have been dropping on the world market. The population of over 500,000 is growing at 2.7% annually, and the population density is among the highest in Africa. Population pressure and poverty have led to a vicious circle of over-exploitation, environmental degradation, and further poverty.

The government of Comores recognises the links between natural resource conservation and sustainable development. A National Environmental Policy (PNE) was developed and adopted in 1993, and an Environmental Action Plan (PAE) approved in 1994. Unfortunately, the government has undergone many changes and reorganizations in recent years, and has lacked the human and financial resources needed to implement the PAE. In 1995 UNDP and the government of Comores developed two projects: a GEF project to implement the biodiversity components of the PNE, and a Capacity 21 project to build national capacity to support sustainable development. In 1996 it was decided to integrate the objectives of both, and in July and August, 1996, a consultancy team was sent to the Comores to finalize the project. A stakeholders workshop was held to develop project approaches and ensure proposed activities were sound and agreed by all.

The goal of this integrated GEF/Capacity 21 project is to build Comorian capacity to conserve biodiversity within a framework of sustainable development. The government of Comores recognizes that with its limited resources, a participatory approach to conservation and development, in which all stakeholders take part in actively managing resources, will be needed. The immediate project objective is to develop capacity at all levels in the Comores and assist to establish the legal, financial, institutional and operational frameworks and essential technical skills for collaborative management and sustainable use of biodiversity.

The 5-year project will produce seven major outputs:

- Operational collaborative management frameworks for biodiversity conservation;
- Strengthened capacity for biodiversity conservation at all levels (national, regional and local);
- A functional legal framework and sustainable funding mechanisms for biodiversity conservation (ideally a biodiversity trust fund will be established);
- A workable management structure for a network of protected areas, with at least one, the Moheli Marine Protected Area, functional;
- Implemented species recovery plans for at least the Livingstone's flying fox and marine turtles;
- Increased awareness, interest and participation in biodiversity conservation;
- Implemented sustainable income and other benefit-generating activities as alternatives to present unsustainable resource consumption.

The project will take a listening-piloting-demonstrating-mainstreaming approach to implementation and will work with other conservation and development programmes to ensure maximization of everyone's limited resources. Flexibility will be key. Activities and approaches will be regularly monitored and evaluated, and refined as needed.

Natural resources are currently being depleted at an alarming rate in the Comores. This project will work to show concrete results as soon as possible to demonstrate that conservation and sustainable development are possible—in fact, the only viable, long term option for the majority of Comorians who depend on biodiversity resources for their survival.

## A. CONTEXT

The Federal Islamic Republic of the Comores is located in the Mozambique Channel between northern Mozambique and Madagascar. The country comprises three main islands of volcanic origin: Grand Comore, Anjouan, and Moheli. Mayotte, the fourth island in the archipelago, remains under French administration. The islands contain a diversity of marine and terrestrial habitats and their associated species, many of which are endemic. This biodiversity is naturally vulnerable and also faces severe and unprecedented threats due to human population pressure and unsustainable resource exploitation. With the realization that ecological degradation and resource loss have negatively affected the islands' economy and biological heritage, biodiversity conservation and sustainable use activities are priorities for both government and local people. Given the government's lack of financial resources, the severe economic conditions in the Comores, and rapid population growth, biodiversity conservation will require an innovative, cost-effective, participatory approach.

The project described here aims to integrate the objectives of both the previously approved Capacity 21 and Global Environment Facility (GEF) project proposals, coordinate the outputs with other projects and activities in the Comores, and ensure concrete results are produced from pilot activities to ensure biodiversity conservation and set the stage for future conservation actions. The project follows directly from the planning and baseline activities already undertaken, and will support capacity building at all levels of the society through the implementation of the biodiversity related components of the National Plan for the Environment (PNE) and the Environmental Action Plan (PAE).

### A.1 Description of Subsector

The Comores have some of the least studied yet most threatened biota of the Indian Ocean. According to available data, more than 33% of indigenous vascular plants are endemic, including 43 species of orchids, (Adjonohoun *et al.* 1982, Ahama and Mohamed 1989, CNDRS 1992, 1993; WCMC 1994). The status of many plant species is unknown, and it is assumed that some species have already gone extinct due to the clearing of lowland forest (Stuart and Adam 1990). Other species are endangered by continuing deforestation and colonization by exotic species, with three plant species classified as threatened (Stuart and Adam 1990; WCMC 1994). Table 1 for a species summary.

Endemism reaches 25% and 75% for nesting birds at the specific and subspecific levels, respectively (Louette, 1988; Louette *et al.*, 1988). Other endemic fauna include the Livingstone's flying fox (*Pteropus livingstonii*) and fruit bat *Rousettus obliviosus* (WCMC 1993), seven species of reptiles (WCMC 1994), several terrestrial fresh water molluscs, and butterflies (Clark *et al.* 1992). Of global ecological and scientific interest in the marine environment, is the threatened coelacanth (*Latimeria chalumnae*), known only from fossil records until discovered in 1938 (Fricke *et al.* 1991). Four invertebrates, including two swallowtail butterflies are classified as threatened (Groombridge 1993). Four of the six threatened bird species are endemic to Mt. Karthala on Grand Comore (Stuart and Adam 1990). Other globally threatened species found within the archipelago include two species of lemurs (*Eulemur mongoz* and *Eulemur fulvis*), the dugong (*Dugong dugon*), and sea turtles (*Eretmochelys imbricata* and *Chelonia mydas*) (Frazier 1985, Mortimer 1993).

In addition to the large numbers of endemic species, the islands boast a multitude of habitat types, both marine and terrestrial (Takhtajan 1986). Terrestrial ecosystems include montane heath above the forest zone (over 1,800m), closed evergreen forests (600 to 1,200 m), grass and bush savannas, pioneer plant communities on lava flows, lowland xerophytic forest on the coast, and crater lakes. In addition to their use as habitat for the islands' plant and animal species, these terrestrial ecosystems are of critical importance for migratory birds. Littoral and marine ecosystems are also remarkably varied, consisting of mangroves, coral reefs (fringing and shoal), and algal and seagrass beds. Despite this wealth of varied

habitats, there are to date no protected zones in the Comores, although Boundouni Lake on Moheli was added to the Ramsar list as a wetland of international importance in February, 1995.

**Table 1. Endemic and Threatened Species In the Comores**

Taxa	Number of species recorded	Number of endemic species	Number of threatened species
Mammals	12	2	3
Birds	91 total 50 breeding	9	6
Reptiles	22	7	2
Freshwater fish	15		
Plants	935 total 416 indig.	136	3

Sources: Stuart and Adams 1990; WCMC 1994

The wealth of the country's biodiversity stands in contrast to the poverty of its people, with a GNP per capita of \$460, and per capita official development assistance of \$98 in 1989 (WRI 1992). The 1990 population of 550,000 is growing at an estimated annual rate of 3.6% (WRI 1992). Population density is among the highest in Africa at 246 persons/km<sup>2</sup> (WRI 1992). The population is primarily rural (72.2%); farming and fishing are among the principal occupations. Export earnings depend largely on the production of vanilla, cloves, copra, and essential oils from ylang-ylang whose prices have been dropping in the world market. Local food production cannot meet demand and is supplemented by imports, including food aid. Inter-island migration is high, as is emigration to France, Mayotte, and Madagascar, though these latter options are becoming more difficult.

Population pressure and poverty have led to a vicious circle of over-exploitation, environmental degradation, and further poverty. On land, the rate of deforestation is of serious concern, brought on by an ever-increasing need for agricultural land, construction and fuelwood, environmentally-damaging agricultural techniques, and a lack of forest policy and regulation. From 1971/73 to 1983/84 the amount of primary forest lost was 73% on Anjouan, 53% on Moheli and 36% on Grande Comore (University of East Anglia 1988). If the current rate of natural forest loss of over 500 hectares annually continues, the forests will have completely vanished within the next 15 years, taking with them forest-dwelling species such as the Livingstone's flying fox and Scops owls. This excessive deforestation also accelerates natural erosion leading to sedimentation of coral reefs, decreased soil fertility, drying up of streams and springs, and disappearance of natural habitats and species.

Unsustainable resource exploitation extends to the coastal and marine environments. Sand and coral are collected for construction purposes, which weakens marine and coastal habitats and increases their vulnerability to erosion. Mangroves are being cut indiscriminately, and depleted. At sea, fishing techniques, such as poison and dynamite, are extremely damaging to marine ecosystems, and contribute to overfishing along the coast and the destruction of coral reefs. In contrast, the high seas are largely under-exploited; local fishermen have neither the means nor the techniques required to tap these resources. Motorized boats and fish aggregating devices (FADs) are accessible only within the framework of village cooperatives or with external funding. Since such assistance is currently unavailable to most

fishermen, they are confined to bottom fishing on the steep slopes bordering the islands, where coelacanths are occasionally caught. The coelacanths are sold to collectors or consumed, endangering the remaining population of these rare creatures.

## **A.2 Comorian Environmental Strategy**

Comorian efforts to address environmental degradation and the loss of biodiversity became active in the early 1990's, with the assistance of multilateral and bilateral organizations. An important step forward in environmental planning in the country came with the UNDP-funded project entitled "Support to National Capacity Building Activities in the Field of the Environment," which was executed by UNESCO and IUCN. This project led to the formulation of a National Conservation Strategy. The main activities realized under this strategy include:

- An environment and resource assessment conducted in 1993. This assessment served as a basis for the National Environmental Policy.
- A national policy planning workshop in December 1993. Participants at the workshop included seven government ministers, representatives from all islands and social sectors, and international agencies. The workshop led to the adoption of the National Environmental Policy (PNE) and the establishment of priorities for an Environmental Action Plan (PAE).
- The approval of the PAE at the Donors Round Table, held in Geneva under UNDP auspices in October 1994.

The PNE establishes the Comorian commitment to protection and sustainable use of the environment to realize sustainable development. The basic principle of the policy is to integrate environmental considerations into all national sectoral policies and into the social and economic development of the country.

Two objectives of the PNE define how the basic principle can be developed. The first, *to assure sustainable and rational management of resources*, is based on three precepts: rational management, protection, and conservation of resources. The objective has six parts:

- To support rational utilization of natural resources and the development of alternative technologies that can reduce resource pressure.
- To safeguard and protect biological diversity and areas of great ecological and/or cultural interest.
- To develop and/or update knowledge of the environment.
- To promote economically and ecologically viable agricultural activities and policy.
- To promote the conservation and the reconstruction of the forest heritage through rational management of forest resources.
- To implement appropriate management of marine and coastal areas.

The second objective of the PNE is *to define or reinforce sectoral policies including the decentralization of the family planning policy, improved marketing of agricultural products, improved storage of agricultural*

and fish products, and reinforcement of education and training concerning the environment. Of immediate urgency is the necessity to adopt and implement new policies concerning land-use planning and management, land and resource tenure, water policy, and clean-up and management of waste.

In order to implement the PNE the Comorian government recognizes that a participatory approach, in which all stakeholders (resource users, non-governmental organizations, government institutions, and the private sector) take part in actively managing resources. Such an approach, by definition, is decentralized, devolving decision-making power to stakeholders.

A strategy for implementing the PNE was developed as an Environmental Action Plan (PAE). The PAE highlights four integrated intervention priorities:

- Increasing knowledge about the national heritage, including systematic studies to collect baseline ecological data and the establishment of an environmental information system;
- Creating an effective public sector, including decentralized institutions, and the enactment of appropriate legislation;
- Training technical specialists, and raising environmental awareness among all segments of the population;
- Ensuring a concerted, rational management of the national heritage.

In 1995 both the GEF and Capacity 21 projects were developed as a follow-up activity to the adoption and approval of the PNE and PAE, and to support their implementation.

At the national level, several other legislative, scientific, and education initiatives have been launched. These include ratification of the International Conventions on Biological Diversity, the Law of the Sea, Wetlands of International Importance (the Ramsar Convention), International Trade in Endangered Species (CITES), the World Heritage Convention, and the Regional Convention for the Protection, Management and Development of the Marine and Coastal Environment of East Africa. Studies have been conducted to identify the major species, habitats, and ecosystems in the country to ensure the conservation of biodiversity (with the assistance of international agencies, research centres, and NGOs). Campaigns to raise awareness and involve villagers in environmental conservation activities and biodiversity protection have been initiated with the support of international NGOs and donor organizations.

### **A.3 Related Assistance to the Comores**

There are several on-going projects in the Comores dealing with the environment and other aspects of development related to this project. Some of them are highlighted below.

- 1) The European Development Fund's Indian Ocean Commission Environment Programme (COI/FED) has a strong focus on the marine and coastal environment and is collecting a variety of data on institutions and the environment which will be valuable to other environmental projects. The project will also be involved with training and awareness raising. The project had included a component on endemic and threatened flora which has been dropped due to budget constraints.
- 2) The United Nations Environment Programme (UNEP) is currently carrying out regional projects on coastal and marine resources. The Coastal Zone Management Project (EAF/5) is concerned with developing an information base and building capacity to solve issues in coastal zone management.

The Eastern African Coastal and Marine Environment Resources Database and Atlas Project (EAF/14) is helping the Comores to map and monitor coastal resources by building capacity for establishing and implementing a Geographic Information System (GIS).

- 3) The Moheli Rural Development Project, funded by France, is doing studies of that island's socio-economic, cultural, and ecological resources. The project has carried out a detailed study of village associations and is looking at land use practices. It also supports activities such as tree planting.
- 4) On Anjouan, a European Development Fund Integrated Rural Development Program (DRINEA) has been working in the northeast with villagers to establish and repair water systems, build improved cooking stoves, and carry out soil conservation work. This project will be completed in 1997 with no continuation envisioned. The APPN (Support to Small Producers of Nioumakele) works with local farmers to improve intensive farming techniques, livestock husbandry, and forest use issues.
- 5) The World Bank, with the FAO Investment Centre, is presently planning an **agricultural support project**. It will include extension services, research, support to farmers, marketing, and training. It will operate in selected locations on all three islands. The environmental component of the project was cancelled in July, 1996.
- 6) The Jersey Wildlife Protection Trust's has done extensive work on Livingstone's flying foxes, in collaboration with Action Comores, Flora and Fauna International, Ian Tattersall and the Richard Lounsbery Foundation, and Bristol Ecological Consultants, Ltd. The Max Planck Institute has studied and recommended conservation actions for the coelacanth.
- 7) A variety of donors, including the World Bank, European Union, World Food Program, and French bilateral aid have established projects for contributing funds to local community micro-projects. In some cases they have specific mandates to support environmental projects. This presents the possibility of coordinating efforts, particularly for micro-projects aimed at alternative income, protein, or resource generating activities.

Clean Up Moroni, implemented by CARE Comores, successfully piloted a community-based refuse management system in several quarters of Moroni in 1996. The project will be extended nationally in 1997.

The diving school associated with the Galawa Hotel on Grande Comore is setting up a marine school to raise children's awareness about marine biodiversity. This project hopes to coordinate its awareness-raising activities with such local initiatives.

Efforts have been made by the Directorate General of the Environment and this project design team to identify specific areas of complementarity between the various development projects. Discussions have been held and projects are eager to maximize their resources by coordinating activities, integrating training opportunities and complementing each others' initiatives. Due to the enormity of the challenges facing this GEF/Capacity 21 project, support and coordination among similar initiatives in the Comores is essential for outputs to be achieved. Specific plans will be made for project integration in the set-up phase of the project.

#### **A.4 Institutional Framework for Subsector**

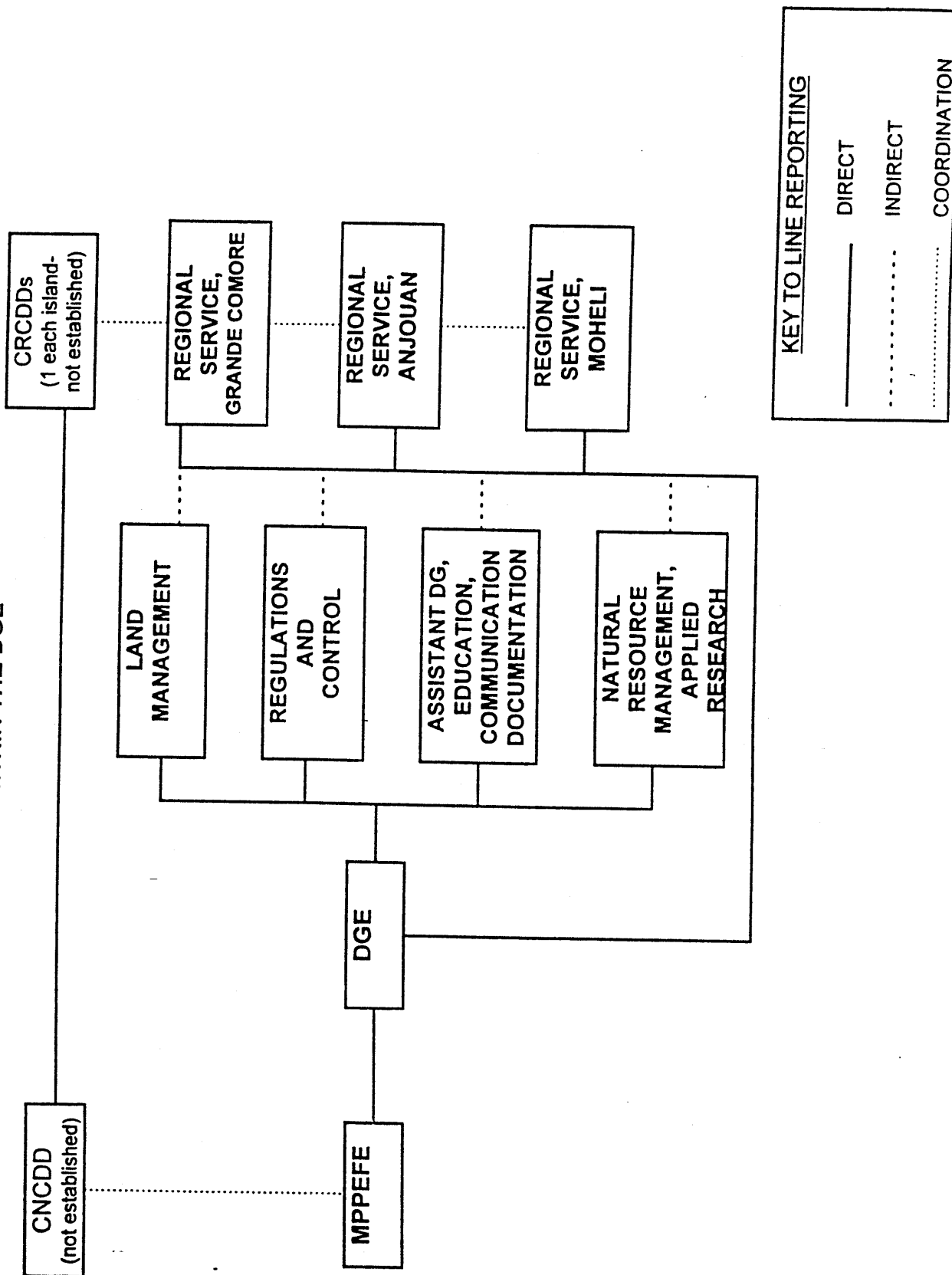
In the last few years, new administrative and legislative structures for environmental management have been created or proposed by the government to ensure the conservation of the Comores' natural heritage.

- The Interministerial Advisory Committee on the Environment (CICE) was created in 1993, and was proposed for modification in 1995 as the **National Committee for the Coordination of Sustainable Development (CNCDD)**. Although not yet officially established, it is envisioned to be a high level, cross-sectoral committee of 19 people representing various ministries, as well as the interests of local associations, NGO's and the private sector. Its role will be to guide and coordinate government actions regarding sustainable development, to see that they conform to Agenda 21.
- **Regional Consultative Committees for Sustainable Development (CCRDD)** are envisioned to be the regional bodies under the CNCDD, with cross-sectoral and civil representation on each island.
- The **General Directorate for the Environment (DGE)** and **Regional Services for the Environment (SREs)** are within the Ministry of Production, Fish, Livestock, Forests, and the Environment (MPPEFE). With a technical staff of only eight people (a Director General and four department heads in Moroni and one regional representative on each island), the DGE coordinates conservation projects and provides some implementation support. Its mandate includes establishing protected areas (PAs) and preparing management plans for them, and drafting environmental legislation for the Minister to present to the National Assembly.
- The **Framework Law for the Environment** provides mechanisms for environmental protection and conservation actions. The Director General, Head of the DGE, played an important role in the drafting of the framework law. It specifically includes provisions for the protection of plants, animals, habitats, and ecosystems, the creation of PAs, the requirement of environmental impact studies, and the creation of an Environmental Management Fund.

This project will work directly with the staff of the DGE, at the national and regional levels. Precise DGE roles and responsibilities will be defined and agreed within six months of the project start-up. The project will also actively explore, promote and support mechanisms to coordinate sectoral policies regarding sustainable development and the environment. Ideally, when established, the CNCDD and CCRDDs will be effective coordinating committees in that role. A project Steering Committee will be set up specifically to approve project work plans and monitor project activities, with representatives of the government of Comores, UNDP and the Implementing Agency.

Figure 1, on the following page, shows the current management structures within the DGE, where the project will be based, and how the DGE hopes to relate to the envisioned CNCDD and CCRDDs.

FIGURE 1: MANAGEMENT STRUCTURES WITHIN THE DGE





## **B. PROJECT JUSTIFICATION**

### **B.1 Problem Identification; the Present Situation**

The environmental situation in the Comores needs urgent attention. It is likely that some terrestrial species have already gone extinct as their habitats have been converted to agricultural land. Many other ecosystems and species remain at risk. Solutions to problems of biodiversity conservation and sustainable development do not come easy in a small island state with high population growth and a lack of sound natural resource management practices. If the remaining biodiversity in the Comores is to be managed for sustainable use and conservation, urgent action is needed to address environmental threats and restore degraded habitats and depleted species.

The cultural, legal, political, institutional, and economic conditions in the Comores complicate efforts directed at the sustainable management of natural resources and the conservation of biodiversity. For example, large families are preferred and population pressure is immense. The situation on the island of Anjouan has become so desperate that there is a great deal of migration to Moheli and Grand Comore, adding to population pressure and hence resource pressure on those two islands. Land and resource tenure is a confusing mix of traditional and statutory systems and tenure reform has been highlighted as a need by international organizations (e.g., FAO, World Bank). Without secure tenure, there is little incentive for people to invest in long-term conservation activities.

Some legal protection for species and habitats exists on paper, such as fines for turtle poaching and the existence of state-reserved forest land. In practice these laws and regulations are not respected or enforced. The Comorian people rely almost exclusively on the land and the sea for their livelihoods. Yet the productivity of these resources is shrinking and other means of income generation are few and not well developed.

While the government of Comores has shown a dedicated commitment to biodiversity conservation and sustainable use of resources, it lacks the capacity at all levels to realize their goals. At the national level, the National Committee for Coordination of Sustainable Development (CNCDD), expected to play an active role in assuring the sound and coordinated management of natural resources across all government and civil sectors, has yet to become operational.

The government body most directly concerned with biodiversity conservation - the DGE, within the MPPEFE, lacks the technical skills and human resources necessary to formulate and implement sound natural resource management practices envisioned in the National Environmental Policy. They also lack important skills for using participatory processes to develop partnerships and effectively manage a dialogue between diverse stakeholders to effect biodiversity conservation.

There are many local NGOs that could play a key role in sound natural resources management for biodiversity conservation. Some are more technically focused, while others are concerned with communication and awareness raising. These groups need to be strengthened so that they can contribute effectively to biodiversity conservation and other aspects of sustainable development.

At the local level, village associations and councils of elders exist that are concerned with natural resource management issues, but need to be strengthened and empowered to manage natural resources in partnership with other stakeholders and to develop alternative benefits activities in their communities.

There is a strong need to raise awareness of the dire environmental situation in the country at all levels of society in order to catalyze a commitment to solve the problems and implement sustainable natural resource management activities. At the same time, there needs to be both a greater realization of the root

causes of environmental degradation, and actions taken to control rapid population growth, increase economic alternatives, and improve political commitment.

## **B.2 Expected End of the Project Situation**

The goal of this project is to build Comorian capacity to conserve biodiversity within a framework of sustainable development. The outputs will include the core of a protected area network, the protection of selected species, greater capacity on all levels to better manage of natural resources, and a greater range of economic choices. The institutional frameworks needed at village and protected site levels to manage protected areas and development activities (see section B.4) will be firmly established and capable of supporting a broad range of initiatives, so community groups will be able to independently attract donors and investors and form conservation and development partnerships with international partners.

By the end of the project, the Directorate General of the Environment will be capable of coordinating and directing activities designed to conserve biodiversity, providing technical advice to local resource users to manage protected areas and species, and motivating others to carry out conservation measures.

In addition, the DGE will be able to provide critical technical support to the CNCDD to effectively coordinate and guide the implementation of the Environmental Action Plan. The CNCDD at the national level, and the CCRDDs at the regional level will play a pivotal role in coordinating conservation and sustainable development activities from the various sectors.

Selected indigenous NGOs will have the skills to effectively manage their personnel and financial resources, establish outreach programmes, and to raise funds in order to meet their goals. Selected local associations will also be empowered to be able to design and implement their own plans and projects.

Funding mechanisms, such as a biodiversity trust fund, will be in place to assure the sustainability of the established and proposed protected areas and species protection activities. Local NGOs and associations will be able to develop and implement activities and attract independent funding. The necessary legal measures will have been taken to ensure that resource tenure and decision-making powers rest with the resource users, and enforcement is effective.

It is clear that in a country such as the Comores, a five-year project will only be able to begin the process of building capacity for biodiversity conservation and sustainable development. By establishing policy, legal, financial, and operational frameworks for participatory biodiversity conservation, the mechanisms for continuing sustainable development initiatives will be in place. Project activities will demonstrate through pilot activities what is possible within this context. Nonetheless, it is probable that further external assistance will be necessary for Comorians to continue these activities at all levels.

## **B.3 Partners and Target Beneficiaries**

The project will work with individuals and groups of stakeholders to set up partnerships and management frameworks both to implement project activities and other development programmes in the future. A partial list of possible partners and target beneficiaries identified during the course of the design mission follows.

### **Government:**

- General Directorate of the Environment (national and regional)
- Other departments within the Ministry of Production, Fish, Livestock, Forests, and Environment (national and regional)

- CNDRS, National Centre for Scientific Research and Documentation
- Ministry of Tourism
- Planning Commission
- Federal and Regional Gendarme (police-type force)
- Local Authorities (Governors and Prefects)

**Indigenous Non-Governmental Organizations:**

- Reseau Femmes et Developpement (national and regional women's development network)
- Action Comores
- Comoflora
- Shwabana
- Federation Ulanga (federation of village associations, where it exists)
- GAD (Action Group for Development)
- CNAD (National Coordination of Development Associations)

**International Non-Governmental Organizations:**

- World Conservation Union (IUCN)
- CARE Comores
- Jersey Wildlife Preservation Trust
- Fauna and Flora International
- Kew Botanical Gardens

**Private Sector:**

- Tourist Association of the Comores
- Chamber of Commerce

**Village Associations:**

- Association Ulanga (Environment clubs)
- Association Femme (Women's associations)
- Development Council (or its equivalent)
- Association Gombessa

Other beneficiary groups will include Inter-village Councils of Resource Users (to be established for each protected area), as well as protected area "wardens" and village-based protected area/site monitors, and individual resource users.

## **B.4 Project Strategy and Implementation Arrangements**

### **B.4.1 Project strategies**

The Comores have a long history of external assistance. Lessons learned from past experience include the need to strengthen existing institutions at all levels and to secure financial sustainability. This is the first conservation and capacity building project of this nature to be implemented in the Comores. A new approach for implementation is proposed that draws on past experience and emphasizes adaptability, securing government and community commitment through participation, capacity building and effective monitoring. Key strategies in this new approach are highlighted below.

The methodology for implementation of this project will be guided by the **listening-piloting-demonstrating-mainstreaming project cycle** (see Annex VIII), which has, for example, been successfully

used to execute a comprehensive integrated coastal zone management project in Tanzania. The new project cycle:

- centres on beneficiary groups incorporating participatory processes
- emphasizes capacity building;
- provides for explicit, prudent management of risks;
- reduces elapsed time and resources spent before initiating action on the ground.

The project was designed with the active participation of Comorians from various sectors of society and all geographic regions. A stakeholders workshop (see Annex VIII) was held during the project finalization mission to discuss a potential organizational structure of stakeholders at village, protected site, regional and national levels concerned with biodiversity conservation and sustainable use of resources (Figure 2). Participants agreed the structure would work in their cultural context, though it will need to be refined as the relationships are established.

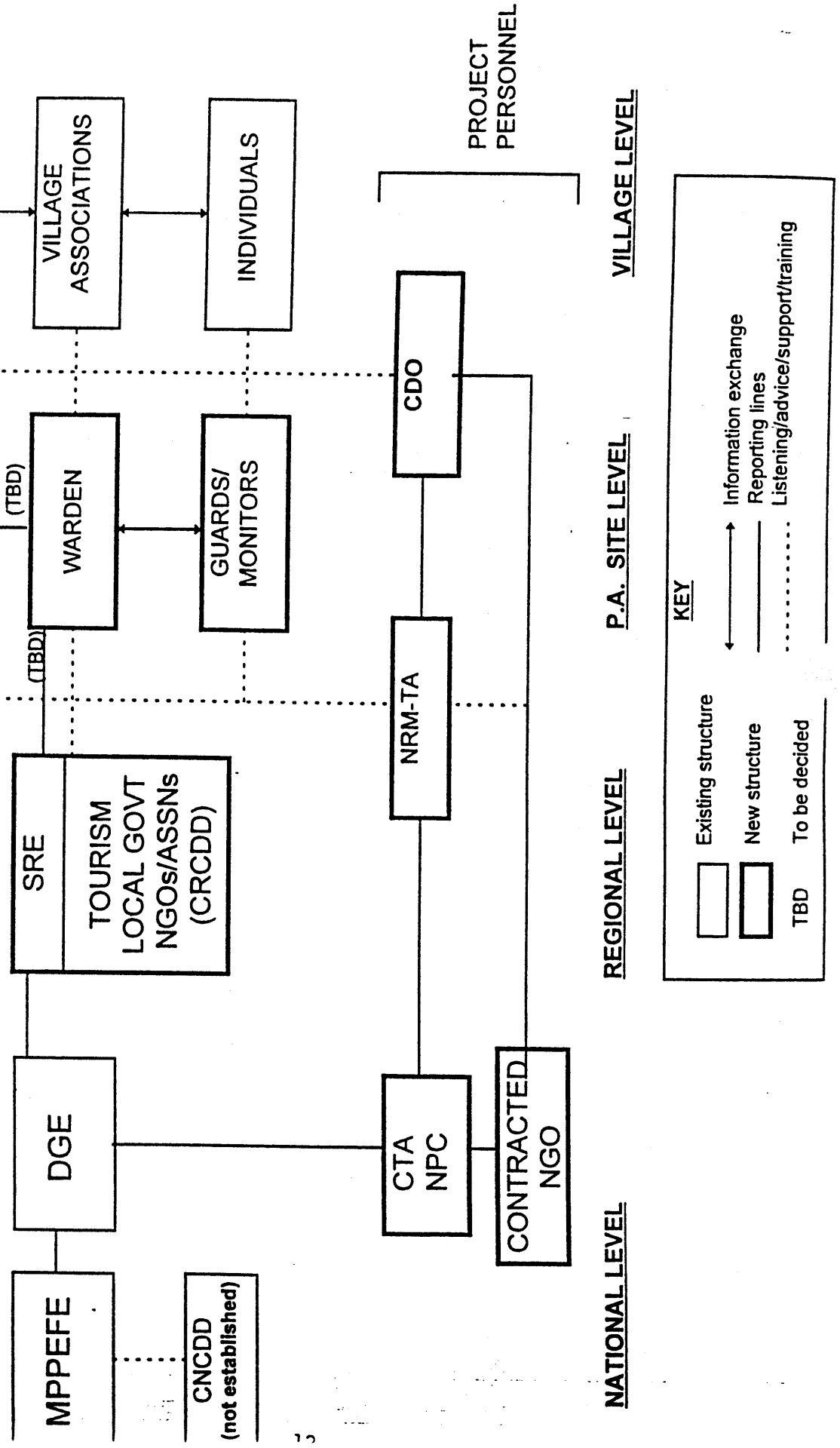
A key result of empowering local communities and organizations with participatory management and communication skills will be their ability to negotiate **collaborative management agreements** for the sustainable use of local natural resources. Collaborative management can be defined as:

*an institutional arrangement by which governmental agencies with jurisdiction over a given territory and body of natural resources, local users of such resources (user groups) and other appropriate stakeholders (e.g. local administration, business, industries, NGOs, research institutions) enter into an agreement covering the specific territory and all or part of the resources contained therein. The agreement identifies:*

- *a body of resources and its boundaries;*
- *the range of functions and sustainable uses it can provide;*
- *the recognized stakeholders in the body of resources;*
- *a system of functions, rights and responsibilities for each stakeholder;*
- *an agreed set of management priorities and a management plan*
- *procedures for dealing with conflicts and negotiating collective decisions about all of the above;*
- *procedures for enforcing such decisions; and*
- *specific rules for monitoring, evaluating and reviewing the agreement, and the relative management plan, as appropriate.*

**Capacity building for conservation and sustainable development** will be a many faceted endeavour in the project. A **train-the-trainers approach** will be taken, and those receiving training will be required to pass on and demonstrate their new skills, so formal training will be followed up with on-the-ground implementation of ideas and pilot activities (see Annex III for details of training needs generated at the stakeholders workshop). Wherever possible, **local experts will be selected** as project advisors, trainers and consultants. Where local expertise does not exist, **regional first, and then international, experts will be sought** to transfer needed skills. **Study tours** will be taken within the region to provide key decision makers with opportunities to observe and discuss a range of conservation approaches.

**FIGURE 2: POTENTIAL INSTITUTIONAL STRUCTURE FOR PROTECTED AREA MANAGEMENT AT VILLAGE, SITE, REGIONAL AND NATIONAL LEVELS, SHOWING PROJECT SUPPORT PERSONNEL**



#### **B.4.2 Project Implementation arrangements**

The project will be executed by the government of Comores. Technical support will be contracted to an implementing agency through a sub-contract with the government of Comores--through UNDP. However, the project will work simultaneously with **partners at all levels** to reduce the risk of building capacity too narrowly in the government and losing momentum if trained personnel depart, or government structures change. Working through the offices of the DGE, a Chief Technical Advisor (CTA) and a National Project Coordinator (NPC) will be responsible for project coordination, implementation and monitoring of progress. The selection and relationship of the NPC to the DGE will be agreed in the first three months of the project. DGE capacity will be built at the national and regional levels, and together the DGE and project team will coordinate activities at the regional level. Project and DGE staff will provide support to a project Steering Committee composed of representatives of the Comorian government, the Implementing Agency, and UNDP, and will also work to establish an effective CNCDD, and the associated regional CCRDDs.

At the regional, site, and local level, the project will work closely with the partners outlined in the proposed institutional structure (Figure 2). A Natural Resources Management Technical Advisor (NRM-TA) will be recruited and posted to Moheli, the first protected area site. A locally recruited Community Development Officer (CDO) on each island will oversee capacity building for community-based organizations and initiate participatory processes that lead to collaborative management agreements. Local people trained in participatory processes by previous projects are available in the Comores to serve as CDOs. Subcontracts may be developed with international and local NGOs to implement and oversee participatory capacity building and conservation activities at the regional and local levels. Foreseen roles and responsibilities of institutions and partners are summarized in Table 2 on the following pages.

To direct and coordinate the management of the protected areas, park "wardens" and village-based protected areas monitors are foreseen. How community-based "wardens" and monitors report to the SRE (DGE representative) on each island, will be determined during the first year of the project (Activity D.1.1.4).

A challenging project such as this, which will be established in an unsettled political situation, needs to retain flexibility. During the first six months, the project team will further assess the realism of planned activities, and explore the possibilities of forging partnerships with other development organizations and initiatives to maximize everyone's resources.

Pilot project activities for conservation and the development of alternative benefits for current resource users will be funded through the proposed Conservation Action Fund. Grants will be small, so they can test the local leadership and provide information about the development tasks expected to be replicated at a later stage. If approaches are not successful, they will be modified. The project will undergo an introspective annual review, and formal external evaluations at the end of Year 2 and mid-Year 5. Adjustments to all aspects of the project, from implementation arrangements to proposed activities, will be thoughtfully considered after the annual reviews and incorporated into the following year's work plan. Larger project modifications will be considered, if necessary, after the Year 2 evaluation, when lessons learned can be distilled and transformed into alternative approaches and activities. The second evaluation will help to suggest follow-up activities to the project and how the government and donor organizations can best learn from this project's achievements.

**TABLE 2: ROLES AND RESPONSIBILITIES OF INSTITUTIONS AND ORGANISATIONS DIRECTLY INVOLVED IN PROJECT IMPLEMENTATION**

INSTITUTION	LOCATION	MEMBERSHIP	ROLE AND RESPONSIBILITIES
CNCDD	National (not yet created)	Ministries	<ul style="list-style-type: none"> <li>- Oversight of integration of policies/plans</li> <li>- Inter-ministerial coordination of all activities involving the environment</li> </ul>
MPPEFE	National	--	<ul style="list-style-type: none"> <li>- Development of agricultural, forestry, fisheries and environmental policies and plans, and their implementation</li> </ul>
DGE - Director General	National	Director plus support staff	<ul style="list-style-type: none"> <li>- Development, coordination and implementation of environment/ biodiversity policies, plans, legislation and activities</li> <li>- Project oversight</li> </ul>
DGE - Land Management Service	National	1 Director	<ul style="list-style-type: none"> <li>- Land use</li> <li>- Gazettement and ownership of protected areas</li> </ul>
DGE - Assistant DG Education, Environmental Communication & Documentation Service	National	1 Director	<ul style="list-style-type: none"> <li>- Environmental awareness and communication</li> <li>- Information collection and management</li> </ul>
DGE - Rules and Control Service	National	1 Director	<ul style="list-style-type: none"> <li>- Legal issues and permit issue</li> </ul>
DGE - Natural Resource Management Service	National	1 Director	<ul style="list-style-type: none"> <li>- Protected areas and species management</li> <li>- Natural resources management</li> </ul>
DGE - Regional Environment Service (SRE)	1 per island	1 Representative	<ul style="list-style-type: none"> <li>- All DGE responsibilities on the respective island</li> </ul>
CNDRS	National	Director Research Staff Support Staff	<ul style="list-style-type: none"> <li>- Research</li> <li>- Archives, documentation</li> <li>- Information handling</li> <li>- Museum and herbarium</li> </ul>
Regional Coordination Committee (not yet created)	1 per island	SRE, NGOs, Ministries (total of up to 6)	<ul style="list-style-type: none"> <li>- Oversight of project and other protected areas/species activities</li> <li>- Development of regional biodiversity strategies</li> </ul>
CRCCD (not yet created)	1 per island	Ministries including local government--	<ul style="list-style-type: none"> <li>- Oversight of integration of policies/plans for the respective island</li> <li>- Inter-ministerial Coordination of all activities involving the environment for the respective island</li> </ul>

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INSTITUTION	LOCATION	MEMBERSHIP	ROLE AND RESPONSIBILITIES
Regional Government and Law Enforcement	1 per island	Governor's Office, Police, Gendarmerie	<ul style="list-style-type: none"> <li>Oversight of all project activities on the respective island</li> <li>Law enforcement aspects of protected area and species activities</li> </ul>
Protected Area Warden (to be recruited)	1 per protected area	Recruited regionally where possible	<ul style="list-style-type: none"> <li>Daily management of the protected area and its staff</li> <li>Information with the Inter-village Committee and participating NGOs, Associations or individuals</li> </ul>
Village-based Protected Area/Site Monitors (to be recruited)	Several per protected area/site	Recruited locally	<ul style="list-style-type: none"> <li>Surveillance</li> <li>Monitoring of environmental and human activity parameters</li> </ul>
National/Local NGOs (see list in Section xx)	National Regional Area Thematic	All comprise voluntary members	<ul style="list-style-type: none"> <li>Community-based development</li> <li>Area/species conservation</li> <li>Environmental awareness raising</li> <li>Health/hygiene awareness</li> <li>NGO coordination</li> </ul>
International NGOs (CARE, IUCN, JWPT, Action Comores)	National Regional Local		<ul style="list-style-type: none"> <li>Species conservation</li> <li>Local NGO/Association support</li> <li>Environmental awareness raising</li> <li>Sustainable community development</li> </ul>
Inter-village Committees (to be created)	Site (protected area/species sites)	Equitable representation of participating villages	<ul style="list-style-type: none"> <li>Representation of interests of all villages/sub-groups</li> <li>Information/advice exchange with warden, villages and associations</li> <li>Planning for protected areas/species</li> </ul>
Village Representative Committees	1 per participating village	Age, gender, Interest groups	<ul style="list-style-type: none"> <li>Represent all village interests</li> <li>Liaison with Associations</li> <li>Coordination of village-specific activities in protected area/species and development</li> </ul>
Associations	Numerous, villages	Special Interest groups	<ul style="list-style-type: none"> <li>Environmental awareness raising</li> <li>Community development projects</li> <li>Protected areas/species/sustainable development activities</li> </ul>
Monitoring & Evaluation Team (to be created)	From all three islands	NGOs, associations (max 6)	<ul style="list-style-type: none"> <li>Work with participating community organisations, NGOs and DGE to develop and implement participatory monitoring and evaluation</li> <li>Recommend strategies/approaches</li> </ul>



INSTITUTION	LOCATION	MEMBERSHIP	ROLE AND RESPONSIBILITIES
<b>PERSONNEL RECRUITED/FUNDED FOR MORE THAN ONE YEAR OF THE PROJECT</b>			
Chief Technical Advisor (CTA) (to be recruited)	Attached to the DGE	International recruit	<ul style="list-style-type: none"> <li>- Project execution under the supervision of the DG and the Implementing Agency</li> <li>- Technical support to all project partners</li> <li>- Support to the DGE staff</li> <li>- Liaison with the CNCDD and other ministries, donors and their projects</li> </ul>
Natural Resource Management Technical Advisor (NRM-TA)	Based on Moheli but working on all islands	International recruit	<ul style="list-style-type: none"> <li>- Technical assistance to the DGE</li> <li>- Technical assistance to other participating ministries</li> <li>- Development of protected area/species management capacity in the Warden, Guards and Monitors on Moheli</li> <li>- Development of species conservation capacity among participating NGOs and associations</li> </ul>
National Project Coordinator (NPC) (to be recruited)	Attached to, or member of the DGE	Comorian recruit or government employee	<ul style="list-style-type: none"> <li>- Project execution under the supervision of the DG and the Implementing Agency</li> <li>- Technical support to all project partners</li> <li>- Support to the DGE staff</li> <li>- Liaison with the CNCDD and other ministries, donors and their projects</li> </ul>
NGO	1 based in the Comores	--	<ul style="list-style-type: none"> <li>- Supervision of Community Conservation Advisors</li> <li>- Technical assistance for community development/participation</li> </ul>
United Nations Volunteer (UNV), or equivalent	1 based in Moroni, but working on all islands	International recruit	<ul style="list-style-type: none"> <li>- Technical support to all project partners for awareness activities</li> </ul>
Community Development Officers	1 per island	Comorian recruits	<ul style="list-style-type: none"> <li>- Development of capacity among participating NGOs and associations</li> <li>- Support to the Inter-village and Village Representative Committees</li> </ul>
Implementing Agency	TBD	--	<ul style="list-style-type: none"> <li>- Project guidance and technical oversight</li> <li>- Technical support</li> <li>- Project management</li> <li>- International networking</li> </ul>

### **B.5 Reasons for Assistance from UNDP**

The government of Comores does not have adequate financial resources or trained personnel to address the urgent biodiversity conservation and sustainable development needs. The United Nations Development Programme has played a key role in developing environmental capacity in the Comores in the last few years, including participation in the preparation of the National Environmental Policy and Environmental Action Plan. UNDP's continued involvement in this sector, and the implementation of specific activities resulting from this planning process are an extension of this role.

The assistance for biodiversity conservation within the context of sustainable development in the Comores is a particularly appropriate use of funds designated under Capacity 21 (developing the capacity to implement Agenda 21) and from the Global Environment Facility.

### **B.6 Special Considerations**

#### *Women in Development*

Traditional Comorian society is matrilineal, with rights of inheritance passing to women—a unique situation within an Islamic society. Most houses are owned by women as are many parcels of land. Women play a primary role in providing food for their family and collecting natural resources used for basic survival or income generation (e.g., fuelwood, medicinal plants, inshore fish, sand). Consequently, any efforts to implement sustainable resource management practices will affect women, and should include their active participation.

Women will be major partners in project activities. The Women's Development Network is targeted as one of the primary partner NGOs. It will play a crucial role in working with local women and women's associations and raising awareness of environmental issues and women's special concerns. As activities are initiated to protect species and ecosystems, women's resource use patterns and their priorities will be given full consideration. They will participate fully in determining how protected areas will be zoned and managed.

#### *Non-Governmental Organizations and Community-Based Organizations*

Comorian NGOs are in their infancy and have yet to develop into truly professional organizations with well-defined missions and goals. Some NGOs have an interest in improving management of natural resources. Others have broader goals to contribute to development in the country. Still others focus on particular sectors, such as women. It is envisioned that NGOs will contribute to the project as partners working with local communities and providing technical expertise. Appropriate NGOs will be identified once project implementation has begun. The project will help build their capacity to continue implementation of the programmes and activities initiated through their participation.

Community-based organizations (CBOs) consist primarily of village associations. The Ulanga, or environment clubs, found in many villages were supported through a U.S. Peace Corps programme in response to local interest in improving the environment. Associations differ greatly in their activities and level of organization village to village. Other important CBOs include Village Development Councils, groups of elders and womens groups. These local groups and institutions will be seen as key partners in the project and their capacity built according to their needs and interests.

## **B.7 Coordination Arrangements**

This project will work in close collaboration with other projects currently being implemented in the Comores, such as COI/FED, rural development initiatives on the islands, micro-project funding projects, and the proposed World Bank agricultural project (see section A.3). By coordinating activities with other efforts, greater overall benefit to the Comorian people can be realized. Initial contact has already been made with most of the organizations mentioned above. Coordination at the levels of the DGE nationally, and SRE regionally, will be essential.

## **B.8 Counterpart Support Capacity**

The government of Comores has already demonstrated its commitment to biodiversity conservation through the preparation and adoption of a variety of conservation policies (see section A.2). Following up policy development and approval with implementation actions and financial support will prove more difficult. In the past several years, the government has gone through many changes, culminating in a government overthrow in October, 1995. A new President was elected in April, 1996, and in August the new government was dissolved and a new cabinet named. Parliamentary elections are due to take place in October, 1996. Therefore, the current political situation is uncertain. In addition, government salaries are months in arrears, providing reduced incentive to civil servants to perform their jobs, and necessitating many to pursue alternative income-generating activities during the work week (see Section F).

In the GEF project formulation document, government counterpart financing was listed at \$242,000. The Capacity 21 project document listed a CFA 16,000,000 (approximately \$285,000) intended contribution of national expertise. Support from government staff is expected, especially the DGE, though only the dedication of DGE staff and the benefits of training may sustain their personal interest. There will be no government salary top-ups. It is also expected that the government will provide office space with paid utilities on all three islands for project staff. The government is expected to actively support project objectives and activities during and after the life of the project, through continued environmental law reform and provision of enforcement personnel, the establishment of an environmental trust fund for biodiversity conservation, and support of collaborative natural resource management agreements.

This project aims to work in partnership with the government of Comores, but recognises that other partners will be equally important for project initiatives to be implemented and sustained. Communities, local associations, and NGOs feature prominently alongside government personnel in all planned support and capacity building activities. It is envisioned that by the end of the project the combined efforts of all partners, government and non-government, will be able to effect and sustain biodiversity conservation initiatives.

## **C. DEVELOPMENT OBJECTIVE**

Objectives, outputs and activities described in sections C and D were derived through a participatory Logical Framework analysis exercise that took place during a stakeholders workshop facilitated by the project finalization mission in August, 1996 (see Logical Framework matrix in Annex I). The workshop included representatives from government, UNDP, NGOs, aid agencies, communities and businesses from all three islands.

The development objective of this integrated Capacity 21 and GEF funded project is:

***Through implementation of the biodiversity components of the National Environmental Policy and the Environmental Action Plan, biodiversity conservation contributes to the***

***sustainable development of the Comores and maintains the islands' unique natural heritage.***

This objective recognises two important considerations. First, the Comores is typical of small island states which lack the mineral or land resources found in larger nations, and whose populations depend directly on such primary resources as fisheries, forests, water and others for survival. Biodiversity resources are typically among the most valuable. Second, island biodiversity is naturally concentrated in small areas that are fragile and easily destroyed. In the case of the Comores, these resources are in a critical state.

Forests and marine/coastal ecosystems, two of the most important biodiversity resources, are severely threatened by unsustainable utilisation and destruction in the Comores. Forests, which provide valuable timber products and protect the limited usable agricultural land and freshwater systems, have been reduced to a few small areas. Inshore marine and coastal resources are limited in extent, due to the steep slopes bordering these volcanic islands, and over-exploitation and harmful utilisation practices have reduced their value significantly. 70% of Comorians depend on forest, freshwater and marine resources. If action is not taken immediately, and effective management systems are not put in place, the valuable resource base will be lost, closing an important avenue for sustainable development and condemning the Comores to continued dependence on external assistance.

The importance of biodiversity to the sustainable development of the Comores is clearly recognised in the Environmental Action Plan and its existing subsidiary policies, such as the Framework Law for the Environment. Among the most important sectoral policies and plans dependent on natural habitats and species, are those for agriculture, forests and fisheries developed by the MPPEFE.

This project will implement the biodiversity components of the National Environmental Policy and the Environmental Action Plan. Its main contribution will be to promote the nation's sustainable economic development by establishing **model functional systems** for biodiversity conservation. The expansion and replication of those systems throughout the country will enable the government and the people of the Comores to protect and develop their valuable biodiversity resources.

**D. IMMEDIATE OBJECTIVE, OUTPUTS AND ACTIVITIES**

**D.1 Immediate Objective**

The immediate project objective is to:

***Develop capacity and establish the legal, financial, institutional and operational frameworks and essential technical skills for collaborative management and sustainable use of biodiversity.***

The project will play a lead role in establishing in-country capacity and frameworks for long-term biodiversity conservation, in reducing further loss of unique ecosystems and valuable habitats, and in establishing mechanisms that include the conservation of biodiversity resources as part of the country's sustainable development programme.

The challenge is immense, and the project's efforts need to be clearly focused if it is to be effective within the five-year time frame and limited budget.

Following the listening-piloting-demonstrating-mainstreaming methodology, the seven outputs listed below with their associated activities, describe how the immediate objective will be achieved. Results will be achieved directly through the project, and indirectly through third parties that adopt similar approaches and are supported from other financial sources.

**D.1.1 Output 1: Collaborative management frameworks for participatory biodiversity conservation operational.**

Collaborative management of protected areas (PAs) and species conservation activities requires agreement among partners and the definition of their respective roles and responsibilities. The proposed institutional structure and roles and responsibilities of potential partners are summarised in Figure 2 and Table 2, but these will require further refinement as the PA network develops and species recovery plans are implemented.

The project will work with concerned partners during the second half of Year 1 to obtain agreement on PA management frameworks, roles and responsibilities. These will be piloted, tested and refined in the proposed Moheli marine protected area (MPA). Drawing on the experiences of the Moheli MPA, the project will advise partner organisations involved in other PA initiatives.

The collaborative management frameworks will build on existing posts and organizations, with the addition of a few staff posts required for daily PA management, such as a "warden" and monitors and/or monitors.

The project will provide models for species management through the implementation of at least two species recovery plans, that may involve quite different partnerships, and can be used as models for additional species recovery activities.

In all cases, setting up the collaborative management frameworks will provide a focus for capacity development described in Output 2.

Output 1 will produce the following results:

**Direct results:**

- Broad guidelines for collaborative management structures developed and stakeholders' roles and responsibilities defined at a national, regional, site and community level;
- A collaborative management agreement, with clearly defined roles and responsibilities, functional for the development of the Moheli MPA;
- Partnerships to implement the Livingstone's flying fox, marine turtles and possibly one other species recovery plan function effectively.

**Indirect (third-party) results:**

- Collaborative management agreement, with clearly defined roles and responsibilities, functional for development of a high priority forest PA;
- Collaborative management agreement, with clearly defined roles and responsibilities, functional for development of another priority forest or marine protected area (MPA).

**D.1.1.1 Activity:** Identify potential partners to be involved in collaborative management regimes.

The COI-FED Environment Programme audit of governmental and non-governmental institutions involved in biodiversity conservation, their expertise, interests and activities, will be used to identify potential partners. Further information required will be collected by the project staff and the Director of the DGE's Awareness, Education and Communications Division. As new NGOs and associations appear, the list of partners will be updated. The initial activity will be completed by month 6 of Year 1.

**D.1.1.2 Activity:** Facilitate the development of model collaborative management frameworks agreed upon by communities, NGOs and government.

The project staff will work with the DGE, SREs, NGOs, associations and interested partners on each island to further refine the proposed management framework developed during the stakeholders workshop. This work will be completed by the end of Year 1, and regularly reviewed and refined with the partners.

**D.1.1.3 Activity:** Develop and refine a model for a collaborative management agreement for the Moheli MPA, including definition of specific roles and responsibilities at national, regional and local levels.

This work follows on from Activity D.1.1.2 and is focused on the specific management structures, roles and responsibilities required for the Moheli MPA as a model for application at other protected area sites. Special care will be taken to ensure that local conditions and cultures are respected, and that management structures are adapted to meet specific needs. The initial proposals for management structures on Moheli will be completed by the end of Year 1. This activity directly supports Output 4, and is associated with Activity D.1.4.1.

**D.1.1.4 Activity:** Facilitate development of a management structure for the Moheli MPA, including the PA "warden", regional (island) supervisory committee (perhaps the envisioned Regional Consultative Committee for Sustainable Development, CCRDD), the SRE, Inter-village Consultative Committee and groups representing specific participating village interests.

Project personnel will assist the DGE and the SRE based at Fomboni in setting up the management structures required for the proposed MPA on the island's southern and western coasts. This activity will involve negotiations with participating communities to set up an Inter-village Consultative Committee, define its role, and identify the role of specific village associations, such as Ulangas, and participating NGOs, such as the Women's Development Network and Action Comores and international NGO partners. It will also facilitate the selection of a "warden", and monitors for the PA, and the definition of their roles and responsibilities. Clear working relationships will be developed. Within the first year of the project, as collaborative management agreements are developed and agreed, it will be determined how the park "warden" and monitors will be answerable to the SRE or the Inter-village Resource User Committee. The project will ensure full-time support for this facilitative role by recruiting an international natural resources management technical advisor (NRM-TA) with experience in PAs and collaborative management. The management structures will be in place by month 3 of Year 2. This activity is also associated with Activity D.1.4.1.

**D.1.1.5 Activity:** Periodically review the Moheli MPA collaborative management arrangement, and others as they develop, and assist with their refinement, adaptation and replication at different sites.

Project personnel will work with the DGE and other partners to periodically review the management structures in the model Moheli MPA, starting in month 6 of Year 2, and ensure that lessons learned are disseminated among other interested parties. The project and DGE staff will organise workshops to facilitate information exchange between the Moheli partners and those working toward the creation of other PAs as they are developed.

**D.1.1.6 Activity:** Facilitate partnership arrangements for implementation of the Livingstone's flying fox species recovery plan on Anjouan.

The project will work with Action Comores, Jersey Wildlife Protection Trust, other international and local NGOs and associations, to define roles and needs for this species recovery plan on Anjouan, and perhaps Moheli, by month 9 of Year 1. This activity directly supports Output 5, Activity D.1.4.1.

**D.1.1.7 Activity:** Facilitate partnership arrangements for the development of Comorian marine turtle species recovery plan, with detailed activities specified for the Moheli component.

Project staff and the DGE will work with the SREs on each island, local NGOs and associations, and international experts to develop a marine turtle recovery plan by the end of Year 1. It is anticipated that partnerships will develop on Grande Comore and Anjouan for turtle conservation after partnerships on Moheli are functional. The Implementing Agency will ensure that this activity is fully integrated with the Western Indian Ocean Marine Turtle Conservation Strategy.

**D.1.1.8 Activity:** Advise other partners concerned with the development of other species recovery plans.

Starting in Year 2, the CTA and NPC will assist the DGE in developing partnerships for at least two other species recovery plans. It is hoped that project volunteers will also assist in this process. This activity is linked with Activity D.1.5.5 and directly supports Output 5.

**D.1.2 Output 2: Capacity for biodiversity conservation strengthened.**

Capacity building for effective biodiversity conservation is the cornerstone of this project. It will involve three principal, overlapping components:

- identification of partners/participants and their needs, together with an assessment of available in-country expertise;
- direct, formal training;
- learning through experience.

Preliminary identification of conservation partners and potential participants in biodiversity conservation activities yielded three broad categories: community-based organisations (CBOs) including associations, NGOs, and government employees working within the environment/conservation sector, especially the DGE. In addition, there are independent consultants and consultancy firms that are eager to work with these three groups in the environmental sector.

For logistical and financial reasons, the project will not be able to train all potential partners directly (there are, for example, more than 100 separate community-based associations within both the Ulanga and Women's Development Network). Consequently, the project will train selected partners who will be encouraged to train others.

Training and capacity development of partners and participants will be carried out on the basis of a plan that will be regularly reviewed and updated. Capacity development will also be encouraged through direct experience of project management (see Output 3, Activity D.1.3.8) and regular information exchange. Regional study tours will augment training.

Output 2 will produce the following results:

**Direct results:**

- A training and development plan defining partners, participants and their capacity building - needs is developed, implemented, and regularly reviewed and refined;
- In-country expertise is identified and drawn upon;
- The staff of the DGE at the national and regional levels provide technical input to other partners involved in PAs and species management, and coordinate biodiversity efforts with only periodic external technical support;
- The DGE fulfils its mandate for coordination of PA and species programmes;
- Partners trained by the project extend their knowledge and skills to others;
- Partners and participants involved in PA and species management initiatives supported directly by the project are capable of fulfilling their respective roles and responsibilities with limited external technical support;
- NGOs and associations successfully develop, implement and report on externally funded projects.

**Indirect results:**

- A partnership which does not include direct project participation successfully creates and manages at least one other PA with the project providing only advice;
- Additional species recovery plans are independently developed and implemented by other partners;
- National and regional structures are formed and function effectively to support biodiversity conservation and environmental planning.

**D.1.2.1 Activity:** Identify potential partners/participants, their potential roles and their training and development needs (indicative activities listed in Annex III and Activities D.1.2.4, D.1.2.9).

Key partners for intensive training may include: regional and national federations of Ulangas and Women's Development Network (or selected individual associations if the federations are not



formed), in-country members of Action Comores, all DGE staff, individuals in key posts in selected ministries, selected independent national consultants, and all partners involved in the PA and species initiatives undertaken by the project. This activity will be largely completed by month 9 of Year 1, though needs will be continuously assessed throughout the project life. It is closely linked with Activity D.1.1.1, and directly supports Output 6, Activity D.1.6.1.

**D.1.2.2 Activity: Identify available in-country technical experts who can contribute to capacity development efforts.**

Experts available in the Comores will be identified from lists compiled during the audit conducted by the COI-FED Environment Programme. Individuals willing to assist with training and development will be interviewed to determine their capacity and potential contribution to the project by month 9 of Year 1. It is anticipated that many of the in-country experts will require additional training by external specialists.

**D.1.2.3 Activity: Develop, implement and regularly adapt a training and development plan for partners and participants.**

An preliminary training needs assessment is presented in Annex III, and will be refined by month 9 of Year 1. Training will be carried out by all project staff and international and national short-term consultants, and progressively during the project by the DGE and key NGOs. Training will be monitored and evaluated at regular (quarterly) intervals, and needs revised. Reviews will help to ensure that trained partners are extending their expertise to others. The impact of training on partners directly involved in PA and species initiatives that are supported by the project, will also be evaluated. This activity directly supports Output 6, Activity D.1.6.2.

**D.1.2.4 Activity: Develop capacity for DGE staff relevant to their role needs.**

The DGE will be a major partner for capacity development. Technical support from the implementing agency experts will be provided to the national and regional DGE for legislation development, PAs network coordination, PAs management, species conservation, external project management, community-based participatory conservation, personnel management, and planning, monitoring and evaluation. The experts will provide support regarding implementation of relevant international treaties and conventions ratified by the government of Comores.

Individuals within the DGE will also receive support for their particular areas of responsibility. For example, the Natural Resources Management Director will have regular hands-on exposure to sustainable development initiatives carried out through the project (see Output 7, Activities D.1.7.1-4), and the Director of Awareness, Education and Communication will participate actively in the awareness raising component of the project (see Output 6, Activities D.1.6.1-4). All three SREs will receive support related to their roles as trainers and supporters of PA and species activities which will be implemented on their respective islands. Where possibilities exist, an effort will be made to draw upon the training and development resources of other Comorian projects such as the COI-FED Environment Programme, or those available through regional programmes such as the Western Indian Ocean Marine Turtle Conservation Programme being developed by IUCN.

**D.1.2.5 Activity: Develop capacity for Moheli MPA management for "warden" and staff.**

The "warden" and staff appointed to the Moheli MPA will lack relevant experience, and will require intensive, full-time support. Starting in Year 2, support will be provided initially by project staff and, in due course, by the DGE/SRE. The support will involve continuous on-the-job transfer of skills and periodic intensive formal training. Development support will be tailored to the specific roles of staff members and will include planning, monitoring, evaluation, reporting, surveillance, enforcement, community relations, awareness raising, conflict resolution, basic resource management, basic ecology and biology, and languages. Training for the "warden" will be provided at greater depth for most themes. A study tour to PAs in Madagascar is planned for key PA staff.

As and when other PAs are developed, the DGE will assume the primary role in coordinating training. Project staff will play an advisory role, assist the DGE in coordinating exchange visits to Moheli and new PAs, and facilitate information exchange and training workshops on Moheli.

**D.1.2.6 Activity: Develop capacity for professional activities among Comorian NGOs.**

A major aim of the project will be to develop the capacity of Comorian NGOs to operate as professional bodies that can coordinate, support and represent their member associations, or can provide technical services in support of biodiversity conservation. General capacity development for NGOs will include: business management and responsibilities of a professional NGO, fund-raising strategies, personnel management, outreach and communication, and conflict resolution.

Technical development will be tailored to the specific needs of individual NGOs. It may include awareness raising, outreach, representation of member groups (for regional NGOs representing community-based associations) and participatory rural development techniques. Local NGOs that have already been identified as potential partner organizations for conservation actions include the federal or regional bodies representing associations such as Ulangas and the Women's Development Network, and Action Comores, Comoflora and Shwabana representing specific thematic interests. NGO and association training by the project will be centred on the list of key partners identified in Activity D.1.2.1. Those who receive training will be expected to utilize and extend their knowledge and skills to other partners based on agreed-upon targets and schedules.

Training will begin in month 3 of Year 1 of the project to enable those NGO's with some existing capacity to qualify for grants from the Conservation Action Fund (see Activities D.1.2.8 and D.1.3.8). Grant recipients, in collaboration with village groups, will then be able to begin urgently needed conservation activities and training extension as soon as possible.

**D.1.2.7 Activity: Develop capacity among community representative bodies, the Inter-village Consultative Committees and associations to participate in PA and species activities.**

Community-based organisations have so far received no training for their anticipated important roles in PA and species management, or associated sustainable development initiatives (vital to reducing threats to natural environments or threatened species). In cooperation with NGOs (Activity D.1.2.6), the project will train CBOs and individuals involved in the Moheli MPA beginning before the end of Year 1. Training is likely to include management for small associations, resource monitoring, outreach and communication, and awareness raising techniques. Groups representing more specialised interests such as fishing and farming will be trained through the project or in collaboration with technical experts available from NGOs and other cooperating projects and programmes. The possibility of introducing new and sustainable activities among members of the community will also be pursued, such as the production of handicrafts by women for sale to visitors (see Activity 1.7.2).

Inter-village Consultative Committees will be developed for coordinating community participation in PAs management and will be important partners selected for development and training support. Members of the committees will be trained in basic PA concepts, planning and review, outreach and communication, representational responsibilities relevant to resource management, and conflict resolution. The DGE and NGOs will become responsible for training CBOs involved in other PAs as they arise, with project staff will playing an advisory role.

**D.1.2.8 Activity: Provide the opportunity for NGOs and community-based organisations to develop capacity through direct action via access to funds for conservation actions.**

It is recognised that no amount of training through workshops, study tours and advice from project staff can substitute for direct action and learning through experience. For this reason, and to implement urgent-needed conservation activities, the project will develop a Conservation Action Fund that can be drawn upon by NGOs and associations to carry out conservation initiatives related to the project.

Funds granted will be provided once potential recipients have undergone a minimum amount of training in their management. Special attention will be given to project conception, planning, monitoring and evaluation. This will have the added value of preparing recipient groups to seek other funds from donors with similar conservation and sustainable development interests (e.g. through the UNDP/GEF and various embassies' small grants programmes). The funds will be operational from the month 6 of Year 1 of the project, and preparatory training will commence 2-3 months beforehand. NGOs with existing capacity to design and implement projects will be the initial recipients of grant funds and will be expected to work closely with CBOs. This activity is closely linked to those described in Activities D.1.2.6 and D.1.2.7, and directly contributes to Output 3, Activity D.1.3.8.

**D.1.2.9 Activity: Develop capacity for individuals or groups to establish and manage business practices linked to conservation and sustainable resource use.**

Deriving direct benefits from PAs and species conservation programmes under the prevailing Comorian socio-economic conditions presents a considerable challenge. Communities can generate some benefits from having clearer control over resources in their traditional area and through technical assistance. However, it is highly likely that these advantages will be relatively small and, in many cases, require years to come to fruition. The project will therefore assist individuals or small groups living on the coast of Moheli to start small businesses which favour, or at least are non-damaging to, conservation efforts. These may include the development of tourism services including guiding, simple accommodation or food service, indirect tourism activities such as the production of handicrafts for sale to visitors, or improved domestic animal production and agriculture.

As initiatives are identified and supported, the project will ensure that community partners establish and implement a continuous monitoring programme. Monitoring will cover the impact of the benefits themselves on the partners, their families and neighbours, the need for further technical input, and the impact on the environment. Care will be taken to ensure that the development of small businesses are gender-sensitive and equitable.

Attention will be paid to setting up viable and realistic business ventures and their structures (e.g. cooperatives, family ventures, partnerships). The Community Development Officers will take a lead role in identifying possible business ventures and carry out preliminary impact assessments. Depending on the nature of proposed businesses, short-term expert advice may need to be

provided. Those involved may be required to undertake preparatory training in business management followed by technical training and support. Extension of the skills developed on the Moheli coast will be promoted by exchange visits involving NGO and association members living elsewhere in the Comores. Capacity building will begin at the end of Year 1, with the first business established by the beginning of Year 2. This activity directly supports Output 7, Activity D.1.7.2.

**D.1.2.10 Activity: Provide technical support to other national and regional bodies, programmes and projects involved in conservation, biodiversity and environment planning.**

Conservation and the environment are integral elements in most, if not all, sectors of the country's policy and plans for development. Examples include population and health, tourism, infrastructure development, forestry, agriculture and fishing. The project will provide information and technical advice to decision makers and implementors upon request or as needs are identified. Both public and private sector bodies will be included.

**D.1.3 Output 3: Legal framework and sustainable funding mechanisms for environmental conservation, with an emphasis on biodiversity, functional.**

The proposed Framework Law for the Environment (FLE) and its amendments provide an important basis for biodiversity and other natural resource conservation, including the establishment of PAs, species conservation and their respective management structures. Building upon the FLE to refine policies and legislation for natural resource management will be a major component of the project.

The project will provide technical assistance to refine the FLE, to develop specific legislation required to ensure effective legal protection for PAs and their resources, and to implement relevant international treaties and conventions. While much of the basic work will be carried out shortly after the project's start up, there will be a need to provide further support as specific lessons are learned from practical experience.

An area of particular interest in the FLE is the creation of the National Environment Fund to support sustainable financing of biodiversity conservation. The project will work with policy makers and legislators to find the most effective fiscal mechanism that enables long-term, sustainable financing for PAs management and related species activities.

The development of sustainable financial support for *all* aspects of PA and species conservation will also be a major component of the project. In particular, the project will explore funding mechanisms to cover:

- initial development/investment costs involved in PA development, and periodic replacement of expensive equipment and infrastructures;
- the ensuing recurrent costs of PAs and species recovery activities;
- support for sustainable development activities within communities neighbouring PAs and species conservation sites.

These three elements will require different fiscal strategies tailored to their specific needs and the potential sources of funds.

Output 3 will produce the following results:

**Direct results:**

- The FLE, with amendments proposed through project support, is submitted by the MPPEFE to the Council of Ministers;
- Laws pertaining to international treaties and conventions are considered adequate by international agencies;
- A cross-sectoral review of environmental policies promotes interest in establishing effective national and regional coordination structures, such as the CNCDD and CCRDDs;
- Effective national and regional coordination bodies, such as the CNCDD and CCRDDs, to improve cross-sectoral management of the environment;
- Contractual agreement for the collaborative management of the Moheli MPA are robust and effective;
- A trust fund to cover the recurrent costs for biodiversity conservation (especially PAs and related species activities) is created and operational;
- A "Conservation Action Fund" is established and conservation projects are funded and successfully completed;
- A preliminary business plan for the Moheli MPA is developed, encouraging national, regional and local interest in PAs management.

**Indirect results:**

- The amended FLE is approved and implemented as legislation;
- The DGE and its partners obtain adequate aid agency funds to cover the initial investment costs for at least one additional PA, and a schedule is agreed upon for future investment needs;
- Other sources of funds are available to communities for improved natural resource management, including benefit generating schemes, during and after the project;
- Other partners agree to the business plan approach for additional PAs.

**D.1.3.1 Activity:** Develop amendments/proposals to the Framework Law for the Environment for submission to the Council of Ministers, including sectoral responsibilities for safeguarding environment, collaborative management frameworks, PAs legislation, species conservation, land/resource management and financial framework.

The project will engage an international expert, through the Implementing Agency, to work with a national jurist and all concerned line ministries to review the FLE, and to develop proposals for amendments. These amendments will be designed to ensure adequate attention to environment in the development programmes and activities of all line ministries. This will take place during the

second two quarters of the project. Proposed amendments will be submitted by the DGE to the MPPEFE and all concerned ministries for examination and revision and subsequent submission to the Council of Ministers for approval. Further amendments will be proposed in Years 2 and 3 of the project.

The legal framework for the creation of a trust fund for biodiversity in the Comores will be studied (see Activity D.1.3.5). Legislation for PAs management will be refined based upon the proposed management structures and responsibilities as described in Output 1, Activities D.1.1.2 and D.1.1.3. Species considerations include national legislation, international conventions and treaties, and modalities of including relevant aspects of species recovery plans in laws. This project will focus on land and resource tenure issues within the boundaries of PAs, but support for comprehensive land tenure reform will need to be dealt with by other institutions with sufficient resources.

**D.1.3.2 Activity: Conduct a cross-sectoral review of environmental policies and plans, identify potential coordination structures, and support efforts to achieve effective coordination through structures such as the CNCDD and CCRDDs.**

The project staff, with assistance if needed, will assist the DGE in partnership with all line ministries to conduct a cross-sectoral review of policies and plans which have an impact on the environment during Year 2 of the project. The review will be submitted by the MPPEFE for circulation among other government offices. The review will include recommendations for improved coordination, and is thus directly relevant to proposals to create the CNCDD and its regional bodies, the CCRDDs, on each island.

The project will use this activity to reactivate the creation of the CNCDD and its regional bodies, the CCRDDs, on each island. The creation of the CNCDD will be a major focus of activity for the Grande Comore-based project personnel, as will the building of DGE capacity to function as a secretariat to the committee. It is envisaged that UNDP Comores will contribute significantly to the facilitation of this process through their links with government.

Specifically, the project will examine and revise working mechanisms for the CNCDD's role in coordinating the application of the PNE and PAE. The project will assist the DGE to provide logistical support to the CNCDD, and regional CCRDDs whenever possible. And, the project will provide seminars and training for members of the CNCDD and CCRDDs on monitoring and evaluation of programmes, participatory development and technical issues as needed.

**D.1.3.3 Activity: Develop, test and refine management contracts for collaborative PAs management.**

The rights, roles and responsibilities concerning government, community and NGO participation in PAs management set out in the FLE will require amendments as practical experience is gained. These will be examined by national consultants engaged by the project starting in Year 2, and further action taken as needs are identified.

**D.1.3.4 Activity: Analyze start up/investment costs for the PAs network and species recovery plans (as a basis for future grant proposals to donors).**

The government has limited resources for PAs establishment and the development of species recovery plans. Starting in Year 3, the project will support the DGE in estimating the initial investment costs associated with surveying, infrastructures and essential equipment, plus development of economic activities, such as ecotourism. The estimates will help aid agencies to

set aside allocations for biodiversity management if they wish to support the sector, and help other partners develop funding proposals for additional PA and species conservation initiatives. This activity is closely related to Activity D.1.3.5.

**D.1.3.5 Activity: Investigate and define options and conditions for sustainable financing of recurrent costs for biodiversity conservation.**

The establishment of a financial instrument (such as an endowment fund) to cover recurrent costs of PAs and key species recovery plans is a vital component of the long-term sustainability of the structures and programmes developed by this project. The project will recruit a short-term expert in Year 1 to help identify suitable options, including funding structures, potential sources of funds (e.g. aid agency donations, debt conversions, tourism sector revenues), management mechanisms, legal considerations (especially those regarding the placement of the funds and their relationship to the National Environment Fund), and acceptable revenue uses and needs. The scope of the fund's activities has yet to be defined, but may cover recurrent costs of Comorian PAs (e.g. salaries, fuel, consumable office items, communications) and selected species recovery plans. It is anticipated that the fund will be established and operational by the end of Year 3 of the project. The project will support the development of fund management guidelines.

**D.1.3.6 Activity: Secure and deposit funds to generate income for conservation activities, such as recurrent costs of PAs.**

The project will work with the DGE to raise the required investment capital for the endowment fund by submitting proposals to interested donors, including lenders interested in debt conversion, starting in month 6 of Year 2 of the project.

**D.1.3.7 Activity: Develop procedures for budget preparations drawing upon the endowment fund.**

The CTA and the NPC will support the DGE in the design and subsequent refinement of procedures for drawing upon funds to meet recurrent conservation costs (see Activities D.1.3.5 and D.1.3.6). The development of procedures and criteria will begin in month 6, Year 2, after the fund's structure has been defined, and will involve the participation of selected/representative NGOs and associations. Regular participatory monitoring and periodic evaluation of the use of funds will be carried out.

**D.1.3.8 Activity: Establish a "Conservation Action Fund" for urgent conservation actions.**

In response to the critical threats facing key habitats and species in the Comores, the project will establish a Conservation Action Fund. The fund will act to encourage greater community interest and participation in conservation activities in important areas. Its use will be restricted to activities that complement project objectives and that can be overseen by project personnel and partners. Initially the fund will target activities to support the future Moheli MPA, Livingstone's flying fox conservation on Anjouan, and marine turtle conservation on Moheli.

The fund will be available to NGOs and CBOs, although NGOs with existing capacity to design and implement projects will be the initial grant recipients. They will be expected to collaborate with CBOs not only to implement their conservation projects, but also to use the exercise to assist CBOs to acquire project design and implementation capacity of their own through practical experience (see Activity D.1.2.8). Eligibility criteria for the fund will be completed by the second quarter of Year 1, and it will be operational by month 6 of Year 1.

**D.1.3.9 Activity: Monitor and evaluate use of development funds.**

The Conservation Action Fund will be continually monitored and periodically evaluated, starting in Year 2. Monitoring and evaluation will allow actual and potential users to learn from prior experience, thus increasing the likelihood of improved project design, implementation and reporting in the future, and enable the project to refine its criteria and ensure that adequate support is provided to users. Monitoring and evaluation will be participatory, involving the users themselves and the project's monitoring and evaluation team.

**D.1.3.10 Activity: Promote the long-term availability of funds for community/NGO projects linked to biodiversity conservation and environmental management among donors.**

Starting in Year 2, the project will work with aid agencies to promote linkages between their projects and this one to extend the influence of biodiversity conservation objectives. In addition, the project will work with donors to encourage them to support other projects aimed at sustainable natural resource management and conservation. The information collected through Activity D.1.3.9 and the management structures set in place by the project should facilitate the continuation of small-scale support to NGOs and community associations.

**D.1.3.11 Activity: Develop a business plan for the Mohelli MPA.**

The project will work with all participating partners to develop a business plan for this PA, starting in month 6 of Year 2. The business plan is essential for the following reasons: 1) It is unlikely that the government will be able to commit sufficient funds to this or other PAs after the project terminates; 2) The participating communities will benefit from understanding what they are gaining in relation to what they have given up as access to "free" resources through creation of the PA; 3) The business plan will be developed carefully to avoid unrealistically raising local expectations and to ensure that the conservation goals of the PA remain paramount.

The business plan should enable estimates of operating costs to be realistic, and to benefit from lessons learned. The business plan should contain as many as possible of the following elements: estimated investment costs (infrastructures, expensive equipment, training); projected recurrent costs (salaries, consumable materials, fuel, extended training); actual and projected direct income (entrance fees, tourism levies); actual and projected indirect income (private sector revenues from tourism, increase in revenues from improved practices derived from associated NGO/community support activities); and improvements in health or well-being from improved environmental/resource management (reduced health costs, value of improved water supplies, sustainable access to valuable natural resources such as timber).

**D.1.4 Output 4: Process for establishment of a network of PAs is initiated and at least one operational under a collaborative management agreement.**

The development of an effective PAs network is one of the primary means of helping to ensure that the valuable scenic, ecosystem, habitat and species resources of the Comores are maintained in perpetuity and contribute to sustainable development. Given the lack of government resources, actual establishment of a national PA network will rely to a large extent on village-level management. The project will assist the government to establish a decentralized approach and facilitate the development of an individualized collaborative management agreement and management plan for a model PA.



Review of existing biodiversity information and discussions held at the national seminar in 1993 led to the identification and prioritization of the major sites for biodiversity protection. These include two primarily marine and coral reef sites and three terrestrial sites as follows:

- The marine and littoral ecosystems of the southern coast of Moheli, including Niamoucheli and Boundouni lake (site designated under the Ramsar Convention);
- The peninsula of Binbini and the islet of La Selle near Anjouan;
- The natural forest on the crater of Moheli;
- The forested region of Karthala on Grande Comore;
- The relict forests on Anjouan.

The pressures of demography, a weak and undiversified economy, and poverty require an adaptive approach to PA management that deals with immediate human needs. This will require the development of a balance between controlled use of resources and stricter protection for key localities/species within a broad multiple-use area.

Due to limited human and financial resources, and the time required to develop and refine collaborative management agreements and management structures for PA development, it is anticipated that only one PA will be fully operational at the end of year 5. In addition, the project will initiate establishing a network of PAs that would include the priority sites above. The details of this process will be defined during the second year of the project and refined based on lessons learned from establishing the Moheli MPA.

During the stakeholders workshop held in August, 1996, there was consensus that the first PA to be developed should be the Moheli marine/coastal area. The project's role will be to assist stakeholders to develop, test and refine approaches to delimitation and zoning of activities, and to prepare, adopt and implement a management plan for the pilot site as a model to be refined as other PA sites are developed.

Output 4 will produce the following results:

**Direct results:**

- Model for PAs development process is agreed by all interested partners;
- Initial zoning of the Moheli MPA is completed;
- Partnership agreements for the Moheli MPA are functional;
- Initial participatory management planning for the Moheli MPA is completed;
- The Moheli MPA is gazetted;
- Partnerships for the management of other PAs are identified and formed under the guidance of the DGE and project team;
- Process for establishment of a PA network is initiated.

**Indirect results:**

- At least two additional PAs being developed and managed by other partners.

**D.1.4.1 Activity: Facilitate development of partnership arrangements and a collaborative management agreement for the Moheli MPA, and develop initial approaches.**

This activity builds on Activities D.1.1.1 through D.1.1.4. The basic model for collaborative management and the roles and responsibilities of each partner were shown previously in Figure 2 and Table 2. Roles, responsibilities and partnership linkages will be formalized through written contractual agreements, once they have been agreed by all parties, and periodically reviewed and refined. The agreement is to be in place by the end of Year 1.

During the stakeholders workshop, two alternative approaches for PAs establishment were agreed by representatives from all three islands, government, the DGE, communities, associations and NGOs. The first approach involves an initial process of developing protection and controlled use zones within a wider prospective management area. The zones may be modified, or their number augmented, as information and the number of participating communities increases. Some zones may be designated for specific time periods only, rotating between strict protection and controlled use seasonally or over a longer time frame. Some controlled use zones may also be reserved for the use of one or few communities, at least on a seasonal basis. It is anticipated that the zones would eventually be grouped together into a PA covering a wider area, or into a multiple-use management area which has a legal conservation status. This model (Figure 3) involving initial zoning and later classification as a larger PA is considered to be particularly relevant to marine and coastal sites and will probably be adopted on Moheli.

The second model involves a more traditional concept of defining large areas of natural habitat or areas important for species conservation as reserves, then defining the conservation and controlled use zones at a later time. This model (Figure 4) was preferred for forest sites, but it should be noted that there was agreement by workshop participants to determine the best approach on a site-by-site basis.

FIGURE 3: PROPOSED PROTECTED AREA DEVELOPMENT FROM EARLY ZONING TO BOUNDARY DEFINITION

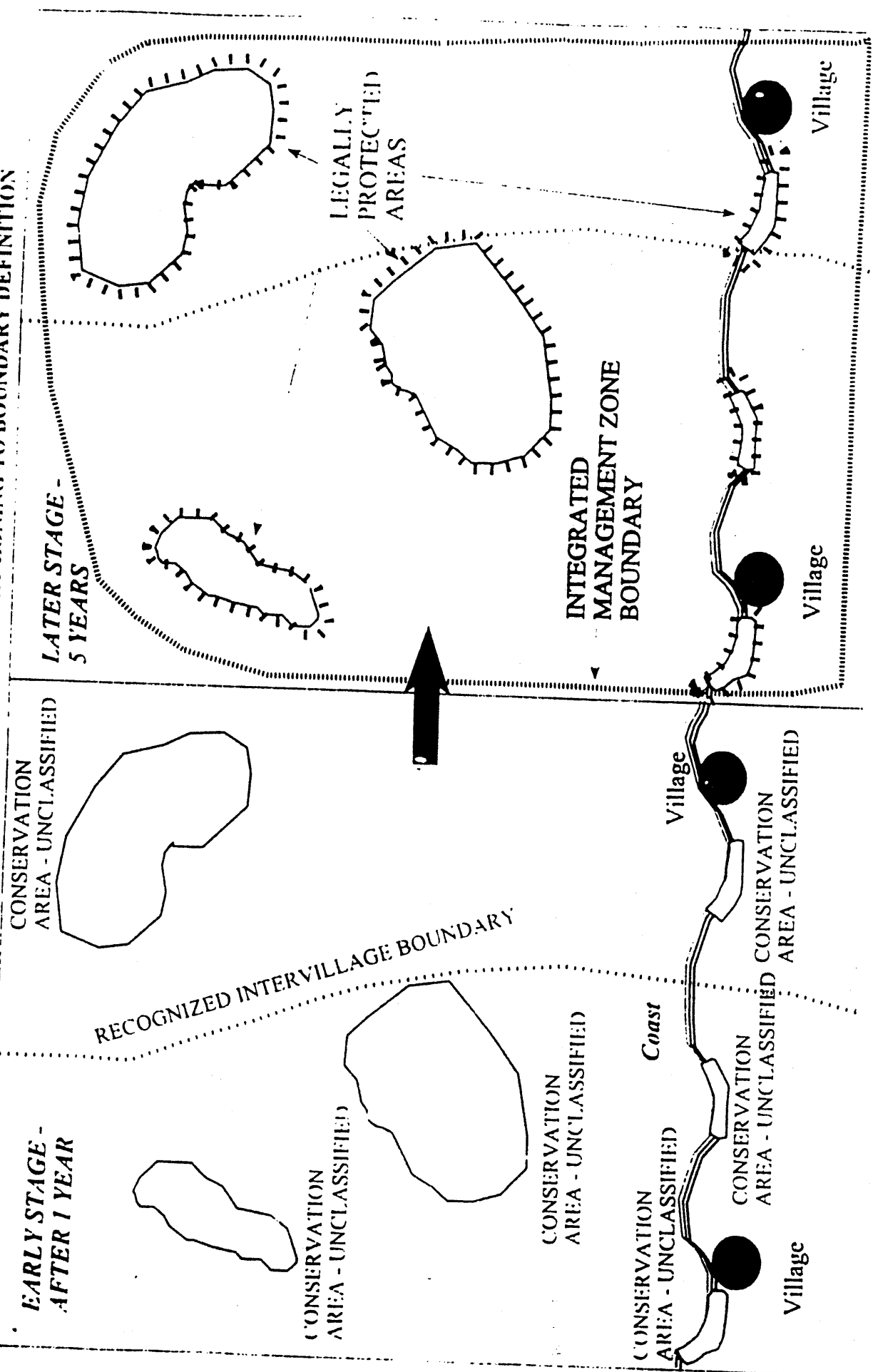
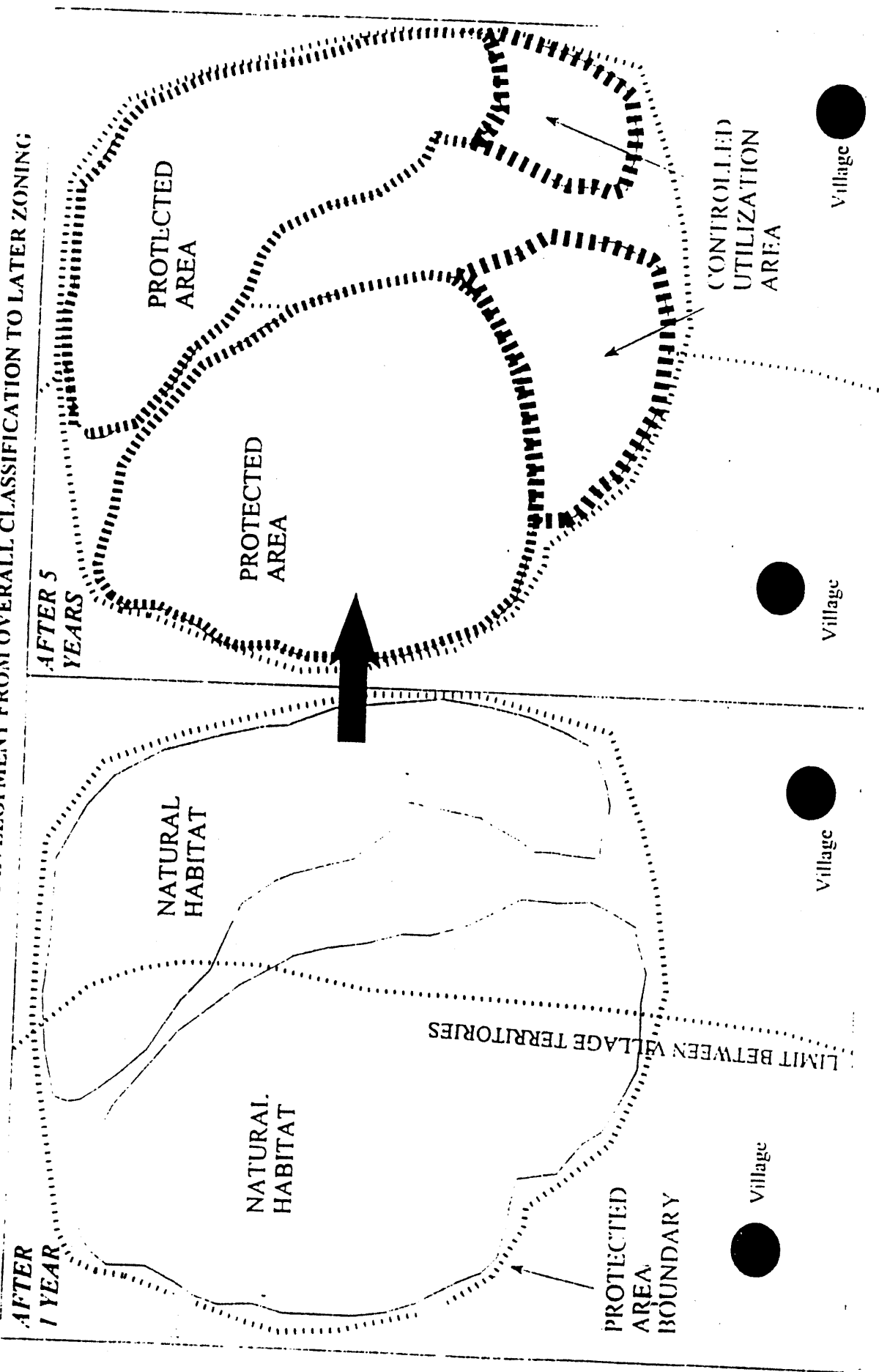


FIGURE 4: PROPOSED PROTECTED AREA DEVELOPMENT FROM OVERALL CLASSIFICATION TO LATER ZONING



**D.1.4.2 Activity:** Identify initial zoning, and develop, update and implement a collaborative management plan for Moheli coastal and marine area with involved communities.

The Moheli marine zone will be the first site selected for PA development with project assistance. There will be an initial preparatory phase involving negotiations and information exchange with local communities and NGOs, preliminary Participatory Rural Appraisal (PRA) or equivalent assessment, basic training and capacity development for associations, representative committees, PAs staff and NGOs, establishment of the agreed-upon partnership structures, recruitment of PAs staff, and the acquisition of basic operating equipment. All staff will be recruited from Moheli, if possible, and monitors will be recruited from participating villages. It is anticipated that the development of the PA will begin in earnest at the beginning of Year 2, on the basis of earlier proposals and initial negotiations with communities. Care will be taken to ensure that ownership and utilisation rights are thoroughly examined to avoid future conflicts of interest or disputes over tenure.

Management planning will begin some 3-6 months after the PA and/or the initial zoning is under way. This will be a collaborative venture involving all partners, and will involve mini-workshops and continuous negotiations. The management plan will incorporate the development of a preliminary business plan to initiate monitoring and help assess and improve the impact of the PA on local communities and economy. The initial management plan should be ready by the middle of Year 2, and will be reviewed periodically thereafter.

The project will provide direct technical support to the Moheli MPA through the NRM-TA, CTA, NPC and the Moheli-based Community Development Officer (CDO). The NRM-TA will work primarily with the "warden" and monitors, but will provide input to the Community Based Organization (CBO) partners regarding natural resource assessment and utilisation. The CDO will assist the community partners but will also provide considerable input to the "warden" regarding community perceptions, needs and interests. Both NRM-TA and the CDO will work with the PA personnel and the communities, to avoid separation of the two groups into conservation and development camps. Short-term international expertise required to train PA staff will be provided through the Implementing Agency.

**D.1.4.3 Activity:** Promote the selection and development of additional PAs.

Project staff and the DGE will advise other partners who intend to develop additional PAs. This support will involve site visits by the project staff and DGE, site visits by other partners to Moheli and workshops, starting in month 6 of Year 2.

**D.1.4.4 Activity:** Promote gazettement of the Moheli MPA when boundaries and zoning plans have been agreed upon by communities and government.

Once component zones or the entire PA have been defined and preliminarily delimited, the project will promote gazettement. It is anticipated that Moheli will be the first PA to be gazetted, probably in Year 4 or 5.

**D.1.4.5 Activity:** Assist the process of coordinating and managing the PA network.

The main responsibility for the establishment and coordination of a PAs network will lie with the DGE, unless new structures are set up to specifically assume this role. In either case, the project will provide technical support through its staff members to ensure that effective strategies and

coordination structures are put in place, including the development of an overall strategy or "system plan". Short-term experts will be recruited from the Implementing Agency or from within the region (e.g. the PAs coordinating body in Madagascar, ANGAP--l'Association Nationale pour la Gestion des Aires Protégées) as needed.

Coordination among other partners with significant interests in the PAs network will be an important role of the project. The project will build the DGE's capacity to develop a PA network and provide technical support to implementing partners starting in Year 2. It is intended that collaborative management agreements will be completed and at least two other PAs will be initiated by Year 5 of the project.

**D.1.5 Output 5: Species recovery plans developed and implemented.**

As islands, the Comores have a relatively large number of endemic species which are either vulnerable or threatened with imminent extinction. Others, such as the marine turtles, are threatened globally and equally require urgent attention. At the stakeholders workshop, a preliminary list of endangered species to be targeted for conservation action was developed. It included the Livingstone's flying fox, marine turtles, coelacanth, Scops owls, dugong, endemic flora, blue pigeon, reptiles (iguana, lizards and others), and black coral. Consequently, the project will emphasize formulation and implementation of at least two species recovery plans, one for Livingstone's flying fox on Anjouan and possibly Moheli, and another for marine turtles on Moheli as models for the development of further recovery plans. At least two additional species recovery plans will be formulated, with partners identified for their implementation and activities initiated.

The stakeholders workshop identified two approaches for effective species conservation in the Comores. The first approach requires a specific species recovery focus based on the pattern developed by the IUCN Species Survival Commission Specialist Groups. The second approach requires the conservation of large blocks of natural habitats on each of the islands as a means to protect species which are either poorly understood or even not yet identified, and to safeguard species that now occur in fragmented or isolated habitats. In reality, species recovery plans in the Comores will require a mixture of the two approaches.

Species recovery plans exist or are being developed for the Livingstone's flying fox and marine turtles respectively through the efforts of Action Comores, Jersey Wildlife Preservation Trust, Fauna and Flora International, Ian Tattersall and the Richard Lounsbery Foundation, Bristol Ecological Consultants, Ltd., and the IUCN Bat Specialist Group. The formulation of a recovery plan for the coelacanth has also been initiated, although consensus and a formal approach have yet to be developed. Previously, the Max Planck Institute had suggested Fish Aggregating Devices (FADs) to alleviate fishing pressure on coelacanths. However, the FADs are deemed an excessively expensive and unsustainable option for coelacanth conservation. The project will work with local Association Gombessa and the COI-FED project, which has targeted coelacanth conservation in its objectives, to develop a realistic recovery plan and implement actions to protect this important species. Apart from these species, no other species have been targeted for recovery to date. The project will pilot species recovery with the species mentioned, and will draw on this experience to advise other partners interested in extending the activities to other sites and/or species.

Output 5 will produce the following results:

**Direct results:**

- Known species needs are prioritised;
- The Livingstone's flying fox recovery plan is implemented on schedule on Anjouan;
- The total number of Livingstone's flying foxes increases;
- The Moheli component of the regional marine turtle plan is implemented on schedule;
- The number of slaughtered marine turtles recorded is reduced on protected beaches on Moheli;
- Species concerns are fully integrated into the Moheli MPA;
- At least two additional species recovery plans, for coelacanths and at least one other species, are developed and initiated with appropriate partners.

**Indirect results:**

- Initial identification of species needs and priorities is completed;
- The Livingstone's flying fox plan is implemented on Moheli;
- A captive breeding programme for the Livingstone's flying fox is established in the Comores;
- Marine turtle conservation actions included in the regional plan are initiated on at least one other island;
- Species issues are integrated fully into at least one additional PA.

**D.1.5.1 Activity:** Facilitate agreement on priority species for recovery action.

To focus national and international efforts on the most threatened species, the project will facilitate identification of these through research review and broad consensus, based on the preliminary list developed at the stakeholders workshop.

The initial identification of species planning needs will take place during Year 1, and will be periodically reviewed and refined. Most of the initial specialist input will be provided by international NGOs and the Implementing Agency. This activity directly supports Output 1, Activity 1.1.6.

**D.1.5.2 Activity:** Cooperate with Action Comores and its partners to implement Livingstone's flying fox recovery plan.

The project will support the activities of Action Comores and its partners (notably JWPT) to implement the recovery plan for Livingstone's flying fox on Anjouan, beginning in month 6 of Year

1, by supporting conservation of known bat roosts, training for the Action Comores representatives, and training and monitoring of local Ulanga members who work as bat recorders and roost guards. The project will encourage a captive breeding programme in the Comores. A significant effort will be made to train key local NGO and associations in the development and implementation of an awareness raising campaign. The project will target Action Comores as a key NGO for capacity building in species protection.

**D.1.5.3 Activity:** Contribute to formulation of a species recovery plan for marine turtles.

The project staff and concerned partners will develop a marine turtle recovery plan for the Comores, by the end of Year 1. The Implementing Agency will facilitate information exchange and coordination in the context of the Western Indian Ocean Marine Turtle Conservation Strategy.

**D.1.5.4 Activity:** Facilitate implementation of marine turtle recovery plan on Moheli.

The marine turtle recovery plan will be implemented as pilot activities on Moheli and will be linked to the marine PA programme, starting in month 6 of Year 1. The NRM-TA and CDO will support the PA staff, associations, enforcement personnel and local volunteers through: training in turtle surveys, handling and tagging, surveillance, awareness raising, and tourist management for turtle watching. The project will also facilitate inputs from other projects (such as the COI-FED Environment Programme), involvement of Comorian scientists, effective enforcement of turtle protection laws, and active participation in the Western Indian Ocean Marine Turtle Conservation Programme.

**D.1.5.5 Activity:** Advise partners on the development and implementation of additional species recovery plans.

Project staff will advise and assist the DGE and other partners in developing and implementing at least two additional species recovery plans (one of which will be the coelacanth), starting in Year 2. The staff and the Implementing Agency will also promote participation by other international NGOs and aid agencies. Also, special attention will be given to extending Livingstone's flying fox activities to Moheli, and of marine turtle conservation to Anjouan and Grande Comore. This activity supports Output 1 and is linked to Activity 1.1.8.

**D.1.6 Output 6:** Awareness, interest and participation in biodiversity conservation increased.

The long-term success of the initiatives set in motion by the project depends on increased awareness, interest and participation in biodiversity conservation by the population generally, and by the important targeted partners in particular. These partners are the decision makers in government, selected businesses like tourism, rural communities, and regional authorities including law enforcement personnel.

Children are also a target group. They will grow up to find few economic alternatives open to them and will be forced to perpetuate unsustainable use of land and natural resources. While the development of alternative income/resources is the only real solution to this problem, a greater understanding of the environment and its biodiversity values will help people to make informed decisions, and encourage them to actively seek alternative sustainable solutions.

The project will endeavour to raise environmental awareness and participation by training key partners to carry out this work and extend the training to others. A UNV, or equivalent, will be



recruited in Year 1 of the project to coordinate and oversee awareness raising activities and a training and capacity building programme for targeted groups and partners starting in Year 2. Eventually it is anticipated that the partners will be capable of developing proposals for independent fund raising to extend the scope of awareness activities.

Output 6 will produce the following results:

**Direct results:**

- Key partners are identified as implementors;
- Partners trained by the project implement awareness raising activities and extend their skills to others.

**Indirect results:**

- Trained partners associate their awareness raising activities with efforts to develop PAs, species recovery plans and sustainable development programmes aimed at conserving the islands' biodiversity;
- Increased interest in biodiversity management or conservation is indicated by an increase in viable project proposals through the project or other partner programmes (e.g. COI-FED project);
- Environmental and/or biodiversity issues are systematically incorporated into federal and regional master policies or plans;
- Local media coverage of biodiversity issues increases.

**D.1.6.1 Activity: Identify and train target groups and implementors for awareness raising in PA sites and for priority species.**

During the first half of Year 2, the UNV and DGE will analyze the environmental awareness needs of target groups in government (such as members of the CNCDD and CCRDDs and other key individuals in the education and information sectors), NGO's, resource user groups, donors and others, and identify key partners who could implement related activities.

The project will develop the capacity of key partners, target groups and individuals through focused training activities, provision of specific technical support, and promotion of linkages to project activities. This activity supports Output 2, Activities D.1.2.1 and D.1.2.3.

**D.1.6.2 Activity: Advise key partners.**

The project staff will advise key partners on a regular basis and provide technical information and oversight (review and factual editing) as needed for any materials produced, once the UNV is in place in Year 2 of the project.

**D.1.6.3 Activity: Develop and implement participatory monitoring and evaluation of the awareness raising programme.**

During the second half of Year 2, project staff will work with partners to develop techniques to evaluate the effectiveness of awareness activities. The evaluation will be used to refine approaches on a regular basis.

**D.1.7 Output 7: Sustainable income and other benefit generating alternatives developed.**

As things stand, the continuing unchecked population growth and the demand for land and natural resources will result in the loss of all but the most inaccessible sites and their resources in the not-too-distant future. Consequently, the development of alternative income/benefit generating schemes is vital to the future success of PA and species initiatives.

Alternative income/benefit generation is too extensive an issue to be addressed by this project alone, and collaboration with other programmes is essential. However, the project's NRM-TA and CDO on each island will assist to address this issue directly, within the constraints of available resources.

The project will train key partners as implementors, and focus on the Moheli MPA as a pilot site.

Output 7 will produce the following results:

**Direct results:**

- Key partners are identified as implementors;
- Key partners are trained;
- Potential sustainable natural resource management activities are identified with communities living in the Moheli MPA are identified;
- Potential sustainable natural resource management activities in the Moheli MPA developed, tested and refined.

**Indirect results:**

- Key partners develop, test and refine sustainable development activities on all three islands, and extend their knowledge to others;
- Interest in sustainable natural resource management on all three islands increases, as measured by replication of successful approaches, and request for assistance from partners trained by the project.
- Successful natural resource management approaches are replicated independently in several communities.

**D.1.7.1 Activity: Conduct a participatory review of potential sustainable development activities.**

The project staff will seek the advice of local socio-economists and implementing agencies working in sustainable development programmes throughout the Comores regarding feasible, equitable and gender-sensitive alternative benefits activities. Potential activities will subsequently be reviewed with project implementors, and representatives from communities, specialist associations and NGOs, starting in month 6 of Year 1.

**D.1.7.2 Activity: Train key organisations and individuals in selected sustainable development activities.**

The project will recruit short-term consultants for training of target organisations and individuals who will in turn act as trainers. The target group will include selected NGOs and associations and individuals linked to the project species and PA activities and who are willing to play an extension role. They will subsequently be supported through the proposed conservation action fund described in Outputs 2 and 3 and by other aid agencies.

Training will comprise a mixture of workshops and practical experience, beginning by month 9 of Year 1, and continuing periodically thereafter as necessary.

The project formulation mission identified ecotourism, the use of Fish Aggregating Devices (FADs), in-forest honey production and poultry rearing as potential sustainable development activities. Others will be based on traditional resource use practices such as fish trapping, extraction of native tree species for timber and fire wood, and forest products used to make artisanal products.

**D.1.7.3 Activity: Provide technical support to trained key partners and their trainees.**

The project's CDOs will provide continuous technical support to trainers and their trainee community members on all three islands. On Moheli and Anjouan there will be an emphasis on sustainable development activities linked to management of coastal/marine resources and forest habitat protection for the Livingstone's flying fox, respectively. However, support will not be confined to these initiatives. The NRM-TA will also play an important role in supporting community efforts to sustainably manage renewable natural forest and marine resources.

**D.1.7.4 Activity: Participatory monitoring and evaluation of sustainable development activities.**

Project staff will coordinate monitoring and evaluation of all sustainable development activities supported by the project beginning in Year 2. The community and NGO partners involved in sustainable development activities will participate fully in monitoring and evaluation activities as part of their capacity building, supported by project staff as needed.

**E. INPUTS**

**E.1. Input from Government of Comores**

The government will contribute national expertise to the project, including staff time of the DGE at national and regional levels, who will participate in establishing and coordinating the national protected areas network, drafting legislation for presentation to their Minister, and working with villages, with assistance, to develop collaborative management agreements and management plans for protected areas and species

recovery. The government will also provide office space on all three islands for all project personnel and the execution of project activities.

## **E.2 Input from sources other than UNDP**

The project will work with other projects, programmes and organizations in the Comores to coordinate activities and maximize resources. International NGOs, such as Fauna and Flora International and Action Comores have shown interest in augmenting the project's inputs with funds of their own to support species conservation activities. Specifics will be negotiated after the project begins.

## **E.3 Input from UNDP**

UNDP will provide \$595,000 Capacity 21 funds and \$2,442,000 from GEF funds (of which \$89,959 has already been spent in 1996 against the Preparatory Assistance), thus a total of \$3,037,000. In addition, UNDP Comores will support the project as a member of the project Steering Committee and in other, non-financial ways. The GEF and Capacity 21 secretariats will provide technical review and evaluation support to the project. UNDP financial inputs will be utilized as follows:

### **E.3.1 Personnel**

#### **E.3.1.1 International personnel**

- Chief Technical Advisor (CTA)--to have overall responsibility for project implementation and management, with expertise in participatory process and capacity building, policy and legislation, environmental trust funds and other sustainable funding mechanisms, sustainable development, including small grant facilities, ecotourism, (60 p/m)
- Natural Resources Management Technical Advisor (NRM-TA)--to be based in Moheli, with expertise in collaborative management, planning and establishing protected areas, training personnel in protected area management and species conservation, species recovery, appropriate alternative benefits and income-generation activities. (51 p/m)
- UNV, or equivalent--Communications and awareness specialist to design and coordinate an awareness, communications and environmental education programme, advise on materials production, do training for target groups. (24 p/m)
- Consultants--Specialized consultants will provide advice and training to the project to assist in developing species recovery plans, establishing a biodiversity trust fund, reviewing and proposing environmental laws, and establishing alternative benefits projects, such as ecotourism (12 p/m)

#### **E.3.1.2 National personnel**

- National Project Coordinator (NPC)--Development expert to assist the CTA with project management, coordinate and lead in community-based and NGO capacity-building initiatives, support awareness raising initiatives. (60 p/m)
- Development Coordinator--Specialist in participatory processes to design and coordinate implementation of PRA (or equivalent) training programme, supervise CDO's, liaise with CTA, NRM-TA, NPC and UNV on conservation and development activities programme. (20 p/m)

- Community Development Officers (CDO)--PRA (or equivalent) trainers to promote and develop participatory management structures for protected area and species initiatives, implement PRA (or equivalent) training programme, train and support NGOs and local associations in conservation and alternative benefit project design and implementation. (1 each island; 126 p/m)
- Project/Environmental Fund Finance Manager--Accountant to manage project finances and oversee financial management and disbursement of funds for Conservation Action Fund and biodiversity trust fund (58 p/m)
- Project Secretaries--Full time on Grande Comore, half time on Moheli (85 p/m)
- Project Administrator/Driver--For Grande Comore only, to facilitate procurement, government administration matters, manage visitors and consultants. (58 p/m)
- Protected Area "Warden"--One foreseen for Moheli MPA to oversee and implement MPA management plan, supervise monitors and capacity building for all MPA staff. (51 p/m)
- Protected Area Monitors--At least 1 foreseen from each of 12 villages involved in Moheli MPA when comprehensive marine park is established to patrol and maintain PA, work with community groups and tourists on education and awareness activities, monitor p.a. and species status. Will be phased into project as villages join PA (480 p/m)
- Protected Species Coordinator--2, part-time persons to oversee and coordinate species monitoring in smaller, protected sites as part of species recovery plans. (52 p/m)
- Protected Species Watchmen--2, full-time persons to guard, work with communities and tourists at protected sites (104 p/m)
- Local consultants--local expertise will be identified as project activities develop (Activity D.1.2.2). Preference will be given for local consultants in all areas. (46 p/m)

### **E.3.2 Subcontracts**

Funds for the subcontract to finalize this project document are included in the budget.

Other sub-contracts to international and Comorian NGOs are foreseen throughout the project, as needed and when capacity is established for NGOs to oversee the implementation of selected project activities. Funds will be redistributed from project personnel budget lines to cover the subcontracts.

### **E.3.3 Training**

Training is a cornerstone of this project. An preliminary training needs assessment is included as Annex III, to be refined once the project begins. National, regional and local-level workshops and seminars are planned, plus regional study tours. Government personnel (DGE, CNCDD, CRCDD), NGOs, local associations, protected area staff, and other interested partners will be targeted. External trainers/specialists will be needed for some training; other training will be conducted using local/regional expertise, including project staff (TAs, CDOs).

Since development of collaborative management agreements for protected areas and species recovery will involve cooperation and coordination among several local villages (12 for Moheli protected area), plus government, NGO's, other programmes and projects, a significant amount has been budgeted for local meetings. There will also be many local informal trainings, such as for the protected area "warden" and staff conducted by the NRM-TA, NPC, CDO's.

#### **E.3.4 Equipment**

Non-expendable equipment: (see equipment lists, Annex IV);

Vehicles--2 for Moheli and Grande Comore; Moheli 4WD, capable of carrying staff and materials to outlying sites for species work on Moheli, demarcating protected areas/sites, conducting village meetings, trainings, etc.; Grande Comore less heavy duty, for meetings, town and island travel, work on Mt. Karthala; Anjouan vehicles will be rented

Motorcycles--5 primarily for each CDO to travel to villages to conduct meetings and participatory processes training activities; 1 for UNV, 1 for Moheli PA "warden"

Computers--1 for each island, plus printers, software

Boat and motor--for patrolling, surveying, monitoring Moheli MPA

Office equipment--minimal for 3 islands

Education and awareness equipment (basic)

Expendable equipment:

Office supplies, maps, charts, photos, education/awareness supplies, books, basic field equipment

Materials to establish protected areas--boundary demarcation, signs, fencing, etc.

Materials to support species recovery--turtle tagging supplies, surveying and monitoring supplies, all-weather gear, etc.

#### **E.3.5 Operations**

Operations costs, including communications, equipment insurance, operating costs, repair and maintenance, utilities, storage, and reporting are estimated at approximately \$143,000 over the life of the project.

#### **E.3.6 Conservation Action Fund (see Activities D.1.2.8 and D.1.3.8)**

\$80,000 has been budgeted for the Conservation Action Fund, to be awarded as small (\$1,000-\$5,000) grants to local NGOs and associations.

#### **E.3.7 Implementing Agency Oversight**

The Implementing Agency oversight will include technical staff time to advise on protected areas, biodiversity (species recovery plans), marine parks, alternative benefits, environmental planning, ecotourism, forest conservation, wetlands, and communications. International travel is budgeted for 5 trips per year, (including trips to Comores by Nairobi and international staff, and travel by TAs to Nairobi), plus communications and office costs for project management and accounting. Total budgeted is \$350,000. Implementing Agency overheads are budgeted at 8% of the total cost of the sub-contract, approximately \$218,000.

#### **E.3.8 Contingency**

3%, or approximately \$82,000, has been budgeted for contingencies.

### **F. RISKS**

A general list of risks and assumptions is contained in the project Logical Framework Matrix attached as Annex I. Risks described in this document have been considered in the design of the project and are

deemed acceptable at present for project progress to occur as planned. If the risks grow with time, however, they would cause major disruption to the project and would require adjustment in its operation.

**1. The socio-economic situation in the Comores becomes less secure.**

Several of the socio-economic conditions in the Comores stand in stark contrast to the need for conservation and sustainable development activities. Population growth continues unchecked, inter-island migration is increasing, land and resource tenure are not secure, and the economic base is limited. The government of Comores' determination to deal with these important socio-economic issues has been demonstrated through adoption of progressive sustainable development policies and development of projects aimed at improving the situation. Failure to **successfully implement** necessary actions, however, will mean the increasing rate of environmental degradation will continue.

This project will directly address the problems of environmental degradation through implementing conservation activities. Within the limited scope of the project (specifically as it affects PAs and species conservation) land and resource tenure issues will be addressed. The project will also promote a diversification of the economic base, though, again, only on a limited basis as it relates to project activities. However, if the driving forces behind environmental degradation--notably social, economic, and political factors--are not addressed and markedly improved in the next five years, the project may be unable to make substantive, sustainable progress towards its conservation and development goal.

**2. The Government of Comores becomes less stable or insolvent.**

This project aims to work in partnership with the government of Comores. Many activities are designed to build government capacity at national and regional levels to coordinate and manage biodiversity conservation. Currently government salaries are months in arrears, providing reduced incentive to civil servants to perform their jobs, and necessitating many to pursue alternative income-generating activities during the work week. If the situation continues to decline, important coordinating, advising, management and enforcement functions will need to be institutionalized elsewhere--such as within communities.

The project places heavy emphasis on building and empowering local management structures and institutions to work in cooperation with government bodies. However, if the level of national and/or regional government functions is reduced, it is envisioned that inter-community and community councils and associations, trained during the project period, could operate independently.

**3. The government of Comores fails to adopt and enforce policies and legislation to ensure local resource ownership and reform the country's land tenure system, establish PAs and species protection, or support collaborative natural resource management.**

The National Environmental Policy and Environmental Action Plan call for the establishment of PAs and biodiversity conservation, and continued evolution of the Framework Law for the Environment. The government of Comores has recognised it must reform the country's land tenure system and adopt a participatory approach to resource management, due to its limited human and financial resources.

To encourage continued government support, politicians and policy makers will be targets of awareness-raising campaigns to ensure they understand the value of participatory decision making and collaborative management, and how biodiversity conservation will contribute to the economic well-being and stability of the country. Laws and policies will be reviewed by the project, and project personnel, working through the DGE and the CNCDD, will keep government officials actively involved and informed of the importance of law and policy reform and enforcement.

**4. A catastrophic climatic or other natural event occurs.**

Because of degraded, exposed soils, cultivation on steep slopes and deforestation in riparian areas, it has been predicted that a large cyclone could cause extreme environmental damage (soil erosion and forest damage leading to severe reef siltation--even ecological collapse in some areas). Also, there is the possibility of an eruption of Mt. Karthala volcano on Grande Comore.

It is hoped that better resource management practices promoted by the project will increase natural resource protection and better mitigate the effects of natural catastrophes.

**5. The funds to cover recurrent biodiversity conservation costs are not made available.**

The establishment of an endowment fund to cover the recurrent costs of biodiversity conservation in the Comores is essential to ensure the sustainability of PAs and species recovery activities, and is a major project activity. However, establishment of this fund depends upon both the commitment of the international community to support biodiversity conservation in the Comores, and the ability and commitment of the government of Comores to facilitate the fund's establishment and management. Without a sufficiently large fund, it is unlikely that activities will be sustained beyond the life of the project.

**6. Conflicts cannot be managed.**

As in any group of communities, especially when competition for resources is keen, mistrust, even long-standing rivalry, occurs between families and villages. The three islands of the Comores speak different languages and have different customs. Raiding of other islands' resources is common. Government is not always trusted. The depth of antagonism is not completely understood.

This project is designed on the premise that participatory management of resources, starting with resource users themselves, is possible in the Comores. It is assumed and that mutually developed resource management agreements can and will be fairly and equitably developed, and that stakeholders will be willing to participate in the process with all other stakeholders and partners in the process. Some amount of conflict management is foreseen, but it is assumed that communities will be willing to work for a common good and will see that long-term benefits will be available to all.

**G. PRIOR OBLIGATIONS AND PREREQUISITES**

**(A) Prior obligations**

There are no additional obligations on the part of the government of Comores as a precondition for UNDP assistance.

**(B) Prerequisites**

The following prerequisites are essential for smooth implementation of the project:

1. Suitable office space provided and water and electricity costs covered by the government of Comores on Grande Comore, Moheli and Anjouan for project personnel and activities. The CTA on Grande Comore will need office space from day one of the project, and the NRM-TA on Moheli will need office space from month 3, Year 1 of the project. Community Development Officers on each island, and the UN Volunteer (or equivalent) will need office space when they are put in place, according to the workplan.



2. Commitment by the government of Comores that all DGE personnel who are performing satisfactorily will be maintained in their present positions, subject to promotion to related fields, for the duration of the project.
3. Commitment by the government of Comores to establish the CNCDD and the three CRCDDs with the advisory support of the project, as needed.
4. Commitment by the government of Comores to support collaborative management agreements negotiated with stakeholders groups, especially in the area of provision of enforcement personnel.
5. Commitment by the government of Comores to support adequate protection of species and ecosystems through revision and modifications of the Framework Law for the Environment, and to support the creation of sustainable funding mechanisms to cover the recurrent costs of biodiversity conservation beyond the life of the project.

UNDP GEF and Capacity 21 assistance to the project will be provided, subject to UNDP GEF and Capacity 21 receiving satisfaction that the prerequisites listed above have been fulfilled or are likely to be fulfilled. When anticipated fulfilment of one or more prerequisites fails to materialize, UNDP GEF or Capacity 21 may, at its discretion, either suspend or terminate the assistance.

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

The project will be subject to tripartite review by the Steering Committee (composed of representatives from the government of Comores, the Implementing Agency, and UNDP) at least once per year during the fourth quarter. The National Project Coordinator and the Chief Technical Advisor will prepare and submit to each Steering Committee review meeting a Project Performance Evaluation Report (PPER). Additional PPERs may be requested, if necessary, during the project.

A project terminal report will be prepared for consideration at the terminal Steering Committee review meeting. It will be prepared in draft sufficiently in advance to allow review and technical clearance by the executing agency at least four months prior to the terminal Steering Committee review.

The project shall be subject to evaluation 24 months and 54 months after the start of full implementation. The organization, terms of reference, and timing will be decided after consultation between the parties to the project document, the Steering Committee, plus any associated United Nations agency.

The Government will provide the Resident Representative with certified periodic financial statements and with an annual audit of the financial statements relating to the status of UNDP (including GEF) funds according to the procedures set out in Section 30503 of the UNDP Policies and Procedures Manual (PPM) and Section 10404 of the UNDP Finance Manual. 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 Federal Islamic Republic of the Comores and the United Nations Development Programme, signed by the parties on 27 January 1976. The host country implementing agency shall, for the purpose of the Standard Basic Assistance Agreement, refer to the government co-operating agency described in that Agreement.

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

- a) Revision in, or addition of, any of the annexes of the project document;
- b) Revisions which do not involve significant changes in the immediate objectives, outputs or activities of a project, but are caused by the rearrangement of inputs already agreed to or by cost increases due to inflation;
- c) Mandatory annual revisions which rephase the delivery of agreed project inputs, or reflect increased expert or other costs due to inflation, or take into account agency expenditure flexibility.



J. BUDGET—Governing UNDP contribution																		
Country: Comoros																		
Project Number: C097G31A/IG/99																		
Project Title: Conservation of Biodiversity and Sustainable Development in the Federal Islamic Republic of the Comoros																		
	Imp.Aq.	Gvmt	Imp.Aq.	IPF	GEF	mm	TOTAL US\$	Prior YE879 US\$	mm	1997 US\$	mm	1998 US\$	mm	1999 US\$	mm	2000 US\$	mm	2001 US\$
42.99 Subtotal non-expendable equipment*	Gvmt	141,000		141,000			141,000			124,000		8,000		7,000		2,000		500
43.00 Premises*	Gvmt	6,000		6,000			6,000			2,000		1,500		1,000		1,000		1,000
43.01 Equipment/supplies storage facilities*	Gvmt	5,000		5,000			5,000			1,000		1,000		1,000		1,000		1,000
43.02 Utilities and maintenance office costs*	Gvmt									3,000		5,000		4,000		4,000		4,000
43.03 Communications	Imp.Aq.		20,000		20,000		20,000			6,000		7,500		6,000		6,000		5,500
43.99 Subtotal premises	Imp.Aq.	11,000		11,000			31,000			150,000		83,000		50,000		37,000		27,000
48. EQUIPMENT COMPONENT TOTAL		152,000	175,000	157,000	170,000		322,000											
50.00 MISCELLANEOUS	Gvmt																	
51.00 Operation and maintenance of equipment*	Gvmt	25,000		25,000			25,000			5,000		5,000		5,000		5,000		5,000
51.01 Vehicle and boat insurance*	Gvmt	5,000		5,000			5,000			1,000		1,000		1,000		1,000		1,000
51.02 Equipment insurance*	Gvmt	78,000		78,000			78,000			10,000		20,000		20,000		18,000		18,000
51.03 Vehicle & boat, operating and R & M*	Gvmt	108,000		108,000			108,000			16,000		26,000		26,000		24,000		24,000
51.99 Sub-total operations and maintenance*	Gvmt	2,500		2,500			2,500			500		500		500		500		500
52.00 Reporting costs*	Gvmt	72,247		72,247			72,247			12,247		15,000		15,000		15,000		15,000
53.00 Studies*	Gvmt	40,000		40,000			40,000			10,000		15,000		15,000		10,000		10,000
54.00 Conservation action fund*	Gvmt	60,000		60,000			60,000			10,000		15,000		15,000		10,000		10,000
54.99 Conservation action fund subtotal*	Imp.Aq.																	
55. Implementing Agency Oversight	Imp.Aq.																	
55.01 Technical oversight	Imp.Aq.	114,000		114,000			114,000			24,000		24,000		24,000		24,000		24,000
55.02 International travel	Imp.Aq.	64,600		64,600			64,600			13,600		13,600		13,600		13,600		13,600
55.03 Communications and office costs	Imp.Aq.	25,000		25,000			25,000			5,000		5,000		5,000		5,000		5,000
55.04 Project management and accounting	Imp.Aq.	209,193		209,193			209,193			45,193		41,000		41,000		41,000		41,000
55.05 Transition costs	Imp.Aq.	4,000		4,000			4,000			543		550		500		700		90
55.06 Contingencies	Imp.Aq.	1,903		1,903			1,903			87,793		84,600		84,600		84,600		84,600
55.99 Imp. Agency subtotal	Imp.Aq.	418,694		418,694			418,694			128,540		128,100		128,100		119,100		119,100
59. MISCELLANEOUS COMPONENT TOTAL		242,747	1,734,196	171,000	480,443		867,443											
Sub-Total		1,166,727		595,000	2,305,923		2,900,923											
sub-total horizontal (incl + impl. agency)							2,900,923											
sub-total horizontal (incl+gcf)							2,900,923											
Project Support Services					45,115		45,115											
99. GRAND TOTAL				595,000	2,352,041		2,947,041											
sub-total horizontal							2,947,041											

## **K. ANNEXES**

# ANNEX I. PROJECT LOGICAL FRAMEWORK MATRIX: CONSERVATION OF BIODIVERSITY AND SUSTAINABLE DEVELOPMENT IN THE COMOROS

OBJECTIVES AND ACTIVITIES	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS AND RISKS
<p><i>Development Objective:</i> Through implementation of the biodiversity components of the PNE &amp; PAE, biodiversity conservation contributes to the sustainable development of the Comores &amp; maintains the islands' unique natural heritage</p>	<ul style="list-style-type: none"> <li>- No known species extinction occurs</li> <li>- Natural forest cover remains adequate for indigenous/endemic species recovery</li> <li>- Marine turtle numbers stable or increasing</li> <li>- Livingstone's flying fox numbers stable or increasing</li> <li>- Socio-economic benefits accrue from species recovery, protected areas (PAs), conservation measures</li> </ul>	<ul style="list-style-type: none"> <li>- Existing surveys/reports/ GIS/surveys</li> <li>- National socio-economic indicators, local interviews</li> </ul>	<ul style="list-style-type: none"> <li>- Other sustainable development initiatives are effective</li> <li>- Government becomes more stable and solvent</li> <li>- No catastrophic climatic or natural event occurs</li> </ul>
<p><i>Immediate Objective:</i> Develop capacity &amp; establish the legal, financial, institutional &amp; operational frameworks and essential technical skills for collaborative management and sustainable use of biodiversity</p>	<ul style="list-style-type: none"> <li>- DGE actively coordinates all biodiversity conservation activities within its mandate with limited technical assistance</li> <li>- Local communities benefit sufficiently from sustainable biodiversity management to reduce negative pressure on natural environments &amp; native species in at least three areas</li> <li>- At least 50% of basic recurrent costs of protected areas &amp; species recovery programmes covered by endowment fund revenues</li> <li>- Environmental &amp; conservation laws adequate &amp; upheld</li> </ul>	<ul style="list-style-type: none"> <li>- Meeting minutes, reports</li> <li>- Surveys, interviews, socio-economic indicators</li> <li>- PA financial reports</li> <li>- PA reports including enforcement info.</li> </ul>	<ul style="list-style-type: none"> <li>- Willingness to participate exists</li> <li>- Donor interest maintained</li> <li>- Appropriate government professionals available/remain</li> <li>- Government reforms land tenure, willing to devolve authority to regions &amp; communities, enacts proposed conservation legislation, &amp; provides enforcement</li> </ul>
<p><i>Outputs:</i></p> <ol style="list-style-type: none"> <li>1. Collaborative management frameworks for participatory biodiversity conservation operational</li> <li>2. Capacity for biodiversity conservation strengthened</li> <li>3. Legal framework &amp; sustainable funding mechanisms for biodiversity conservation functional</li> <li>4. Network of protected areas initiated &amp; at least one operational under a collaborative management agreement</li> <li>5. Species recovery plans developed &amp; implemented</li> <li>6. Awareness, interest &amp; participation in biodiversity conservation increased</li> <li>7. Sustainable income &amp; other benefit generating alternatives developed</li> </ol>			

PROJECT LOGICAL FRAMEWORK MATRIX: CONSERVATION OF BIODIVERSITY AND SUSTAINABLE DEVELOPMENT IN THE COMOROS

OBJECTIVES AND ACTIVITIES	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS AND RISKS
<p><b>Output 1:</b> Collaborative management frameworks for participatory biodiversity conservation operational</p>	<ul style="list-style-type: none"> <li>- Collaborative structures for at least 2 species recovery plans &amp; 1 protected area functional</li> <li>- Management meetings held/minuted</li> </ul>	<ul style="list-style-type: none"> <li>- 3 management agreements</li> <li>- reports from wardens, coordinators</li> </ul>	<ul style="list-style-type: none"> <li>- Stakeholders agree that incentives for biodiversity conservation can be greater than the disincentives</li> </ul>
<p><b>Activities:</b></p> <p>1.1 Identify partners to be involved in collaborative management regimes</p> <p>1.2 Facilitate the development of model collaborative management frameworks, agreed by communities, NOGs, government</p> <p>1.3 Develop &amp; refine a model for a collaborative management agreement for Moheli MPA, including role and responsibilities at all levels</p> <p>1.4 Facilitate development of a management structure for Moheli MPA, including the warden, regional (island) supervisory committee, the SRE, Inter-village Consultative Committee &amp; groups representing specific participating village interests for the Moheli marine/coastal area</p> <p>1.5 Periodically review the Moheli MPA collaborative management arrangement, and others, &amp; assist with their refinement, adaptation &amp; replication at different sites</p> <p>1.6 Facilitate partnership arrangements for implementation of the Livingstone's flying fox species recovery plan on Anjouan</p> <p>1.7 Facilitate partnership arrangements for the development of Comorian marine turtle species recovery plan, with detailed activities for Moheli component</p> <p>1.8 Advise other partners concerned with the development of species recovery plans</p>	<ul style="list-style-type: none"> <li>- A series of local meetings and workshops held with partners and all stakeholders to develop frameworks and agreements for protected areas/site and species recovery</li> <li>- Collaborative management agreements produced</li> <li>- Review teams established</li> <li>- Advice solicited by partners to further conservation of ecosystems and species</li> </ul> <p><u>Inputs</u></p> <ul style="list-style-type: none"> <li>• Local/regional meetings and workshop support—with materials, facilitators, transport</li> <li>• Project/partner staff time</li> </ul>	<ul style="list-style-type: none"> <li>- Meeting minutes and workshop reports</li> <li>- Draft collaborative management frameworks</li> <li>- Approved collaborative management agreements</li> <li>- Review documents</li> <li>- Advice provided—memos, documents, meetings attended</li> </ul>	<ul style="list-style-type: none"> <li>- Potential partners agree to participate in biodiversity conservation activities</li> <li>- Conflict between stakeholders and partners can be managed</li> <li>- More than 1 site will be interested in collaborative management of natural resources</li> <li>- Stakeholders will agree that conservation incentives can be greater than disincentives in Moheli marine area and for flying fox and marine turtle conservation</li> </ul>

# PROJECT LOGICAL FRAMEWORK MATRIX: CONSERVATION OF BIODIVERSITY AND SUSTAINABLE DEVELOPMENT IN THE COMOROS

OBJECTIVES AND ACTIVITIES	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS AND RISKS
<p><b>Output 2:</b> Capacity for biodiversity conservation strengthened</p>	<ul style="list-style-type: none"> <li>- Protected areas/sites effectively managed</li> <li>- NGOs, CBOs able to design and implement conservation projects</li> </ul>	<ul style="list-style-type: none"> <li>- Management reviews</li> <li>- Project evaluations</li> </ul>	<ul style="list-style-type: none"> <li>- Project/partners can satisfy capacity building needs for PA management &amp; conservation with existing resources</li> <li>- Conservation-related projects are priorities</li> </ul>
<p><b>Activities:</b></p> <p>2.1 Identify potential partners/participants, their potential roles &amp; their training &amp; development needs</p> <p>2.2 Identify available in-country technical experts who can contribute to capacity development efforts</p> <p>2.3 Develop, implement &amp; regularly adapt a training &amp; development plan for partners &amp; participants</p> <p>2.4 Develop capacity for DGE staff relevant to their role needs</p> <p>2.5 Develop capacity for Moheli MPA management for wardens &amp; staff</p> <p>2.6 Develop capacity for professional activities among Comorian NGOs</p> <p>2.7 Develop capacity among community representative bodies, the Inter-village Consultative Committees &amp; associations to participate in PA &amp; species activities</p> <p>2.8 Provide the opportunity for NGOs and CBOs to develop capacity through direct action via access to funds</p> <p>2.9 Develop capacity for individuals or groups to establish &amp; manage business practices linked to conservation &amp; sustainable resource use</p> <p>2.10 Provide technical support to other national &amp; regional bodies involved in conservation, biodiversity &amp; environment planning</p>	<ul style="list-style-type: none"> <li>- In-country technical experts identified and interviewed</li> <li>- DGE actively coordinates planning, implementation, monitoring &amp; evaluation of projects under its mandate</li> <li>- DGE solicited for advice by other ministries regarding sectoral policies &amp; plans</li> <li>- Training plan developed and implemented</li> <li>- At least 2 local NGOs attain professional status with full-time employees</li> <li>- 2 NGOs capable of acquiring adequate external funding</li> <li>- At least 1 regional NGO network functional</li> <li>- Conservation Action Fund (CAF) functional</li> <li>- 5 NGO &amp; Association projects funded &amp; completed</li> <li>- Technical support provided</li> </ul> <p><b>Inputs</b></p> <ul style="list-style-type: none"> <li>• Project/partner staff time/external trainers</li> <li>• Workshops and training organization and financial support to CAF</li> <li>• Equipment and transport</li> <li>• Training materials</li> </ul>	<ul style="list-style-type: none"> <li>- List of Comorian expertise</li> <li>- Coordinated/integrated workplans of environmental projects</li> <li>- DGE provides information to CNCCD, CCRDD, project Steering committees/meeting minutes</li> <li>- Training plan document, materials developed, training sessions held</li> <li>- Full time employees in 2 local NGOs</li> <li>- 2 NGO projects proposed and funded</li> <li>- Local associations request NGO assistance 5 times</li> <li>- Village surveys confirm usefulness of NGO network</li> <li>- Guidelines for Conservation Action Fund; records of funds disbursed</li> <li>- reports indicate project progress</li> </ul>	<ul style="list-style-type: none"> <li>- Partners willing to invest time and effort in training, and share skills with others</li> <li>- In-country technical expertise exists and is available to the project</li> <li>- DGE staff remain in government positions as full-time staff</li> <li>- Moheli MPA is established</li> <li>- Specific training in protected area and species management is desired</li> <li>- Local groups willing to invest time and effort in Conservation-related projects</li> <li>- NGOs/associations capable of design &amp; implementation of conservation project</li> <li>- Other institutions exist or will develop with interest in conservation, biodiversity, environmental planning</li> </ul>



# PROJECT LOGICAL FRAMEWORK MATRIX: CONSERVATION OF BIODIVERSITY AND SUSTAINABLE DEVELOPMENT IN THE COMOROS

OBJECTIVES AND ACTIVITIES	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS AND RISKS
<p><b>Output 3:</b></p> <p>Legal framework &amp; sustainable funding mechanisms for environmental conservation, with an emphasis on biodiversity, functional</p>	<ul style="list-style-type: none"> <li>- Legislation enacted to protect biodiversity and establish protected areas</li> <li>- Recurrent costs of 1 protected area and 2 species recovery plans are available through trust fund</li> </ul>	<ul style="list-style-type: none"> <li>- Adopted legislation</li> <li>- Annual fund audits</li> </ul>	<ul style="list-style-type: none"> <li>- Majority of Ministers and legislators and the President will approve conservation legislation and funding proposals</li> <li>- Government will support/provide enforcement</li> </ul>
<p><b>Activities:</b></p> <p>3.1 Develop amendments/proposals to the Framework Law for the Environment (FLE) for submission to the Council of Ministers, including participatory management framework, protected areas legislation, species conservation, land/resource management &amp; financial framework</p> <p>3.2 Conduct cross-sectoral review of environmental policies &amp; plans, potential coordination structures, &amp; support efforts to achieve effective coordination (CNCDD &amp; CCRRD)</p> <p>3.3 Develop, test &amp; refine contracts for collaborative protected areas management</p> <p>3.4 Analyze start up/investment costs for the PAs network &amp; species recovery plans (for future grant proposals to donors)</p> <p>3.5 Investigate &amp; define options &amp; conditions for sustainable financing of recurrent costs for biodiversity conservation</p> <p>3.6 Secure &amp; deposit funds to generate income for conservation activities, such as recurrent costs of PAs</p> <p>3.7 Develop procedures for budget preparations drawing upon the endowment fund</p> <p>3.8 Establish "Conservation Action Fund" for communities &amp; NGOs</p> <p>3.9 Monitor &amp; evaluate use of development funds</p> <p>3.10 Promote the long-term availability of funds for community/NGO projects linked to biodiversity conservation &amp; environmental management among donors</p> <p>3.11 Develop a business plan for the Moheli MPA</p>	<ul style="list-style-type: none"> <li>- FLE amended &amp; legislation enacted to support PA status, collaborative management, sustainable biodiversity funding, species protection, &amp; biodiversity conservation treaties &amp; conventions</li> <li>- Cross sectoral review completed</li> <li>- CNCDD and CCRRDs meeting</li> <li>- Protected area/site start-up and species recovery costs analysis completed</li> <li>- Biodiversity conservation fund structure proposed and adopted</li> <li>- Fund use procedures developed</li> <li>- Fund has \$2 million</li> <li>- CAF established</li> <li>- 5 projects funded through CAF</li> <li>- CAF and supported projects evaluated</li> <li>- Number of requests for CAF grants exceeds resources; other donors intervene</li> <li>- Business plan for Moheli marine protected area completed</li> </ul> <p><u>Inputs</u></p> <ul style="list-style-type: none"> <li>• Environmental law, Environmental trust fund expertise</li> <li>• Project/partner staff time</li> <li>• Project funds for CAF</li> <li>• Meeting costs in Moheli for business plan</li> </ul>	<ul style="list-style-type: none"> <li>- Government gazette</li> <li>- Cross-sectoral review document</li> <li>- CNCDD &amp; CCRRD's meeting minutes</li> <li>- Reviews of Collaborative Management agreements</li> <li>- Biodiversity trust fund guidelines/decrees/management meeting minutes</li> <li>- PA/species investment costs documents</li> <li>- CAF documentation/guidelines</li> <li>- CAF financial reports</li> <li>- CAF and project evaluations</li> <li>- Conservation proposals submitted by NGOs and associations/group and donor records/interviews</li> <li>- Moheli MPA business plan document</li> </ul>	<ul style="list-style-type: none"> <li>- Cooperation of all ministries in cross-sectoral review</li> <li>- DGE has capacity to coordinate conservation activities</li> <li>- More than one collaborative management agreement is desired</li> <li>- Biodiversity trust fund accepted and approved by government</li> <li>- Donors/lenders commit to support biodiversity fund</li> <li>- Conservation actions are a priority to groups targeted for CAF funds</li> <li>- Proposals to CAF adequately prepared</li> <li>- Conservation projects are a priority for other donors</li> </ul>

PROJECT LOGICAL FRAMEWORK MATRIX: CONSERVATION OF BIODIVERSITY AND SUSTAINABLE DEVELOPMENT IN THE COMOROS

OBJECTIVES AND ACTIVITIES	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS AND RISKS
<p><b>Output 4:</b> Network of PAs initiated &amp; at least one operational under a collaborative management agreement</p>	<ul style="list-style-type: none"> <li>- Protected area network includes one gazetted area</li> <li>- At least 2 additional protected areas/sites are proposed by local communities</li> </ul>	<ul style="list-style-type: none"> <li>- Collaborative management agreement</li> <li>- Enforcement effective from PA reports</li> <li>- Site visits</li> </ul>	<ul style="list-style-type: none"> <li>- Government effectively supports enforcement</li> <li>- Collaborative management agreement partners uphold their agreed roles and responsibilities</li> <li>- Loss of immediate use of protected area biodiversity is perceived to be adequately compensated by alternative benefits</li> </ul>
<p><b>Activities:</b></p> <p>4.1 Facilitate development of partnership arrangements for collaborative management of the Moheli MPA &amp; formalize through appropriate agreements, &amp; develop initial approaches</p> <p>4.2 Identify initial zoning, &amp; develop, update &amp; implement a participatory management plan for Moheli MPA with involved communities</p> <p>4.3 Promote the selection &amp; development of additional protected areas</p> <p>4.4 Promote gazettement of the Moheli MPA when boundaries &amp; zoning plans have been agreed upon by communities &amp; government</p> <p>4.5 Assist the process of coordinating &amp; managing the protected area network</p>	<ul style="list-style-type: none"> <li>- A collaborative management agreement for Moheli MPA is developed and endorsed by all stakeholders and partners</li> <li>- Protected area zones are agreed and demarcated</li> <li>- A management plan for Moheli MPA is developed and approved</li> <li>- Moheli MPA is gazetted</li> <li>- A collaborative management agreement concluded for a Livingstone's flying fox roost site on Anjouan &amp; marine turtle beaches</li> </ul> <p><b>Inputs:</b></p> <ul style="list-style-type: none"> <li>• Local meetings, meeting materials, transport</li> <li>• Materials and equipment to establish MPA and protected sites</li> <li>• Project/partner staff time</li> <li>• External expertise in species recovery/protection</li> </ul>	<ul style="list-style-type: none"> <li>- Collaborative management document for Moheli MPA</li> <li>- Management plan for Moheli MPA</li> <li>- Government gazette</li> </ul>	<ul style="list-style-type: none"> <li>- Conflicts among stakeholders can be resolved</li> <li>- Moheli MPA can be physically established using existing skills or with minimal training</li> <li>- Local enforcement of MPA is established and effective</li> <li>- DGE functioning with adequate capacity to coordinate and manage a protected area network</li> </ul>

**PROJECT LOGICAL FRAMEWORK MATRIX: CONSERVATION OF BIODIVERSITY AND SUSTAINABLE DEVELOPMENT IN THE COMOROS**

OBJECTIVES AND ACTIVITIES	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS AND RISKS
<p><b>Output 5:</b> Species recovery plans developed &amp; implemented</p>	<ul style="list-style-type: none"> <li>- Targeted species' numbers stable or increasing</li> </ul>	<ul style="list-style-type: none"> <li>- Annual comparison to baseline surveys</li> </ul>	<ul style="list-style-type: none"> <li>- Local interest in supporting target species conservation</li> <li>- Local people perceive benefits of species conservation outweigh costs</li> </ul>
<p><b>Activities:</b></p> <p><b>5.1</b> Facilitate agreement on priority species for recovery action</p> <p><b>5.2</b> Cooperate with Action Comores &amp; its partners to implement Livingstone's flying fox recovery plan</p> <p><b>5.3</b> Contribute to formulation of species recovery plan for marine turtles</p> <p><b>5.4</b> Facilitate implementation of marine turtle recovery plan on Moheli</p> <p><b>5.5</b> Advise partners on the development &amp; implementation of additional species recovery plans</p>	<ul style="list-style-type: none"> <li>- Priority species agreed</li> <li>- Species recovery plans developed and implemented for Livingstone's flying fox and marine turtles</li> <li>- Livingstone's flying fox numbers stable or increasing</li> <li>- Marine turtle numbers stable or increasing on protected beaches on Moheli</li> <li>- At least 2 other species plans operational with other partners.</li> </ul> <p><b>Inputs:</b></p> <ul style="list-style-type: none"> <li>• Project/partners staff time</li> <li>• External expertise in species recovery</li> <li>• Materials to conduct surveys, count, tag, monitor target species</li> <li>• Transport of staff/partners to species sites</li> <li>• Local meeting costs</li> </ul>	<ul style="list-style-type: none"> <li>- Documentation of agreed priority species</li> <li>- Species recovery plans</li> <li>- Monthly/annual surveys of targeted species from PA/site staff</li> </ul>	<ul style="list-style-type: none"> <li>- Partner organizations continue to support target species conservation efforts</li> <li>- Government adequately supports enforcement</li> </ul>

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OBJECTIVES AND ACTIVITIES	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS AND RISKS
<b>Output 6:</b> Awareness, interest & participation in biodiversity conservation increased	<ul style="list-style-type: none"> <li>- Local media coverage of environment/biodiversity/ conservation issues consistently increases</li> <li>- Increased requests to project/partners and pilot sites for information on how to get involved in conservation activities</li> </ul>	<ul style="list-style-type: none"> <li>- Media output monitoring</li> <li>- Meeting attendance</li> <li>- # requests for information/ or assistance from project/partners</li> </ul>	<ul style="list-style-type: none"> <li>- Awareness activities can reach enough people to effect better conservation</li> <li>- Socio-economic conditions allow conservation choices</li> </ul>
<b>Activities:</b> 6.1 Identify target groups & implementors for awareness raising in pilot sites & for priority species 6.2 Advise key partners 6.3 Develop & implement participatory monitoring & evaluation of the awareness raising programme	<ul style="list-style-type: none"> <li>- Awareness activities, communication training events are held</li> <li>- Advice on communications/awareness requested</li> <li>- M &amp; E programme developed</li> </ul> <b>Inputs:</b> <ul style="list-style-type: none"> <li>* Project (UNV)/partner staff time</li> <li>* Local meeting, workshop, training costs</li> <li>* Equipment and materials for awareness/ communications training</li> </ul>	<ul style="list-style-type: none"> <li>- Training/workshop reports</li> <li>- Advice provided: memos, meeting notes</li> <li>- M &amp; E reports</li> </ul>	<ul style="list-style-type: none"> <li>- Partner groups are interested in implementing conservation awareness activities</li> </ul>

OBJECTIVES AND ACTIVITIES	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS AND RISKS
<b>Output 7:</b> Sustainable income & other benefit generating alternatives developed	<ul style="list-style-type: none"> <li>- Socio-economic conditions improve</li> <li>- Species decline/ecosystem degradation halted</li> </ul>	<ul style="list-style-type: none"> <li>- Comparative reports, currently available baseline info. &amp; indicators</li> </ul>	<ul style="list-style-type: none"> <li>- Local people will substitute alternative benefits for biodiversity use</li> </ul>
<b>Activities:</b> 7.1 Conduct a participatory review of potential sustainable development activities 7.2 Train key organisations & individuals in selected sustainable development activities 7.3 Provide technical support to trained key partners & their trainees 7.4 Participatory monitoring & evaluation sustainable development activities	<ul style="list-style-type: none"> <li>- Alternative benefit activities successfully undertaken by local community members</li> <li>- Alternative benefits activities contribute to economic and social well-being</li> <li>- Sustainable development projects replicated in non-project localities</li> </ul> <b>Inputs:</b> <ul style="list-style-type: none"> <li>* Project/partner staff time</li> <li>* Specialist trainers, meetings, workshops</li> <li>* Materials, transport, basic equipment</li> </ul>	<ul style="list-style-type: none"> <li>- Site visits, reports</li> <li>- Interviews, indicators</li> <li>- M &amp; E reports</li> </ul>	<ul style="list-style-type: none"> <li>- Materials/inputs are available to support alternative benefit activities</li> <li>- Market exists and is accessible for products produced for income generation</li> </ul>

ANNEX II. INDICATIVE PROJECT WORKPLAN

OBJECTIVE/ACTIVITY	MILESTONE	TIME FRAME						RESP
		Pre- YEAR 1	YEAR 1 1997	YEAR 2 1998	YEAR 3 1999	YEAR 4 2000	YEAR 5 2001	
Project start-up and administration								
Recruit and install CTA	By 1/97							Impl. Agency
Recruit NPC	By 3/97							CTA, DGE
Recruit and install NMR-TA	By 6/97							
Recruit Project Finance Manager	By 3/97							CTA, NPC, DGE
Recruit and install Environmental Awareness UNV, or equivalent	By 1/98							CTA, NPC, DGE
Procure equipment	By 6/97							CTA, NPC
Develop project agreement with DGE	Completed by project start-up							Impl. Ag. DGE
Establish Project Steering Committee								CTA, NPC, Impl. Ag. , DGE
Hold Steering Committee meetings								SC (CTA,NPC)
Develop annual work plans								CTA, NPC, DGE
Evaluate progress and approaches	Formal evaluations 12/98 & 6/01							EVAL. TEAM, Impl. Agency
Develop follow-up proposals (if appropriate)	By 6/01							CTA, NPC, DGE, Impl. Agency

# INDICATIVE PROJECT WORKPLAN

OBJECTIVE/ACTIVITY	MILESTONE	TIME FRAME					RESP
		YEAR 1 1997	YEAR 2 1998	YEAR 3 1999	YEAR 4 2000	YEAR 5 2001	
<b>D.1.1 Output 1</b> <b>Collaborative management framework for participatory biodiversity conservation operational</b>							
D.1.1.1 Identify potential partners to be involved in collaborative management regimes	Review completed by 06/97						NPC, DGE, NGO, CTA
D.1.1.2. Facilitate the development of model collaborative management frameworks agreed upon by communities, NGOs and government	Agreed upon by 12/97						CTA, NPC, DGE, SREs, CDOs, NGO
D.1.1.3 Develop and refine a model for a collaborative management agreement for the Moheli marine protected area	Initial model developed by 12/97						SRE, CDO, NPC, NGO, CTA, NRM-TA, IMPL. AG. HQ
D.1.1.4 Facilitate development of a management framework including the warden, regional supervisory committee (perhaps CCRDD), the SRE, Inter-village Consultative Committee and groups representing specific participating village interests for the Moheli area	Functioning from 01/98						SRE, WARDEN, CDO, NGO, NRM-TA
D.1.1.5 Periodically review collaborative management arrangements for protected areas and assist with their refinement, adaptation and replication at different sites							CTA, NRM-TA, NPC, DGE, SRE, CDOs
D.1.1.6 Facilitate partnership arrangements for implementation of the Livingstone's flying fox species recovery plan on Anjouan							CTA, NRM-TA, NPC, DGE, SRE, CDOs

# INDICATIVE PROJECT WORKPLAN

OBJECTIVE/ACTIVITY	MILESTONE	TIME FRAME					RESP
		YEAR 1 1997	YEAR 2 1998	YEAR 3 1999	YEAR 4 2000	YEAR 5 2001	
<b>Output 1 (continued)</b> Collaborative management framework for participatory biodiversity conservation operational							
D.1.1.7 Facilitate partnership arrangements for the development of Comorian marine turtle species recovery plan and develop them for the Moheli component	By 12/97						CTA, NRM-TA, DGE, SRE
D.1.1.8 Advise other partners concerned with the development of other species recovery plans							CTA, NRM-TA, DGE, SRE

## INDICATIVE PROJECT WORKPLAN

OBJECTIVE/ACTIVITY	MILESTONE	TIME FRAME					RESP
		YEAR 1 1997	YEAR 2 1998	YEAR 3 1999	YEAR 4 2000	YEAR 5 2001	
<b>D.1.2 Output 2</b> <b>Capacity for biodiversity conservation strengthened</b>							
D.1.2.1 Identify potential partners/participants, their potential roles and their training and development needs	Completed by 09/97						DGE, NGO, CTA, NPC
D.1.2.2 Identify available in-country technical experts who can contribute to capacity development							DGE, NPC, CTA
D.1.2.3 Develop, implement and regularly adapt a training and development plan for partners and participants							NGOs, CTA, NPC
D.1.2.4 Develop capacity for DGE staff relevant to their role needs							CTA, NPC, NRM-TA
D.1.2.5 Develop capacity for Moheli warden and staff							NRM-TA, CTA
D.1.2.6 Develop capacity for professional activities among national and regional NGOs							NGO, CDOs, UNV
D.1.2.7 Develop capacity among community groups, the Inter-village Consultative Committees and associations to participate in protected area and species activities							NGO, CDOs, NRM-TA

OBJECTIVE/ACTIVITY	MILESTONE	TIME FRAME												RESP
D.1.2.8 Provide the opportunity for NGOs and CBOs to develop capacity through direct action via access to funds for conservation actions	From 06/97													CTA, NPC, CDOs
D.1.2.9 Develop capacity for individuals or groups to establish and manage business practices linked to conservation and sustainable resource use	First business from 12/98													NGO, CDOs, NRM-TA
D.1.2.10 Provide technical support to other national and federal bodies involved in conservation, biodiversity and environment planning														CTA, NPC, NRM-TA



# INDICATIVE PROJECT WORKPLAN

OBJECTIVE/ACTIVITY	MILESTONE	TIME FRAME					RESP
		YEAR 1 1997	YEAR 2 1998	YEAR 3 1999	YEAR 4 2000	YEAR 5 2001	
<b>D.1.3 Output 3</b> Legal framework and sustainable funding mechanisms for environmental conservation, with an emphasis on biodiversity, functional							
D.1.3.1 Develop amendments/proposals to the Framework Law for the Environment for submission to the Council of Ministers, including participatory management framework, protected areas legislation, species conservation, land/resource management and financial framework	Review completed 06/97; submitted to Council by 06/98; legislation in place by 06/00						CTA, DGE, IMPL. AG.
D.1.3.2 Conduct a cross-sectoral review of environmental policies and plans, identify potential coordination structures, and support efforts to achieve effective coordination through structures such as the CNCDD and CCRDDs	Completed by 12/98						CTA, DGE
D.1.3.3 Develop, test and refine management contracts for collaborative protected areas management							NPC, SRE, CDO, NRM-TA
D.1.3.4 Analyse start up/investment costs for the protected areas network and species recovery plans (as a basis for future grant proposals to donors)							NRM-TA, SRE, WARDEN
D.1.3.5 Investigate and define options and conditions for sustainable financing of recurrent costs for biodiversity conservation							CTA, DGE, NPC, IMPL. AG.
D.1.3.6 Secure and deposit funds to generate income for conservation activities, such as recurrent costs of protected areas							CTA, DGE, IMPL. AG.
D.1.3.7 Develop procedures for budget preparations drawing upon the endowment fund							CTA, NRM-TA, DGE
D.1.3.8 Establish a "Conservation Action Fund" for urgent conservation actions	By 06/97						DGE, CTA, NPC

# INDICATIVE PROJECT WORKPLAN

OBJECTIVE/ACTIVITY	MILESTONE	TIME FRAME					RESP
		YEAR 1 1997	YEAR 2 1998	YEAR 3 1999	YEAR 4 2000	YEAR 5 2001	
<b>Output 3 (continued)</b> Legal framework and sustainable funding mechanisms for biodiversity conservation functional							
D.1.3.9 Monitor and evaluate use of development funds							FM, CTA, NPC, DGE, CDOs
D.1.3.10 Promote the long-term availability of funds for community/NGO projects linked to biodiversity conservation and environmental management among donors							CTA, NPC, DGE
D.1.3.11 Develop a business plan for the Moheii marine protected area	Completed 06/99						NRM-TA, SRE, CDO

# INDICATIVE PROJECT WORKPLAN

OBJECTIVE/ACTIVITY	MILESTONE	TIME FRAME					RESP
		YEAR 1 1997	YEAR 2 1998	YEAR 3 1999	YEAR 4 2000	YEAR 5 2001	
D.1.4 <u>Output 4</u> Network of protected areas initiated and at least one operational under participatory management							
D.1.4.1 Facilitate development of partnership arrangements for collaborative management of the Moheli marine protected area and formalize through appropriate agreements, and develop initial approaches	In place by 01/98						SRE, NPC, CTA, CDO, NRM-TA, IMPL. AG.
D.1.4.2 Identify initial zoning, and develop, update and implement a participative management plan for Moheli coastal and marine area with involved communities	Management plan completed by 06/99						NRM-TA, SRE, CDO, IMPL. AG.
D.1.4.3 Promote the selection and development of additional protected areas	One additional protected area process begins by 06/99						CTA, NPC, SRE, NRM-TA, CDO, DGE
D.1.4.4 Promote gazettelement of the Moheli marine/coastal protected area when boundaries and zoning plans have been agreed upon by communities and government	Moheli protected area gazetted by 01/01						SRE, CDO, CTA, DGE
D.1.4.5 Assist the process of coordinating and managing the protected area network							CTA, NPC, NRM-TA, DGE

# INDICATIVE PROJECT WORKPLAN

OBJECTIVE/ACTIVITY	MILESTONE	TIME FRAME					RESP
		YEAR 1 1997	YEAR 2 1998	YEAR 3 1999	YEAR 4 2000	YEAR 5 2001	
<b>D.1.5 Output 5</b> Species recovery plans developed and implemented							
D.1.5.1 Facilitate agreement on priority species for recovery action	Completed 09/97						CTA, DGE, NPC
D.1.5.2 Cooperate with Action Comores and its partners to implement Livingstone's flying fox recovery plan							NRM-TA, DGE, SRE, CTA, CDOS
D.1.5.3 Contribute to formulation of species recovery plan for marine turtles	Completed 12/97						DGE, CTA, NRM-TA, IMPL. AG.
D.1.5.4 Facilitate implementation of marine turtle recovery plan on Moheli	Begins with protected area work						NRM-TA, CTA, DGE
D.1.5.5 Advise partners on the development and implementation of additional species recovery plans							CTA, NRM-TA, DGE, IMPL. AG.

# INDICATIVE PROJECT WORKPLAN

OBJECTIVE/ACTIVITY	MILESTONE	TIME FRAME					RESP
		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
<b>D.1.6 Output 6</b> Awareness, Interest and participation in biodiversity conservation increased							
D.1.6.1 Identify and train target groups and implementors for awareness raising in pilot sites and for priority species	Completed 12/97						NGOs, NPC, UNV, DGE
D.1.6.2 Advise key partners							NGOs, NPC, UNV
D.1.6.3 Develop and implement participatory monitoring and evaluation of the awareness raising programme	Monitoring plan completed by 3/99						UNV, EVAL. TEAM

# INDICATIVE PROJECT WORKPLAN

OBJECTIVE/ACTIVITY	MILESTONE	TIME FRAME					RESP
		YEAR 1 1997	YEAR 2 1998	YEAR 3 1999	YEAR 4 2000	YEAR 5 2001	
D.1.7 Output 7 Sustainable income and other benefit generating alternatives developed							
D.1.7.1 Conduct a participative review of potential sustainable development activities	Completed and revised by 06/98						NGO, CDO, NRM-TA, CTA, NPC
D.1.7.2 Train key organisations and individuals in selected sustainable development activities	Intensive training begun 11/97						CDOs, NGO, NRM-TA
D.1.7.3 Provide technical support to trained key partners and their trainees							NGO, CDOs, NRM-TA
D.1.7.4 Participatively monitor and evaluate sustainable development activities	Participative monitoring team working from 1/98						CTA, NPC, CDOs, DGE, NGO, NRM-TA

### **ANNEX III. TRAINING PROGRAMME**

Training is crucial to achieving the project objective of developing capacity for collaborative biodiversity conservation. The project will take a "training-of-trainers" approach and combine in-country training workshops, on-the-ground follow-up, daily skills transfer (on-the-job training), and appropriate regional study tours to build capacity.

Project personnel will conduct a training needs assessment to establish a training and development plan for project partners by month 9 of Year 1 of the project (see Activity D.1.2.3). As implementation progresses and partners begin using the skills acquired in training, the need for additional and complementary training will be regularly reassessed.

The project will draw on a diversity of trainers. Project staff, such as the CTA, NPC, NRM-TA, CDOs and Technical Specialists, will contribute to the training programme, as will the Implementing Agency regional and international staff. Comorian nationals with appropriate skills will be identified to serve as trainers (Activity 1.2.2), and local/international NGOs with specific expertise (such as CARE Comores and Jersey Wildlife Preservation Trust) will be called upon.

Training will be coordinated with other projects in the Comores. It is recognized that the limited resources of this project cannot fill all of the training needs of the various partners. For example, the COI-FED Environment Program has already begun the process of identifying Comorian expertise, and its training component targets some of the same groups as this project. CARE Comores works with local communities, helping them to develop and implement micro-projects. This project aims to "piggy-back" on existing training initiatives, even share training programmes, to maximize everyone's resources.

The project will use a variety of participatory training methods adapted to the needs of the target groups. Some methods include:

- **In-country training workshops**--Workshops provide an interactive forum for the transfer of skills and knowledge, ideal for training in areas such as communication, participatory processes, and conflict resolution. Technical training workshops on topics such as business practices or technical aspects of species conservation will include experiential learning.
- **On-the-ground follow-up**--In order to obtain the maximum benefit from training workshops, practical reinforcement of concepts and their application is essential. Training workshops will be timed to coincide with opportunities for participants to use the skills and knowledge they have acquired directly in village activities, protected area sites, or for species conservation. An example would be technical training for local associations in turtle monitoring, reinforced by nightly turtle tagging and counts of nesting sites and numbers of eggs laid.
- **On-the-job training**--Often how to work with local communities or how to implement measures to manage and conserve biodiversity cannot be "taught" in formal training workshops or seminars. The need for skills and knowledge transfer on an informal, working basis will be key. The CTA and NPC will work in close collaboration with DGE staff at the national level to share planning, organizing and coordinating skills, and transfer technical expertise. At the regional level the NRM-TA, UNV and the CDO will work directly with the SRE, NGOs, association leaders and protected areas staff, sharing a full range of professional, communication, and technical skills.

- **Regional training opportunities**--Study tours to Madagascar, or other regional sites, will be organized for key government staff, protected areas personnel and local leaders. The tour groups will visit protected areas and see how they are managed, discuss local involvement and assess how lessons learned elsewhere can be applied in the Comores. Upon their return, participants will be required to facilitate short seminars for other project partners, as another means of knowledge transfer.

The following target groups for training were identified at the stakeholders workshop during the project finalization mission:

- DGE national staff
- DGE regional staff (there is one head of service, SRE, on each island.)
- Non-Governmental Organizations
- Local associations
- Protected areas staff

Training for some identified groups, such as law enforcement personnel, will be developed during the course of the project with the participation of relevant representatives of those groups and other project partners. Training for other identified groups, such as representatives from other ministries, will likely consist of providing information about conservation in seminars and site visits.

To build the capacity necessary to implement collaborative biodiversity conservation in the Comores, a wide variety of skills and knowledge training is needed. Some of the essential themes identified during the course of the project finalization mission and at the stakeholders workshop are outlined in the following table:

Training Need	Target Group				
	DGE	SRE	NGOs	Associations	Field staff
<b>COMMUNICATION SKILLS</b>					
Participatory processes	X	X	X	X	X
Participatory rural appraisal techniques		X	X	X	X
Team work, organization and skills	X	X	X	X	X
Conflict resolution	X	X	X	X	X
Communication techniques	X	X	X	X	X
<b>INSTITUTIONAL SKILLS</b>					
Managing participatory processes	X	X	X	X	X
Coordinating activities among partners	X	X	X	X	X

Community relations	X	X			X
<b>Training Need</b>	<b>DGE</b>	<b>SRE</b>	<b>NGOs</b>	<b>Associ- ations</b>	<b>Field staff</b>
<b>ORGANIZATIONAL SKILLS</b> NGO roles and responsibilities			X		
Project development and proposal writing			X	X	X
Fund raising and donor relations			X	X	
Project implementation and reporting			X	X	
Project monitoring and evaluation			X	X	
Personnel management	X		X		X
Outreach programs			X		X
<b>AWARENESS RAISING SKILLS</b>	X	X	X	X	
<b>ECOLOGICAL MANAGEMENT</b> Ecological and biological principles		X			X
Principles of conservation biology	X	X			X
Ecological monitoring techniques		X		X	X
Resource management techniques		X		X	X
Species conservation techniques		X	X	X	X
<b>PROTECTED AREA MANAGEMENT</b> Developing management plans	X	X			X
Resource use and zonation		X	X	X	X
Planning, budgeting, and reporting	X				X
<b>ALTERNATIVE BENEFIT GENERATING TECHNIQUES</b>			X	X	



## **ANNEX IV. EQUIPMENT LISTS**

The following equipment lists are indicative. The specifications of non-expendable equipment procured will be dependent on support for repair and maintenance, spare parts and availability of supplies in the Comores. Expendable supplies will be ordered in two batches--one before the beginning of the project for items of a general nature (some office supplies, field equipment, species conservation materials, some awareness materials and reference materials), and another batch after the project has begun, when precise needs can be verified. UNDP Comores, the DGE and CARE Comores will be consulted before equipment and supplies are procured.

### **1. Non-expendable equipment**

2 vehicles--4WD, double-cab, Nissan/Toyota pick up trucks, for Grande Comore and Moheli; vehicles will be rented on Anjouan

5 motorcycles--125 cc. Honda/Yamaha for use by CDO when visiting villages; UNV and Moheli p.a. "warden"

1 boat and 40 hp motor--inflatable boat (transported by vehicle in Moheli)

3 computers--2 desk-top and 1 lap-top, plus software, 1 small lazer and 2 bubble-jet printers. Computers will have sufficient memory to handle Microsoft Office, Windows-based software, plus presentation/graphics software

#### Office equipment:

2 desktop photocopiers

3 telephones

1 fax machine

1 portable generator

3 manual typewriters

desks, chairs, shelving, filing cabinets for project staff

3 secure storage cabinets

#### Awareness, communications, education equipment

35 mm camera to document project progress, environment

overhead projector

slide projector

#### Field equipment

binoculars--6 pair

### **2. Expendable equipment**

#### Office supplies

diskettes, printer cartridges, software updates

staplers, hole punches, files, pens/pencils/paper, hanging files

calculators

photocopier cartridges

stationery

#### Awareness materials

flip charts, pens, stands, film (100 rolls/year), processing

#### Field supplies

masks, fins, snorkels, wetsuits x 20 sets

3 sets topographic maps, 2 sets nautical charts

tracing paper, mapping pens

plastic slates

rain gear x 40

**3. Equipment for protected areas**

Moheli marine protected area

sign materials x 20  
registration book & tickets  
strongbox/cashbox  
moorings (to be determined)  
turtle tags & applicators (10 applicators + 500 tags/year = \$6,000)  
reference materials

Flying fox protected sites

fencing, posts  
signs x 10  
nets, cages if needed  
reference materials

## **ANNEX V. JOB DESCRIPTIONS**

### **DRAFT TERMS OF REFERENCE FOR THE CHIEF TECHNICAL ADVISOR**

The Chief Technical Advisor (CTA) will be based in the Director General's Office within the General Directorate of the Environment (DGE). The CTA will play a supportive role to the Director General and his staff regarding the implementation of the project. The specific roles are described below.

- 1. General project management.**
  - 1.1 Coordinate all project staff, consultants, subcontractors, and activities, including planning, implementation, monitoring and evaluation, and reporting.
  - 1.2 Coordinate all technical aspects of protected area and species management.
  - 1.3 Together with the DGE staff and the Implementing Agency, prepare TOR's for all consultants, supervise their work and ensure satisfactory completion of outputs.
- 2. Strengthen the capacity of the DGE to manage biodiversity conservation programmes.**
  - 2.1 Advise the DGE staff on the development of the protected area network, and assist with developing a network-wide coordination plan.
  - 2.2 Advise the DGE staff at all levels on biodiversity and conservation issues to be incorporated as specific protected areas are developed.
  - 2.3 Advise DGE staff on relevant issues and available external expertise regarding the development of species recovery plans.
  - 2.4 Take the lead role among project staff for protected area and species issues on Grande Comore.
- 3. Coordinate policy and legislation development for biodiversity management and conservation.**
  - 3.1 Supervise and support consultants working on legislation development.
  - 3.2 Advise the DGE and MPPEFE on the development of legislation for national and international treaty/convention needs.
- 4. Assist the DGE develop a biodiversity endowment fund and other funding mechanisms to cover the recurrent costs of protected areas and species recovery plans.**
  - 4.1 Supervise consultants developing options for a biodiversity endowment fund and other sustainable funding mechanisms.
  - 4.2 Assist the DGE and the MPPEFE in establishing an effective endowment fund.
  - 4.3 Promote the endowment fund among aid agencies based in the country, and secure some of the capital funds required.
  - 4.4 Promote the endowment fund among ministries and potential users.
  - 4.5 Assist with the establishment of user criteria for the endowment fund, and train its operators and users.
  - 4.6 Prepare such proposals as may be necessary to secure funds either for the biodiversity trust fund, or to enable specific conservation activities to be achieved.

5. **Promote sustainable ecotourism development in areas where the project is operating.**
  - 5.1 Coordinate a participatory review of potential ecotourism development, focusing on the coastal areas of Moheli.
  - 5.2 Coordinate training and support to potential community groups wishing to develop ecotourism ventures.
6. **Liaise with other partners at the federal and regional levels, and promote the development of cross-sectoral coordination structures.**
  - 6.1 Conduct regular meetings with representatives of other ministries and higher government institutions to inform them of project progress or, as the need arises, to provide technical advice.
  - 6.2 Liaise regularly with leaders of other projects and, where appropriate, their parent ministries and aid agencies, in order to maintain a high degree of complementarity.
  - 6.3 Work with other government institutions and aid agencies to promote the creation of federal and regional environment coordination structures.

**DRAFT  
TERMS OF REFERENCE FOR THE  
NATIONAL PROJECT COORDINATOR**

The National Project Coordinator (NPC) will be based in the Director General's Office within the General Directorate of the Environment (DGE). The NPC will play a supportive role to the Director General and his staff regarding the implementation of the project. The specific roles are described below.

- 1. Assist the CTA with project management.**
  - 1.1 The CTA will delegate responsibility for selected administrative and management tasks to the NPC, which the latter will take prime responsibility.
  - 1.2 Supervise and support the UNV-Awareness (or equivalent).
- 2. Take the lead role within the project regarding the coordination of community-based capacity building initiatives.**
  - 2.1 Liaise regularly with the Development Coordinator and CDO's who will manage the community/NGO development activities, providing advice as necessary.
  - 2.2 Provide on-site support to project staff and their partners regarding community capacity development issues.
  - 2.3 Provide support to all planning, monitoring and evaluation exercises concerning community development strategies established by the project.
- 3. Support the project's efforts to strengthen local NGOs.**
  - 3.1 Provide advice as required to local NGOs.
  - 3.2 Manage technical issues pertaining to the Conservation Action Fund for NGOs and associations.
- 4. Supervise the project's awareness, communication and environmental education initiatives.**
  - 4.1 Provide technical support to local NGOs involved in these activities, and the UNV Awareness (or equivalent).

**DRAFT**  
**TERMS OF REFERENCE FOR THE**  
**NATURAL RESOURCES MANAGEMENT TECHNICAL ADVISOR**

The Natural Resources Management Technical Advisor (NRM-TA) will be based on Moheli. The NRM-TA will work closely to support the Service Regional de l'Environnement (SRE) based at Fomboni, and the "warden" and staff of the proposed Moheli marine/coastal protected area. However, the NRM-TA will also be expected to spend time on Anjouan in support of the Livingstone's flying fox recovery plan, and elsewhere to assist selected conservation initiatives. Specific responsibilities are set out below.

- 1. Provide training for participants involved in protected area and species conservation.**
  - 1.1 Provide training to the SRE of Moheli to meet his developing role as an effective coordinator of biodiversity conservation programmes on Moheli. Special attention will be given to developing capacity to support protected area and turtle conservation activities. Significant attention will also be given to developing forest conservation and Livingstone's flying fox conservation skills, and in community outreach capacity.
  - 1.2 Train the "warden" and staff of the Moheli marine protected area.
  - 1.3 Train community and NGO members in selected natural resource management issues.
  - 1.4 Train Anjouan NGO and community representatives, and the SRE, in appropriate methods to implement the Livingstone's flying fox recovery plan. Support and advise any external volunteers/experts working through this plan.
  - 1.5 Provide technical inputs into key regional government offices, especially the police and gendarmerie.
  - 1.6 Facilitate training opportunities for relevant partners on all islands.
  - 1.7 Take a lead role in identifying training needs to be addressed in the natural resources management sector, and assist with the development of a training plan.
- 2. Assist the process of developing the Moheli marine and coastal protected area.**
  - 2.1 Assist with the recruitment of the "warden" and his staff.
  - 2.2 Assist the process of developing collaborative management structures for the Moheli protected areas.
  - 2.3 Facilitate the process of zoning and eventual definition of a larger integrated coastal management zone.
  - 2.4 Facilitate the process of developing a participatory management and business plan for the Moheli protected area.
  - 2.5 Initiate the process of gazetting the Moheli protected area.
- 3. Support species recovery plans for the Livingstone's flying fox on Anjouan and marine turtles on Moheli.**
  - 3.1 Take the lead role in local coordination of the Livingstone's flying fox plan on Anjouan.
  - 3.2 Provide regular technical advice and support to the plan's implementors on Anjouan.
  - 3.3 Take the lead role in local development and coordination of the marine turtle plan on Moheli, integrating it into protected area design and establishment.
  - 3.4 Provide regular technical advice and support to the plan's implementors on Moheli.

4. **Provide technical input and support for selected protected area, species and natural resource management partners and issues.**
  - 4.1 Assist the CTA, DGE and other partners in the development of the protected area network, including the preparation of plans and monitoring/evaluation procedures.
  - 4.2 Provide technical input into the development of protected areas other than that proposed for the Moheli coast.
  - 4.3 Assist the CTA, DGE in supporting other partners involved the development of species recovery plans for other taxa. Notable taxa include the endemic flora, the coelacanth, Livingstone's flying fox on Moheli, and turtles on all islands.
5. **Provide technical input into selected planning processes by other government agencies, NGO's and local groups.**
  - 5.1 Identify needs and opportunities for providing technical input.
  - 5.2 Provide input where needed and possible, in cooperation with the CDOs assigned to each island.

**DRAFT  
TERMS OF REFERENCE FOR THE  
COMMUNITY DEVELOPMENT OFFICER**

A Community Development Officer (CDO) will be based on each of the three islands and will liaise regularly with the NRM-TA. Specific duties are described below.

- 1. Promote the development of participatory management structures for protected area and species Initiatives.**
  - 1.1 Facilitate the development of participatory management structures for protected areas and provide advice as needed.
  - 1.2 Facilitate the development of participatory management structures for species and provide advice as needed.
  - 1.3 Facilitate a participatory review process of the above structures and provide advice when needed.
- 2. In cooperation with the NRM-TA, train and support NGOs and Associations involved in biodiversity management.**
  - 2.1 Assist the NRM-TA and CTA in Grande Comore in identifying partners involved in the project and the definition of their training needs. Provide limited support to other partners where possible.
  - 2.2 Participate in organised training arranged by the project or other partners where relevant.
  - 2.3 Assist the NRM-TA to provide continuous technical support to participating NGOs and Associations.
  - 2.4 Provide information and advice to the protected areas staff, the SREs and the DGE.
- 3. Support practical projects aimed at sustainable natural resource management.**
  - 3.1 Facilitate villagers to identify suitable alternative income and other benefit generating activities, and to set up related trials.
  - 3.2 facilitate villagers to identify management issues and solutions, and to develop and implement plans to resolve those issues on a trial basis.
  - 3.3 Identify needs for expert technical assistance.
  - 3.4 Provide support in project design, implementation, monitoring and evaluation.



**DRAFT  
TERMS OF REFERENCE FOR THE  
UNV-Awareness (or equivalent)**

The UNV-Awareness (or equivalent) will be based on Anjouan or Moheli, but will be expected to spend time on the other islands. Specific responsibilities are described below.

- 1. Assist the process of developing an awareness, communication and environmental education programme, and in identifying potential implementors.**
  - 1.1 Work on a regional level to identify awareness needs and opportunities.
  - 1.2 Identify potential implementors of awareness activities and assess their training needs.
- 2. Provide technical assistance to partners implementing the awareness, communication and environmental education programme.**
  - 2.1 Assist with organised training for the potential awareness activities implementing partners.
  - 2.2 Provide on-site technical assistance to all awareness activity implementors..
  - 2.3 Advise key partners and provide technical information and oversight as needed for materials and multi-media products produced.

## **ANNEX VI. STAKEHOLDERS WORKSHOP REPORT**

### **1. INTRODUCTION**

A project formulation mission spent 6 weeks, from June through mid-August, 1996, in the Comores to finalise the project document on "Conservation of Biodiversity and Sustainable Development in the Federal Islamic Republic of the Comores", based on two existing and complementary proposals:

- "Strengthening National Capacities for Sustainable Development in the Comores", initiated by UNDP through the Capacity 21 programme;
- "Island Biodiversity and Participatory Conservation in the Federal Islamic Republic of the Comores", supported by the Global Environment Facility (GEF).

The mission comprised a team of 10 people: 5 Comorian consultants, 3 international consultants and 2 IUCN experts. The mission included the design and organisation of a workshop to allow principal stakeholders an opportunity to provide input to the contents of the project document. The objective of this report is to provide a record of the design, implementation and results of the stakeholders workshop, as these results constitute the broad foundation of the project document, and the process represents the first step in focusing the future implementation of the project

### **2. WORKSHOP DESIGN and PREPARATION**

The mission team felt that it was important that the workshop design and implementation be done on a participatory basis, involving the Directorate General of the Environment (DGE) in all the discussions and encouraging their sense of ownership.

#### **2.1. Invitation and selection of stakeholders**

One week before the workshop, the invitation and the list of invitees was prepared. About 50 participants were chosen to include stakeholders with direct interest in the project, representing 3 geographic levels (national, regional/island, local or village), different types of organisations (government and para-statal institutions, NGOs, village associations, donor projects, the private sector and women, plus fair representation from the 3 islands at the NGO and community levels.

The identification of village and other NGO representatives proved a difficult task, due to lack of adequate communications and transport on each island. The selection was therefore done during the consultants' field mission and according to the following 2 main criteria:

- Locations and villages where protected areas are more likely to be established;
- A participatory approach, i.e. the Ulanga or local association had to choose and freely nominate their representative to the workshop.

#### **2.2. Preparation of background documents**

The mission team and the DGE discussed at length the preparation of background documents, agenda and organisation of the workshop. There was a consensus to provide the following BACKGROUND DOCUMENTS to each participant:

- A definition of key *concepts*: environment, biodiversity, conservation, protected area, sustainable development, strengthening capacity, stakeholders. These concepts were

prepared in order to even the comprehension of the subject and save precious time discussing semantics;

- A 2-page project summary, listing the overall goal, specific purpose, means, basic guiding principles, duration and expected results. The two pages were revised and corrected by the DGE in order to provide one simple paper without highlighting GEF and Capacity 21 proposals;
- A categorised list of the project' *stakeholders* :
  - MPPEFE
  - Other interested ministries at national and regional levels (i.e. tourism)
  - Local NGOs at national and regional levels
  - International NGOs
  - Funding agencies and their related projects
  - Community or village associations
  - Private sector and business
  - Individuals

### **2.3. Preparation of the agenda**

The AGENDA was conceived in order to achieve the following:

1. Bring all stakeholders on a common level of understanding of the vocabulary, issues and challenges related to the project.
2. Maximise the benefits of the workshop's approach, by allowing adequate time for small-group discussions. Three groups of about 15 people each were organised to ensure even representation of stakeholders in each groups.
3. Promote the active participation of each individual by avoiding formal discussion and providing facilitation by a neutral external person.
4. Optimise cross-fertilisation of ideas by having 3 small groups discussing all 3 main themes.
5. Present the conclusions and recommendations of the workshop at the end of the meeting, both verbally and in writing, so that each participant could be provided with a brief summary paper.
6. Establish an image of workshop effectiveness and professionalism by requesting each participant to evaluate the event.

### **2.4. Key themes to be addressed**

After the field visits, the team identified 3 main priority topics to be addressed by the stakeholders at the workshop. The DGE and the local consultants then agreed that each group should focus on the 3 following THEMES:

- I. What can be done to develop protected areas and conserve endangered species?
- II. Which structures and mode of functioning could be suggested for participatory biodiversity conservation?

**III. What are the needs and means for strengthening the capacity to manage biodiversity in the Comores?**

A list of questions, to be addressed by each group and for each of the above themes, was prepared in order to provide guidance to facilitators and harmonise the presentation of the results.

**3. WORKSHOP OBJECTIVE AND EXPECTATIONS**

The workshop had several direct and indirect objectives:

- To enable the finalisation of the project document untitled "Conservation of Biodiversity and Sustainable Development in the Federal Islamic Republic of the Comores", by meeting key stakeholders and assessing various assumptions;
- To test the participatory approach recommended for the project with a wide range of stakeholders and enable each participant to define his/her role;
- To identify problems, discuss options, and develop recommendations for the 3 key issues: protected area establishment and species conservation, development of management structures for the project, and capacity building needs in biodiversity conservation;
- To bring all partners to a same level of awareness and understanding of the concepts, the goal and challenges of the project.

The broad list of expectations expressed at the workshop and discussed later in small groups is summarised below:

**3.1. Expectations related to theme I - biodiversity conservation:**

- Definition of the key species and areas to be protected;
- Save and wisely manage habitats and biodiversity;
- Progress on the identification and knowledge on species to be protected;
- Better understand and survey the environmental practices applied by the local people;
- Link the protection of the environment to tourism development;
- Address the key role of wise management of natural resources on economic development.

**3.2. Expectations related to the role and development of each partner debated in theme II - management structures:**

- Explore the ways to fully involve local communities in the project;
- Integrate and empower the communities for their sustainable economic development;
- Concretise the legislation and role of governmental institutions in environment;
- Better coordinate and strengthen association involvement in conservation;
- Address the training of personnel and provision of employment.

**3.3. Specific expectations from the project itself:**

- Address the viability of the project;
- Reinforce the existing conservation and development initiative;
- Create awareness among local people and the wide public to know nature better;
- Identify and develop simple means of environmental communication for all stakeholders and especially villages;
- Clarify the content and impact of the project and the role of each partner;
- Define a project document with specific urgent actions in conservation;

- Finalisation of a good credible document;
- Obtain basic understanding of what is conservation.

#### **4. WORKSHOP IMPLEMENTATION AND RESULTS**

##### **4.1. Generalities on the process**

During the 2 days of the workshop, a total of 51 people registered with an average active participation of 40 persons per day. Twelve people from Moheli and Anjouan where sponsored to attend the meeting.

The workshop was organised to promote free discussion and was therefore not formal. The Secretary General of the MPPEFE opened the workshop, and the Director General of DGE closed it very informally. One of the consultants, an external neutral person, facilitated 5 plenary discussions on the following subjects:

- Exploring expectations, concept definition, and project summary;
- Presentation, summary and brief discussion of the work of each small group on theme I - protected area and species conservation;
- Presentation, summary and brief discussion of the work of each small group on theme II - structure and mode of functioning;
- Presentation, summary and brief discussion of the work of each small group on theme III - strengthening capacity to manage biodiversity;
- Presentations of the conclusions and recommendations and discussion of these.

At the end of the workshop, a summary of the indicative project implementation plan was presented.

In general, the plenary sessions were less effective and productive, and it became obvious that some individuals wanted to be seen and heard. Time for discussions in the plenary session was therefore limited and maximum time was allocated to small group discussions. The degree of commitment and effective participation during small group discussions was outstanding.

The international consultants facilitated the work of the small groups, while the national consultants assisted and acted as rapporteurs.

The facilitation was based on the following methods:

- Using flip charts to write all ideas on the board once these were clearly understood and agreed by the group;
- Reaching group consensus on the various issues;
- Exploring alternative options in case of disagreement;
- Voting to highlight tendencies;
- Leading every participant to think globally, in order to enable them to detach themselves from their own specific interests;
- Helping everyone understand the links between the various components of the project.

The interest in the project and expectations from the workshop where very high and gave a good atmosphere to the meeting. This was confirmed by the very useful conclusions and recommendations made (see point 4.2. below) and by the very positive workshop evaluation presented under point 6.

##### **4.2. Results, conclusions and recommendations**

Excellent and detailed guidance was provided by the stakeholders workshop. However, lack of more time for the workshop constrained the depth of the analysis.

The following results constitute the pillars of the project and are summarised below for each theme discussed in small group.

**Results theme I: What can be done to develop protected areas and conserve endangered species?**

The list of pre-identified protected areas to be developed comprises 6 agreed SITES:

- a. A zone of the marine and coastal area of Moheli, and its Ramsar site (Boundouni Lake)
- b. Altitude forest of Moheli
- c. Marine and coastal zone in the area of Bimbini in Anjouan
- d. Relict forests in Anjouan and Dzialandze Lake
- e. Forest of the Karthala Volcano of Grande Comore
- f. Marine and coastal area of the coelacanth of Grande Comore

Other sites, such as turtle beaches on Grande Comore and Anjouan, were also mentioned. The relations between natural sites and cultural/archaeological sites should also be considered.

The CRITERIA identified for establishing priority protected areas in Comores where recommended as:

- Biological value
- Endemism and rarity of the resources
- Role and functions of the ecosystem
- Value and socio-economical role of natural resources
- Touristic and cultural values
- Rate of degradation or non-degradation of the area
- Political support in an area
- Juridical and legislative statute of the site
- Degree of (or non-) awareness, training and organisation of the villages concerned
- Existing surveys and inventories for an area
- Existence or not of structures promoting the viability of actions undertaken
- Expectations of the local population

Unfortunately, time did not allow a proper ranking of the six sites according to the above criteria. However, a consensus was reached to consider the coastal and marine zone of Moheli as the first priority for the establishment of a protected area. The other sites will be identified by the project according to the established criteria.

The type of PARTICIPATORY APPROACH recommended for developing protected areas varied with the type of ecosystem considered:

- For the marine and coastal ecosystem, a site-specific approach at the village level was recommended, with a preference for a progressive zoning aimed at creating a global integrated management resource area later. An alternative approach, combining both a delimitation of a global area and a progressive zoning within it, was also considered appropriate;
- For terrestrial ecosystems, first defining the global zone to be protected was recommended, with progressive zoning within the area according to each village's participation and commitment to happen later.

These approaches were presented and discussed with drawings showing the possible evolutions of a protected area. The question of the duration of these protected areas was addressed (protecting or managing yes, but for how long?)

The list of ENDANGERED SPECIES identified by the various stakeholders includes:

- Marine turtles
- Livingstone's flying fox
- Dugong
- Scops owls
- Blue pigeon
- Iguana, lizards and other reptiles
- Kaya Comorensis
- Lemurs
- Endemic flora (including trees and orchids)
- Black coral
- Coelacanth

The need to develop species-specific recovery plans was stressed, especially for marine turtles, and for the Livingstone's flying fox. It was recommended that the conservation of other species would be better achieved through the protection of their natural habitat. Consequently the integration of species conservation plans and the establishment of a protected area network was perceived.

In general the scientific knowledge of endangered species was judged inadequate by the participants, especially regarding the Scops owls and the endemic flora. The conservation of the endemic flora of the Comores was recommended as a high and urgent priority to be address by the project.

The notion of URGENCY to conserve species and habitat was strongly claimed, and the question discussed was: what can be done before the beginning of the project by the end of 1996?

#### **Results theme II: Which structures and mode of functioning could be suggested for participatory biodiversity conservation?**

The reflection was based on the choice of relevant partners and on their possible role for the implementation of the project. In depth discussions took place for both village and site levels, while regional and national levels were less discussed due to the lack of time and their perceived lower priority.

The discussion focused on the creation of viable structures, therefore creating a minimum of new structures which could continue to function after the project. The discussions tried to separate the existing situation from realistic future expectations.

Religious authorities are considered to play a key role at all levels of the society, in influencing the use and consumption of natural resources.

Individual and institutional structures were discussed at village, site or protected area, regional or island and national or federal levels.

At VILLAGE level, conclusions were:

- All villagers are concerned about the exploitation of natural resources, and especially, the committee of elders, the village associations and their specific sectors (women, Ulanga, sports, culture), the village development committee, etc.
- The village development committee (or sometimes the "comite de pilotage"), is the most representative structure of the members of one village and its associations. Therefore it will be at this level that a representative of the village could be designated to constitute the inter-village consultative committee (or "conseil inter-village des usagers").

At SITE or PROTECTED AREA level, the conclusions were:

- The role of a "conservateur" or ward for each site was recognised as essential both in terms of human resources management and technical work. It should be the responsibility of one individual to manage the area and ensure the liaison with the inter-village committee.
- The need for an inter-village committee was approved. This committee should have a coordination and consultative function for all the villages belonging to a designated site. The committee should advise regularly both the ward and the villagers. In addition it could make the links and pressures on the local authorities regarding law enforcement.
- The role of a local NGO in strengthening capacities both at site and village levels was suggested. The support of local NGOs by international NGOs is also indispensable.
- The "warden" should be assisted by monitorss (law enforcement role) and monitors (ecological monitoring function) who will be recruited among the villages of the protected area.

At REGIONAL level, the conclusions were:

- The key role of the "Service Regional de l'Environnement" (SRE) was acknowledge in terms of technical capacity, of coordination for the MPPEFE, and as the governmental authority in officially in charge of the project.
- It was generally recommended that local and international NGOs, the Regional Tourism Service, and the regional authorities in charge of law enforcement had to be involved in biodiversity conservation at the island level.
- The difficulty to work by committee at regional level was identified as a true constraint. Therefore recommendations are stressing the daily management role of the SRE in backing up the ward(s). Concerning wider regional decision making, a small, efficient, inexpensive, flexible and professional committee should be constituted. This regional committee should be administrated by the SRE and comprise the ward(s), one or two NGO representatives, and/or the Regional Service for Tourism, and/or the representative of the law enforcement (or local authorities).
- The creation of a larger inter-services coordination body at regional level was also needed, but as a second priority, for involving all other sectors in conservation. The idea of a Regional Committee for Sustainable Development was accepted.

At NATIONAL level, the conclusions were:



- DGE is recognised as the governmental body directly in charge of the project.
- The need to create a national coordinating inter-ministerial structure (such as a National Committee for Sustainable Development) was also identified, but the mechanisms to set it up and to involve NGOs and other partners was not discussed.
- The role of funding agencies and their related projects was stressed for supporting the communities in finding alternative benefits and incomes.

**Results theme III: What are the needs and means for reinforcing the capacity to manage biodiversity in the Comores?**

It was agreed that the general needs in capacity building for conserving Comorian biodiversity are:

- Training in management and planning of natural resources;
- Specific training or advice in technical, scientific, legislative, research, policy and environmental education matters;
- Training in institutional management, administration and finances;
- Training in public relations with donors, fund-raising and project formulation and implementation;
- Strengthening of the environmental communication, animation and awareness skills;
- Training in conflict management and resolution;
- Support for addressing the socio-economic problems at village level and finding alternative benefits and revenues;
- Strengthening of the professionalism, ethic and motivation of the individuals working in conservation in Comores;
- Supporting the establishment of a long-term and transparent environmental fund or trust fund;
- Training of tourist guides.

The main target groups needing strengthening of their capacity in one or several of the topics mentioned above are:

- Village association and inter-village committee
- Local NGO and NGO federations
- "wardens", guards and monitors
- DGE and its SRE
- Local authorities in charge of law enforcement
- National research institutes and other technical services or ministries

Due to limited project funds, it was agreed that the village and site levels were those most in need of support for building their capacity to sustainably manage biodiversity.

## **5. WORKSHOP ADMINISTRATION, LOGISTICS AND FINANCES**

The DGE and UNDP office in Moroni were very supportive for the organisation of the workshop. The DGE arranged for the workshop to take place free of charge in the "Palais du Peuple". And the UNDP made its printer and photocopy machine available during the meeting, and provided a driver and a car for dealing with the numerous logistical matters. Despite this support, the administration, logistics and finances for

the implementation of the workshop were less than ideal. The workshop evaluation attributed the lowest mark for the logistical arrangements (see point 6 below). Consequently, future workshop organisation should take these constraints into account.

## **6. WORKSHOP EVALUATION**

An evaluation form was distributed to each participant at the end of the workshop.

### **6.1. Conclusions and recommendations**

Overall the evaluations showed:

- 97% of the participants said it was a good workshop;
- 97% estimated that the objectives were achieved;
- 86% judged it very useful to them (highest score);
- The majority thought that small group discussions were very useful, especially on the theme of strengthening capacity.

The lowest marks were given for the logistical arrangements (24% evaluated as weak) and for the quality of the documents distributed (16% estimated it weak). As discussed under point 5, various factors constrained the logistical arrangements, particularly transport and the quality of the catering, the conference facilities and equipment.

Concerning the quality of the documents, participants felt that the documents were too few and not distributed sufficiently in advance. Interest was high in having more detailed information on the project and other conservation issues, such as the biodiversity convention, protected areas strategies, etc.

Specific comments and recommendations are as follows:

- More time for thematic and plenary discussions; a 3- or 4-day workshop would have been ideal;
- More village association representatives (especially ULANGA) should have been invited to attend the workshop;
- Representatives of elders and religious authorities were missing and should be considered as key stakeholders;
- More private sector representatives, especially from the tourism industry should have been invited;
- The project needs to be well-defined in relation to existing actions and project at local level;
- Emergency actions and monitoring mechanisms should be planned until the project starts, in order to keep the momentum;
- The need to find alternative benefits and/or income generating activities should be stressed to relieve the current pressure on natural resources;
- Other interested ministries and services (i.e. fisheries) should have participated;
- The results of the workshop should be monitored and implemented;
- More information on species needs to be provided, including maps as a support for discussions.

Complete documentation of the stakeholders workshop is available through the UNDP Country Office.

**LISTE DES INVITES A L'ATELIER NATIONAL DU PROJET DE CONSERVATION DE LA  
BIODIVERSITE ET DE DEVELOPPEMENT DURABLE AUX COMORES  
13 et 14 AOUT 1996, Moroni.**

**Représentants gouvernementaux**

Antoy Abdou, Conseiller technique MPEFPE  
Kassimo M'Saidie, DG Agriculture  
Nasser Eddine, Conseiller juridique MPEFPE  
Abdou Soimadou, Chef de Service planification, S&E, MPEFPE  
Charles Nicaise, Conseiller technique MPEFPE  
Aboulhouda Youssouf, Directeur Général Environnement  
Isabelle Valade, Conseiller technique PRE-COI-FED  
Ahmed Yahaya, Chef de Service Aménagement du territoire, DGE  
Faissoili Ben Mohadjji, Chef de Service Régional de l'Environnement, Mohéli  
Hissami Eddine Zarcach, Chef de Service Régional de l'Environnement, Anjouan  
Abiamri Midiladji, Chef de Service Régional de l'Environnement, Grande Comore  
Midi Zahir, Direction Générale de la Pêche  
Issouf Mohamed, INRAPE  
Ambad Issouf, Forestier INRAPE  
Sitti Attoumani, DG Tourisme  
Représentant Gendarmerie Fédérale  
Représentant Commissariat au Plan

**Représentants Institutionnels**

Sitti Damir, PNUD  
Représentant de l'EU-FED  
Chef de Mission d'Aide et de Coopération Culturelle  
Coordinateur du projet Banque Mondiale, Mohamed Dossar  
Représentant CARE  
Représentant CNDRS  
Said Ahamada, Consultant PRE-COI-FED  
Représentant de l'Association Touristique des Comores  
Représentant de la Chambre du Commerce  
Représentant projet APPN à Anjouan\*  
Représentant projet DRINEA à Anjouan\*  
Représentant projet PDRM à Mohéli\*  
Représentant FADC-Fond d'Aide au Développement Communautaire  
Belara Ahmed, Réseau National Femmes et Développement-FE/D  
Représentante Réseau régional FE/D Anjouan, Antuyaba Mohamed  
Représentante Réseau régional FE/D Mohéli, Zaitoune Hamid  
Représentante Réseau régional FE/D Grande Comore  
Représentant GAD  
Représentant Comoflora  
Représentant Action-Comores, Mohamed Fahar Eddine Motui  
Représentant Fédération ULANGA-Mohéli,  
Youssouf Matoir Représentant Fédération ULANGA-Anjouan, Kamariddine Abdou

**Representants des Communautés**

Représentant Association villageoise Itsamia, Anfani M'Soili, SG Ulanga  
Représentant Association Nioumachoua, Inzoudine Altoumane Tara, SG Ulanga  
Représentant Association Hoani, Mikidache Ahamada, membre Ulanga  
Représentant Association Bimbini, Miftahou Abdallah, SG Ulanga  
Représentant Association Lingoni, Alihadiddine Bourhane, SG Ulanga  
Représentant de la zone du Gombessa, GC  
Représentant des villages riverains du Karthala, GC  
Said Hassani, expert en ethnobotanique et SG adjoint Ulanga Moroni, GC

**Facilitateurs de l'UICN**

Martin Nicoll  
Deborah Forester  
Sylvie Wabbes

(\*) Les représentants des projets sont auto-financés

## **ANNEX VII. AWARENESS ACTIVITIES**

Awareness raising activities are crucial to the realization of the project goal of developing capacity for biodiversity conservation within a framework of sustainable development. The purpose of raising awareness is ultimately to change behaviour, in this case the way that people use resources and how they support resource conservation activities.

Awareness of conservation and sustainable development principles and benefits is inconsistent in the Comores. If conservation activities are to be implemented effectively, people need a good understanding of conservation needs and benefits, how conservation principles and practices can be applied, and what role they can play. Support for conservation initiatives needs to come from all segments of society including village-based resource users, government civil servants, the private sector, politicians, and donor organizations.

In Year 2 of the project, a UNV (or equivalent) specialist in awareness, communications and environmental education will be recruited to develop and implement an awareness raising campaign to augment other project activities (see Output 7). The UNV will transfer skills for designing and implementing awareness activities to local partners, who will then implement them, learn to evaluate their effectiveness and make necessary alterations. Activities will serve to build capacity in local NGOs and village associations while effecting behaviour change among selected target groups.

Key partners for implementing awareness raising will be the DGE, appropriate NGOs, and village associations. Target groups for awareness raising activities include resource users and other villagers near potential protected areas and sites of species conservation work, ministers and their staff, national and regional politicians, law enforcement personnel, the private sector (especially those in the tourism sector), school children, and the general public.

Specific themes to be addressed through awareness raising campaigns will be developed during the course of the project, but could include the following:

- The benefits at local and national levels of conserving species and ecosystems, the consequences of not doing so, and the principles of sustainability;
- Resource use practices that promote conservation (e.g., fishery, coral reef, forest, and mangrove management);
- Protected area principles and impacts on the daily lives of resource users;
- Reasons for, and methods of, integrating environmental concerns into activities in all sectors;
- Alternative income and other benefit generating activities related to biodiversity conservation.

The following steps will be followed in designing and implementing an awareness raising campaign:

1. **Identify the target groups**—Different themes will be appropriate for different target groups.
2. **Determine the appropriate message**—While more than one target group may be identified for a theme, the message to each may be different. For example, if the theme involves the importance of species and ecosystem conservation, at the village or site level messages of practical and every

day significance would be highlighted, along with how conservation practices might affect resource users. The message to ministers might be how conservation could contribute to national economic growth.

3. **Determine methods and produce any necessary support materials**--The project needs to take advantage of as many methods and materials as are available and appropriate. Methods and materials include meetings, facilitated discussions, workshops, demonstrations, field trips, drama, radio, posters, flip charts, brochures, booklets, video, and others. Any materials used will be well-developed and adequately tested to ensure their effectiveness.
4. **Implement the campaign**--Depending on the methods and materials developed, some awareness-raising activities will be of short duration, such as facilitating a workshop. Others may involve a long process of animation and demonstration that gradually raises peoples' consciousness about a topic and builds their commitment to take positive action.
5. **Monitor and evaluate activities**--Effective awareness raising campaigns need to be flexibly executed. The realisation of campaign objectives needs to be continuously monitored and evaluated, and necessary alterations to the strategy made. Implementors need to work together with target groups to determine the whether or not target groups are understanding the message that is intended, and whether or not the methods and materials being used are effective. The ultimate measure of the effectiveness of an awareness raising campaign is whether or not behaviours (e.g., resource use practices) have changed.

## **ANNEX VIII. A NEW PROJECT CYCLE**

In December, 1994, the following article appeared in Finance & Development, a monthly publication of the World Bank. The article was written by Robert Piccotto, Director-General, Operations Evaluation, and Rachel Weaving, Senior External Affairs Counsellor in the Bank's Office of the Director-General. This "new approach" was discussed by the Project Formulation Team and was endorsed as a valid approach to project planning and implementation in some circumstances. Elements of this new project cycle have already been incorporated in several projects.

### **A NEW PROJECT CYCLE FOR THE WORLD BANK?**

At the World Bank, a new project cycle is evolving that is better adapted to the increasingly risky, volatile, and participatory framework of development assistance today.

For development agencies such as the World Bank, the operating environment of 15 years ago - even of 5 years ago - no longer applies. Planned economies are being replaced by market economies. Centralized decision-making and resource allocations are being supplanted by a nearly universal focus on policy adjustment and better governance. At the same time, with the realization that structural and institutional weaknesses are holding back adjustment efforts and delaying economic recovery in very poor countries and transition economies, the focus is shifting back to the basic staples of development economics - capacity building, human resources, and poverty reduction - with a heightened concern for environmental sustainability and private sector development.

As a result, the demands on investment projects have escalated, as have the pressures on development agencies to be more responsive and efficient. This has led the Bank to take measures to improve the management of its portfolio and to lend for projects that are more varied, complex, and wide ranging.

These more ambitious projects promise higher benefits, but carry higher risks. This may help explain why, according to the Bank's Operations Evaluation Department, about a third of the Bank-supported operations completed recently have not reached their major relevant goals, or are not having a satisfactory development impact - compared with 15 percent in the 1970's.

The answer is not to turn the clock back. The new policy priorities hold considerable promise for making development assistance more effective, and they are widely shared within the development community. Instead, experience suggests that the key to better project performance lies in more adept management of risks, streamlined business processes, and more effective capacity building. That means changing the way the Bank has been doing business and reshaping what is known as the project cycle.

#### **Need for Change**

The traditional project cycle, lucidly articulated by Warren Baum in the December 1978 issue of Finance and Development, has served the development community extraordinarily well. Grounded in engineering tradition, this paradigm - with its orderly progression from identification to preparation, appraisal, approval, implementation, and evaluation - has instilled a professional approach to public investment. It has been particularly well suited to infrastructure development in stable economies with well-established institutions and predictable government policies.

But times have changed, and the traditional cycle is not easily adapted to the participatory, risky, and volatile framework of a growing share of today's development business. Indeed, the Bank's evaluation experience suggests that when development projects perform poorly, it is usually for one or more of the following reasons:

- Beneficiaries do not participate sufficiently. Participation has often been equated with explaining the project to key stakeholders (individuals and groups who stand to gain or lose from the project), instead of involving them in decision-making;
- Borrowers are not committed to project goals. Their "ownership" has been sought by making them responsible for preparation and implementation, instead of ensuring that the impetus for the project is local and that the process provides explicit opportunities for consensus building;
- Risks are inadequately assessed and managed;
- Capacity building has been pursued through separate technical assistance components, for example for staff training, instead of being a core objective that permeates the whole project;
- Project designs are not adjusted to changing conditions in a timely way.

The Bank has launched a major effort to boost the development impact of its operations. An action plan now in progress provides for the introduction of more efficient and client-oriented practices; a greater focus, in dialogues with borrower countries, on how projects are managed; and several measures, such as improved risk assessment and more systematic use of lessons from experience, to improve the quality of operations entering the portfolio. In parallel, business processes are being reshaped to eliminate needless paper work and to ensure less formalistic and more continuous contact with borrowers and beneficiaries. Equally, to encourage the participation of a wider range of stakeholders, the Bank is implementing the recommendations of a learning group on participatory development. It is also reaching out to non-governmental organizations (NGOs), both to solicit their views on its operational policies and to involve them in implementing investment projects.

#### **A new project cycle**

Within this context, staff throughout the Bank are testing new approaches to processing projects. These approaches emphasize adaptability, government commitment, capacity building, and effective monitoring. Though not codified, they amount to the forging of a new project cycle that:

- Centres on the borrower and the beneficiary, not on the requirements of the assistance agency;
- Incorporates participation and capacity development features;
- Provides for explicit, prudent management of risks; and
- Reduces elapsed time and resources spent before initiating action on the ground.

The new cycle - essentially a learning cycle - recognises that development occurs increasingly in complex and uncertain environments that are not amenable to precise long-term planning or centralized management. At its most fully developed, it comprises a four-stage sequence: listening, piloting, demonstrating, and mainstreaming.

#### **1. Listening.**



In the traditional project cycle, the first step is "identification" - a term that suggests the visual selection of physical goals. The new project cycle starts with "listening". This term symbolizes the learning dimension of projects, the central role of the borrower, and the participation of potential beneficiaries right from the start. The thrust of the listening phase is an open-ended but systematic inquiry into the views and concerns of all significant stakeholders. When all participants listen, they learn from one another and use the information to clarify project goals and to gather relevant experience and insights.

The preparation of a health project that the Bank is assisting in the Lao Peoples's Democratic Republic, for example, shows how listening can help shape the goals. In workshops led by Laotians, Bank staff acted as resource persons, using computer models to show the financial and manpower implications of various options as they were discussed. As a result of this instant feedback, participants shifted the emphasis of project goals from curative to preventive care. Similarly, in Cote d'Ivoire, Bank staff took part in local groups that brought together government and non-government representatives interested in urban development. The strategy that has emerged is less comprehensive than a conventional bank strategy, but it targets areas in which external support for institutional and regulatory reform is judged likely to be especially effective in removing barriers to improving living standards.

Listening brings the demand side of the equation into the picture, by eliciting the preferences and values of people who are to be affected by projects and policies. It ensures that supply-driven initiatives do not survive unless they elicit a broadly based response from potential beneficiaries as well as a creditable commitment from the borrower agencies.

In Espirito Santo, Brazil, a Bank-financed project to improve environmental and urban health conditions shows the value of wide ranging talks among state water and environmental agencies, community representatives and Bank staff. Household surveys taken during the discussion phase found that poor households without water and sanitation, and those with unreliable service, were prepared to pay substantially more for services than they are now paying. As a result, project designers expanded the goals from coastal environmental clean-up to improvements in water supply and sanitation, with a strong focus on poor urban neighbourhoods (see "listening to the poor" in this issue).

## **2. Piloting.**

The second phase - "piloting" - is geared to exploring alternatives identified at the learning phase and objectively assessing risks. Pilot projects are deliberately small. They can be funded without elaborate internal review processes, thus reducing the time needed to start project activities. In Mozambique, for example, an International Development Association credit for natural gas engineering is financing a pilot project to prove gas reserves, test the feasibility of an eventual large-scale pipeline to South Africa, and held put together financial and marketing arrangements for a gas development project. The pilot follows an extensive period of "listening" and joint preparatory work by the government, private sector interests, oil and gas companies, potential users, potential financiers and investors, and the Bank.

Pilot projects test local leadership and provide information about the development tasks expected to be replicated at a later stage. They allow different agencies, contrasting project management styles, competing technologies, or alternative sequencing of investments to be tried without incurring major transaction costs or risks. Training of leaders and the design of participatory techniques are integral parts of piloting - along with exploring the social, physical, cultural, ecological, and institutional aspects of the project.

## **3. Demonstration.**

Based on the results of the pilot, the "demonstration" phase provides the opportunity to fine-tune and adapt project concepts - for example, to confirm hypotheses identified at the pilot phase through trials on a representative scale, and to confirm that risks are manageable and that the project potentially has a satisfactory development impact. This third phase also enables planners to set up management information systems and to work out cost sharing or cost recovery arrangements. The emergence of visible benefits at this stage helps to reinforce ownership and thus the potential for replicating the project on a larger scale.

The demonstration phase ends when consensus is strong, enough skilled participants are available, and enough experience has been accumulated to carry the project into its final phase. In India, for example, in 1990 the Ministry of Environment and Forests officially endorsed the involvement of village communities and NGOs in the regeneration, management, and protection of degraded forests. Twenty years earlier in southwest Bengal, an experimental project of the State Forest Department had organised villagers into forest protection committees on 1,200 hectares of forest. The project was nurtured until coverage had spread to 152,000 hectares and 1,250 villages. The Bank then supported the demonstration phase in which coverage was extended to nearly 35 percent of state forest land in southwest Bengal.

#### **4. Mainstreaming.**

The ultimate aim of development assistance is institutional learning and the achievement of a lasting impact on the country's policies, practices, technologies, and skills. Hence, the new cycle comes to fruition with the large-scale adoption - that is, "mainstreaming" - of methods, techniques, and programs pioneered during the pilot and demonstration phases. India's \$85 million Bank-supported National Leprosy Elimination Project, for example, mainstreams a concept that was tested and proven through smaller-scale projects that were implemented by NGOs and assisted by bilateral donors: it relies on community mobilization and participation to educate the public about leprosy, reduce the stigma associated with the disease, and the identify cases for treatment.

Transforming a demonstration program into a self-sustaining national program is perilous unless sound foundations have been laid. Thus, mainstreaming needs to be carefully calibrated, phased, and where appropriate, backed up by conditionality. The leadership skills and organizational instruments needed may differ from those that succeeded in the earlier phases. To minimize potential interference, special measures may be needed to strengthen accountability and transparency within the agencies concerned.

To have a lasting impact, this final phase needs to nurture the continued commitment of major stakeholders not just to the specific methods, techniques, and programs being implemented but also to the processes that will ensure continuous adaptation to changing circumstances as implementation proceeds. For nationwide implementation, decentralized methods will often be appropriate, including reliance on markets and voluntary organizations.

#### **Looking ahead**

The new project cycle encourages early collaboration and resulting commitment to the goals agreed on. Its explicit focus on experimentation, organizational learning, and risk assessment encourages more realistic project design and phasing. Most important, it makes the benefits from development operations more likely to be sustained.

Within the Bank, staff are applying elements of the new cycle pragmatically. the range of alternatives is wide. In integrated sector operations in some African countries, the new cycle even repeats itself: at any give time, parts of the operation may be, say, building roads and training contractors while other parts are

collecting feedback from local contractors and community groups, piloting different types of training, and mainstreaming proven construction approaches.

The new cycle is consistent with the Bank's objective of strengthening its partnership with other development entities. The pilot phase calls for detailed knowledge of local conditions and a permanent presence "on the ground." Often it will be appropriate for the Bank to build on the work of other organizations and to build strategic alliances with other development agencies; for example, with NGOs and bilateral agencies for the pilot stage, and with the regional banks for the demonstration stage.

Experience thus far is encouraging. If the use of these approaches can be expanded and intensified, in consultation with stakeholders in client countries and the broader development community, there should then be less need for "rehabilitation," "restructuring," "cancellations," and other costly and stressful symptoms of excessively rigid and non-participatory processes.

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