

CURRENCY EQUIVALENTS

Currency unit = CFA franc (CFAF)
US\$1.00 = CFAF 270 (October 1992)^a

WEIGHTS AND MEASURES

Metric system

ACRONYMS AND ABBREVIATIONS

ATLAS	-	African Training for Leadership and Skills (USA)
CAR	-	Central African Republic
CERGEC	-	Centre de Recherche Géographique et de Production Cartographique (Congo)
CERVE	-	Centre d'Etudes sur les Ressources Végétales (National Herbarium)
CFC	-	Congo Forest Conservation
CITES	-	Convention on International Trade in Endangered Species
DFF	-	Direction of Fauna and Flora
DGRST	-	Directorate General of Scientific and Technical Research (Congo)
EDF	-	European Development Fund
ENEF	-	National Forestry School (Congo)
EOSAT	-	Earth Observation Satellite Company (USA)
FAO/CP	-	Food and Agriculture Organization/Cooperative Program with the World Bank
GDP	-	Gross domestic product
GEF	-	Global Environment Facility
GET	-	Global Environment Trust Fund
GIS	-	Geographic Information System
GPU	-	Gorilla Protection Unit
GTZ	-	German Executive Agency for Technical Assistance
HELP	-	Habitat Ecologique et Liberté des Primates
HPLF	-	Howletts and Port Lympne Foundation
IDR	-	Rural Development Institute (Congo)
IMF	-	International Monetary Fund
IUCN	-	World Conservation Union
MAB	-	Man and Biosphere
MUCODEC	-	Mutuelles Congolaise d'Épargne et Crédit
NEAP	-	National Environmental Action Plan
NGO	-	Non-governmental Organization
ORSTOM	-	Institut Français de Recherche Scientifique pour le Développement en Coopération
PARCS	-	Protected Areas Conservation Strategy
PARTS	-	Policy, Analysis, Research and Technical Support
PMU	-	Project Management Unit
RAMSAR	-	Convention on Wetlands Protection
TFAP	-	Tropical Forest Action Program
TSC	-	Technical Steering Committee
UFA	-	Unité Forestière d'Aménagement
UNDP	-	United Nations Development Programme
UNESCO	-	United Nations Education, Scientific and Cultural Organization
USAID	-	U.S. Agency for International Development
USGS	-	United States Geological Service
WCI	-	Wildlife Conservation International
WWF	-	World Wildlife Fund-US

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a/ The CFA franc is tied to the French franc (FF 1.00 = CFAF 50), which is subject to a floating exchange rate.

REPUBLIC OF CONGO

WILDLANDS PROTECTION AND MANAGEMENT PROJECT

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This report is based on the findings of a Bank appraisal mission to the Congo that took place from March 16 to 30, 1992. The mission was led by Mr. Jean-Claude Balcet (AF1AG) and consisted of Mmes. Karen Richardson (AF1AG) and Amy Vedder (WCI), and Messrs. Charles Doumenge (IUCN) and Serge van Outryve (AGRER). Ms. Susan Desmond provided the assistance for the secretarial work. Mr. Jan Post (ENVGE) was the Peer Reviewer for the project. Messrs. Michael J. Gillette and Théodore Nkodo were Department Director (AF1) and Division Chief (AF1AG) respectively. The present Department Director is Mr. Olivier Lafourcade. Messrs. Jean-Claude Balcet and Grant Slade (AFTEN) were Task Manager and Project Advisor respectively. The present Task Manager is Ms. Catherine Cruveillier (AF1AG).

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REPUBLIC OF CONGO

WILDLANDS PROTECTION AND MANAGEMENT PROJECT

I. INTRODUCTION

1.01 Congo is a country with great ecological wealth. There are still many large intact areas with considerable biodiversity, including high densities of rare wildlife. Thus far, however, conservation initiatives have been limited. The forest covers roughly 65% of the country's territory (22 million ha) and is subdivided into three main areas, namely the Congo River Basin, the Chaillu region and the Mayombe region; 20% of the total forested area, mainly in the north-east, has standing water most of the year. The remaining 35% of the territory is savannah. The population of the Congo is low (2.6 million inhabitants), and highly urbanized (60%) which means that rural densities are generally extremely low.

1.02 The Wildlands Protection and Management Project (GEF) stems from the commitment of Congolese authorities, reaffirmed during the National Conference, to systematically address the country's environmental problems in the framework of the Environmental Law enacted in April 1991. The project forms an integral part of the national environmental strategy, in which the key elements are: (a) two planning/programming exercises, namely the Tropical Forest Action Program (now in the course of implementation and scheduled for completion by end 1992), and the National Environmental Action Plan, launched in September 1991 and to continue through mid 1993; (b) two national projects, namely the GEF project and the Natural Resources Management Project (presently only at the identification stage), the latter being regarded chiefly as a means of setting up and carrying out a country-wide development scheme targeting natural areas, including agricultural lands, forests and wildlands buffer zones; and (c) a number of area-based and pilot projects, consisting of inventory and research activities, in addition to management plans for specific reserve areas (in particular the Dimonika-Man and Biosphere (MAB) reserve, with UNDP/UNESCO financing; the Nouabalé-Ndoki site with USAID Wildlife Conservation International (WCI) financing; the Conkouati reserve with BP/Chevron/World Conservation Union (IUCN) financing; and, as part of the European Development Fund's sub-regional forest ecosystem management project, the Odzala National Park).

1.03 At present, there are 11 gazetted areas earmarked for conservation. However, none of them, except for Odzala National Park and Dimonika-MAB reserve, has benefitted from a rational conservation program or management plan. These 11 reserves cover roughly 1.5 million ha, or 4.4% of the national territory. In addition, the Nouabalé-Ndoki and the Lake Télé-Likouala-aux-Herbes sites, in the north of the country, were identified as particularly important zones to conserve since they still contain primary closed forests and inundated forests with considerable numbers of large mammals. The addition of these two sites will bring the total amount of protected land to 3.5 million ha (just over 10% of the national territory). The Nouabalé-Ndoki site could become part of a larger conservation area which will be contiguous with the Dzanga-Sangha reserve in the Central African Republic and the Lake Lobéké region in Cameroon, thus forming one of the largest closed forest conservation systems in Africa.

1.04 The project's main goal is to protect significant amounts of the country's biodiversity through the establishment of a nationwide system of effective conservation activities, and through systematic protection of selected sites. The selection of sites responds to the need to cover a cross-section

of ecosystems representative of the Congo's biodiversity, and to strike a balance between protecting sites which are seriously threatened by destruction, degradation and human conversion, with sites which are still intact, uninhabited and species-rich. On this basis, it has been decided that protection activities will focus on:

- (a) sites representative of each major ecosystem in the country;
- (b) vast, still intact, ecosystems (in the north of the country);
- (c) highly threatened ecosystems (particularly in the south);
- (d) endangered, threatened and endemic species;
- (e) species and zones which are the subject of existing or future international conventions (Convention for International Trade of Endangered Species (CITES), Convention for Wetland Protection (RAMSAR), Man and Biosphere (MAB), etc.); and
- (f) sites where community participation, through pilot projects and buffer zone management, can allow optimal biodiversity protection.

1.05 The project strategy is designed to fit into a comprehensive framework for the long-term sustainable conservation and management of the country's biodiversity. It calls for:

- (a) rigorous analysis of existing constraints;
- (b) sound design of actions to be carried out over the long term, including accurate assessment of the recurrent costs involved;
- (c) generation of financial resources that will eventually cover part of these recurrent costs; and
- (d) close involvement of local communities in planning and executing the various actions that will be undertaken at the reserve level.

II. SECTOR BACKGROUND

A. Geographic and Economic Setting

2.01 The Republic of Congo covers an area of 342,000 km², bordered by the Central African Republic and Cameroon to the north, Gabon to the west and Zaire to the south and east. Although the terrain is varied, it never exceeds 1,000 m in altitude. The climate is dry sub-equatorial in the southern region and equatorial in the north. Average precipitation is in the range of 1,200-1,800 mm per year throughout the country. Soils are lateritic and hydromorphic.

2.02 The two main types of vegetation cover are forest and savannah. Moist, closed forest extends over the northern part of the country, while inundated and swamp forest covers the Congo River Basin. In the south, lower montane forest and gallery forest with shrub savannah are found.

2.03 In 1991, the population of the Congo was estimated at approximately 2.6 million inhabitants, nearly half (47%) of whom were living in the cities of Pointe-Noire and Brazzaville alone, with 330,000 and 660,000 inhabitants respectively. Population growth is estimated at 3.5% per year, but is limited to the urban areas, as emigration to cities has continued unabated and growth in the rural areas is close to zero. In 1988, the population distribution pattern was as follows:

Population Distribution, by Commune and Region

<u>Commune</u> (urban)	<u>Inhabitants</u>	<u>Region</u> (rural)	<u>Inhabitants</u>
Brazzaville	659,835	Kouilou	84,865
Pointe Noire	332,413	Niari	118,824
Loubomo	55,044	Lékoumo	73,971
Nkayi	39,783	Bouenza	164,945
Ouessou	13,288	Pool	198,772
Mossendjo	15,697	Plateaux	118,838
		Cuvette	147,623
		Sangha	36,884
		Likouala	85,507
		Grand Total	2,146,289

Source: CNSEE, 1988 Statistical Yearbook (based on 1984 census).

2.04 Geographic distribution of the population is very uneven, ranging from 0.7 inhabitants/km² in the northernmost regions (Sangha and Likouala) to 13.5 inhabitants/km² in the Pool region (including Brazzaville). This marked unevenness is a dominant characteristic of the economies of equatorial countries with little rural development, but is especially apparent in the Congo, as a consequence of massive rural exodus to urban areas. This rural exodus can be ascribed to: (a) the very poor state of feeder roads and basic infrastructure, which has undermined attempts by village communities to grow cash crops; (b) the failure of earlier experiments with collective farming under State control; and (c) the creation of numerous job opportunities in the urban centers as a result of the oil boom over 1980-1985.

2.05 The 1980-85 oil boom created a widespread atmosphere of euphoria, with the GDP constant rising from CFAF 360 billion in 1980 to 710 billion in 1982, but then stabilizing in the region of 400 billion from 1985 to 1988. Oil revenue accounted for 17% of GDP in 1978, 40% in 1982, and 23% in 1988. This strong growth in oil exports gave the country a considerable increase in purchasing power, particularly in the urban population, mainly as a result of the very pronounced expansion of the public sector, both in terms of manpower (an increase from 30,000 government workers in 1979 to 55,000 in 1986) and of the wage bill (an increase from CFAF 32 billion in 1979 to 57 billion in 1986). During this period, the State took on considerable debt, especially during the Economic and Social Development Plan of 1982-1986.

2.06 By the end of 1985, the combined effects of the collapse of oil prices and the dollar, greatly deteriorated the situation. These two factors together led to a sharp reduction in oil revenues, which declined from CFAF 225 billion in 1985 to a little over 40 billion in 1988; although they rose again in 1989, to 84 billion, they have never returned to their 1985 level. To rectify the situation, the Government introduced a Structural Adjustment Plan in the second half of 1985 which called for an immediate halt in the growth of public spending and strict control of development expenditures.

2.07 Two agreements with the IMF (1986 and 1989) failed to mitigate the situation. During the 1991 National Conference, the Government's reticence to break up Hydrocongo (the national oil concern), and its decision to increase the salaries of civil servants and recruit 12,000 new civil servants, forced the suspension of aid to the country from various donors. This suspension has not been lifted to date due to the Government's failure to move ahead on public sector reform and reorganization, and to meet its debt service commitments after the end of 1990. This situation has led to the Government's total bankruptcy, since the budget was already in deficit in 1990, being barely sufficient to cover the wage bill at that time. The fiscal deficit will be an estimated CFAF 440 billion in 1992, assuming the Government endeavors to meet all its obligations. It is clear that economic recovery will be long and difficult.

2.08 The following observations concerning the country's present socio-economic situation need to be taken into account as far as the design of the Congo GEF project is concerned:

- (a) The Government is in no position to make a significant financial counterpart contribution to the various actions that will be launched in the short-to-medium term;
- (b) In view of the democratization process taking place in the country (with attendant upcoming national elections), the Government's institutional structure is likely to be altered substantially in the short-to-medium term. There is therefore both a great uncertainty as to the institutional context and opportunity to introduce the desirable changes in institutions, which calls for flexibility in the design of the project's institutional set-up;
- (c) The concept of community-level protection should be expanded upon wherever the presence of local communities will allow it, by emphasizing a type of management that will ensure the renewal of natural resources by these communities themselves and the creation of alternative resources. It is clear that the traditional supply systems can no longer cover the increasingly heavy demand from the urban centers (particularly for fuelwood and fresh bushmeat) without further degradation of the natural environment which will in turn aggravate the rural exodus;
- (d) The twofold need to involve the rural population in the country's management of its natural resources and to cover the recurrent costs associated with such management programs (in view of the Government's limited capacity to meet these costs itself) is another reason to advocate systematic identification of all forms of revenue which could be generated in the context of these programs, provided that they are compatible with the general goals of protection of the environment in protection areas;
- (e) The role of the Government vis-a-vis the private sector should also be reexamined, by giving priority to any reorganization of institutions and amendment of legislation called for to promote the retrenchment of the State from productive activity and the attendant

empowerment of the private sector. This will result in giving the private sector expanded responsibilities (and therefore greater revenues) as administrator of natural resources;

- (f) The Non-Government Organization (NGO) movement in the Congo is incipient and should be encouraged by providing assistance to conservation-related NGOs for capacity-building; and
- (g) Given the degree to which the Congo is lagging behind in environmental education, steps must be taken to launch sensitization programs both at the national level and in the various areas targeted by the project.

B. Human Impact on the Natural Environment

1. Forestry Sector

2.09 Logging has traditionally been a major source of revenue for the Congo. In the 1960s, it was the principal source of foreign exchange, accounting for about half of all exports. Beginning in the early 1980s, when exploitation of the first off-shore oilfields commenced, the situation changed considerably. In 1980, the oil sector accounted for 23% of GDP and 75% of exports, in contrast to the forestry sector which accounted for 4% of GDP and 13% of exports. The forestry sector nevertheless continued to expand steadily, the output of lumber almost doubling over the 1973-90 period. The increase in output, however, was accompanied by less positive trends, as the volume of lumber treated within the country prior to export has remained more or less constant. On the positive side, it is worthwhile noting that output from the eucalyptus plantations established in the Pointe-Noire region in the 1980s now accounts for 32% of the volume of lumber produced in the country. Despite the fact that the forestry sector accounts for a significant proportion of the country's exports, its impact remains fairly minor as far as employment opportunities and government revenues are concerned.

2.10 The Congo was one of the first equatorial countries to introduce tangible measures to protect its forest resources by establishing regulations aimed at controlling forest exploitation in a manner that will ensure sustainability. This approach was affirmed in 1974 by the enactment of the Forest Code, which stipulates that prior to opening any zone for logging purposes, the zone shall be the subject of a management plan. The objectives of the management plan are to provide a means of:

- (a) specifying the types of operations that will be allowable (stipulation of periods of validity of operating licenses, felling diameters for the various species, authorized maximum felling volumes), on the basis of a detailed forest inventory and estimates of spontaneous regeneration capacities; and
- (b) identifying possible areas for protection, to be given the status of forest reserves. Where such areas are concerned, the Forest Code also provides that "the exercise of rights of use, logging permits and contracts, and rights of residence or access may be abolished, prohibited or regulated, in accordance with the classification of the areas in question".

2. Traditional Agriculture

2.11 Traditional agriculture in the Congo is mostly subsistence-oriented; it also involves some cash crops (coffee, cocoa). Tubers, especially cassava, are the major staple crops, together with plantains in certain areas. Given the concentration of the population in the south, these crops are also grown for

commercial purposes. The food crops are usually grown by women, with men only helping out in the land preparation which often involves heavy clearing of land.

2.12 Given the widespread practices of itinerant cropping and short fallow periods, relative to the time required to regenerate soil fertility, traditional agriculture contributes to some extent to the irreversible deterioration of soils, particularly in areas adjacent to forest zones. Nevertheless, since population pressure in rural areas is generally very light and much arable land is available, extensive cropping remains predominant in most areas except around the main cities and in the Niari valley. The average land area devoted to food crops is approximately 30 ares per family, producing an average of 12-15 metric tons/year mainly of starchy foodstuffs, allowing each inhabitant a net yearly food ration of 400 kg of starches.

3. Hunting

2.13 Throughout the country, hunting is an important means of securing animal protein, both for subsistence and commercial consumption. Some of the ancestral hunting methods (such as the group hunt with nets and knives) are disappearing, and being replaced by trapping and guns. It is not unusual to find that rural dwellers keep a large number of traps or snares in neighboring forests, visiting them only periodically. This results in a large fraction of animals taken been lost, as the meat has become inedible. Moreover, this method of hunting is very damaging to wildlife, as no distinction is made between species, and young animals, as well as breeding females, are just as likely to be taken.

2.14 The statutes governing hunting retain inconsistencies and weaknesses. The prohibition of hunting during six months of the year, while the sale of ammunition is allowed during the entire year propagates illegal hunting. Some of the consequences of the Public Lands and Land Rights Law (Loi Domaniale) introduced in 1986 are also regrettable. For instance, any citizen is entitled to hunt anywhere in the national territory, a provision that ignores ancient customary rights which could provide a point of departure for community-based management of wildlife. The Congo Tropical Forestry Action Plan (TFAP), which is being finalized contains a strategy for the rational conservation and management of forest resources and will be addressing the above issues.

2.15 For the moment, there is no real alternative to bushmeat for the supply of animal protein to the population. Most villages raise small livestock (poultry, sheep, goats, pigs, and on occasion some trypanosome-resistant cattle), but there is a lack of incentive to produce more than what is needed for subsistence, as access to market, due in particular to poor road infrastructure, remains a major stumbling block.

2.16 Fish is the other main source of animal protein in the Congo and inland fishing is a lucrative activity. Fortunately, the fisheries sector appears to be much less threatened at the moment than terrestrial wildlife. Conservation measures do not appear to be warranted, except in certain areas such as those adjacent to the Conkouati reserve. Efforts should be deployed nevertheless to rationalize river fishing and develop fish farming that have potential to generate lucrative revenues and can therefore constitute interesting alternative activities for rural dwellers.

4. Other Uses of Natural Resources

2.17 Local populations use a variety of natural resources such as plants, insects and non-timber forest products which could be developed into alternative economic activities (e.g. production of wax and

honey for export, collection of medicinal plants for the domestic market and export, creation of village-based stands of eucalyptus and fruit trees, and breeding of caterpillars).

III. PROTECTION AND MANAGEMENT OF NATURAL RESOURCES

A. Government Strategy

3.01 The long-term environmental strategy of the Congolese Government at the national level is two-fold: (a) establish a network of protected areas with a view to protecting the country's biodiversity. These areas will benefit from effective management plans; and (b) develop and implement a nationwide natural resource management plan with a view to ensuring a rational and sustainable management of the environment. On the sub-regional level, the Government's major objective is to see that its national strategy for the protection of the environment is coordinated in both design and execution, with the interests of protection of natural resources and biodiversity on a global scale. This objective is partly being addressed by the EDF Central African Ecosystem Conservation Program (para 3.14), but could also be realized through the creation of transnational protected areas with neighboring countries.

3.02 The objectives of this strategy are: (a) the reinforcement of already existing reserves and the creation of new protected areas; (b) the development and subsequent implementation nationwide of a natural resource management plan, which will include inventories and pilot activities; (c) the development of more intensive and less environmentally damaging agriculture and agro-forestry practices; (d) the strengthening of forestry services so that they can provide technical assistance and enforcement of forestry laws; and (e) the promotion of greater participation by local communities and populations in the conservation of the environment. This will pave the way for sustainable management of natural resources, through dialogue, training and sensitization programs, and the creation of alternative economic activities.

3.03 The Government is addressing these objectives through: (a) two planning exercises, the Tropical Forest Action Plan (TFAP) and the National Environmental Action Plan (NEAP); and (b) two main projects, the Congo Wildlands Protection and Management Project (herein proposed) to be financed by the GEF, and the proposed Natural Resource Management Project. This latter project, to be partly financed by the World Bank, has only been identified for the time being (para 3.18). Preparation of the TFAP began in June 1990 and should be completed by end 1992; it is being coordinated by the French Cooperation. The NEAP, began in September 1991 and should be completed by mid 1993. The NEAP addresses the country's overall environmental problems and will incorporate the TFAP's conclusions into its action plan. One of the primary goals of the NEAP which concerns this project, is to recommend the appropriate institutional arrangement for a permanent structure in charge of all conservation activities.

B. Regulatory Context

3.04 Congo possesses a substantive ensemble of laws and decrees concerning the environment and land rights. The main laws consists of the Forest Code, Mining Code, Public Lands and Land Rights Code, and the recent Environmental Code. These laws and codes were revised since their creation, but they retain inconsistencies and weaknesses. Moreover, they are poorly enforced.

3.05 The Forestry Code enacted in 1974 and amended in 1982, gives the Congo one of Africa's most modern legislation concerning forestry. Concerned with ensuring the sustainability of lumber production, its main provisions on the subject of logging operations are the following:

- (a) opening of any zone for logging purposes is subject to prior formulation of a management plan by the forestry authorities; in principle, the plan is intended as a means of specifying operating methods and procedures (for lumber production) that will allow not only sustainable management of the resources in question but also protection of the natural environment in general and of fauna and flora in particular;
- (b) each UFA (forestry management unit) should in principle be covered by a Development Plan prior to the granting of any logging permits, which are to be issued on the basis of subsequent subdivision of the UFA into UFEs (forestry exploitation units);
- (c) such a plan, beyond the core requirement to undertake a basic forest inventory on which the authorized maximum felling volume and duration of the logging permit are determined, may also incorporate inventories of fauna and flora which identify noteworthy species, designate sites of interest for hunting and/or tourism purposes, and provide for any appropriate protection measures; and
- (d) the Ministry responsible for forest conservation is also responsible for wildlife management and enforcement of the numerous decrees governing this sector.

3.06 However, the provisions of the Forestry Code regarding protection and management of wildlife were hardly acted upon, although this sector was supposed to be one of the beneficiaries of the proceeds of the forest management tax (earmarked for a special account known as the Natural Resources Management Fund). In fact revenues from this forest tax were mainly used to carry out inventories and establish management plans.

3.07 The law of 1983 also governs wildlife management methods by specifying the conditions for the protection and exploitation of wildlife. It concerns mainly the modalities for issuance of hunting permits and licenses. Regulations affecting exports of game meat and wild flora products and the list of animals entirely or partially protected were set in two 1984 Orders.

3.08 All these measures are recent and remain inconsistent. For instance, the provisions relating to wildlife declare that all wildlife belongs to the State, but that hunting may be "carried out on land designated for that purpose only with the consent of the rightful owners." This is not compatible with the Public Lands and Land Rights Code, which specifies that: "throughout the territory of the Republic of the Congo, land is the property of the people represented by the State (Article 1)." It abolishes all titles to land obtained previously under the provisions of the Civil Code or under the registration system, as well as customary land rights (Article 2). The Code also provides that the State shall have full and free disposal of all land and subsoil, of the resources forming part thereof, and of the resources of the sea-bed and marine subsoil.

3.09 To this rather fluid and inconsistent corpus of statutory materials should be added: (a) a Decree of 1986, which makes environmental impact studies an obligatory part of any project of a significant size; (b) a Law of 1991, which incorporates the Environmental Code; and (c) the creation in September 1992 of a Ministry of the Environment, Tourism and Leisure in charge of the management and protection of natural sites.

3.10 While most legal statutes, including the Decree of June 1986 and the recently enacted Environmental Code, provide a relatively complete legislative framework, these instruments seem too theoretical when it comes to the realities of daily life, which inevitably includes the dynamics of private sector development and results of a mix of customary powers and modern pressures. A good example is the law governing land rights, which speaks of full and free disposal of land by the State (i.e. land regarded as the property of the people), but goes on to speak also of rightful owners, rights of usage and rights of enjoyment. It is thus subject to varied interpretations. In the circumstances, this Code will need to be updated again, embodying in it the spirit of the National Conference which calls for greater decentralization of the Executive Branch, considerable moderation of the prerogatives of the public sector, and (long-awaited) recognition of the role of a private sector thus confirmed in its natural and ancestral rights.

C. Institutional Context

3.11 If legal issues appear to indicate some hesitation regarding doctrinal matters, the lack of a sense of purpose is similarly evident where institutional matters are concerned. A good example here is the tardy emergence of the concept that the environment is something which should concern the institutions of the State. There was no mention of such a concept in the civil service organization chart until 1980. Since then, responsibility for environmental matters has been assigned successively to the following governmental departments:

- (a) 1980: a decree made the management of the environment the responsibility of the authority responsible for tourism (Ministry of Tourism and the Environment);
- (b) 1986: this responsibility was transferred to the Ministry of Scientific Research and the Environment; subsequently, in the course of the same year, to the Ministry of Public Works, Construction, Urban Development, Habitat and the Environment;
- (c) 1990: another reassignment of the responsibility, in October of this year, to the Ministry of Equipment in charge of the Environment, followed by transfer some months later to the Ministry of Forest Economy, Fisheries and the Environment; and
- (d) 1992: first transfer in January to the new Ministry of Agriculture, Water and Forest, Environment and Biodiversity, and second transfer in September to the newly created Ministry of Environment, Tourism and Leisure in charge of the management and protection of natural sites.

3.12 Although this succession of reassignments could be considered a sign of the importance attached to environmental questions, this is unfortunately not confirmed by the facts. In October 1991, only 93 civil service personnel were working in this department throughout the national territory, 42 of them at central government level and 48 in the field. Although over-employment is a marked characteristic

of the Congolese civil service, the service responsible for the country's wildlands is very much of an exception, something which cannot fail to create problems with implementation of any program for the real protection and management of natural resources in protected areas. This could be eased in the medium to long term by the emergence of the NGOs movement. However, NGOs have only been recognized since the National Conference in June 1991 and their development is incipient. Assistance will be provided under the project for NGO capacity-building (para 4.05 (e)).

D. Other Conservation and Natural Resource Management Projects

3.13 Dimonika-Man and Biosphere (MAB) Project. Since 1985, the Dimonika-MaB reserve in the Mayombe region has been the focus of a project financed by UNDP and UNESCO. The goals of this project are: (a) establishing and managing of reserve, which was legally created in 1988 (infrastructure, boundary marking, game wardens, etc.); (b) conducting studies and scientific research (botany, zoology, geology, hydrology and climatology); and (c) implementing support actions, particularly education, training, and development of alternative activities. Although project achievements in research -- through a collaborative effort with ORSTOM, the University Marien Ngouabi, the University of Paris Val de Marne, the Royal Museum for Central Africa in Tervuren (Belgium) and the Natural History Museum of Paris -- have been substantial, they have been much more modest in protection of the reserve. The scientific data collected by ORSTOM have focussed on forest-atmosphere interactions, origin of the intra-Mayombean savannahs, the role of termites in the process of soil change, the ichthyological fauna and large fauna. As far as protection is concerned, the reserve has been zoned, basic infrastructure has been built, and all logging permits have been canceled. However, management and surveillance of the reserve still leave much to be desired (pressure from poachers, for instance, is still heavy) since the project has failed to generate either the additional resources to cover operating costs or alternative activities to take the place of the traditional hunting activities of the local populations.

3.14 Odzala National Park. The EDF-funded sub-regional project for conservation and rational utilization of forest ecosystems in Central Africa, has a national component, Odzala National Park and is also headquartered in Brazzaville. This project, which has just begun, focuses on implementing rational management plans for one area in each of the seven Central African countries selected. A different emphasis is envisaged for the management plans for each area; the emphasis in Congo is to be placed on the participation of local populations in conservation. The Congo component works with the Directorate of Fauna and Flora (DFF) for reserve protection and management, but the overall sub-regional project will be administered under the tutelle of the Ministry in charge of Economy, Finance and Planning. The EDF project will collaborate with the Congo GEF project on several components: (a) the Map Database and GIS/satellite imagery; (b) training and sensitization at the national level; and (c) capacity-building of national institutes (DFF and the herbarium). In addition, the EDF project will be represented on the Technical Steering Committee.

3.15 Gorilla Protection Project. This project, funded by the Howletts and Port Lympne Foundation, has been working since 1986 with the Government of Congo (DFF) on the establishment and management of an orphanage and rehabilitation center for confiscated gorillas. To date, the project has about 20 gorillas which have been kept in a semi-natural environment and are now ready for reintroduction to a natural environment. These gorillas are expected to be released in social groups formed prior to release and will be monitored for several months to ensure integration. The project will work with the Congo GEF project and the DFF in the southern region the Léfini reserve on the reintroduction and protection

of these gorillas. The project, in conjunction with the Congo GEF project, will also serve as a vehicle for conservation education to help break the cycle of poaching/confiscation/release of confiscated animals. It will also serve as a means to start a media campaign on the need to protect large primates. Eventually, the reintroduction site could serve as a tourist attraction and educational center.

3.16 Chimpanzee Reintroduction Project. Similar to the above project, chimpanzees confiscated by DFF, will be reintroduced to the Conkouati reserve. A local NGO, Habitat Ecologique et Liberté des Primates (HELP), will work with the Government of Congo and IUCN through the GEF project to oversee the full reintroduction of chimpanzees. This project will work in conjunction with the proposed Jane

Goodall/Conoco chimpanzee sanctuary. The Jane Goodall/Conoco sanctuary will house the chimpanzees from the Pointe Noire zoo which are too old to be reintroduced to the wild. The sanctuary will be built approximately 90 km from Pointe Noire and will serve as a research station as well as a tourist attraction. Both projects will also be used as educational tools and as such will work in conjunction with the sensitization component of the GEF project.

3.17 US Government Funded Projects. The US Government is currently funding several projects/programs which complement the Congo GEF project. These projects/programs are: (a) the African Training for Leadership and Skills (ATLAS) project which funds high level training (Bachelor, Master and Doctorate degrees) for Congolese nationals; the focus of this training will be natural resource management and conservation, and this project will complement the training and sensitization component of the Congo GEF project; (b) Peace Corps volunteers; these volunteers will work in three reserves, Nouabalé-Ndoki, Conkouati and Dimonika and will provide on-the-job training in reserve protection and management; (c) the Protected Areas Conservation Strategy (PARCS) program -- executed by WCI, WWF and AWF (Africa Wildlife Fund) -- which will provide an assessment of the training needs for conservation across tropical Africa; (d) Policy, Analysis, Research and Technical Support (PARTS), which provides support for other projects in the above mentioned areas; and (e) the Central Africa Global Climate Change Project, a joint project with World Resource Institute, World Wildlife Fund and NASA Goddard Space Flight Center, to study the contribution of the moist forest area in the Congo basin to the global climate change.

3.18 Natural Resources Management Project. The project proposal is based on helping the Government develop methods which are less destructive to the environment, along with inventories and exploitation of non-timber forest products and the enforcement of a rational timber policy. The project consists of: (a) establishing a comprehensive management plan for natural resources; (b) building the national institutional capacity to plan and manage the environment; (c) developing, on a pilot basis, management plans for selected forestry concessions; and (d) implementing pilot agro-forestry programs to address critical environmental issues, such as deforestation around the cities and soil erosion. The project was identified by FAO/CP and the Bank in May 1991. It is presently on hold due to the suspension of the Bank lending to the Congo which has been in effect since September 1991. As is the case for any Bank operation, when the project process resumes, the project design will be thoroughly revisited to conform to new Bank policies that might have been approved in the interim. In the case of this project, the Bank's new forest policy which does not fund logging in primary forest, will be applied to the project.

3.19 Sub-Regional LANDSAT Satellite Imagery Project. This sub-regional project, under GEF financing, will purchase and archive LANDSAT TM data for the whole Central African region. The data will be purchased through Earth Observation Satellite Company (EOSAT) and will be archived at the U.S. Geological Service (USGS). An initial purchase will be made in 1994-1995 and an anniversary purchase

in 1999-2000. These data will be available to individual country GEF projects, national institutes and national and international NGOs. This project will provide the satellite images needed for monitoring and evaluating the Congo GEF project. The data and images of Congo will be analyzed and stored at CERGEC, with copies made available to all ministries/departments and NGOs concerned.

3.20 Scientific Research and Biological Inventories. Several studies and biological inventories of reserves and sites have been conducted to date. These studies and inventories have focussed on collecting data needed to improve the knowledge of the various ecosystems in Congo, and the availability of such data has been invaluable in the planning of the reserves and protected areas. The main studies include: (a) biological inventories of the Nouabalé-Ndoki site, carried out by WCI and used for the development of the Congo Forest Conservation project (executed by WCI and the Congolese Government under USAID funding); (b) studies on the primates and indigenous populations in the Nouabalé-Ndoki site, carried out by a team of researchers at the University of Kyoto and the Ministry in charge of Science and Technology; (c) biological inventories and surveys of local populations, carried out by IUCN, and financed in part by BP and Chevron which form the basis of the proposed actions in the Conkouati reserve and Odzala National Park; (d) biological inventories of the Lake Télé site, in particular the fish in the lake, carried out by Woods Hole Oceanographic Institute; (e) inventories and preliminary management plans for Odzala National Park conducted by IUCN with EEC support; (f) research on the Mayombe forest conducted by ORSTOM; and (g) a general survey on conservation of forest ecosystems in the Congo, carried out by IUCN.

E. Lessons Learned

3.21 To date, the only long-standing conservation efforts undertaken in the Congo have been initiated within the framework of the Man and the Biosphere program in the area of Dimonika with UNDP/UNESCO sponsorship. The program which started in 1985 has led to important research findings and the incipient development of a local reserve system. At present, however, this system is proving difficult to sustain, mainly because of encroachment by local populations and a lack of resources to cover recurrent costs. This shortcoming is due mostly to the lack of alternative activities for the local populations and the absence of self-generated revenues in the reserve. The best example of the Bank's involvement in conservation relevant to the Congo circumstances is in the CAR Dzanga-Sangha National Park which borders the proposed Nouabalé-Ndoki reserve. This on-going project is proving successful in restoring and protecting large populations of mammals, as well as generating local funds through safari hunting and tourism, by developing appropriate institutions and involving local populations.

3.22 Other case studies of Bank projects in the region, indicate that projects which affect indigenous populations have generally been shortsighted in addressing their needs, although more recent projects have involved local populations in all stages of project preparation. The participation of local populations, in developing the necessary alternative economic activities (addressing the needs of women, as well as men), to protect biodiversity, will be a critical part of the project.

IV. THE PROJECT

A. Project Objectives, Strategy and Rationale

4.01 Project Objectives. The project's overall objective is to protect a significant amount of the Congo's biological diversity through systematic planning and coordination of conservation activities at

the national level, and careful management of selected reserves, including the development of alternative activities for the local population, at the local level. This will ensure that the country's ecosystems, important in global terms, will be conserved. The project will be the first in a series on interventions for biodiversity conservation at the national and international level. The project, as such, is modest and to some extent experimental. The project will pursue a long-term strategy which will begin to build the necessary framework for effective biodiversity conservation in the Congo and will act as a catalyst for complementary biodiversity protection projects. The project will focus on five reserves representative of the country's biodiversity: Nouabalé-Ndoki, primary closed forest; Conkouati, mixed gallery forest, savannah and mangrove swamp; Dimonika, mixed closed forest; Léfini, savannah and gallery forest; and Lake Télé-Likouala, inundated forest. Additional inventory and survey work will be carried out in Mt.

Fouari, Mt. Nabemba-Garibenzam and other sites for possible inclusion at a later stage. The experience gained in these reserves will form the basis for developing management systems to be replicated over time in other reserves.

4.02 Project Strategy. The project will establish a coherent system of reserve management through the development of: (a) an appropriate and institutional framework for all conservation activities; (b) rational management plans for reserves where plans are non-existent or inadequate; and (c) alternative activities for local populations to ensure the long-term protection of the reserves. At the national level, the project will lay the groundwork for a permanent structure in charge of all conservation activities by creating a Project Management Unit (para 4.48) and a Technical Steering Committee (para 4.50) to manage and monitor the project in the interim. The project will also provide support towards the capacity-building of the directorate in charge of protected areas, the national herbarium, the national geographic and cartographic center, and national NGOs. At the reserve level, the project will support the development and execution of rational management plans, including alternative activities for local populations. To the above effect, the Government will, no later than six months following the Mid-Term Review (para 4.57), under terms and conditions acceptable to the Bank and following adequate public consultations: (a) enact a new legislation concerning protected areas; (b) adopt the permanent structure to take charge of all conservation activities nationally (para 4.48); and (c) give appropriate legal statutes to all five priority project sites; these statutes should make provision for the financial and administrative autonomy of the local structures in charge of these sites (in particular authority to generate revenues and recruit staff independently) and include appropriate arrangements to prohibit all economic activities in their core zones and allow the pursuit of alternative activities, such as ecotourism, subsistence hunting and safaris in their buffer zones. The Government will further, by June 30, 1994, have submitted a plan to review the general legislation concerning protected areas and taken the preliminary steps to gazette the project sites. Additionally, the Government will deploy staff with adequate skill mix in all five priority project sites along agreed individual staffing schedules by sites; staff deployment will start by June 30, 1993 and be completed no later than six months following the Mid-Term Review. Staffing requirements and staff deployment schedules per priority sites will be agreed at negotiations. Assurances on implementation of all above measures were obtained at negotiations (paras 6.01 (a) and (b)). As a condition of effectiveness, the Government will be requested to stop issuing new logging concessions in the project priority sites (para 6.02 (a)).

4.03 The project will be executed over a four year period divided into two phases: (a) an initial phase (up to the Mid-Term Review in PY3) during which an interim Project Management Unit and a Technical Steering Committee will be created to coordinate and oversee project activities; and (b) a second phase in which the responsibilities of the Project Management Unit and Technical Steering Committee will be transferred over to a permanent structure in charge of conservation activities to be created based on the

recommendations of the National Environmental Action Plan and the Tropical Forestry Action Plan. In subsequent sections, the generic term of Project Management is used to refer both to the Project Management Unit up to PY3 and the permanent structure that should take over thereafter.

4.04 Rationale for GEF involvement. Given Congo's anticipated economic problems in the short-to-medium term, it is very unlikely that the Government will allocate adequate funds for the conservation of ecosystems that are of vital importance from a global viewpoint. The availability of grant funds will reinforce the Government's commitment to protect biodiversity, and will be a strong incentive to the Government to pursue conservation and related support actions. GEF financing will be limited to areas whose conservation has global significance and which receive no or insufficient assistance.

B. Detailed Project Description

1. Actions at the National Level

Project Management (US\$ 1,209,000) and Consultancies and Studies (US\$ 1,413,000) ^{1/}

4.05 At the national level, the project's primary goal will be to strengthen the capacity of the existing government services/institutes involved in conservation, and lay the groundwork for a permanent structure in charge of all conservation activities. During the initial phase (until the Mid-Term Review), the project will support the establishment of a Project Management Unit (PMU) under the tutelle of the Ministry of Economy, Finance and Planning (Annex 1). The PMU will have the following main responsibilities:

- (a) ensure technical and administrative coordination and financial/accounting management of all project activities;
- (b) prepare strategic orientations, generic methodologies and protocols and management procedures, to be used at the reserve-level, and provide the related support (inter alia for anti-poaching activities, surveys of local populations, monitoring and evaluation (including biological monitoring) (para 4.12);
- (c) undertake studies and programs of national scope including: (i) a study on the urban consumption of bushmeat and the bushmeat market (para 4.12); and (ii) training and sensitization programs concerning conservation matters (para 4.16;
- (d) develop a coherent regulatory and institutional framework for all conservation activities;
- (e) provide support towards the capacity-building of national NGOs (para 3.12);
- (f) overseeing the legal and technical engineering of a trust fund (para 4.15); and

^{1/} The figures in parentheses are total costs, namely GEF and parallel financing, and include physical and price contingencies. The cost item "consultancies and studies" include US\$300,000 earmarked for monitoring and evaluation activities (paras 4.09 to 4.14) and US\$225,000 earmarked for legal studies. It does not include the costs related to the establishment of the Trust Fund (para 4.15).

- (g) promotion of sub-regional cooperation in the field of conservation, in particular in areas which will be the object of project field activities (e.g. Nouabalé-Ndoki and Conkouati).

4.06 The PMU will also serve under the project as a secretariat to a Technical Steering Committee (TSC) which will be established with membership and mandate acceptable to the Bank and will be a condition of effectiveness (para 4.50). This committee will review twice a year, the work programs for all conservation-related activities in the Congo. The committee will be chaired by the Ministry in charge of protected areas and will be composed of representatives from: (a) all ministries/departments concerned by conservation activities; (b) all the reserves (including those such as Odzala outside the scope of the project's field actions); representation from the reserve level will include the director of the reserve and a designated representative from the local communities surrounding or in the reserve; and (c) national NGOs.

4.07 A goal of the project is to eliminate the poaching of wildlife in the core areas of the reserves while controlling subsistence hunting in the buffer zones and multiple use areas. This will be done through supporting guards and surveillance teams to protect the core areas from poachers, and by developing with the local communities, a system to control the amount of subsistence hunting in an area. The amount of subsistence hunting in the buffer zones and multiple use areas of a reserve will be determined by the local community in question, the reserve management and the authorities at the local level. The surveillance systems to be set up will include community organizations which could help control the commercial sale of bushmeat, such as local cooperatives and hunter's guilds.

4.08 At the central level, the PMU will carry-out studies and surveys on the urban bushmeat markets (quantity and type of meat, price, availability and origin) with the goal of understanding the commercial trade of bushmeat. The PMU will also be in charge of designing surveys and studies to be carried out at the reserve level to determine scope of the bushmeat trade near each reserve. These studies will be carried out by an anthropologist/sociologist and will complement the biological inventories in the reserve by focusing on the yield and effort of the hunters in and near a reserve. The data from hunters will be integrated with the baseline scientific data on the wildlife populations in the area, to help develop a basis for determining the levels of subsistence hunting in an area.

Monitoring and Evaluation (US\$ 300,000) ^{2/} (Annex 2)

4.09 In view of the "pilot" and experimental nature of the project, it is imperative that a thorough, rigorous and credible monitoring and evaluation (M&E) program be built in as an integral project component. Beyond this immediate objective, the project will aim more broadly at testing M&E procedures suitable for biodiversity conservation projects. The purpose of this component is threefold: (a) to ensure that adequate baseline studies are designed, established and executed to permit monitoring of progress toward the fundamental goal of biodiversity conservation; (b) to enable the Project Management Unit (PMU) to efficiently track progress of individual site components and collateral programs toward stated objectives; and (c) to provide periodic review and feedback that will enable project implementors to make improvements and mid-course corrections in line with the "rolling design" strategy under which the project is being executed.

^{2/} This represents costs incurred in conducting M&E activities at the PMU level, as part of consultancies and studies. It does not include costs incurred for M&E activities neither at the CERGEC and CERVE level, nor at the reserve level (para 4.14). Total cost devoted to M&E are approximately US\$ 900,000 (para 4.14).

4.10 The M&E activities to be undertaken under the project involve both national level institutions such as DFF, CERVE and CERGEC and site level implementing agencies in the design and execution of the M&E program. Annex 2 gives a description of this program over the four-year project implementation period, together with the detailed agenda for PY1. Discussion of the program will be the main item on the agenda of the Project Launch Workshop to be held the second quarter of CY93. The program will focus on three principal aspects of development and execution of M&E activities:

- (a) institutional development, including strengthening in national capacity for carrying out protected area design, development, management and administration;
- (b) biodiversity conservation, in terms of measuring how project interventions contribute to reduction in present threats to endangered flora and fauna and to enhanced stability of threatened ecosystems; and
- (c) socio-economic dimensions as these relate to long term security and stability of the protected area system being established, with special reference to "local" issues such as community participation, acceptance and support of the overall program goals, methods and accomplishments.

4.11 Monitoring of institutional development will include tracking progress at the national level in terms of improvements in the legal framework for protected area establishment, gazetting and administration; for regulation of use of natural areas and harvesting of natural products; and for improvement in regulatory statutes related to game management. With respect to the regulatory framework, the M&E program will track progress concerning integration of natural areas management into the larger national agenda of environmental concerns -- through the Tropical Forestry Action Plan-TFAP and the National Environmental Action Plan-NEAP processes -- and into the local and regional agendas through adoption of bylaws and implementation of local enforcement mechanisms. Regarding conservation management and administration the PMU will track improvements in enforcement of game and wildlife laws and the effects on domestic and international commerce in protected species. The PMU will track performance of the "local" site management authorities with respect to progress in activities including: establishing local advisory boards, developing annual workplans, preparing management plans, initiating training programs and public awareness campaigns, accomplishing key tasks such as demarcation of reserve boundaries and construction of necessary infrastructure.

4.12 Biological monitoring will principally be carried out by the local site authorities with support from collaborating agencies such as CERVE. The role of the PMU will be to work with the local site authorities to define requirements for baseline studies, identify key "indicators" to be monitored and agree on an appropriate format and intervals for reporting of results. Definition of a consistent and credible monitoring regime to track progress toward biological conservation objectives is essential to measure overall project performance and to define priority requirements for resource use and activities during and beyond the period of project implementation. Biological monitoring will concern the demographics, population and ecological status of target fauna, identification of fragile natural communities, tracking progress in restoration of damaged ecosystems, and measurement of key ecological parameters such as water quality. An essential baseline component of biological monitoring concerns hunting pressure on large vertebrates and development of accurate market data on bushmeat distribution and consumption patterns and practices. Detailed and accurate data are necessary in order to measure success of enforcement and public awareness programs, to guide development of rational game laws, and to assess the potential for sustainable management and harvesting in the future. The PMU will take

primary responsibility for collecting market data but will work closely with local management units which will be responsible for collection of periodic data on hunting pressure within the project areas.

4.13 Local community involvement is one of the crucial dimensions of project socio-economic M&E activities. This will involve baseline assessments of local community utilization of natural products (bushmeat, plant products, land for shifting cultivation) and ongoing monitoring of attitudes toward the local management regimes. Socio-economic studies to be undertaken under the project will involve assessment of contemporary activities carried out by residents of areas affected by the project, and monitoring of the impact of the project on the economic well being of these residents. Community participation in management of the reserves and in economic activities generated as a result of the project (e.g. tourism) are two key elements to be tracked by the monitoring program. A more detailed outline of the monitoring program planned for tracking community participation, attitudes and economic status is outlined in Annex 2.

4.14 The project M&E component has been designed as an integral part of the project, with a time lag vis-a-vis other components, as its design was dependent on the design of other project features. Financial resources for M&E activities total approximately US\$ 900,000. They have been allocated in the amount of US\$ 300,000 to the PMU. The remainder has been earmarked for the individual site authorities (with some funds earmarked also for collaborating institution at the national level, e.g. CERGEC and CERVE) to ensure that data collection and monitoring of key indicators are performed by the institutions positioned to be most effective. The M&E program is designed to provide feedback among the various levels of program administration to facilitate reliable information flow and provide for expedient adjustment of program priorities as changing situations warrant it. The Technical Steering Committee and the Peer Review Committee established under the project provide two appropriate fora for public review and evaluation of program performance. The M&E component has been designed to create a process of internal and external review of project performance that should prove valuable to project staff in defining and revising their program agendas, yield credible data for external assessment of project results, and provide a credible basis for identifying future needs and priorities. The challenge in implementing the component will be to ensure an effective interface between central and local structures, so that, at the two levels, the M&E goals are fully achieved, with particular attention to the feedback required as part of the "rolling design" strategy, without being a burden to implementing agencies.

Trust Fund (US\$ 342,000) (Annex 3)

4.15 The level of project funding will only be sufficient to cover the initial activities at the central and reserve level. It is therefore crucial that the project leverage funds from other sources to cover long-term recurrent costs. The project will do this by creating a trust fund to provide a long-term, perhaps indefinite, future income stream. This will not only improve program stability by facilitating long-range planning, training and recruitment, but will also serve to build up absorptive capacity (by spreading large grants over a longer period of time and by "retailing" large grants to a range of smaller projects) and will institutionalize cooperation between the government sector, local communities and NGOs. The project will support the legal and technical engineering and associated publicity needed to establish the Trust Fund, but will not contribute to its financial endowment. The objective will be to attract outside donors who will provide endowments to the Trust Fund with view to cover part of the recurrent costs for conservation-related activities in Congo. At negotiations, an assurance has been obtained at negotiations that the Trust Fund be created no later than six months following the date of the Mid-Term Review (para 6.01 (c)).

Training (US\$ 1,326,000) (Annex 4)

4.16 The training component will provide training at the international level, national level and on-site training at the reserve level. It will complement the ATLAS program (financed by USAID for approximately \$US 967,000) which focuses on undergraduate and post-graduate training in the field of conservation. This component will focus on:

- (a) linking existing professional training programs with protected area conservation activities and personnel, providing practical experience and integrating biological, social and economic concerns in training;
- (b) establishing regular in-service workshops for protected area personnel, allowing for professional exchanges and discussion;
- (c) providing protected area information through public awareness programs, national and local; and
- (d) fostering dialogue with populations neighboring protected areas, integrating discussion of biological conservation and protected area management with alternative economic activities.

4.17 Detailed training programs will be prepared yearly based on close monitoring of the results obtained previously. The detailed training program for PY1 has been agreed at negotiations (Annex 4, Section V).

Support for the National Herbarium (US\$ 500,000)

4.18 The Center for Studies and Research on Plant Resources (CERVE) or national herbarium, located in Brazzaville, is presently run by the Government without adequate resources. Support from the project will help ensure a permanent collection of the plant specimens representative of the country's biodiversity. The main objectives of this support will be to: (a) improve the capacity of the herbarium to treat and preserve plant samples; (b) upgrade the existing botanical data base for the country; (c) reinforce the capacity of national personnel to carry out inventories and identify both plant species and important areas of biodiversity in the Congo to be considered for future inclusion in the system of reserves (including medicinal and economically important species); and (d) provide long-term association with an international or group of international herbariums through a twinning arrangement. The herbarium which is under the tutelle of the Ministry in charge of Science and Technology, will work in direct collaboration with the reserves, the University of Marien Ngouabi and the Geographic Research and Cartographic Production Center (CERGECE).

4.19 The national herbarium will be responsible for:

- (a) developing a scientific protocol for all botanical inventories to be carried out under the project in conjunction with reserve personnel;
- (b) overseeing, and carrying out in close liaison with reserve personnel, botanical field work, including inventories in the project sites, studies on forest dynamics, studies on traditional medicinal plants and other plants of economic importance, and management of plant resources;

- (c) producing baseline documents on plant identification and vegetation mapping; and
- (d) increasing the capacity to identify and conserve plant specimens, and to identify areas with important biodiversity in the Congo for future inventories.

4.20 To achieve the above objectives, the project will provide funding for: (a) one-person year of resident technical assistance (botanist-ecologist), see Terms of Reference in Annex 5; (b) training of a national assistant to the director of the herbarium; and (c) logistical support, including the required scientific and technical equipment.

Map Database and Geographic Information System (US\$ 355,000)

4.21 This component will be executed by the National Geographic and Cartographic Center (CERGE) which is under tutelle of the Ministry of Technology Development and Professional Training and works in collaboration with the University of Marien Ngouabi, the Directorate of Land Use Planning (DATAR), the national herbarium and the reserves. The project will support the development of a database to be used for mapping the reserves. This database will eventually be computerized to be used with a Geographic Information System (GIS) and for the interpretation of satellite images. The database will be collected in collaboration with the University of Marien Ngouabi, the herbarium and DATAR. CERGE will be specifically in charge of:

- (a) providing the herbarium and the reserves the database necessary to complete the inventories in the field;
- (b) creating a database for the reserves;
- (c) putting in place a GIS system for the management of the reserves;
- (d) establishing thematic maps to meet the needs of each reserves; and
- (e) putting in place a national database system for protected areas.

4.22 To accomplish the above, a long-term twinning arrangement of CERGE with an international institute for technical support will be sought through the project. Under this component, the project will provide the following support to CERGE: (a) one-person year of resident technical assistance (technical specialist in mapping, GIS and satellite imagery analysis, see Terms of Reference Annex 5); and (b) logistical support, including the required technical equipment.

2. Actions at the Local Level

4.23 At the local level, daily management of project activities will be the responsibility of the individual reserve authorities. This will allow for operational autonomy in daily project implementation and sustainability of project actions. The project will work in close collaboration with the directorate in charge of protected areas. This directorate will have direct responsibility for executing project activities in the Léfini reserve and in those reserves and future reserves which are not the object of management under this project. To aid the management of the reserves, a reserve review board will be established for each reserve. This review board will consist of representatives from all local communities involved, parties working in the area who are not necessarily part of the management team, but who have an interest in the activities of the reserve (e.g. the University of Kyoto team in the Nouabalé-Ndoki site and the local NGO,

HELP in the Conkouati reserve), and the management team of the reserve. The review board will review the work program of the reserve and make recommendations before the program was submitted to the TSC. The review board will not, however, be the approval board for actions, like the TSC it will have a consultative role. The director of the reserve along with a leader from the local communities will then represent the reserve at the TSC. Actions at the reserve level will also be designed and carried out so as to maximize building the national capacity to manage protected areas. This will be done through ensuring that activities undertaken by international NGOs and technical assistants will be sustainable over time by national experts and NGOs. This will be assured through training programs, institution building and assistance to the emergence of national NGOs.

4.24 At the reserve level, the project will:

- (a) develop and execute rational management plans;
- (b) delineate core zones and buffer zones as appropriate, and define appropriate conservation activities in both of these zones;
- (c) carry out scientific research, sociological surveys and inventories of the different ecosystems;
- (d) train and deploy staff for anti-poaching and management efforts; and
- (e) initiate and maintain a dialogue with local populations with the goal of developing alternative activities.

4.25 To achieve the above goals, the GEF grant will provide funding for: (a) resident technical assistance in the Conkouati and Dimonika reserves, and the Lake Télé-Likouala site; (b) contractual employment of national personnel for protection and management activities; (c) scientific research programs, including biological inventories and monitoring; (d) light infrastructure (research stations and guard huts); (e) the required scientific and technical equipment; (f) training and sensitization programs at the reserve level; and (g) alternative activities for local populations, such as aquaculture, game ranching, ecotourism (guide services and accommodation services), and reserve-related employment (surveillance, maintenance of facilities and miscellaneous services). Additional funding will be provided by USAID through the Congo Forest Conservation project in Nouabalé-Ndoki and the Howletts/Port Lymph Foundation for the Gorilla reinsertion project in Léfini.

Alternative Activities

4.26 The project will act as a vehicle to identify and initiate feasibility studies of alternative activities for populations living in buffer zone areas or around the reserves whose livelihood will be altered by conservation-related activities and protection of the reserve. The principal alternative activity for local communities will be employment in reserve or reserve-related activities. Other activities will be identified by the local communities themselves, reserve management and short-term consultants (preferably national) brought in to examine precise issues. The reserve review board will review identified activities and will help the reserve management decide on feasibility and implementation. The execution of the alternative activities will either be initiated and partly carried-out under the project, or will be turned over to either other projects, organizations or institutions working in collaboration with the GEF project. The project will identify activities, carry-out feasibility studies, and, in some instances, execute alternative activities.

4.27 To support the development of alternative activities, the project will provide:

- (a) a limited amount of funds under the reserve management level for alternative activities which may not be economically viable in the short-to-medium term, but which will have a long-term impact on the economic situation of the areas around the reserves, such as the identification of medicinal plants, non-timber forest products, limited ecotourism and volunteer technical assistance programs, technical and logistical assistance to scientific research teams;
- (b) help the National Credit Union System (MUCODEC) establish management, training and lending programs in the areas surrounding some of the reserves (Dimonika and Konkouati in particular), for activities which will yield a short-to-medium term profits, such as small livestock farming (small ruminants and poultry), production and harvesting of wild-grown and cash crops (e.g. cassava, bananas, groundnuts and "safou"), fish farming (aquaculture), touristic and research site preparation (e.g. bush camps) and pharmacies. Such activities should make rapid, highly visible and positive contributions to the development of alternative activities and the establishment of procedures and methods for the protection of the reserve. Programs should be distributed throughout the project area and should employ appropriate, replicable and sustainable technical measures. Local populations should take a strong role in setting priorities and carrying out activities with technical and logistical support as required from the reserve and project management;
- (c) support to other locally established projects working in surrounding areas which are in the position to implement activities through their training and extension programs (e.g. the National Agriculture Extension Project) for activities such as aquaculture and small ruminant farming; and
- (d) support, through both the PMU and reserve management, NGOs and local communities by: (i) sponsoring workshops, seminars and village/town meetings (e.g. film showings and follow-up discussions) to provide a forum for exchanging ideas on conservation and alternative activities; (ii) implementing low-cost, practical solutions which reflect the insights and reward the efforts of local populations to take a lead role in defining strategies for increasing involvement in and support for natural resource management by developing alternative activities.

4.28 The type of alternative activities (outside reserve-related employment) will vary by reserve. Thus, in order to assure successful reserve-specific activities, the management of each reserve will:

- (a) initiate and maintain a dialogue with local populations on their interest and capacity to carry-out alternative activities;
- (b) hire and oversee short-term (preferably national) consultants to help identify activities and to conduct feasibility studies;
- (c) liaise with other projects, organizations, institutes, private companies and private projects to explore the possibility of collaboration (over fifty companies have already shown an interest in purchasing non-timber products for use in soaps, cosmetics, food and pharmaceuticals);

- (d) report to the reserve review board and the TSC on the viability of the activities and make recommendations for implementation; and
- (e) hire and oversee national and local reserve staff (e.g. conservation officers, commercialization/economic officers, tour guides and logistical assistants).

4.29 Once alternative activities are identified and feasibility studies carried-out, the reserve management will review the proposals through the reserve review board and will incorporate either initial implementation plans or requests for collaboration with other interested parties into their work program for review by the TSC. The TSC will review such initiatives in advance and will flag any activities which will require an environmental assessment prior to implementation. Progress reports will be submitted on a regular basis to the TSC and any activities financed directly under the project will be monitored and evaluated by the PMU. Activities funded by other projects will have to be subjected to the necessary environmental assessments and will have to comply with the standards set by the PMU for monitoring and evaluation. An agreement to this effect will be sought through the conventions and agreements between the project and other projects.

Nouabalé-Ndoki Site (US\$ 3,632,000)

4.30 The Nouabalé-Ndoki site (Annex 6), is located in the north of the country on the border with Central African Republic and Cameroon, and extends over 450,000 ha of primary closed forest. The area is sparsely populated (0.4/km²), with concentrations of bantu and pygmy populations at Bomassa, Bon Coin and Makao. This site has recently become a focus of conservation efforts via the Congo Forest Conservation (CFC) project, jointly financed by USAID, Wildlife Conservation International (WCI), and the Government of Congo. This project, now being implemented by the Directorate of Fauna and Flora (DFF) and WCI, is designed to plan, establish and manage a new nature reserve, following the intention declared by the Congolese government in 1991. The CFC project is also intended to develop an applied research program and organize a research station for the reserve, train Congolese conservationists (both scientific and managerial), and involve local populations in management of the reserve and associated natural resources. The initial five-year phase began mid-1991, with significant but incomplete funding from the above sources. Previously confirmed funding will cover costs of most project personnel, partial logistical support, and some training and research costs. Since 1987, the site has also been the object of biological and anthropological research, undertaken by a team from the University of Kyoto and the General Directorate of Scientific and Technical Research (DGRST). Research has focussed on the ecology and behavior of forest primates, and the Aka and B'aaka pygmies.

4.31 Local populations around the proposed reserve (in particular in Bomassa, Bon Coin and Makao) have been involved in planning the reserve since its inception. The University of Kyoto research team has been working with the local populations since 1987, studying their way of life and dependence on the natural environment. Several public consultations were held between the Government of Congo, the staff of the CFC project, the preparation team for this project and the local populations (both Pygmy and Bantu). The outcome of these meetings showed a strong desire on the part of the local populations to create the reserve on the condition that the local populations were invited to participate in defining the limits for the core and buffer zone areas and in determining the wages for local employment. The local populations also welcomed the presence of the CFC project which will develop a management plan for the site with GEF support and will hence protect the rich biodiversity of the area.

4.32 The GEF-financed activities planned for Nouabalé-Ndoki, will be complementary to those in progress via the above projects. They will be executed by WCI in liaison with the University of Kyoto, within the framework of the CFC. They will consist of:

- (a) establishing an effective system of reserve protection;
- (b) creating basic infrastructure to allow establishment of a scientific research center;
- (c) training staff in relevant research and management activities (this will be undertaken primarily through on-the-job training, apprenticeships and guided research); and
- (d) undertaking scientific studies including:
 - (i) assessment of large mammal hunting (harvest rates, renewal rates, impacts, economic importance, guidelines for sustainable use);
 - (ii) studies of vegetational dynamics, with focus on regeneration in natural and logged forest patches to assess damage from harvest regimes;
 - (iii) inventory and monitoring of selected flora and fauna (in conjunction with the National Herbarium); and
 - (iv) anthropological studies to assess needs and desires of local human populations, and thereby guide project activities.

Conkouati Reserve (US\$ 2,155,000)

4.33 The Conkouati fauna reserve (300,000 ha) (Annex 7) located to the north-west of Pointe-Noire, was first classified in 1980 and then re-classified in 1989 to allow for some oil exploration and forest exploitation. The reserve covers a vast diversity of ecosystems including primary closed forests, gallery forests, savannah, coastal forests, and mangrove swamps. It also contains the highest densities of mammals in southern Congo. The population density around the reserve is moderate (1.2/km²), there are around 5,000 inhabitants within the reserve and human pressure from the neighboring city of Pointe-Noire is high. Recent forest exploitation and oil exploration have left a network of roads in the reserve which have facilitated hunting and poaching. The reserve is presently under the responsibility of DFF, but suffers from a lack of support for protection.

4.34 The World Conservation Union (IUCN) has been conducting inventories and studies in the area for the past several years, and has established a dialogue with the local populations on the management plan for the reserve and the periphery areas of the reserve. IUCN has also been working with the local populations on solutions for problems created by the existing reserve (e.g crop-raiding by elephants in the north of the reserve). Since the reserve was created in 1980, little has been done to help integrate the local populations into reserve-related activities. Thus, based on consultations during project preparation and the experience gained through the existing dialogue with local populations, the project will support strengthening alternative activities for local populations, surveillance and anti-poaching. It will also promote conservation education in local schools and communities.

4.35 Activities in Conkouati will be executed by the World Conservation Union (IUCN), working in collaboration with DFF and a local NGO. The long term objective of the project will be to

ensure the protection of biodiversity in the south of Congo by addressing the needs of the populations living within and around the reserve. To this effect, the project will:

- (a) complete biological inventories and studies on the physical characteristics of the reserve, in particular the northern part of the reserve; and delineate the limits of the reserve to include marine and coastal areas, a core area and buffer zones;
- (b) reinforce the surveillance and protection capacities of DFF;
- (c) establish a detailed management plan for the reserve, integrating the needs of the local communities with the sustainable management of natural resources;
- (d) conduct surveys and establish dialogue with local populations with the goal of:
 - (i) studying the human impact and socio-economic dynamics of populations living within and around the reserve and the influence of the city of Pointe Noire (in particular, the problem of demand for bushmeat and firewood);
 - (ii) identifying and developing alternative economic projects (this will be done either directly by the project, or in liaison with other locally-established projects and MUCODEC); and
 - (iii) developing local educational and sensitization activities on natural resource management; and
- (e) help DFF reintroduce confiscated chimpanzees to the reserve, which will serve as a catalyst to develop tourism from Pointe Noire.

Dimonika Reserve (US\$ 981,000)

4.36 The Dimonika-MAB reserve (Annex 8). This reserve, located 185 km northeast of Pointe-Noire and 400 km west of Brazzaville, this reserve of 136,000 ha is representative of the Mayombe forest. The population density is relatively high (4.6/km²) numbering 27,000 inhabitants divided into the two prefectures which cover the entire Mayombe. The Dimonika-Man and Biosphere (MAB) project in the Mayombe has to date benefitted from funding from UNDP, UNESCO and the Government of Congo, utilized mainly in gaining greater scientific knowledge of the ecosystems and economic activities characteristic of the zone, with some development of basic infrastructure. The project was designed to create a fully functional MAB reserve, so that the resident biodiversity could be protected at the same time as development in neighboring communities was assured. Despite judicious zoning of the reserve, however, the resources mobilized to those ends have been inadequate, with the result that the traditional modes of harvesting wildlife in the region have remained unchanged while there is growing hostility on the part of the population to the introduction of protection measures. This is mainly a consequence of: (a) the insufficient resources devoted so far to basic infrastructure and day-to-day management; (b) uncertainty as to the status of the buffer zones and the zones of influence, including the extent of hunting, and lack of enforcement of any restrictions; (c) the heavy impact of human activities on the natural environment -- a result of the presence of itinerant gold prospectors and of a number of villages located in the middle of the reserve (buffer zone 1), the presence of large communities south of the zone of influence, and the proximity of the railway; and (d) the winding down of logging operations, involving a

corresponding degree of deterioration of basic infrastructure and a significant decrease in the sources of revenue available to forest inhabitants.

4.37 Thus far the Dimonika-MAB project has done little to create alternative activities. The existing management has spent several years conducting surveys on the attitudes of the local populations towards the reserve and on actions the local populations will like to see implemented in the scope of the existing project. During project preparation, the Bank team visited the reserve and held discussions with some of the local managers and members of the local communities. The local populations, which now derive substantial revenue from bushmeat, agree that a reserve is necessary to protect the remaining animals. However, in exchange for respecting the core zones of the reserve, local communities want to see alternative activities, such as aquaculture, cash crops (bananas) and the harvesting of non-timber products developed in parallel to all protection activities.

4.38 Project activities for the reserve will therefore focus chiefly on:

- (a) the establishment of an effective system of protection for the reserve; and
- (b) the involvement of local population groups more closely in the new policy of natural resource management to be introduced -- a policy that must necessarily go hand in hand with the development of alternative sources of income as a substitute for forest resources withheld.

4.39 When the permanent statutes for the Dimonika reserve will be established (para 4.02), its management (presently under the Ministry in charge of Science and Technology) will come under the tutelle of the Ministry in charge of protected areas, at the end of the UNDP/UNESCO financing (June 30, 1993).

Léfini Reserve (US\$ 1,067,000)

4.40 The Léfini reserve (Annex 9) is located 90 km north of Brazzaville. This reserve covers 630,000 ha, mostly of savannah and gallery forest. The reserve itself is sparsely populated, but the human pressure is intense from the surrounding area, in particular the villages along the northern highway which borders the reserve. Hunting pressure is strong due to the proximity to the Brazzaville market and this has led to the demise of most of the wildlife in the area. The strategy so far followed for conservation of the natural environment of Léfini has focussed on protecting fauna throughout the entire 630,000 ha of the reserve. Given the pressure created by growing demand for bushmeat in Brazzaville, protection efforts have failed completely. This has been evidenced by inventories, which indicate that wildlife is becoming increasingly rare, chiefly because of the activities of poachers employing guns. Effective protection of the entire Léfini reserve will require a large investment of resources. Given that this is currently not justifiable, due to the combination of depressed animal populations and personnel and financial constraints, the project will initially focus on selected sites and activities to begin the process of recovery. Therefore, the project will concentrate on protection and management activities in two areas: (a) the Lake Blue area, at the southern border of the reserve, where gorilla introduction efforts are planned by the Gorilla Protection Project; and (b) the Mbouambe area, the northern part of the reserve where higher animal densities are found, and where surveillance is facilitated by ready access via the Léfini River and its tributaries. Each of these areas affords promise of tourism potential, and thereby the possibility of recovering recurrent costs. Success on these fronts will allow expansion of conservation activities to other portions of the reserve in the future.

4.41 Populations living around the reserve depend to a great degree on bushmeat for their livelihood both for personal consumption and for export to Brazzaville. During the preparation of the project, communities along the main highway bordering the reserve were consulted and there was a consensus that the protection of the reserve should be stepped up to protect the little remaining wildlife. It was also noted that education and the development of employment and alternative activities were lacking in the region and that improved programs could help stem the illegal bushmeat trade to the city.

4.42 Project activities, to be executed by DFF and Howletts/Port Lympne Foundation (HPLF) for activities concerning the reintroduction of gorillas, will include:

- (a) development and implementation of a detailed reserve management plan;
- (b) reinforcement of protection activities undertaken by reserve personnel (including provision of logistics, operational costs, supplemental personnel);
- (c) partial assistance to the gorilla introduction program, to provide a focus for conservation education and tourism; and
- (d) establishment of an integrated outreach program with local populations, combining discussion and public awareness concerning reserve protection and natural resource conservation, with facilitation of resource substitution and development of alternative economic activities.

Lake Télé-Likouala Site (US\$ 477,000)

4.43 The Lake Télé/Likouala-aux-Herbes site (Annex 10), located in the north of the country and in the center of the Congo equatorial basin, consists of 1,050,000 ha of inundated forest. The site does not benefit from any protection to date, but has been put forth as a RAMSAR (conservation for wetlands protection) site to be gazetted in 1992-1993. Although the human population around the site is low (population density around one inhabitant/km²), the improvement of transportation routes over the years has increased the accessibility to the area and hence the hunting of wildlife. Faced with increasing human pressures around the site, the establishment of a long-term management plan for the area, with the participation of the local populations, is to be undertaken as a priority.

4.44 The local populations are concentrated along the main rivers in the area (Sangha and Likouala-aux-Herbes) and are primarily fishermen and hunters. To date, few consultations have been undertaken with the local populations, although several groups of foreign researchers have been in the area. The gazettement of the site will be undertaken in conjunction with the Government's commitment to establish a RAMSAR site, thus consultations with local populations and gazettement of the site will occur over the first few years of project activities.

4.45 Activities in Lake Télé/Likouala-aux-Herbes will be executed by IUCN, in collaboration with the national RAMSAR working group and DFF. The project will:

- (a) produce the baseline data and documents for the gazettement the site;
- (b) establish a preliminary management plan based on local land use patterns and laws of the site;

- (c) define alternative activities for local populations, such as ecotourism and aquaculture;
- (d) develop educational and sensitization activities on natural resource management for local populations; and
- (e) solicit long-term external financing for the site.

Mt. Fouari, Mt. Nabemba-Garibenzam and Other Sites (\$345,000)

4.46 Inventories, reconnaissance missions and socio-economic studies will be carried out in Mt. Fouari, Mt. Nabemba-Garibenzam and other sites identified for possible later action. These actions will be carried out by DFF in conjunction with the national herbarium. The sites will be identified by DFF and approved by the Technical Steering Committee. External financial support will be solicited by the Project Management Unit to support long-term activities in these areas.

C. Project Organization and Management

1. Project Management

4.47 The project will be under the administrative tutelle of the Ministry of Economy, Finance and Planning until the Mid-Term Review (PY3), and will work in close collaboration with all the technical tutelles involved in conservation (Annex 11). After the Mid-Term Review, the project will be integrated into the permanent structure in charge of all conservation activities, under the tutelle of the Ministry in charge of protected areas.

4.48 Project Management Unit. The Project Management Unit will oversee all project-related activities (see corresponding responsibilities of the PMU outlined in para 4.05). In addition, it will be responsible for: (a) coordinating and monitoring all project-related conservation activities in its capacity as secretariat to the Technical Steering Committee (para 4.50); (b) serving as an interface between the project and external technical agencies/policy-making bodies, including the Peer Review Committee to be established under the project (para 4.51); and (c) preparing the Mid-Term Review (para 4.57). The establishment of this unit, to serve as interim management structure for the project under the tutelle of the Ministry of Economy, Finance and Planning, will be a condition of grant effectiveness (para 6.02 (b)). The Unit will cease to exist no later than six months after the Mid-Term Review, at which date the permanent structure is scheduled to take over. This structure will provide an autonomous administrative and financial status for the national system of reserves, and, within this system, for each reserve individually. Assurances were obtained at negotiations that the structure be created under terms and conditions acceptable to the Bank no later than six months after the Mid-Term Review (para 6.01 (d)). The Project Management (the PMU up to PY3 and the permanent structure thereafter) will be given the resources, through technical assistance and services contracts, to acquire the monitoring/evaluation, accounting/financial and technical capability required to deliver its duties.

4.49 The Project Management Unit will be under the tutelle of the Ministry of Economy, Finance and Planning, and will work in close collaboration with the directorate in charge of protected areas. It will be headed by a Project Coordinator, to be selected through a competitive selection process advertized in the local media. The Project Coordinator will be assisted by an internationally-recruited advisor for three years and two high level national staff. One of these staff will be in charge of Monitoring and Evaluation activities and national studies; the other will act as liaison officer with the directorate in charge of protected areas and will be in charge of technical follow-up of reserve-level activities. The

recruitment through competitive selection advertised in the local media of the Project Coordinator and the two high level national staff will be a condition of Grant effectiveness (para 6.02 (c)).

4.50 Technical Steering Committee. A Technical Steering Committee (TSC) to review work programs at the national level and for each reserve, including the environmental impact of proposed activities. The committee will be chaired by a representative from the Ministry in charge of protected areas, and will be composed of the representatives of all government ministries/departments involved (in particular DFF, the General Directorate of the Environment, etc.), all reserves directors and representatives of local communities, national NGOs and representatives from other conservation-related projects. It will meet every six months and will submit its recommendations to the Project Management Unit and the Bank supervision missions. This arrangement will be one part of the overall mechanism envisaged for the "rolling design" of the project. The mandate and membership of this committee will be agreed upon at negotiations; its creation will be a condition of Grant effectiveness (para 6.02 (d)).

4.51 Peer Review Committee. An external Peer Review Committee will be created to help monitor and evaluate the project. This committee will be composed of three international experts; an ecologist, an economist and an anthropologist/sociologist who will meet once a year in the Congo to review project activities. A condition of Grant effectiveness will be that the Committee be established and the three experts, with qualifications and experience acceptable to the Bank, be selected (para 6.02 (e)).

4.52 Capacity-Building of National Non-Government Organization. The project will provide support to national NGOs in the field of conservation to help build their capacity to implement conservation-related activities. This will be done through direct on-the-job training with the international NGOs associated with the project and through support from the Project Management Unit. This support will be used for:

- (a) developing the capacity of national NGOs to execute conservation-related activities including twinning local NGOs with international NGOs for the implementation of project activities at the reserve level;
- (b) providing conservation-oriented national NGOs access through the PMU to consultancies and the necessary facilities and equipment to develop conservation programs; and
- (c) promoting national NGOs through seminars, workshops, conferences and short-term training.

4.53 Contractual/Administrative Arrangements. In addition to the management and technical assistance contracts designed to support the Project Management Unit, the following main contracts/conventions will be established as a means to execute certain project components: (a) contracts with WCI and the University of Kyoto for activities in the Nouabalé-Ndoki site; (b) a contract with IUCN for activities in the Conkouati reserve and Lake Télé-Likouala site; (c) a convention with the directorate in charge of protected areas for activities in Dimonika-MAB, Léfini and additional sites; (d) a convention with CERVE for botanical activities; (e) a convention with CERGEC for the map database and GIS; (f) a contract with an independent audit firm; (g) a contract with MUCODEC; and (h) a contract with WWF-US for the legal and technical engineering of a trust-fund.

2. Project Monitoring and Evaluation (M&E) (Annex 2)

4.54 General Monitoring and Evaluation. The Project Management Unit will have primary responsibility for monitoring and evaluation of the project. It will be assisted for this task by the external Peer Review Committee and the Technical Steering Committee. One of the main objectives of M&E activities will be to assess the changes inside and outside the reserves. This will be done by conducting household surveys of local populations and surveys on specific themes for urban populations (e.g. bushmeat consumption) before implementation of reserve activities to establish baseline data on the population number, standard of living, economic and production activities, against which subsequent project effects could be measured. This will be carried out by the executing agency in the reserve and the PMU. Under the Monitoring and Evaluation component, the project will provide ten person-months of specialized short-term consultants to assist in the planning and implementation of proposed M&E activities. The concept underlying the performance criteria for project implementation at the national and the reserve level will be detailed during the first six months. It will be discussed during the Project Launch Seminar (May 1993), and submitted to the Technical Steering Committee at its first meeting (June 1993). It will also finance one vehicle at the central level, and the operating expenditures of the M&E service during the project period.

4.55 Biological Monitoring. Given the experimental nature of the planned conservation activities, the need to assess their effectiveness over time, and the subsequent opportunity to adapt activities to increase effectiveness within a long-term sustainable program, biological monitoring will be an essential component of the project. This monitoring will be carried out at the reserve level with support from the PMU, the national herbarium (CERVE) and the Geographic and Cartographic Production Center (CERGEC). Monitoring systems will be designed to allow for: (a) standardized data collection across the reserves as appropriate, for collation at the national level; and (b) site-specific data collection tailored to individual reserves and their specific management concerns and priorities.

4.56 Within the first six months of the project, the PMU will meet with reserve personnel to determine a strategy for establishing a program. Focal subjects will be identified (vulnerable, rare and/or high priority species or communities), and indicators which can be monitored. Mechanisms for baseline information collection and monitoring will be outlined, with a proposed implementation schedule. The strategy will take into consideration the following: (a) monitoring should be sustainable; feasible for implementation by in-country personnel, with little need after-project for continued outside technical or financial support; (b) analysis should be designed for ready interpretation and application to conservation and management; and (c) individual threats and management problems should be addressed in different reserve programs. On-ground monitoring will be combined with remote sensing activities.

4.57 Mid-Term Review. A Mid-Term Review will be undertaken in PY3 (June 30, 1995) to confirm or modify the orientation of project activities. An assurance to this effect was obtained at negotiations (para 6.01 (e)). No later than six months thereafter, the Trust Fund (para 4.15) and the new permanent structure in charge of all conservation activities (para 4.47) will be created. The Mid-Term Review will cover: (a) progress in the implementation of policy, regulatory and institutional change; (b) the status of management plans and activities in the reserves; (c) the integration of local populations into reserve activities and the creation of alternative activities; and (d) overall project performance. This will provide a platform for all interested parties to comment on the project's achievements and/or shortcomings. The Government's financial contribution to the project will also be discussed. If sufficient alternative economic activities were in place by this date to justify the Government's contribution, the Government will start contributing to the operating costs of the project on an increasing schedule until project

completion. If no or insufficient alternative activities were operational, then the project will continue to cover all or the greater part of operating costs.

D. Project Costs and Financing

1. Cost Estimates

4.58 Total project costs over the 1992-96 period, including all incremental capital and operating expenditures, are estimated at CFAF 3,750 million (US\$13.9 million), of which CFAF 2.3 billion (US\$ 8.2 million) or 59% in foreign exchange. These costs are net of tax, except for the special tax on fuel and lubricants, as the Government will waive all other taxes and duties. A condition of Grant effectiveness is the issuance by the Government of an appropriate tax exemption for this purpose (para 6.02 (f)).

4.59 Base costs were estimated at March 1992 prices using the prevailing rate of exchange of CFAF 280 to the U.S. dollar effective at that date. These costs were readjusted to reflect the situation prevailing at negotiations in October 1992 when the rate of exchange was CFAF 270 to the dollar. Physical contingencies of varying amounts were allowed on investment and operating costs items, except for long-term technical assistance, staff salaries and special items. The average physical contingency

amounts to 10% of base costs, with individual rates ranging from 5% up to 20%. Price contingencies were applied to base costs over the estimated implementation period of four years (1992/93 to 1995/96). Price contingencies on foreign exchange costs based on the Bank's projections of international price increases were included at an average of 3.5% from 1993/94 to 1995/96. Price contingencies on local costs are assumed the same as those applied to foreign expenditures, given that local inflation trends in Congo are likely to equate international inflation trends. Total price contingencies amount to about 4% of base costs.

4.60 Project costs are summarized below and details are given in Annex 12.

	<u>Project Cost Summary</u>							
	Local	Foreign	Total	Local	Foreign	Total	Foreign Exchange	Base Costs
	----CFAF Million----			-----US\$ Thousand----			-----%-----	
<u>National Level Components</u>								
1. Project Management	105	171	276	390	635	1,025	62	8
2. Consultancies and Studies	121	189	310	449	700	1,149	61	10
3. Trust Fund	32	49	81	117	183	300	61	2
4. Training (mgmt. unit)	125	159	284	464	590	1,054	56	9
5. CERVE (Herbarium)	36	88	124	133	327	460	71	4
6. CERGEC (Cartography Center)	10	82	92	37	303	340	89	3
7. Project Preparatory Advance	7	20	27	25	75	100	75	1
Subtotal	436	758	1,194	1,615	2,813	4,428	63	37
<u>Local Level Components</u>								
1. Nouabalé - Ndoki	396	476	872	1,467	1,765	3,232	55	27
2. Conkouati	227	299	526	840	1,107	1,947	57	16
3. Dimonika	112	129	240	416	476	892	53	7
4. Léfini	95	162	257	352	599	951	63	8
5. Lake Télé - Likouala	42	75	117	156	276	432	64	4
6. Others	31	50	81	114	186	300	62	2
Subtotal	903	1,191	2,094	3,345	4,409	7,754	57	64
<u>Total Baseline Costs</u>	<u>1,339</u>	<u>1,949</u>	<u>3,288</u>	<u>4,960</u>	<u>7,222</u>	<u>12,182</u>	<u>59</u>	<u>100</u>
1. Physical Contingencies	131	196	327	484	726	1,210	50	10
2. Price Contingencies	57	81	138	209	301	510	59	4
<u>Total Project Costs</u>	<u>1,527</u>	<u>2,226</u>	<u>3,753</u>	<u>5,653</u>	<u>8,249</u>	<u>13,902</u>	<u>59</u>	<u>114</u>

4.61 Project Preparation Advance. A US\$100,000 Project Preparation Advance (PPA) was granted to the Government of Congo to assist in project start-up. The PPA financed three preliminary studies on: (a) the development of alternative economic activities for local communities living around the project sites; (b) the identification of the key indicators for the monitoring and evaluation program; and (c) the establishment of the legal and financial structure of the trust fund. The PPA also funded field work for additional consultations with local populations, and assistance in procurement activities required for project start-up.

2. Financing

4.62 Project costs will be borne by the co-financiers in the following amounts and proportions:

	<u>Financing Plan</u>					<u>Total</u>
	<u>GEF</u>	<u>USAID</u>	<u>US Government Peace Corps</u>	<u>HPLF</u>	<u>Government of Congo</u>	
	----- US\$ Thousand -----					
<u>National Level Components</u>						
1. Project Management	1,020	-	-	-	189	1,209
2. Consultancies and Studies	1,413	-	-	-	-	1,413
3. Trust Fund	342	-	-	-	-	342
4. Training (PMU)	358	968	-	-	-	1,326
5. CERVE (Herbarium)	458	-	-	-	42	500
6. CERGEC (Cartography)	351	-	-	-	4	355
7. Project Preparatory Advance (PPA)	100	-	-	-	-	100
Subtotal	4,042	968	-	-	235	5,245
<u>Reserve Level Components</u>						
1. Nouabalé - Ndoki	1,878	1,227	139	-	388	3,632
2. Conkouati	1,858	-	134	-	163	2,155
3. Dimonika	737	-	139	-	105	981
4. Léfini	770	-	-	219	78	1,067
5. Lake Télé - Likouala	467	-	-	-	10	477
6. Others	345	-	-	-	-	345
Subtotal	6,055	1,227	412	219	744	8,657
<u>Total Project Costs</u>	<u>10,097</u>	<u>2,195</u>	<u>412</u>	<u>219</u>	<u>979</u>	<u>13,902</u>

4.63 The proposed GEF grant of about US\$10 million and the PPA of about US\$100,000 will finance approximately 73% of total project costs, including US\$4.7 million equivalent of local costs. It will bear the bulk of expenditures incurred at the central level (77%) except for training activities, and the following proportions of expenditures at the reserve level: (a) Nouabalé-Ndoki, 52%; (b) Conkouati, 86%; (c) Dimonika, 75%; (d) Léfini, 72%; and (e) Lake Télé-Likouala and others, 100%. It will finance the following proportions of project funding by disbursement category: (a) 100% of vehicles and short-term technical assistance; (b) a large fraction of the civil works (84%) and the resident technical assistance (59%); (c) a significant fraction (30%) of training expenditures; and (d) on a declining basis, 64% of incremental operating expenditures.

4.64 USAID financing (16%) will be applied to: (a) expenditures related to the Nouabalé-Ndoki site through the Congo Forest Conservation Project (CFC) which will finance a major part of these expenditures; and (b) staff training through the small country program of Assistance in Training, Leadership and Skills (ATLAS). The Peace Corps program will finance the stay of two volunteers for the duration of the project in each reserve of Nouabalé-Ndoki, Dimonika and Conkouati, for a total of about US\$410,000 or 3% of total project expenditures. The Howletts and Port Lympne Foundation will contribute to the Gorilla Reinsertion Program in the Léfini reserve for an amount of approximately US\$220,000 or 2% of total project costs. The Government will fund 7% of projects costs as a contribution to incremental operating expenditures on an increasing basis, both at the national level and the reserve level. In addition, re-deployment of staff to the field will be needed to meet the staff needs

of the reserves. Discussions continue with GTZ and oil companies for their possible participation in supplementary activities which will be coordinated with on-going project activities.

3. Procurement

4.65 The following arrangements have been established for goods and services to be procured under the project.

Procurement Arrangements 1/

<u>Item</u>	<u>ICB</u>	<u>LCB</u>	<u>Other</u>	<u>Parallel Financing 2/</u>	<u>Total</u>
----- US\$ Thousand -----					
1. <u>Civil Works</u>	-	480	780	-	1,260
	-	(330)	(720)	-	(1,050)
2. <u>Vehicles</u>	400	-	140	-	540
	(400)	-	(140)	-	(540)
3. <u>Goods and Equipment</u>	400	270	400	100	1,170
	(400)	(270)	(400)	-	(1,070)
4. <u>Technical Assistance</u>					
a. Short-Term	-	-	2,860	-	2,860
	-	-	(2,860)	-	(2,860)
b. Resident	-	-	1,360	960	2,320
	-	-	(1,360)	-	(1,360)
Subtotal	-	-	4,220	960	5,180
	-	-	(4,220)	-	(4,220)
5. <u>Training</u>	-	-	430	1,010	1,440
	-	-	(430)	-	(430)
6. <u>Incremental Operating Costs</u>					
a. Supplies and salaries 3/	-	-	2,276	-	2,276
	-	-	(1,648)	-	(1,648)
b. Others	-	-	1,936	-	1,936
	-	-	(1,040)	-	(1,040)
Subtotal	-	-	4,212	-	4,212
	-	-	(2,688)	-	(2,688)
7. <u>Project Preparatory Advance (PPA)</u>	-	-	100	-	100
	-	-	(100)	-	(100)
<u>Total</u>	<u>800</u>	<u>750</u>	<u>10,282</u>	<u>2,070</u>	<u>13,902</u>
	(800)	(600)	(8,698)	-	(10,098)

1/ Amounts in parentheses indicate GEF financing

2/ Parallel financing by other donors will be under their own procedures

3/ Salaries of incremental contractual and/or private personnel.

4.66 The generic term of Project Management is used in subsequent paragraphs to refer both to the Project Management Unit (PMU) up to PY3, and the permanent reserve management structure that should take over thereafter.

4.67 Civil Works. The infrastructure to be constructed under the project consists of small buildings, shelters, tracks, etc., which are widely scattered geographically in the five priority project sites. The related costs were estimated at the following amounts: (a) Nouabalé-Ndoki, about US\$600,000; (b) Conkouati, about US\$205,000; (c) Léfini, about US\$135,000; (d) Dimonika, about US\$120,000; and (e) Lake Télé-Likouala, about US\$50,000. On the sites of Nouabalé-Ndoki, Lake Télé-Likouala and Dimonika, the construction works will be undertaken through direct contracting with the executing agencies in these sites, i.e. two NGOs (World Conservation International (WCI) and the World Conservation Union (IUCN)), and the project management unit at Dimonika. These two NGOs and the PMU at Dimonika have demonstrated technical expertise and managerial capability to carry out the type of construction works envisaged, and are the only entities capable of actually undertaking them in the sites given their remoteness and isolation. The contracts will provide for prior submission of budgets, ex-ante evaluation of the reasonability of costs and judgement as to whether the NGO is having sufficient fund liquidity, and ex-post work verification by the Project Management. In the other sites, the works will be carried out by local contractors on the basis of LCB.

4.68 Vehicles, Goods and Equipment. Vehicles will be procured on the basis of ICB (one contract of about US\$400,000), except for a small number of them required immediately upon project start-up or to be renewed by PY3 and PY4 (up to an aggregate ceiling of US\$140,000). These latter will be procured by prudent shopping on the basis of comparison of price quotations solicited from at least three different suppliers. The category goods and equipment concerns technical and scientific equipment of a very diverse nature, office equipment and office furniture. These items will be procured through grouped bidding packages to allow for ICB and LCB; several such packages will be established for a total amount of about US\$400,000 under ICB and US\$270,000 under LCB. The remainder (about US\$400,000) concerns items for which bulking will not be feasible, specialized items available only from give suppliers and/or items that will be needed immediately upon project start-up. These items will be procured through prudent shopping on the basis of price quotations from at least three different suppliers.

4.69 Technical Assistance and Training. The following contracts will be passed for the provision of resident technical assistance: (a) Project Management Unit (three person-years); (b) Dimonika reserve (two person-years); (c) CERVE (one person-year, as part of a twinning arrangement with a specialized foreign institution); (d) CERGEC (eight person-months); (e) Conkouati reserve (three person-years); and (d) the Lake Télé site (14 person-months) (see Terms of Reference and details of contracts in Annex 5). This assistance will be procured following the Bank guidelines for the recruitment of consultants, on the basis of the establishment of a short-list of qualified firms/institutions -- except for the Conkouati and Lake Télé contracts which will be awarded to IUCN. This NGO has been closely associated with the inventory and survey work undertaken in the Conkouati reserve in recent years. The award of such a contract to IUCN is therefore necessary to ensure continuity of work in this reserve. Short-term technical assistance will be very specialized and encompass a wide spectrum of expertise. There will therefore be a need to retain flexibility for individual hiring of consultants with given expertise. As a result, a significant part of the short-term consultants in this category -- for an aggregate value will not exceeding US\$250,000 -- will be hired directly based on annual work programs established by the Project Management and the reserves, and approved by the Bank. The remainder will either will be included in the contracts for long-term technical assistance, or be procured as part of specific services contracts, e.g. for financial and accounting support to the PMU and the reserves, and for legal and institutional support notably to establish the Trust Fund; also as part of the contract with WCI which will be the NGO in charge of executing the Nouabalé-Ndoki component (this NGO has been closely associated with the inventory and survey work undertaken to date in this site and has demonstrated technical expertise and managerial capability to provide the required short-term consultancies) (see details in Annex 5, Section IV). Training activities will be procured following the same procedures as short-term

consultants. The greater part -- for an aggregate value not exceeding US\$430,000 -- will be procured directly based on work programs established yearly by the Project Management; the remainder will be included in the long-term technical assistance contracts. In all cases, contracts for short-term consultants and training activities exceeding US\$125,000 will be procured following the same procedures as those for resident technical assistance, i.e. short-list competitive bidding. To the extent possible, procurement of short-term consultants will be grouped to allow for this procedure.

4.70 Operating Costs. Operating costs corresponding to incremental salaries/travel allowances, vehicle/equipment operation and maintenance, and office supplies will be financed by the GEF following government procedures which have been found acceptable. The GEF contribution will be on a declining basis, at the following rates: (a) for the fuel and lubricants category, 60% up to December 31, 1995 and 30% thereafter; and (b) for other operating expenditures, 100% up to December 31, 1995 and 50% thereafter. The remainder will be covered by the National Budget directly, by special funds (e.g. the existing Forestry Fund and the Trust Fund to be created under the project) and by resources generated at the reserve level through payment of entrance fees, hunting permits, guide services, etc.

4.71 General Rules and Review. The LCB to be followed will include local advertising, public bid opening, establishment of clear evaluation criteria, and award to the lowest-evaluated bidder. Foreign bidders will not be excluded. The aggregate value for LCB and prudent shopping will be specified in the Grant Agreement. All bidding packages for GEF-financed goods and services estimated to cost more than US\$130,000 equivalent will require prior approval by the Bank as will the final award of the related contracts. These packages will represent about 80% of the total value of goods and services financed by the GEF grant. Prior approval will also be required for the procurement of computer equipment and the recruitment of all technical assistance and training, regardless of the related contract amounts or the source of financing. The other contracts will be subject to random review by the Bank after contract award.

4. Disbursements and Revolving Funds

4.72 Disbursements. Disbursement of the GEF grant of about US\$10 million, is shown over a five-year period starting January 1993 (Annex 13). Project disbursements follow the Bank standard profile for the West and Central Africa Region agricultural/environmental projects, adjusted to take into account the expected shorter duration of the project (four years instead of the standard five years). The proceeds of the GEF grant will be disbursed as follows:

Disbursement of GET Grant

<u>Category</u>	<u>US\$ '000 Equivalent</u>	<u>% of Expendit. To be Financed</u>
1. Civil Works	960	100%
2. Vehicles, Goods and Equipment	1,550	100%
3. Technical Assist. and Training	3,770	100%
4. Training ^{1/}	430	100%
5. Incremental Operating Costs		
(a) Fuel and Lubricants	360	60% up to Dec. 31, 1995 30% thereafter
(b) Other	2,060	100% up to December 31, 1995 50% thereafter
6. Unallocated	870	
Total ^{2/}	<u>10,000</u>	

^{1/} As part of activities both of the PMU and other executing agencies.

^{2/} Total amount of GET Grant, excluding the US\$100,000 GEF Project Preparation Advance (PPA).

4.73 Disbursements will be fully documented. However, operating costs financed under category 4 and contracts valued at less than US\$ 25,000 equivalent will be allowed on the basis of Statements of Expenditure (SOEs). The supporting documentation will be retained by the Government and made available for ex-post inspection by Bank missions. The yearly financial statements will be submitted to the Bank before June 30 of each fiscal year. Provision has been made under the project for the necessary technical assistance to design and set up, within the Project Management and at each reserve, the accounting systems required to efficiently maintain the project accounts.

4.74 Revolving Funds. All expenditures above US\$ 25,000 equivalent will be eligible for direct payments by IBRD. To facilitate project implementation and to ensure that funds are available when needed, the Government will open a Special Account in US dollars at a commercial bank on terms and conditions acceptable to the Bank. IBRD will make an initial deposit of US\$ 250,000 into the Special Account. The account will be used to finance local and foreign costs of eligible expenditures. The Project Coordinator will be authorized to decide on procurement matters and effect payments for goods and services to be paid out of the special account up to an amount of US\$125,000; above this amount the Minister of Economy, Finance and Planning or his delegate will have to sign. An assurance to this effect was obtained at negotiations (para 6.01 (f)). The Bank will replenish this account every month upon receipt of satisfactory evidence of disbursements for allowable expenditures. Should any disbursements be made from these accounts for items not eligible, the Government will be required to deposit the corresponding amount into the account. Disbursements against this account will be monitored through withdrawal requests which will be accompanied by monthly statements giving details of all withdrawals and deposits, as well as the opening and closing balances.

4.75 To ensure timely disbursement of the Government's counterpart funding, the Government will open a local currency account (the "project account") in a local bank. As a condition of effectiveness, the Government will deposit on the project account an amount of CFAF 5 million corresponding to taxes on fuel and lubricants to be used over the first six months of project implementation. Subsequently, requirements in local currency to be met by the Government will be established yearly and will form the basis upon which the project currency account will be replenished. The Government will deposit its share of funding on the project account quarterly and in advance on the

basis of disbursement forecasts for the following three months. The Project Coordinator will be authorized to decide on procurement matters and effect payment for goods and services paid out of the project account up to an amount of CFAF 10 million. Beyond this amount the Minister of Economy, Planning and Finance or his delegate will have to sign. Assurances on the above were obtained at negotiations (para 6.01 (g)).

5. Financial Management, Accounting and Audit Requirements

4.76 The Project Management will be responsible for the preparation of annual project accounts (para 4.05 (a)). It will assist the individual reserves in an advisory capacity for all accounting, administrative and financial matters related to project financing. Because of the shortage of competence in the Congolese administration in the field of finance and accounting, steps will be taken to secure consultancy services from a qualified private firm to: (a) design and implement a computerized accounting (general and cost accounting) and budgetary systems; and (b) train staff in the use of this system.

4.77 Financial Procedures and Systems. The Project Management will assume responsibility for preparing and consolidating all project accounts, preparing and monitoring the overall project budget, analyzing the variances, ensuring that payments to contractors for executing project components are in compliance with project objectives and budget, and preparing disbursement applications and records. It will maintain accounting records for project activities, consistent with sound accounting practices which will reflect fairly, in accordance with internationally accepted accounting principles, the overall financial situation of the project. All accounting and financial operations (including the project annual budget) will be fully computerized.

4.78 Audit. The project financial statements and Statements of Expenditures (SOEs) will be audited annually in accordance with internationally accepted auditing standards by a qualified independent audit firm acceptable to the Bank. Audited accounts and the audit reports (Short Form Report with all required information, the Special Report on the utilization of the GEF grant, and the Management Letter) will be submitted to the Bank within six months of the end of each fiscal year. The audit will include specific verification of the legitimacy of all expenditures and an opinion on the reliability of the SOE procedures, and utilization of goods and services financed under the project. The auditors will also provide a Long Form Report, including detailed comments on the financial, general and cost accounting systems, and an assessment of the operational efficiency of the project. Assurances to this effect were obtained at negotiations (para 6.01 (h)).

4.79 Reporting. The Project Management will be responsible for monitoring project implementation along the agreed implementation schedule (Annex 14), including physical and institutional objectives. It will prepare semi-annual progress reports to be submitted to the Government and the Bank, following review by the Technical Steering Committee (para 4.50). These reports, based on mandatory semi-annual supervision of each component, will assess progress (physical, financial, budgetary and institutional) against agreed annual programs of operations and targets, and include a review of procurement activities. They will serve as a basis for Bank supervision missions (see supervision schedule in Annex 15). The Project Management will communicate to the Bank, before October 31 of each year, the project's program of operations and detailed annual training program for the following year. The work plan for the first year will be agreed at negotiations. The Project Management will also be responsible to prepare the Mid-Term Review in PY3 and a Project Completion Report within six months of the project completion date. At negotiations, the project implementation schedule was agreed and assurances on the above were obtained (para 6.01 (i)).

V. BENEFITS, ENVIRONMENTAL IMPACT AND RISKS

A. Benefits

5.01 The main benefits to be derived from the project will be the conservation of unique ecosystems, with attendant protection of biodiversity of global value. The project will give the Government the scientific and management cognizance to undertake further conservation actions. It will also help develop an appropriate regulatory and institutional framework, and establish a national system of reserves. This will furnish to the Government the capacity and tools to design and implement a coherent conservation policy.

B. Environmental Impact

5.02 The project will greatly enhance the conservation of the country's biodiversity, thus having an overall positive environmental impact. The project will also enhance the training and education of Congolese in matters concerning the environment, thereby increasing the Government's awareness of environmental problems and capacity to manage the country's natural resources. The strengthening of government institutions associated with conservation matters will also generate a positive environmental impact. The environmental analysis undertaken as part of project preparation (Annex 16), stated that the project will have an overall positive impact on the conservation of Congo's biodiversity. The analysis pointed out that, in the absence of the project, the biodiversity of the Congo will continue to deteriorate. The main issues raised in the environmental analysis concern the sustainability of the project after project funding, the inclusion of other areas outside the GEF sites, and the allowance for subsistence hunting and alternative activities for local populations. The issue of sustainability is addressed in the project mainly by the creation of a trust fund. In addition, the creation of alternative economic activities for local populations and the involvement of international NGOs with a long-term interest in the area should aid the sustainability of the project. Additional sites for possible inclusion at a later date will be identified by the PMU; inventories and surveys will be conducted in these sites. Management plans will only be developed in these areas after the permanent reserve management capacity is able to successfully manage existing ones. To ensure environmental soundness in all project activities, all management plans and project activities will be subjected to an independent environmental assessment when necessary. The TSC will review all project activities and will decide on the necessary environmental assessments.

C. Risks

5.03 The main risks associated with project implementation are largely outside project control. They concern: (a) the relative political instability of the country which is presently undergoing a movement towards democracy; and (b) the potential conflict with other activities, such as infrastructure building, logging, oil exploitation and agricultural development in the reserve areas, that will aim at short term economic development. Concerning the political risk, despite the volatility of the present political situation, the Government has continuously expressed commitment for conservation-oriented activities. This has been reaffirmed during the National Conference in 1991. The decision to adopt a comprehensive Law of the Environment in March 1991, and very recently to create a new Ministry of Environment, Tourism and Leisure in charge of the management and protection of natural sites are testimony of the Government's commitment to protecting biodiversity and augurs well for the final institutional arrangements to be made in the area of conservation of natural resources. The issue of potential conflict for land use has already been partially addressed by the Government by agreeing to rapidly gazette the Nouabalé-Ndoki site, and therefore prohibit logging in this area which is one of the last unassigned

forestry concessions. This represents a sign that the Government will accept the additional gazettement that may be required and intends to enforce current reserve regulations.

5.04 Other implementation risks concern: (a) the lack of coordination of field activities, which may lead to a number of isolated projects with their own rationale, rather than a coherent set of actions consistent with the national strategy; (b) the lack of participation by local populations in management and anti-poaching efforts in the reserves, preempting long-term sustainability; and (c) the weak financial situation of the Government that could be an obstacle to mobilizing funds for long-term conservation of protected areas. These risks will be addressed under the project by: (a) developing an appropriate regulatory and institutional framework at central level; assistance for institution-building (in particular in the field of monitoring and supervision) to effectively apply regulations and render the national institutions operational which will ensure proper coordination of field activities; (b) ensuring local participation which is key to maintaining any long-term management system; thus support will go to establishing proper dialogue with local people and helping fund pilot projects which will offset the pressure in the reserves; and (c) the resources generated locally by the reserves and the establishment of the trust fund should contribute substantially to cover recurrent costs both in the reserves and at the central level. The trust fund will hope to attract other donor financing outside of the GEF.

VI. ASSURANCES, CONDITIONS AND RECOMMENDATION

6.01 Assurances Obtained at Negotiations

- (a) the Government will, no later than six months following the Mid-Term Review, under terms and conditions acceptable to the Bank and following adequate public consultations (i) enact a new legislation concerning protected areas, (ii) adopt the permanent structure to take charge of all conservation activities nationally (para 6.01(b)), and (iii) give appropriate legal statutes to all five priority project sites; these statutes should make provision for the financial and administrative autonomy of the local structures in charge of these sites (in particular authority to generate revenues and recruit staff independently), and include appropriate arrangements to prohibit all economic activities in their core zones and allow the pursuit of alternative activities, such as ecotourism, subsistence hunting and safaris in their buffer zones; the Government will further, by June 30, 1994, have submitted a plan to review the general legislation concerning protected areas and taken the preliminary steps to gazette the project sites (para 4.02);
- (b) Government staff with adequate skill mix will be deployed gradually in required numbers in all five priority project sites, and Government will start deployment along agreed individual schedules by project sites by June 30, 1993; full staff deployment should be completed no later than six months following the Mid-Term Review (para 4.02);
- (c) The Trust Fund will be established under terms and conditions acceptable to the Bank no later than six months following the date of the Mid-Term Review (para 4.15);
- (d) the Government will, no later than six months after the Mid-Term Review, adopt a permanent structure to take charge of all conservation activities nationally; this structure should be given an autonomous administrative and financial status providing in particular for the possibility to generate revenues and recruit staff independently (para 4.48);

- (e) the Government will organize a Mid-Term Review no later than June 30, 1995 (para 4.57);
- (f) the Project Coordinator will be authorized to decide on procurement matters and effect payments for goods and services to be paid out of the Special Account, up to an amount of US\$125,000 (para 4.71);
- (g) the Government will open a Project Account in a local bank no later than three months following the date of the Mid-Term Review; this account will be used to channel the Government counterpart funding as of PY3, which will be disbursed quarterly and in advance; the Project Coordinator will be authorized to decide on procurement matters and effect on payments for goods and services paid out of this account up to an amount of CFAF 10 million (para 4.75);
- (h) the project financial statements will be audited yearly in accordance with internationally accepted auditing standards by a qualified independent audit firm acceptable to the Bank (para 4.78); and
- (i) the Project Management will be responsible for preparing (i) semi-annual progress reports; (ii) the Mid-Term Review report; and (iii) the Project Completion Report (para 4.79).

6.02 Conditions of Grant Effectiveness

As conditions of Grant effectiveness, the Government will:

- (a) stop the issuance of new logging concessions in the project priority sites (para 4.02);
- (b) establish a Project Management Unit, as interim management structure for the project, under the tutelle of the Ministry of Economy, Finance and Planning; the Unit will cease to exist no later than six months after the Mid-Term Review, at which date the permanent structure is scheduled to take over (para 4.48);
- (c) select a Project Coordinator and two high level staff for the Project Management Unit, with qualifications and experience acceptable to the Bank, through competitive selection advertized in the local media (para 4.49);
- (d) establish a Technical Steering Committee with a mandate and membership acceptable to the Bank, to be chaired by the Minister in charge of protected areas (para 4.50);
- (e) establish a Peer Review Committee, and select the three international experts, with qualifications and experience acceptable to the Bank, whom it will comprise (para 4.51);
- (f) issue an appropriate legal instrument to grant full tax exemption to all project-related activities, subject to existing national laws and regulations (para 4.58); and
- (g) deposit on the project account the amount of CFAF 5 million corresponding to taxes on fuel and lubricants to be used during the first six months of project implementation (para 4.75).

6.03 Recommendation. With the above agreements, the project will be eligible for a GEF grant of US\$10 million equivalent to the Government of Congo.

REPUBLIC OF CONGO
WILDLANDS PROTECTION AND MANAGEMENT PROJECT

Project Management Unit

I. Personnel

The Project Management Unit (PMU) would oversee all project-related activities and would coordinate and manage project-related activities at the national level. The PMU would be composed of:

- (a) a national coordinator, to be selected through competitive selection process advertized in the local media;
- (b) a national expert in charge of the monitoring and evaluation component and the central-level studies;
- (c) a national expert in charge of the technical follow-up of reserve-level activities; and
- (d) an internationally-recruited expert advisor to the national coordinator. The advisor to the national coordinator would: (a) assist in the supervision and coordination of project activities; (b) help prepare contracts and conventions; (c) assist in the Monitoring and Evaluation of the project; and (d) liaise with the research community. If the expert were Congolese, he/she would have to come from outside the ministries implicated in the project. The qualifications required would be minimum of ten years of field experience in Africa in general project planning and management, with qualifications in environmental management and socio-economic development. The advisor would also need a good command of computers and complete fluency in French.

II. Studies and Consultancies

The Project Management Unit would provide specialized consultancies and studies with the help of national and international experts, for the following purposes:

- (a) financial and accounting management of project activities;
- (b) development of a coherent regulatory and institutional framework for all conservation activities, which would form the basis of a permanent structure;
- (c) study of the bushmeat problem at the central level (i.e. urban consumption of bushmeat and urban markets for bushmeat);
- (d) development of a protocol for surveys of local populations and supervision of the execution of the surveys at the reserve level; and
- (e) development of a central level strategy for anti-poaching to be implemented at the reserve level.

In addition to the above studies/consultancies, the Project Management Unit would:

- (a) conduct the project Monitoring and Evaluation activities;
- (b) oversee the legal and technical engineering of the trust fund (see Annex 4);
- (c) help national NGOs capacity-build; and
- (d) promote sub-regional cooperation in the field of conservation.

Project Management Unit (Ct'd)

III. Capacity-building of national Non-Government Organizations

The project would provide support to national NGOs in the field of conservation to help build their capacity to implement conservation-related activities. This would be done through direct on-the-job training with the international NGOs associated with the project and through support from the Project Management Unit. This support would be used for:

- (a) developing the capacity of national NGOs to execute conservation-related activities including twinning local NGOs with international NGOs for the implementation of project activities at the reserve level;
- (b) providing conservation-oriented national NGOs access through the PMU to some of the necessary facilities and equipment to develop conservation programs; and
- (c) promoting national NGOs through seminars, workshops, conferences and short-term training.

REPUBLIC OF CONGO

CONGO WILDLANDS PROTECTION AND MANAGEMENT PROJECT

Monitoring and Evaluation (M&E) Program

I. General Considerations

A. Goals and Scope of M&E Activities

In view of the central project goal to document knowledge and experience gained in project implementation under the "rolling design" strategy adopted, M&E activities would be an integral part of the project implementation process. The pilot nature of some project components (including biological monitoring) will also require effective M&E capability to assure reliable measurement of project impact and results. Beyond this immediate objective, the project will aim more broadly at testing M&E procedures suitable for biodiversity conservation projects.

M&E activities will focus on three aspects of project implementation:

- institutional development, as the project represents a major vehicle to build coherent national capacity to manage conservation activities;
- biological composition, ecological conditions and status of key biological elements, as tracking these parameters can contribute to the fundamental knowledge base of tropical conservation practice; and
- socio-economic conditions and community participation issues, as these concern the prospects for local sustainability of conservation initiatives.

Within each subject area the M&E program will define indicators to be monitored, integrate existing information and define new data gathering requirements to measure relevant baseline parameters. Where appropriate, activities will identify control interventions and design appropriate sampling schemes, identify and analyze trends, and recommend management actions.

B. Role of Central vs. Local Structures

M&E activities will be executed within each reserve by the local management team with technical support, periodic review and coordination functions supplied at the central level by the PMU in collaboration with the National Herbarium (CERVE), the Geographic and Cartographic Center (CERGEC), utilizing specialized short-term technical consultations as needed.

(a) Project Management Unit

The PMU will assist local site authorities to define requirements for baseline studies, identify key "indicators" to be monitored and develop an appropriate schedule and format for reporting of M&E results. The PMU will commission special studies (e.g. of bushmeat marketing) as necessary and facilitate technical assistance

III.

The PMU will develop appropriate terms of reference for the Technical Steering Committee and ensure that this entity has an appropriate role in the definition and review of M&E programs and reports.

The project management staff at the PMU will identify key activities that should receive detailed attention from the Peer Review Committee during a given review cycle or mission so that cumulative knowledge and documentation of project methods and achievements can be achieved in addition to information on overall performance.

(b) Peer Review Committee

The purpose of the external Peer Review Committee to be established under the project is to provide periodic feedback to the PMU, the Government and the Bank on overall performance and progress toward achieving project objectives. The committee will use the data produced under the M&E program and report findings on an annual basis in a concise format addressing:

- current status with regard to proposed project objectives and activities;
- problems and delays in implementation and their proximate/ultimate causes;
- recommendations for mid-course alterations;
- analysis of implications of delays or proposed changes in specific activities with regard to overall project implementation schedules and performance; and
- issues and actions that require attention by Bank, Government or other program management staff to improve project performance.

(c) Technical Steering Committee

The Technical Steering Committee (TSC) represents the principal public forum for periodic review and evaluation of project performance. Comprised of membership from the DFF, the collaborating agencies, other relevant ministries, participating NGOs and the local site implementing units, the TSC will participate in the M&E process through regular (at least semi-annual) review of performance reports prepared by the PMU and special studies commissioned under the project. Prior to the project mid-term review, the TSC will review project performance against established goals for each of the site components. The TSC will review annual reports of the Peer Review Committee and address needs for mid course changes recommended by the Peer Reviewers or the PMU. The TSC in its role as an advisory body to the PMU and the site management authorities can recommend specific issues to be addressed by the M&E unit within PMU and its collaborating agencies and review results of special studies commissioned by the PMU to address such issues.

(d) Local level units

The local site authorities are the principal agents responsible for monitoring and evaluation of biological and ecological parameters relevant to project execution. They are also the units primarily responsible for basic data collection and documentation of on the ground project performance in the areas of: physical establishment of the protected areas, enforcement activities, community participation issues, and project related development enterprises. With participation of the PMU and review by the TSC, the local units will define the indicators to be monitored during project execution and agree on a reporting schedule and format acceptable to

the PMU. As required, the local site authorities will cooperate with the Peer Review Committee and the PMU in providing information on basic M&E activities undertaken at each of the project sites. Guidelines for relevant general issues to track in site level project execution are given below in section II. Some critical site-specific issues to be addressed by the local site monitoring program during the period preceding the project mid-term review are given in section IV.

II. Categories of M&E Activities

Tracking project performance requires a clear definition of meaningful and measurable criteria against which progress toward achievement of general objectives can be assessed. Below are listed various categories of activities that pertain to conservation program design, establishment and management and some suggested "milestones" by which progress can be assessed.

A. Legal/Institutional Framework and Capacity Building

(a) Legal and Institutional Framework

The legal and institutional framework will be critical to the development of a permanent structure in charge of all conservation activities. During the initial phases of the project the following indicators will be used to track project performance in the following areas:

- progress toward establishing the appropriate legal framework for creation and management of protected areas, regulation of hunting or game harvesting, and appropriate enabling legislation to create the institutional structures needed for long term effective management;
- participation in appropriate international conventions (e.g. becoming a party to the "Ramsar" Convention concerning maintenance and wise use of wetland resources);
- progress in drafting and enacting appropriate legal instruments (laws, decrees, declarations, bylaws) to gazette the principal project sites;
- collection of adequate information (legal and technical) to prepare the necessary legal instruments (e.g. formal boundary descriptions, land tenure assessments);
- establishment of review and advisory boards;
- preparation and approval of management plans;
- appointment and arrival in post of the key personnel (e.g. Project Coordinator); and
- preparation and approval of annual workplans, and fulfillment of reporting requirements.

(b) Capacity Building

Monitoring project performance with respect to meeting capacity building goals, will require

tracking progress in three general areas: formal or professional education; informal and local level training; and public awareness programs.

Indicators for PY1 will include tracking milestones of progress such as:

- identification of formal and informal training needs;
- development of training program and schedule;
- selection of candidates;
- identification of counterpart staff or constituents;
- measure of impact of on-going and new educational activities on attitudes and perceptions of target constituents; and
- public participation in awareness programs and the effect on media coverage of conservation related enterprises.

B. Biological Monitoring and Protected Area Management

(a) General Biological Features

The overriding question to be answered is if the project activities promote improved conservation of biological diversity on the national scale and at the project sites. One of the principal objectives of baseline studies is to define and delineate boundaries of core zones, buffer zones and other land management units within and adjacent to the project sites that will be effective for long term management and conservation of biological diversity.

Key activities to be addressed and monitored to track progress toward this goal include:

- the assessment of status and distribution of target fauna and flora;
- identification of fragile ecosystems and special features;
- mapping of land cover and habitat distribution (Beta diversity);
- execution of faunal and floral inventories (Alpha diversity); and
- measurement of hydrological cycles and climatic parameters as these relate to ecological stability of the sites.

(b) Protected Area Management

(i) Core conservation areas

Achievements concerning management of these areas during the initial project phase will be monitored by evaluating progress toward:

- definition and delineation of core areas or wildlife sanctuaries and buffer zones and other "special use" zones are identified and approved;
- the development and execution of appropriate management plans;
- control of illegal hunting, as measured by the number of snares set, capture rate, or other signs of poaching or illegal activities;
- the frequency and effectiveness of patrolling (i.e. have sufficient staff been recruited and trained to protect core areas); and
- bringing forested tracts adjacent to core areas under appropriate management to allow for habitat continuity and to serve as dispersal sinks for wildlife populations resident in the core areas.

(ii) multiple-use areas

- For the management of these areas during the initial phase, the following will be monitored by tracking whether:
 - external boundary descriptions are prepared and approved and any proposed adjustments to existing boundaries have been identified and approved;
 - subsistence hunting is being carefully regulated and poaching controlled;
 - patrolling by locals recruited by the project has increased protection of wildland resources of buffer areas;
 - collection of firewood has remained at sustainable levels in buffer areas; and
 - the pace at which the regeneration of primary forest tree species occurred in logged areas in or adjacent to protected areas is adequate or not.

C. Socio-economic Conditions and Community Participation

(a) Socio-economic Conditions

(i) Hunting and Economic Opportunity

Hunting remains the preeminent male activity in the rural areas of Congo. The activity is basic to local subsistence and cash income. The reserve areas, if divided into "core" and "buffer" areas, with some hunting allowed for local populations in the latter, will have to find reasonable alternatives for men offering comparable revenues and community incentives.

Monitoring activities should include:

- following the level of bushmeat production by species and quantity for a small, representative sample in some communities in or around the reserves. Site staff will handle data collection and at least some preliminary analysis;

- tracking changes in consumption patterns of bushmeat in the urban centers, especially the viability of any proposed substitutes; and
- evaluating the success of management and protection measures through examples of infractions, fines, seizures and other evidence (such as traps and snares discovered).

(ii) Gender differences in economic activity

Rural activities are organized according to a sexual -- and in some cases a generational -- division of labor. Women produce the staple crops, such as manioc, taro and maize. They also bring in regular cash revenues for the household through sale of products such as processed manioc, raphia palm wine, palm kernels and small game snared in garden traps. Preliminary studies and subsequent monitoring will have to establish the potential significance of local perceptions of nature and implications of gender differences for the actual adoption of "new activities". Women are typically responsible for the regular, intensive labor in some forms of agriculture and animal husbandry, as well as in food processing; men specialize in activities including hunting, fishing, heavy periodic labor (like forest clearing), managing trees for cash cropping, and generating revenues from outside labor opportunities.

Monitoring activities should include:

- resource generating activities specifically tailored to women, such as improved conditions for production, processing and marketing staple crops for the household and market; and
- resource generating activities specifically tailored to men, such as "new" cash crops and sustainable forms of hunting.

N.B.: If appropriate, some attention could be given to generational differences in activities. For instance, younger men may be turning to indiscriminate poaching for bushmeat merchants as an alternative to currently unavailable, periodic wage labor.

(iii) Perspectives for "alternative economic activities"

In general, rural productive activities in the proposed sites remain extensive, based on mixes of shifting agriculture, animal husbandry, hunting and gathering. The success of the range of "alternative activities" sponsored by the project will depend on means of breaking contemporary production constraints. Promoting "new" cash crops will depend on current markets, handling and transport capacities. The cluster of issues relating to transport problems appear crucial to prospects for future economic alternatives in the project sites. Infrastructure is poor, and not managed to encourage overland transport by road. Men, therefore, "rationally" focus on high value for low weight/bulk production of goods such as gold, bushmeat, fish and live animals. Otherwise they move themselves opportunistically as (seasonal) labor to urban marketplaces and to rural worksites (such as lumber concessions and construction sites). Women engage in localized food production and transformation, and small-scale commercialization of goods such as poultry, processed cassava and palm-wine.

Points that should be monitored for alternative activities include:

- local changes in the techniques, varieties and/or quantities produced in relation to new (and old) activities; and
- applications of applied research to local conditions and dissemination of technology for activities including sustainable management of capture fisheries, small livestock rearing, innovative forms of tropical animal husbandry, game ranching and aquaculture.

(b) Community Participation

(i) "Traditional" community land tenure and use rights

Given official government "suppression" of communal land law, the project will have to effectively reformatize and reinstate the power of local tenure and usufruct rights as an integral part of the management program. The project should monitor the following:

- the recognition of local systems of regulation by the government and management authorities, including land use (for agriculture, etc.), arboriculture, hunting, fishing and gathering;
- statutes, reserve regulations and minutes of committee or local meetings will serve as written evidence of the "relegitimization" of community powers;
- the content of local regulations, covering hunting, fishing and gathering, including the exclusion or limitation of locations, periodicity, species, techniques, time of day (diurnal or nocturnal), immature or pregnant animals, certain plants or plant parts, etc.; and
- disputes or local litigation indicating the level of respect and enforcement of regulations by the communities.

(ii) Stimulating and sustaining community support and participation in wildlands management

Given the significant contemporary and potential future impact of the local communities on the sites, their role in management planning and implementation will be absolutely critical. For instance, ineffective incorporation of the communities in and around the Dimonika Reserve has already resulted in considerable local animosity without changing the heavy pressures on the resource. The community members will need to play roles on group and individualized bases in the regulation, surveillance and enforcement of sustainable resource use.

The program should monitor the following areas pertinent to community support and participation:

- evidence of community roles in enforcement of protection measures, such as banning certain methods of hunting; and
- periodic canvassing of community members to determine the level of satisfaction with the combination of management and local development efforts.

(iii) Information, education, negotiation and exchange of ideas

Indigenous knowledge and beliefs about natural resources are valuable for conceiving of and justifying measures. For instance, hunters have notions about the impact of hunting immature, female and pregnant animals on productivity. The following areas should be monitored:

- reserve reports regarding the design and operation of the dialogue with the local community members, including message content, community feedback, methodologies and periodicity;
- meeting minutes and changes in management based on negotiated revisions of program short-term or intermediate objectives; and
- periodic field verification of the information flows within the communities.

III. Work Program at Central Level

A. PMU Work Program

Below is a partial list of key activities which need to be carried out under the responsibility of the PME during the first year (PY1) of project implementation to get the major components operational:

- creation of the administrative structure of the PMU and the project site authorities;
- establishment of the Technical Steering Committee with appropriate terms of reference and membership representing national and site specific implementing institutions;
- establishment of the Peer Review Committee with appropriate terms of reference and membership acceptable to the World Bank;
- development of a framework and tentative timetable for undertaking necessary legislative review toward gazettelement or revision of legislation concerning gazettelement of project sites;
- definition of training and institutional development goals and schedules, including needs for workshops, technical and advanced training and on-the-job coaching from the expatriate technical assistance;
- formulation of a strategy for promoting public awareness of conservation issues which takes advantage of special and unique features of the individual site programs;
- formulation of a plan for integration of the projects conservation goals into the framework of the National Environmental Action Plan currently being prepared; and
- definition of guidelines for community participation in site management and for development of program to promote alternative economic activities in local communities within and adjacent to project sites.

B. Project Launch Workshop

Once the project management staff are in post and work plans have been drafted, a Project Launch Workshop will be organized to bring together staff from the PMU, collaborating agencies such as the National Geographic and Cartographic Center (CERGEC), Mutuelles Congolaises d'Epargne et de Cr dit (MUCODEC), the National Herbarium (CERVE), and the site specific management units, to discuss the detailed work program for PY1. The M&E program will figure as a major items on the workshop agenda. The timing for such a workshop will depend on the schedule of recruitment and deployment of key personnel, and progress in preparation of workplans with clearly defined measurable goals and objectives. An appropriate target date for the workshop will be May 1993.

Output of the workshop will include:

- definition of baseline studies and indicators for measuring project achievements with regard to biodiversity related research, protected areas design and establishment, legal and institutional issues and community involvement;
- definition and adoption of a M&E schedule for the period preceding the mid-term project review;

- articulation of monitoring and evaluation activities and responsibilities between the national and individual site component levels;
- agreement on reporting formats and mechanisms among the representatives of the PMU, the collaborating agencies, and the site-specific project implementation units; and
- delineation of the role and responsibilities of the Technical Committee and the Peer Review Committee with regard to M&E activities.

IV. Orientations for Work Program at Reserve Level

Within most protected areas, few data exist for many of the variables which could be used as indicators of successful conservation action. During PY1, major emphasis will have to be placed on data collection in order to assess the effectiveness of the project activities in years to come. Detailed goals and indicators will be defined based on a dialogue between the local site management authorities, the PMU and the national institutes during the Project Launch Workshop scheduled within the first six months of project implementation.

Some preliminary aspects of project performance which have been identified for monitoring progress at each of the project sites during the period preceding the Mid-Term Review are given below.

A. Nouabalé-Ndoki

- status of poaching, particularly along international borders;
- track record of counterpart training;
- demographics and movement-migration patterns of primates;
- attitudes of local peoples toward the reserve;
- legal boundary description, demarcation and gazettement of the reserve including buffer zones or multiple-use areas; and
- progress on baseline botanical surveys and faunal elements in addition to large mammals.

B. Conkouati

- legal status of reserve and any necessary changes (internal zoning);
- EA's for any expansion of forestry or oil production activities;
- control of poaching and progress on buffer zone development of fuelwood production;
- monitor threats to aquatic ecosystems; and
- interactions with resident fishing communities and progress in involving local communities in project design and development.

C. Dimonika

- readjustment of internal zoning to reflect realistic ability to manage wildlife populations;

- progress in identifying buffer zone development alternatives;
- involvement of local people in reserve management decisions and their application; and
- success in transfer of administrative responsibility from UNDP/UNESCO to DFF.

D. Léfini

- possible reclassification of Lake Blue and Mbouambe areas to upgrade status for wildlife management;
- success in controlling grazing pressure on fragile upland savannahs and control of bushfires along gallery forest margins;
- realistic plans for ecotourism development with maximum financial returns to local resident communities; and
- monitor local attitudes toward the reserve (particularly the gorilla reintroduction program) and local participation in all aspects of reserve development.

E. Lac Télé-Likouala

- Congo to become a party to the "Ramsar" Convention before it can register the site;
- Ramsar registration of the site and appropriate national legal designation to precede major investment;
- delineation and legal description of boundaries including internal zonation to delineate "core zones" critical for seasonal (at least) protection of target species such as migratory waterfowl;
- progress on necessary research to accomplish the above;
- analysis of external threats to the wetland (if any) from potential disruption of the hydrological regime by upstream activities;
- initiating of studies on the current status and production potential (under a sound management regime) and prospects for enhancement of native fisheries before going into aquaculture alternatives (which have frequently been costly and economically nonviable elsewhere); and
- contacts with organizations such as Royal Society for Protection of Birds (RSPB) and International Commission for Bird Protection (ICBP) which have considerable African experience in wetland research and assisting development of locally managed wetland conservation programs to participate in data gathering and program planning for establishing this wetland conservation area.

V. Concluding Remarks

Further design and elaboration of monitoring and evaluation procedures should result from a participatory process involving PMU staff, representatives of collaborating agencies (e.g. CERVE, CERGEC), key personnel of collaborating institutions (e.g. WCI, IUCN, Howletts and Port Lympne Foundation, HELP). The

composition of the Technical Steering Committee needs to be defined and the terms of reference for its operation developed and approved. Reporting formats and key indicators for performance tracking need to be identified, defined and agreed to by the participants and executing agencies.

The M&E program needs to be further refined as an integral component of the project in such a way that efforts expended in that realm contribute directly to enhanced project performance rather than detracting from the limited time that key project staff have to devote to accomplishing the major project objectives. To this end, the M&E process must be (and be perceived to be) an integral component of project execution. To this effect, the process must provide valuable feedback to project managers in helping them design their future workplans and program agendas. The process must also provide outputs which are a credible reflection of meaningful project achievements and help to identify future needs for project actions and investments beyond the four year period of GEF financing.

The recommendations in this annex should be taken as general guidelines for project management and implementing personnel in designing an appropriate M&E regime which satisfies their own needs for information to be used in project planning and execution. Results of the M&E process comprise a powerful and effective management tool for the implementing agencies in both assessing and communicating project successes. Reporting requirements for donors must be met in a way that both accurately reflects meaningful indicators of project performance and does not detract from efforts to meet core project goals and objectives. An efficient and effective M&E process is necessary to meet that goal.

REPUBLIC OF CONGO
WILDLANDS PROTECTION AND MANAGEMENT PROJECT

Trust Fund

I. Overview

The level of project funding would only be sufficient to cover the initial activities at the central and reserve level. It is therefore crucial that the project leverage funds from other sources to cover long-term recurrent costs. The project would do this by creating a trust fund to provide a long-term, perhaps indefinite, future income stream. This would not only improve program stability by facilitating long-range planning, training and recruitment, but would also serve to build up absorptive capacity by spreading large grants over a longer period of time, small grants capacity (by "retailing" large grants to a range of smaller projects) and would institutionalize cooperation between the government sector, local communities and NGO's. The project would support the legal and technical engineering and associated publicity needed to establish the Trust Fund, but would not contribute to its financial endowment. The idea would be to attract outside donors to put money into the Trust Fund to cover part of the recurrent costs for conservation-related activities in Congo. The engineering of this fund would be done by World Wildlife Fund - US which has extensive experience in developing trust fund for conservation-related projects. The model for the trust fund would be developed based on consultations with the Government, NGOs and the GEF. The Trust Fund would be established by the Mid-Term Review of the project (PY3).

II. Models and Related Issues

A. Other GEF Trust Fund Models

Trust funds now being developed with assistance from the GEF in Bhutan, Papua New Guinea, Peru and Poland can provide models for various elements of the trust fund that would be created for Congo. These models share the following common features:

- (a) Trust funds are set up to finance agreed upon types of projects and activities;
- (b) funds are put into an endowment maintained by either
 - (i) recipient country central bank or treasury or
 - (ii) offshore fund managers, who will in either case have administrative and investment responsibility;
- (c) Board of trustees to include government, NGOs, scientific community and GEF representatives. Fiduciary and operational responsibility to lie with these trustees, who would approve project plans/recurrent costs and financial statements, and authorize disbursements for forthcoming periods (perhaps 12 months) ; and

- (d) Responsibilities of the World Bank would include: (i) assisting the planning and appraisal of initial project/costs to be financed by the trust; (ii) approving trust agreements and arrangements for security of fund, investment policies, accounting requirements, disbursement procedures, and arrangements for independent auditing; and (iii) periodic evaluation of the extent to which the trust is achieving its initial objectives, or possibly whether those objectives should be modified given changing circumstances or project achievements.

B. Issues

Issues that have needed to be worked out in the case of other GEF assisted trust funds, and whose solutions may have to be tailored to meet country- specific needs and conditions, include the following:

- (a) The precise composition of the trust fund board -specifically which government ministries and agencies are to be represented, how many seats or votes they are to receive, which NGO's, local community representatives and scientific experts are to be represented and how they are to be chosen;
- (b) Whether or not to have separate sub-account or mini-trust funds dedicated for different purposes, or for different geographical areas;
- (c) Whether (and in what way) to associate the trust fund with an existing government agency (or agencies), or whether to make it totally independent;
- (d) Whether the trust should have only a minimal administrative staff or whether it should have a variety of full-time positions for technical experts and administrators; and
- (e) What should be the criteria for project activities and other assistance that the trust fund will provide in the future, after funding of the initial project stages is completed.

Other issues that have arisen in the case of other GEF assisted trust funds and may also need to be dealt with here include:

- (a) A trustee generally cannot delegate fiduciary responsibility without permission from the original grantor; the World Bank might therefore require specific authorization from the GEF donors to establish such trust funds;
- (b) Establishing separate trust funds would represents a significant delegation of authority by the World Bank; it would be essential to determine whether operational safeguards, could be established to minimize the risks related to this delegation;
- (c) The extent to which project management and supervision could be delegated to the trustees, or retained by the World Bank, would require clarification; and
- (d) Acceptability to donors and recipients.

REPUBLIC OF CONGO

WILDLANDS PROTECTION AND MANAGEMENT PROJECT

Training and Public Awareness

I. Overview

1. In order to effectively conserve a system of protected areas in the Congo, and to ensure long-term support for management of conservation efforts, there is a great need to further develop in-country professional and public capacity to recognize the importance of biological conservation and to undertake activities necessary for its implementation. Specific human resource constraints include the following:

- (a) an inadequate number of qualified and motivated professionals available to ensure conservation of protected areas:
 - (i) at the national level: lack of administrative and scientific experts with the means and experience to identify effective conservation policies and strategies, and to enact long-term planning; and
 - (ii) at the level of protected areas: lack of conservators (6 currently employed nation-wide), guards (16 total), guides (none), and outreach personnel responsible for liaison with neighboring populations (none);
- (b) a lack of scholastic programs concerning environmental and conservation issues, at all levels (primary school, secondary school, and university/technical school); and
- (c) little sensitivity within the Congolese populace on the importance and relevance of biological conservation to their individual and collective (national) welfare.

II. Existing Programs

2. Many of the needs cited above are somewhat surprising given the strong emphasis placed on education and training in the Congo. Constraints exist because current professional training is largely restricted to theory, with no significant practical or field experience provided. At the same time, little or no conservation-related information is discussed with school or public audiences. However, the existing institutional capacity to educate both professionals and the general populace is great. A review of the training needs and the institutional capacity to undertake training and public awareness is being performed under the Protected Areas Conservation Strategy (PARCS) program executed by WCI, WWF and AWF (Africa Wildlife Foundation). Existing institutions and their relevant programs include:

A. Professional Training

- (a) the Wildlife School at Garoua (Cameroon), where 24 Congolese have trained over the past 22 years to become technical experts, conservators and head guards-- but training rarely includes field experience in forests or in Congo;
- (b) the Rural Development Institute (IDR)(Brazzaville), which offers three and six year programs in Forestry (including 2 relevant branches of Animal Biology and Plant Biology) and Agricultural Sciences -- fieldwork is required, though few real opportunities exist;

- (c) the University of Marien Ngouabi (Brazzaville), which offers three and four year degrees in Animal Biology, Plant Biology, and Environmental Law -- fieldwork consists of one week's visit in either program;
- (d) the National Forestry School (ENEF), at which forest technicians receive training in sylviculture and forest exploitation; and
- (e) a post-graduate training program in natural resource management (ATLAS), and in particular conservation, is planned to begin in late 1992 with USAID financing, offering Master's and Doctoral training in the United States; other bilateral assistance is irregularly available for conservation-related post-graduate education.

B. Scholastic Training

- (a) secondary schools, which have courses in biology and ecology; and
- (b) primary schools -- nothing is currently taught regarding biology or environment.

C. Public Awareness/Extension/Outreach

- (a) national-level media: television, radio, newspapers, films -- currently cover very little on environment or conservation;
- (b) Directorate on Environmental Law and Education -- is now testing a set of teaching modules on conservation for the region surrounding the Dimonika-MAB reserve under financing from the Mayombe Project;
- (c) rural extension programs: Literacy Centers (approx. 300), "Rural Progress" Centers, rural associations/groups, women's groups, the National Agricultural Extension Project (World Bank), other specific rural development projects -- little/no discussion of biological conservation or non-project natural resource management currently takes place;
- (d) particular conservation projects: Mayombe Project (UNESCO/UNDP), Odzala National Park (EDF), and Congo Forest Conservation Project (USAID/WCI at Nouabalé-Ndoki) -- each plans a public awareness component of project; and
- (e) national NGOs: 2-3 conservation NGOs are presently being formed, one existing NGO focusses on women and natural resources -- all plan emphasis on public awareness.

3. In sum, able institutions and public awareness mechanisms exist, yet do not function effectively in conservation education and training chiefly due to: (a) a lack of information readily available to them concerning biological conservation and protected areas; (b) inadequate means to give trainees field experience; and (c) little means for maintaining professional motivation once employed.

III. Project Strategy

4. The project would adopt a strategy of:

- (a) linking existing professional training programs with protected area conservation activities and personnel, providing practical experience and frequently integrating biological, social and economic concerns in training;
- (b) establishing regular in-service workshops for protected area personnel, allowing for professional exchanges and discussion;
- (c) providing protected area information to public awareness programs, national and local; and
- (d) fostering dialogue with populations neighboring protected areas, integrating discussion of biological conservation and protected area management with alternative economic activities.

IV. Project Training and Public Awareness Activities

5. The above strategy would be implemented by the following principal activities of the project:

A. Training of Conservation Professionals

- (a) guards, guides: (i) periodic training workshop for all new personnel; (ii) on-site training via apprenticeship with project; and (iii) in-service workshop each year, in a protected area;
- (b) outreach specialists: (i) 2 training workshops at onset of project (initial orientation, followed by 2 months of field reconnaissance, consolidated with 2nd workshop); and (ii) in-service workshop each year, in a protected area;
- (c) protected area managers: (i) fieldwork training/research in protected areas to be associated with existing programs at Garoua, IDR, the university, and ENEF; (ii) regular lectures given by field personnel at the above in-country institutional training programs; and (iii) in-service workshop each year, in a protected area; and
- (d) decision-makers: (i) see above for basic formal training, and complementary bilateral financed post-graduate education (ATLAS); (ii) national level seminar each two years, possibly in conjunction with other environmental programs; and (iii) occasional short-courses or conference attendance overseas;

B. Public Awareness/Outreach

- (a) national: (i) supply information and materials to media: television, radio, newspapers, films; facilitate their collection of information on protected areas and conservation; and (ii) support informational activities of NGOs, via selected small grants program; and
- (b) rural, in areas surrounding protected areas: (i) develop outreach program for each focal protected area, details of which will be developed in initial two workshops; may include outreach via network of village "animateurs", local associations/groups, existing extension/literacy programs or projects, and/or with local schools; and (ii) integrate outreach program with facilitation of alternative economic activities, making clear the necessary linkages.

V. Training Schedule - Project Year 1

Project Year	Month	Activity
PY1	2	Meeting of all implementing agencies to evaluate training needs
	3	Training workshop for all new personnel
	4	Training workshop for all guards
	6	Training workshop for outreach specialists - initial orientation followed by 2 months of field reconnaissance
	6	Meeting of decision makers to determine candidates for ATLAS program and training needs for decision-makers
	10	Workshop for reserve guards and outreach offices in Nouabalé-Ndoki and Conkouati
	12	National-level seminar for decision makers in conjunction with the National Environmental Action Plan

REPUBLIC OF CONGO
WILDLANDS PROTECTION AND MANAGEMENT PROJECT

Technical Assistance and Service Contracts

I. Overview of Resident Technical Assistance

The GEF project would finance 272 person-months of resident technical assistance over the 4-year duration of project execution, including 128 person-months under GEF financing, 96 person-months under USAID financing, and 48 person-months under the financing of the University of Kyoto. The distribution would be as follows:

Component	Position	person-months	Period
Project Management Unit	- Advisor to the National Coordinator	36	yr. 1-3
Herbarium	- Botanist-ecologist	12	yr. 1
Map database/GIS	- Cartographer/GIS expert	6	yr. 1
Nouabalé-Ndoki	- Project Director (USAID/WCI)	48	yr. 1-4
	- Project Manager (USAID/WCI)	48	yr. 1-4
	- Primatologist (Kyoto University)	24	yr. 1-2
	- Sociologist (Kyoto University)	24	yr. 1-2
	- Total Nouabalé-Ndoki	144	
Conkouati	- Advisor to the Reserve Director	36	yr. 1-3
Dimonika	- Advisor to the Reserve Director	24	yr. 1-2
Léfini	- Periodic consultations		
Lake Télé	- Advisor to the Program Director	14	yr. 1-2

II. Terms of Reference for Resident Technical Assistance financed under the GEF grant

All resident technical assistants, in addition to their specific tasks presented below, will have to provide on-the-job training and coaching to the national counterpart staff, so that the latter can take over when the technical assistants leave at the end of their expatriate assignment.

A. Advisor to the National Coordinator

Responsibilities:

- (a) assist in supervision and coordination of project activities;
- (b) help prepare contracts and conventions;
- (c) assist in the Monitoring and Evaluation of the project; and
- (d) liaise with research community.

Duration of appointment: Three years

Qualifications: Field experience (minimum of ten years) in Africa in general project planning and appraisal/management, with strong qualifications in environmental management and experience in socio-economic development. Good command of computers and fluent in French.

Procurement method: Short-list competitive bidding amongst qualified firm/NGOs (PMU contract).

B. Technical Assistant at the Herbarium (CERVE)

Responsibilities:

- (a) assist in developing a scientific protocol for botanical inventories;
- (b) develop staff capacity to carry-out botanical inventories in the project sites;
- (c) assist in developing vegetation maps; and
- (d) train the national director and assistant in the identification of plant species and ecosystems.

Duration of appointment: One year

Qualifications: Expert botanist-ecologist associated with an internationally-recognized herbarium which would provide long-term technical support to the herbarium with at least 5 years of experience in Africa. Fluent in French and English.

Procurement method: Short-list competitive bidding amongst internationally recognized herbariums (CERVE contract).

C. Technical Assistant to the Geographic Research and Cartographic Production Center (CERGEC)

Responsibilities:

- (a) help strengthen existing map database and vegetation maps; and
- (b) provide training in GIS and satellite image analysis;

Duration of appointment: Six months

Qualifications: Cartographer with extensive experience in GIS and satellite image analysis, associated with an internationally-recognized institute which would provide long-term technical support to CERGEC. Fluent in French.

Procurement method: Short-list competitive bidding amongst specialized internationally recognized institute (CERGEC contract).

D. Advisor to Reserve Director - Conkouati

Responsibilities:

- (a) General management support/advice to Reserve Director;
- (b) supervision of studies and monitoring of local population;
- (c) supervision of the program to reintroduce chimpanzees; and
- (d) formulation of procedures and methods for the protection of the reserve.

Duration of appointment: Three years.

Qualifications: Minimum of five years experience managing national park/reserve/biological conservation projects in Africa. Sensitive to issues concerning local populations. Fluent in French.

Procurement method: Sole source procurement with the World Conservation Union (IUCN contract).

E. Advisor to Reserve Director - Dimonika

Responsibilities:

- (a) General management support/advice to Reserve Director;
- (b) supervision of studies and monitoring of local population;
- (c) development and supervision of alternative economic activities for local populations; and
- (d) formulation of procedures and methods for the protection of the reserve.

Duration of appointment: Two years.

Qualifications: Minimum of five years experience managing a national park/reserve/biological conservation project in Africa. Background in sociology/rural development. Sensitive to issues concerning local populations. Fluent in French.

Procurement method: Short-list competitive bidding amongst qualified firms/NGOs.

F. Advisor to Program Director - Lake Télé

Responsibilities:

- (a) General support/advice to Program Director;
- (b) assist in delineation of the limits of the site for gazetting;
- (c) development and supervision of alternative economic activities for local populations; and
- (d) formulation of procedures and methods for the protection of the reserve.

Duration of appointment: Fourteen months.

Qualifications: Minimum of five years experience managing a national park/reserve in Africa. Background in wetland ecology, with knowledge of rural development. Sensitive to issues concerning local populations. Fluent in French.

Procurement method: Sole source procurement with the World Conservation Union (IUCN contract).

III. Main Technical Assistance and Services Contracts

A. Project Management Unit (PMU)

<u>Description</u>	- 3 person-years of resident T.A.	\$	570,000
	- National personnel	\$	180,000
	- Short-term consultancies	\$	670,000
	- Technical Steering Committee	\$	80,000
	- National NGOs	\$	90,000
	- Operating expenditures	\$	<u>225,000</u>
	Total	\$	1,815,000

Procurement method: Short-list international competitive bidding

B. National Herbarium (CERVE)

<u>Description</u>	- 1 person-year of resident T.A.	\$	120,000
	- National personnel	\$	50,000
	- Short-term consultancies	\$	35,000
	- Equipment and Goods	\$	60,000
	- Training	\$	35,000
	- Operating expenditures	\$	<u>15,000</u>
	Total	\$	315,000

Procurement method: Short-list international competitive bidding

C. National Geographic and Cartographic Research Center (CERGEC)

<u>Description</u>	- 8 person-months of resident T.A.	\$	80,000
	- National Personnel	\$	35,000
	- Training	\$	40,000
	- Goods and Services	\$	80,000
	- Operating Expenditures	\$	<u>15,000</u>
	Total	\$	250,000

Procurement method: Short-list international competitive bidding

D. Nouabalé-Ndoki

<u>Description:</u>	- National personnel	\$	65,000
	- Equipment and goods	\$	55,000
	- Reserve management	\$	580,000
	- Short-term consultancies	\$	240,000
	- Laboratory analysis	\$	90,000
	- Alternative activities	\$	150,000
	- Operating expenditures	\$	<u>220,000</u>
	Total	\$	1,400,000

Procurement method: Sole-source procurement with Wildlife Conservation International (\$1,240,000) and the University of Kyoto (\$160,000)

E. Conkouati

<u>Description:</u>	- 6 person-years of resident T.A.	\$	530,000
	- National personnel	\$	430,000
	- Reserve management	\$	160,000
	- Equipment and goods	\$	220,000
	- Short-term consultancies	\$	210,000
	- Alternative activities	\$	110,000
	- Operating expenditures	\$	<u>130,000</u>
	Total	\$	1,790,000

Procurement method: Sole-source procurement with the World Conservation Union (IUCN)

F. Dimonika

<u>Description:</u>	- 2 person-years of resident T.A.	\$	200,000
	- National personnel	\$	125,000
	- Equipment and goods	\$	60,000
	- Reserve management	\$	110,000
	- Alternative activities	\$	65,000
	- Operating expenditures	\$	<u>100,000</u>
	Total	\$	660,000

Procurement method: Short-list international competitive bidding

G.	<u>Lake Télé</u>		
<u>Description:</u>	- 14 months resident T.A.	\$	175,000
	- National personnel	\$	130,000
	- Equipment and goods	\$	85,000
	- Reserve management	\$	40,000
	- Short-term consultancies	\$	30,000
	- Alternative activities	\$	50,000
	- Operating expenditures	\$	<u>50,000</u>
	Total	\$	560,000

Procurement method: Sole-source procurement with the World Conservation Union (IUCN)

IV. Short-term Technical Assistance and Training Contracts

A.	<u>Financial Audits</u>	\$	135,000
	<u>Procurement method:</u> Short-list local competitive bidding		
B.	<u>Peer Review Committee</u>	\$	340,000
	<u>Procurement method:</u> Short-list of international experts		
C.	<u>Procedure manuals</u>	\$	45,000
	<u>Procurement method:</u> Short-list local competitive bidding		
D.	<u>Short-term consultancies</u>	\$	250,000
	<u>Procurement method:</u> Short-list of national and international experts		
E.	<u>Trust Fund</u>	\$	340,000
	<u>Procurement method:</u> Sole-source procurement with World Wildlife Fund		
F.	<u>Training</u>	\$	430,000
	<u>Procurement method:</u> Short-list of national and international experts		

REPUBLIC OF CONGO

WILDLANDS PROTECTION AND MANAGEMENT PROJECT

Nouabalé-Ndoki Site

I. Background

1. The Nouabalé-Ndoki site, extending over some 450,000 ha, is located in the north of the country on the border with the Central African Republic and Cameroon. It is adjacent to the Dzanga-Sangha reserve in the CAR. The site covers the "forest management unit" (UFA) of Nouabalé, although it also extends into the UFA of Kabo, Mokabi and Loundougou, thus incorporating the entire upper portion of the watersheds of the Nouabalé and Ndoki Rivers. The climate is equatorial, with annual precipitation of approximately 1,600 mm and an average temperature throughout the year of close to 25°C. Soils are sandy-textured hydromorphic laterite oxysols for the most part.
2. Gazetting the site as a reserve would endow the Congo with a reserve representative of primary closed forest, which is amongst the least known and studied in Central Africa. The area could also become part of a three-nation system reserves with CAR (the adjacent Dzanga-Sangha reserve, created in 1987) and Cameroon (the region northeast of Moloundou, around Lac Lobéké, now being discussed as a possible reserve).

II. Fauna

3. Nouabalé-Ndoki is one of the rare Central African forest areas whose fauna remains virtually intact. Population density of each species present is high relative to densities found in other similar forests. Several species of large mammals are found in abundance:
 - (a) Elephants: The database built up from several studies carried out in the region indicate that the upper segment of the Ndoki basin shows a very high-density elephant population compared to other parts of Africa. Elephants are hunted in the area for their ivory, which is evacuated to Congolese cities via the rivers and to CAR over land.
 - (b) Gorillas: Gorilla density recorded in the region is quite high, particularly in areas of abundant terrestrial herbaceous vegetation.
 - (c) Chimpanzees: Observation has shown the population density of these animals to be extremely high east of the Ndoki River, much more so than in other parts of the northern Congo.
 - (d) Diurnal primates: Ten species of diurnal primates have been observed in the site. Most commonly found are *Cercopithecus nictitans* and *Cerocebus albigena*.
 - (e) Other large mammals: The population of large mammals east of the Ndoki River is very dense. Numerous duikers are found, particularly *Cephalophus sylvicultor*. The bongo (a large forest antelope) is rare throughout most of the area.

III. Flora

4. Forest cover consists principally of semi-deciduous *Sterculiaceae-Ulmaceae*, with large areas of malapa forest. River floodplains consist mostly of moist forests of raphia palm. Overall, the forest is mature, except for the relatively small area west of the Djéké River, where logging operations have taken place during the last 10 years.

IV. Human Population

5. At the present time, there are no permanent human settlements known in the area proposed for designation as the Nouabalé-Ndoki reserve. Logging operations have not taken place in the zone north of the Djéké River and east of the Ndoki. The region is accessible from several main points: Bomassa, Bon Coin, Makao, Bayanga, Balambok-Manasau and Lindjombo, the last three being located in the CAR. Average human population density in the entire zone, at less than 1 inhabitant/km², is low.

6. Local populations around the proposed reserve (in particular in Bomassa, Bon Coin and Makao) have been involved in planning the reserve since its inception. The University of Kyoto research team has been working with the local populations since 1987. Several public consultations were held between the Government of Congo, the staff of the Congo Forest Conservation (CFC), the preparation team for this project and the local populations (pygmy and bantu). The outcome of these meetings showed a strong desire on the part of the local populations to create a reserve on the condition that they were invited to participate in defining the limits for the core and buffer zones of the reserve and in determining the wages for local employment. The local populations welcomed the CFC project and welcomed their participation in the management plan for the site.

V. Existing Actions

7. Nouabalé-Ndoki has recently become a focus of conservation efforts via the Congo Forest Conservation (CFC) project, jointly financed by USAID, Wildlife Conservation International (WCI), and the Government of Congo. This project, now being implemented by the Director of Fauna and Flora Conservation (DFFC) and WCI, is designed to plan, establish and manage a new nature reserve, following the intention declared by the Congolese government in 1991. This reserve is to be gazetted no later than December 31, 1993. The CFC project is also intended to organize an applied research program and station for the reserve, train Congolese conservationists (both scientific and managerial), and involve local populations in management of the reserve and associated natural resources. The initial 5-year phase began mid-1991, with significant but incomplete funding from the above sources. Previously confirmed funding will cover costs of most project personnel, partial logistical support, and some training and research costs. Since 1987 the site has also been the object of biological and anthropological research, undertaken by a team from the University of Kyoto and the General Direction of Scientific and Technical Research (DGRST). Research has focussed on the ecology and behavior of forest primates, and the Aka and B'aaka pygmies.

VI. Project Interventions

8. The project activities planned for Nouabalé-Ndoki would be complementary to those in progress via the above projects and would be executed by CFC in liaison with the University of Kyoto for certain aspects of research. They would consist of:

- (a) the establishment of an effective system of reserve protection (boundary marking; administrative, guard and guide training) -- CFC;
- (b) assessment of large mammal hunting (harvest rates, renewal rates, impacts, economic importance, guidelines for sustainable use) -- CFC and University of Kyoto;
- (c) studies of vegetational dynamics, with focus on regeneration in natural and logged forest patches to assess damage from harvest regimes -- CFC;
- (d) inventory and monitoring of selected flora and fauna -- CFC, University of Kyoto, and National Herbarium;

- (e) anthropological studies to assess needs and desires of local human populations, and thereby guide project activities -- University of Kyoto;
- (f) creation of basic infrastructure to allow establishment of a scientific research center -- CFC and University of Kyoto;
- (g) training (direct, via apprenticeship and guided research) in the activities cited above -- CFC and University of Kyoto.

VII. Field Resources

9. The following field resources would need to be provided to expand activities already initiated as part of the projects underway:

- (a) Infrastructure: Two basic but durable research stations will be constructed: one near the Ndoki (camp site of the Kyoto University researchers) and another near the Mbeli clearing (CFC);
- (b) Permanent staff: Expatriate personnel will be provided by existing projects for a period of at least 5 years (end of first year of CFC operations will coincide with the onset of the GEF project); Senior CFC Congolese staff will be salaried by the Government of Congo, with logistical and operational support provided by the project. Additional full-time staff would be salaried by existing projects, with the following complement to be covered by project funds:
 - (i) four Congolese scientists associated with the Japanese team (sociology of human settlements and primatology); and
 - (ii) support staff: one clerk/bookkeeper; one secretary; two boatmen; game wardens/guides; and five caretakers/laborers; and
- (c) Temporary staff: Project funding would be applied as follows:
 - (i) temporary laborers would be recruited to build basic project infrastructure and work as porters/guides (for a total of 60 man-years);
 - (ii) funds will be made available at field level to finance periods of residence by national students interested in doing their final university assignments in subjects that would improve existing knowledge of the zone and promote its conservation; and
 - (iii) local residents will be recruited as porters/guides to accompany the various working tours that will take place in the reserve.

VIII. Financing

10. The project would benefit from the above-described joint USAID/WCI financing, support from the University of Kyoto, and provision of U.S. Peace Corps personnel. Discussions continue concerning possible additional financing by German bilateral assistance (GTZ). This financing would go toward an assessment and outreach program in Ouessou and other surrounding communities.

11. Infrastructure, resources and operating funds will be shared by the CFC and University of Kyoto teams and administered as an integral part of the CFC project under the supervision of the project direction acting for and on account of the Government.

REPUBLIC OF CONGO

WILDLANDS PROTECTION AND MANAGEMENT PROJECT

Conkouati Reserve

I. Background

1. The Conkouati fauna reserve, created in 1980 and modified in 1989, has a surface area of approximately 300,000 ha. The region comprising and surrounding the reserve is divided into concessions leased out to forestry companies (for exploitation) and oil companies (for exploration). This has meant that a "total and absolute protection of the wildlife", as described in the reserve's legal statute, has been difficult.
2. The reserve includes a vast diversity of ecosystems: from marine and coastal zones to the Mayombe mountains, and from savannahs areas to wetlands and dense forests. Marine, brackish and fresh water ecosystems are well represented in the reserve by the ocean, lagoons, rivers and lakes. Although the wildlife is under extreme pressure due to the proximity to Pointe Noire, the abundance of wildlife remains the highest in the south of Congo.

II. Fauna

3. Preliminary studies on the fauna of the reserve were conducted by the World Conservation Union (IUCN) in collaboration with the Direction of Flora and Fauna Conservation (DFFC) in the south-east and south-west parts of the reserve; only the northern part of the reserve is poorly studied. Several other inventories, in particular on elephants have been conducted by Wildlife Conservation International (WCI). The results of these studies show the wildlife typical of the Congolese savannah and forest: buffalo, waterbuck, duiker, red forest hog, *Atherus africanus*, gorillas, chimpanzees, mandrills, panthers, elephants, etc. The diversity of habitats in the reserve also supports a diverse bird life. The beaches of the reserve are the nesting grounds for a variety of sea turtles and the Conkouati lagoon and Noumbi river still contain populations of manatees.

III. Flora

4. The vegetation in the reserve parallels the Atlantic coast. From the coast to the Mayombe the vegetation moves from a coastal vegetation to a mosaic of gallery forests and savannahs to the rich, dense lower montane forests of the Mayombe. Interspersed in this mosaic are swamps and flooded forests.
5. The flooded forests and swamps are almost the last remaining examples of untouched forests in the south of Congo, in particular in the Kouilou region. Some of the non-inundated forests are still fully intact, however, most of the forests have undergone at least one stage of logging.
6. The preliminary inventories (ORSTOM, CERVE, IUCN) have demonstrated the floristique richness and presence of endemic species from the region west of the Mayombe. Two species of coffee unknown elsewhere have been found near the village of Ngongo.

IV. Human Population

7. The population of the district of Madingo-Kayes is approximately 7,500 inhabitants for 6,260 km², or 1.2 inhabitants/km². The 5,000 inhabitants who live in reserve are spread throughout the 34 villages. The closest city is Pointe-Noire, situated at approximately 90 km from Tchizalamou, the entrance to the reserve. The direct impact of the populations living in and around the reserve has been the subject of several recent studies by IUCN, but the influence of Pointe-Noire (600,000 inhabitants) on Conkouati and the impact of the populations on the resources of the reserve remains a priority to study.

8. The recent authorization of forest exploitation and oil exploration has created a series of roads in the reserve which have increased the accessibility to the interior of the reserve for hunting. Hunting and fishing remain the principle occupations of men, whereas traditional agriculture is the main occupation of women. Amongst the industrial activities in the region, uncontrolled forest exploitation is the most threatening. In addition to this, brush fires and poaching threaten the reserve.

V. Existing Actions

9. The Conkouati reserve is actually under the responsibility of the Direction of Flora and Fauna Conservation (DFFC). Presently one conservator and several guards, based in Madingo-Kayes, are in charge of the management of the reserve. The present management is restricted to road checks outside of the reserve, as they have no vehicles or equipment at their disposal and little financial support. Infrequent visits are made to the reserve when officials from Brazzaville visit.

VI. Project Interventions

10. The long term objective of the interventions in Conkouati are to address the needs of the populations living around the reserve, and protect a significant amount of biodiversity while considering the industrial demands on the region (forest exploitation and oil exploration).

11. The activities proposed by the GEF project in Conkouati are in line with those already initiated by IUCN and a national NGO with support from BP and Chevron International Limited.

12. The systematic application of a rational protection strategy for the Conkouati reserve is difficult due in part to the diversity of ecosystems, human pressures, potential for tourism, the need for self-sufficient villages and the industrial pressures (wood, minerals and oil). Thus, an effective protection policy would have to be developed in collaboration with local communities and the industries in the area so that it encompasses not only protection, but rational harvesting and management of natural resources.

13. The interventions in Conkouati would be executed by the World Conservation Union (IUCN), with the assistance of a national NGO and the DFFC. The planned interventions would be as follows:

- (a) the reinforcement of the DFFC's capacity to manage the reserve (surveillance, protection, management, monitoring and evaluation, and involvement of local populations);
- (b) delineate the limits of the reserve to include marine and coastal areas, forest and savannah areas and core and multiple use areas, with the possibility of a transborder area with Gabon;
- (c) prepare a detailed, yet flexible management plan for the reserve, integrating the needs of the local communities with sustainable management of natural resources;

- (d) complete biological inventories and studies on the physical characteristics of the reserve and the flora and fauna started by IUCN;
- (e) study the human impact and the socio-economic dynamics of populations living within and around the reserve, including the influence of the city of Pointe Noire. In particular, the problems associated with the forest exploitation industry, and the better management of natural resources. Other studies would include the demand for bushmeat, poaching, oil exploration and mining;
- (f) identify and develop alternative economic activities (this would be done directly by the project, or in liaison with other locally established projects and MUCODEC);
- (g) help DFFC reintroduce confiscated chimpanzees to the reserve, which would serve as a catalyst to develop tourism from Pointe Noire;
- (h) progressively develop small-scale tourist activities near and in the reserve to attract tourists from Pointe Noire;
- (i) study the modes of hunting around the reserve with the goal of developing a subsistence and rational hunting policy for the area;
- (j) develop an awareness program for the local populations of conservation and sustainable use of natural resources.
- (k) help supervise environmental impact studies done by forestry and oil exploration companies;
- (l) research financial support for activities which would continue after the project and for which other sources of funds (Trust Fund) would not be sufficient.

REPUBLIC OF CONGO

WILDLANDS PROTECTION AND MANAGEMENT PROJECT

Dimonika-Man and Biosphere Reserve

I. Background

1. Dimonika-Man and Biosphere (MAB) reserve, located north of National Highway 1 near Mvouti, roughly 185 km northeast of Pointe-Noire and 400 km west of Brazzaville, was created in 1988 as part of the UNESCO Man and Biosphere (MAB) program. Consisting of some 136,000 ha, or close to one-third of the Mayombe forest, the reserve is subdivided as follows:

- (a) a central zone bordered on the north by the Loubomo River, on the west by longitude 12°12' East, on the east by longitude 12°32'30" East, and on the south by latitude 4°16' South and the zone of influence running alongside National Highway 1;
- (b) an initial buffer zone 4 km in width extending on either side of the Mpounga-Makaba road leading toward the center of the reserve;
- (c) a second buffer zone between latitude 4°16' South and the northern boundary of the zone of influence; and
- (d) a zone of influence consisting of a strip 6 km in width to the north of National Highway 1.

II. Fauna

2. The wildlife of the Mayombe is an important source of protein for its inhabitants. The rivers hold a great diversity of fish species, and land animals include large mammals (elephants, gorillas, chimpanzees, leopards, buffalos, monkeys, etc.) and reptiles (crocodiles, monitor lizards, and snakes). Knowledge of wildlife distribution, abundance and dynamics in the Mayombe is still limited. It is nevertheless known that a significant decline in the populations of large mammals has taken place due to village-based hunting in the region.

III. Flora

3. The Mayombe consists largely of dense closed forest. Large, often deciduous trees tower above a tall, evergreen subforest. Given the extreme humidity, epiphytes are rare. The moist valleys and riparian forests are particularly rich in *Symphonia globulifera* and *Julbernardia brieji*.

IV. Human Population

4. The Mayombe forest harbors a human population of approx. 27,000 inhabitants, living in two prefectures. Average population density is 4.6 inhabitants/km². From the 1930s through the late 1980s, inhabitants have participated in a cash economy, based first on employment for railroad construction, then mining, and later forestry exploitation. Presently, hunting and cultivation of food crops are the main economic activities. Given a lack of reliable transport for agricultural products, villagers have found little alternative to hunting gamemeat, which is now officially prohibited in the Dimonika reserve.

5. The Dimonika reserve has benefitted from five years of UNDP/UNESCO, but little has been done to create alternative activities for the local populations in and around the reserve. These populations have been prohibited from hunting. The existing reserve management has spent several years conducting surveys on the attitudes of the local people towards the reserve and on actions the local populations would like to see as a result of the reserve, but little has been carried out. During the project preparation, the Bank team visited the reserve and discussed some of the main problems with the local manager of the reserve and members of the local communities. The local populations want protection measures to parallel the development of alternative activities, such as aquaculture and the harvesting of non-timber forest products.

V. Conservation Activities

6. The Dimonika-MAB project in the Mayombe has to date benefitted from UNDP and UNESCO funding, and a collaboration with ORSTROM, utilized mainly in gaining greater scientific knowledge of the ecosystems characteristic of the zone and economic activities, with some development of basic infrastructure. Studies carried have revealed a high degree of biological diversity, protection of which is justified within the priority objectives of the GEF.

7. The MAB project was designed chiefly to create a fully functional MAB-Dimonika reserve, so that the resident biodiversity could be protected at the same time as development in neighboring communities was assured. Despite judicious zoning of the reserve, the resources mobilized to those ends have been inadequate, with the result that the traditional modes of harvesting wildlife in the region have remained unchanged, while there is growing hostility on the part of the population to the introduction of protection measures. This is mainly a consequence of: (a) the inadequate nature of the resources devoted so far to creating basic infrastructure and to day-to-day management; (b) uncertainty as to the status of buffer zones and the zone of influence, and the extent of restrictions on the taking of game in them; (c) the heavy impact of human activities on the natural environment -- a result of the presence of itinerant gold prospectors and of a number of villages located in the middle of the reserve (buffer zone 1), the presence of large communities south of the zone of influence, and the proximity of the railway; and (d) the gradual winding down of logging operations, involving a corresponding degree of deterioration of forest access roads and a significant decrease in the sources of revenue available to forest inhabitants.

8. GEF activities will focus chiefly on:

- (a) the establishment of an effective system of protection for the reserve; and
- (b) the involvement of local population groups more closely in the new policy of natural resource management to be introduced -- a policy that must necessarily go hand in hand with a substitution for forest resources withheld and/or the development of alternative sources of income.

9. Given that the current situation is complicated by the fact that the local population sees itself in conflict with reserve protection and that a protection team will be constituted for the first time, the GEF project will finance: (1) a technical assistant for the first two years of the project, and (2) support for transportation and guard equipment in order to establish an effective management system under the DFFC.

10. An outreach officer would coordinate interactions between the reserve and local populations. This officer will establish a dialogue with surrounding villages concerning natural resource use, conservation and management. He/she will help local people identify economic activities providing alternatives to over-exploitation, and will facilitate development of promising suggestions as well as protection of the reserve. Similar to the cases of Konkouati and Lefini, the officer will be the project liaison with the MUCODEC investment program, which will be established in the area to provide the financial means to implement selected alternatives.

REPUBLIC OF CONGO

WILDLANDS PROTECTION AND MANAGEMENT PROJECT

Léfini Reserve

I. Background

1. Located north of Brazzaville on the, Léfini reserve is a vast zone (630,000 ha) of savannah and gallery forest stretching 210 km from north to south, its southern limit lying some 90 km north of Brazzaville. It was designated as a reserve in 1951 (Decrees 3671 and 7262 in 1984). In 1963, the fauna in the area was declared to be fully protected. At the present time, the zone itself is only partially protected.

2. Léfini is situated at an altitude of approximately 650-700 m on the limestone Batéké plateau, traversed by deep (c. 310-380 m) river valleys. The Léfini River, running from west to east, has several small tributaries, chiefly the Louna, Loubilika, Djouélé and Nambuli. The river valleys range from those that are deeply set, with little or no floodplain, to those that are broad and edged by forest, marsh and savannah. The vegetation of the Batéké plateau is mainly tall-grass savannah with scattered shrubs and patches of forest; its slopes, which grade rather abruptly down to the rivers, consist of a mosaic of short-grass savannah and patches of forest that extend out from the river beds.

II. Fauna

3. Various studies on the zone and discussions with inhabitants of local villages have confirmed the presence of various animal species in the reserve, including elephant, hippopotamus, buffalo, sitatunga, duiker (grey, blue), bushbuck, red forest hog, aardvark, jackal, lion and two monkey species, *Cercopithecus neglectus* and *Cercopithecus cephus*.

4. Animal population density, however, is low. This is undoubtedly due to a combination of two factors: (a) the soils found in the reserve are of such low fertility that their associated large mammal carrying capacity is correspondingly low; and (b) heavy hunting pressure has reduced some populations to extremely small numbers.

III. Flora

5. The Léfini reserve houses different types of vegetation cover in a mosaic of forest and savannah. The plateau area (approximately 650-700 m in altitude) consists mainly of high-grass savannah studded with shrubs.

6. Although there are different kinds of vegetation (savannah, forest and swamp), these habitats contain relatively few species. Similarly the ecotones separating different types of vegetation cover are not very rich in species, although they can be peculiar. Savannah in other parts of Africa is much richer in species, which may indicate that the Congolese savannah is of comparatively recent origin. The forest richest in species is found on the plateau, but even this is relatively poor compared to forests in the north of the country and in the Mayombe.

IV. Human Impact

7. Only sparsely populated, the reserve contains a small number of villages, mainly on the ring road north of the Léfini river and west of the Northern Road. There is also a major village at Mbouambe, at the point

where the Northern Road and the Léfini intersect. On the plateau, cassava and groundnuts are grown between long fallow periods. The same two crops are also grown in the vicinity of roads (leading to the east and north of the reserve) and villages (where different species of trees, but particularly mango and oil palm, are also cultivated for harvest).

8. Pressure from hunting is heavy along the Léfini and Nambouli rivers, which are deep enough to allow navigation in dug-out canoes with outboard motors. Mbouambe appears to be a center for trading in meat, whether intended for local consumption or other destinations. The present condition of the road does not allow access to Mbouambe, but once the current repair program is completed and traffic increases, the zone would probably be subject to still greater pressure from human activities. Most hunting takes place by day with guns, or by night with spotlights to flush the animals out of their hiding places.

9. During project preparation, populations living along the highway and next to the reserve were consulted. There was a consensus amongst the populations that the wildlife was decreasing dramatically and needed to be protected. Most of the illegal hunting was for commercial purposes. It was determined that the areas outside the fully protected core areas would still permit the little subsistence hunting required to support the populations.

V. Actions Complementary to Project

10. The southern border of the Léfini Reserve has been identified as a likely site for introduction of gorillas by the Gorilla Protection Project, a program financed by the Howletts and Port Lymphe Foundation and coordinated by the DFFC. This project has been established to accept gorillas confiscated from sellers or owners by governmental authorities, bring them back to health, and eventually reintroduce them to a wild habitat. At present, confiscations and healthcare are well under way, and personnel are now designing a second phase project to implement reintroduction. Partial financing is promised from the founding organization, but complementary funds would be required to be able to execute the next phase.

VI. Project Activities

11. The strategy so far followed for conservation of the natural environment of Léfini has focused on protecting fauna throughout the entire 630,000 ha of the reserve. Given the pressure created by growing demand for bushmeat in Brazzaville, protection efforts have failed completely. This has been evidenced by inventories, which indicate that wildlife is becoming increasingly rare, chiefly because of the activities of poachers employing guns.

12. Effective protection of the entire Léfini reserve would require a large investment of resources, and repopulation of the reserve at characteristic densities would require a lengthy period of time. Given that this is currently not justifiable, due to the combination of depressed animal populations and personnel and financial constraints, the project would initially focus on selected sites and activities to begin the process of recovery. Therefore, the project would concentrate on protection and management activities in two areas: (a) the Lake Bleu area, at the southern border of the reserve, where gorilla introduction efforts are planned by the Project for the Gorilla Protection Project; and (b) the Mbouambe area, the northern part of the reserve where higher animal densities are found, and where surveillance is facilitated by ready access via the Léfini River and its tributaries. Each of these areas affords promise of tourism potential, and thereby the possibility of recovering recurrent costs. Success on these fronts would allow expansion of conservation activities to other portions of the reserve in the future.

13. Project activities, to be executed directly by DFFC in conjunction with the Gorilla Protection Unit (GPU), would include:

- (a) development and implementation of a detailed reserve management plan;
- (b) reinforcement of protection activities undertaken by reserve personnel (including provision of logistics, operational costs, supplemental personnel);
- (c) partial assistance to the gorilla introduction program, to provide a focus for conservation education and tourism; and
- (d) establishment of an integrated outreach program with local populations, combining dialogue and public awareness concerning reserve protection and natural resource conservation, with facilitation of resource substitution and/or development of alternative economic activities.

14. The project component of gorilla introduction near Lake Bleu would be conducted along the same lines as that for chimpanzee reintroduction in the vicinity of Conkouati Lagoon, in that every effort would be made to stop poaching, and thereby break the cycle of poaching/confiscation/release of confiscated animals. It would also be regarded as an experiment likely to pave the way for media presentation of the need to protect the large primates, which continue to be hunted for meat and live sale. In addition to considerable scientific interest, the experiment is also likely to provide an appealing "product" as far as tourism development in the zone is concerned (attracting a clientele from Brazzaville and possibly beyond), and therefore to contribute ultimately to recovery of the recurrent costs of the project.

15. The Lake Bleu area in question, however, is at present outside the reserve. It should therefore be considered as the subject of a decree designating it as a protected zone. Current and customary use of this area by must be fully identified and considered, and consensus with local people sought on allowable uses of the area to be zoned.

16. An outreach officer would be named by the DFFC to coordinate interactions between the reserve and local populations. This officer would establish a dialogue with villagers concerning natural resource use, conservation and management in each of the two project focal areas. He/she would help local people identify economic activities providing alternatives to over-exploitation, and would facilitate development of promising suggestions as well as protection of the reserve. Similar to the cases of Conkouati and Dimonika, the officer would be the project liaison with MUCODEC and other locally established project. The project would provide assistance for the MUCODEC to be established in the region and would provide the financial means to implement selected alternatives.

REPUBLIC OF CONGO

WILDLANDS PROTECTION AND MANAGEMENT PROJECT

Lake Télé - Likouala-aux-Herbes Site

I. Background

1. Situated in the Congolese Cuvette in northern Congo, the site of Lake Télé - Likouala-aux-Herbes, covers a total of 1,050,000 ha, and constitutes a very particular inundated forest and swamp ecosystem. Although it has no legal status as a protected area, it is nevertheless considered a "protected forest" and has not been divided into forestry concessions for logging. The main human impact in the area is hunting, however the site is considered to be relatively undisturbed. Approximately eight scientific research missions have been carried out since 1981 around lake Télé, but the results of these missions focus primarily on the characteristics of the lake itself and to date have had no influence on protection.

II. Flora

2. The flora and vegetation of the site is very poorly known and needs to be studied in detail. The majority of the site is covered with permanently or semi-permanent inundated forests and swamps. The remainder of the site is made up of dense forest and floating savannahs of *Gramineae* and *Cyperaceae*. The inundated and primary dense forests which cover the site on the congolese-zaïrois cuvette are in pristine condition and are some of the best examples of inundated forest which most likely dried considerably during the pleistocene era.

III. Fauna

3. Several short zoological expeditions have been conducted in the site under the direction of Woods Hole Oceanographic Institute. The focus of these expedition has been the area surrounding lake Télé. The results show 41 species of fish (several endemic species), 50 species of birds, 12 species of primates (including gorillas and chimpanzees) and other diverse mammals (elephants, otters, situngas etc.). A very large population of pythons also live around lake Télé. The fauna in the site is still relatively untouched and represent important populations of a large proportion of Congo's animals.

IV. Human Population

4. The area around the site is relatively unpopulated (1 inhabitant/km²), except for the large villages which border the Sangha and Likouala-aux-Herbes rivers. Human pressure is therefore localized to noninundated land next to the major rivers. The majority of the villagers are fishermen and hunters (mostly from the Bometaba tribe and pygmies). The hunters in the area are generally restricted to the noninundated land, and although the influence of hunting on the animal populations is hard to measure in the area, the pressure is still light for most animals, with the exception of elephants. However, the improvement of the road from Impfondo-Epena has greatly increased the number of monkeys and antelopes hunted. Alternative agriculture activities are difficult due to the patchiness of the noninundated land.

5. To date, few consultations have been undertaken with the local populations, although several groups of foreign researchers have been in the area. The gazetting of the site will be undertaken in conjunction with the Government's commitment to establish a RAMSAR site, thus consultations with local populations and gazetting of the site will occur over the first few years of project activities. The villages around the site still maintain a traditional control over their land, so care would have to be taken to consult carefully with all communities concerned to ensure their involvement.

V. Existing Actions

6. Although several proposals have been put forth to gazette the site by various services of the Congolese Government, the area does not yet benefit from any protection. A small grant was awarded by the RAMSAR convention to prepare a document to have the site declared a RAMSAR site, but the RAMSAR convention has not yet been signed by Congo and no management of the area has begun.

VI. Project Interventions

7. The long term objective is to provide Congolese institutions with a model for integrating biodiversity protection and rural development in wetlands protection.

8. Activities in Lake Télé/Likouala-aux-Herbes would be executed by IUCN, in collaboration with the national RAMSAR working group and DFFC. The project would:

- (a) produce the baseline data and documents for the gazetting the site;
- (b) establish a preliminary management plan integrating local land use patterns and laws with management of the site;
- (c) define alternative activities for local populations, such as ecotourism and aquaculture;
- (d) develop educational and sensitization activities on natural resource management for local populations; and
- (e) solicit long-term external financing for the site.

9. The project interventions would constitute a first phase of a long term project and would be executed over three years. The preliminary phase of these interventions would be consultations with local populations, socio-economic studies and biological inventories. These baseline data would be used to define the limits of the site and the core and multiple use areas. Another priority would be the development of a plan for alternative economic activities for the local populations. This would be based on traditional way of life in the area and local land use practices.

10. The project interventions at the site would be executed by IUCN in collaboration with the DFFC and the RAMSAR working group. In this capacity, IUCN would help the Government of Congo solicit external funding to support the RAMSAR working group (established in 1991) and finance a national program for wetlands conservation and management.

11. The delimitation of the site would be done in collaboration with the concerned institutions (namely DFFC, CERVEC and CERVE) and with the local populations. The accent would be placed on developing a village-based management system where villages practicing traditional land use rights would manage areas of the site.

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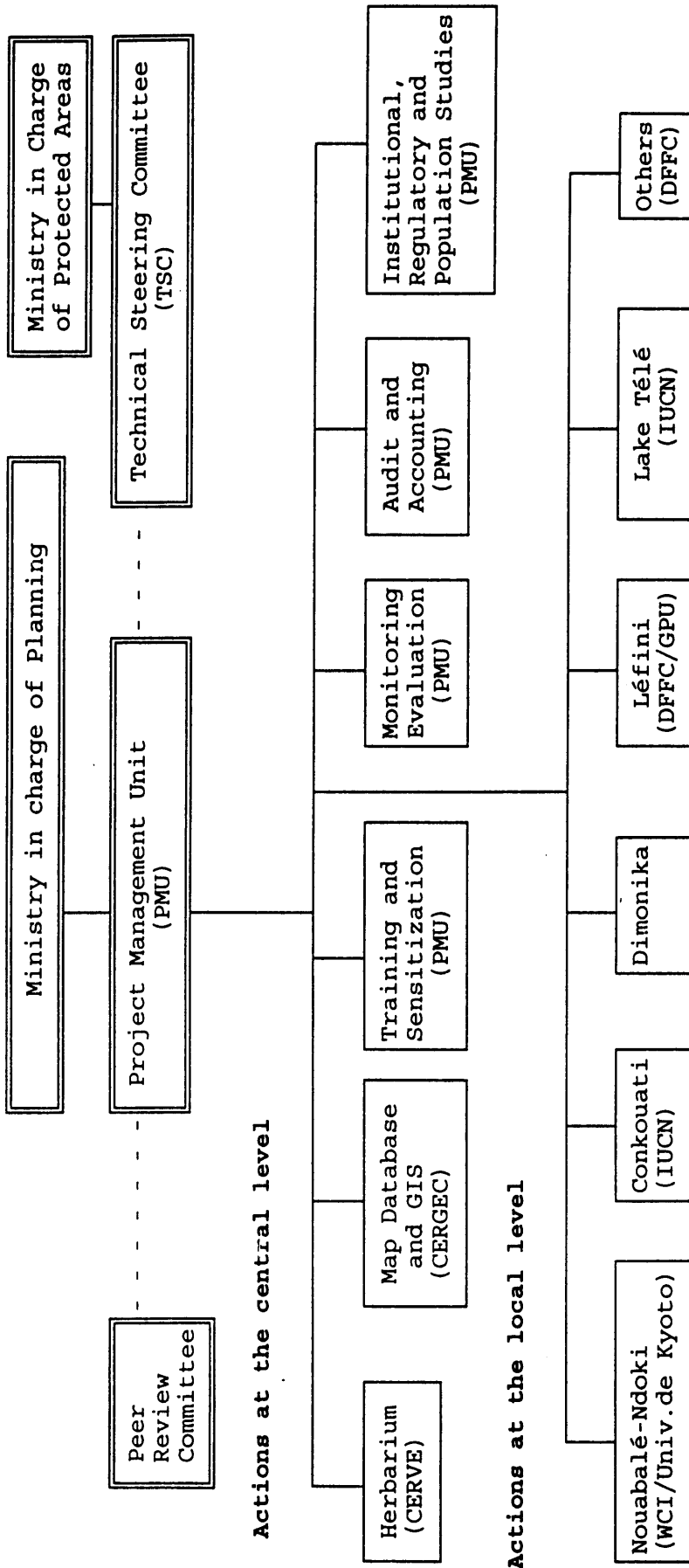
WILDLANDS PROTECTION AND MANAGEMENT PROJECT

SUMMARY ACCOUNT BY PROJECT COMPONENT

	PMU	Training	Consult.	CERGE	CERVE	Nouabale	Conkouati	Dimonika	Léfini	Lake Télé	Total
						(CFAF Million)					
<u>Investment Costs</u>											
Reserve civil works	19,044	-	-	1,300	2,000	95,341	27,110	18,200	53,763	2,002	218,759
Other civil works	-	-	-	-	-	38,260	18,200	7,800	18,980	7,800	91,040
Goods	6,552	-	-	-	-	16,078	10,041	2,522	13,790	5,616	54,600
Vehicles/boats	12,392	-	-	-	6,500	40,974	27,021	12,565	28,930	9,411	137,793
Office equipment	12,038	-	-	19,358	14,698	15,964	14,729	2,418	10,881	3,094	93,180
Office supplies	0,536	-	-	0,812	1,560	-	1,040	2,600	-	0,119	6,667
Research Equipment	-	-	-	-	8,600	25,008	34,482	8,014	13,875	5,568	95,547
Shipping	5,200	-	-	-	-	8,052	6,500	3,900	-	-	23,652
Resident experts	101,500	-	-	55,728	38,852	162,055	91,986	81,542	-	21,142	552,805
Total Investments	157,262	-	-	77,198	72,210	401,732	231,108	139,561	140,219	54,753	1,274,043
<u>Recurrent costs</u>											
Salaries	95,363	-	-	2,340	15,662	183,941	116,601	40,113	70,197	18,789	543,006
Travel	5,556	-	-	3,280	3,280	26,400	2,888	1,620	1,056	3,100	47,180
Vehicle O & M	10,568	-	-	2,116	5,290	46,736	13,474	22,200	8,606	6,160	115,150
Equipment O & M	37,576	-	-	0,538	3,228	5,662	7,102	-	8,393	0,188	62,686
Other O & M	6,857	-	-	3,142	5,864	6,104	21,524	4,053	19,308	6,321	103,173
MUCODEC	26,750	-	-	-	-	4,815	2,430	16,100	1,170	2,010	53,275
Consultancies	25,017	-	-	-	8,323	59,463	21,920	-	-	3,636	428,169
Other incr. Op.	102,000	284,200	-	3,620	9,656	45,293	51,932	-	8,260	7,120	512,071
NGO Management	-	-	-	-	-	62,165	56,669	16,257	-	14,563	149,655
Total Recurrent	309,687	284,200	309,810	15,036	51,304	470,750	294,539	100,243	116,990	61,888	2,014,367
Total baseline costs	466,949	284,200	309,810	92,234	123,513	872,302	525,648	239,904	257,209	116,641	3,288,410
Physical contingencies	51,147	57,840	56,962	1,867	7,670	67,714	37,838	14,411	23,708	8,325	327,482
Price contingencies	22,080	16,984	14,739	2,346	3,235	37,503	19,106	10,028	7,451	3,996	137,468
Total project costs	540,176	359,024	381,511	96,447	134,418	977,519	582,592	264,343	288,368	128,962	3,753,360

WILDLANDS PROTECTION AND MANAGEMENT PROJECT

Organizational Chart



- Legend**
- () - executing agency
 - CERVE - National Herbarium
 - CERGEC - Geographic Research and Cartographic Production Center
 - DFFC - Direction of Fauna and Flora Conservation
 - WCI - Wildlife Conservation International
 - IUCN - World Conservation Union
 - GPU - Gorilla Protection Unit

N.B. This Organizational Chart is only valid until the Mid-Term Review of the project (PY3); after that date, the permanent structure applies.

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WILDLANDS PROTECTION AND MANAGEMENT PROJECT

SUMMARY ACCOUNTS BY YEAR

	92/93	93/94	94/95	95/96	96/97	Total	92/93	93/94	94/95	95/96	96/97	Total
	CFAF Million						US Million					
Investment Costs												
Reserve civil works	161,011	38,437	12,529	6,783	0,000	218,759	0,137	0,045	0,024	0,000	0,826	0,209
Other civil works	88,400	2,640	0,000	0,000	0,000	91,040	0,009	0,000	0,000	0,000	0,209	0,209
Goods	50,430	4,170	0,000	0,000	0,000	54,600	0,015	0,000	0,000	0,000	0,340	0,340
Vehicles/boats	120,140	2,891	12,899	1,863	0,000	137,793	0,010	0,046	0,007	0,000	0,462	0,525
Office equipment	93,180	0,000	0,000	0,000	0,000	93,180	0,000	0,000	0,000	0,000	0,358	0,358
Office supplies	5,798	0,455	0,414	0,000	0,000	6,667	0,002	0,001	0,000	0,000	0,022	0,025
Research equipment	73,980	15,140	3,158	2,602	0,667	95,547	0,054	0,011	0,009	0,000	0,285	0,362
Shipping	18,720	2,466	2,466	0,000	0,000	23,652	0,009	0,009	0,000	0,000	0,072	0,030
Resident experts	181,588	160,746	131,128	58,108	21,235	552,805	0,574	0,468	0,208	0,000	0,698	2,024
Total Investments	793,246	226,946	162,594	69,356	21,902	1,274,043	0,811	0,581	0,248	0,078	4,768	4,768
Recurrent costs												
Salaries	135,104	146,645	136,201	132,331	0,000	550,287	0,527	0,488	0,474	0,000	2,009	2,009
Travel	13,614	12,813	13,093	7,661	0,000	47,180	0,046	0,047	0,027	0,000	0,172	0,172
Vehicle O & M	31,756	30,383	28,102	24,909	0,000	115,150	0,109	0,100	0,089	0,000	0,400	0,400
Equipment O & M	16,712	17,483	17,490	9,860	1,142	62,686	0,062	0,062	0,035	0,004	0,228	0,228
Other O & M costs	1,144	34,144	34,441	33,159	2,283	105,173	0,122	0,123	0,118	0,008	0,376	0,376
MUCODEC	11,830	16,200	14,175	11,070	0,000	53,275	0,058	0,051	0,040	0,000	0,194	0,194
Consultations	155,747	98,875	94,217	79,330	0,000	428,169	0,353	0,336	0,283	0,000	1,572	1,572
Other incr. op.	146,276	134,270	136,910	80,414	0,000	497,871	0,480	0,489	0,287	0,000	1,818	1,818
NGO management cost	68,011	38,166	26,229	16,714	0,534	149,655	0,136	0,094	0,060	0,002	0,553	0,553
Total Recurrent cost	580,194	528,981	500,858	395,454	3,959	2,009,446	1,893	1,790	1,413	0,014	7,342	7,342
Total Baseline costs	1,373,440	755,927	663,452	464,810	25,861	3,283,489	2,704	2,371	1,661	0,092	12,110	12,110
Physical contingencies	134,597	74,080	65,681	47,875	0,728	322,961	0,265	0,237	0,171	0,003	1,193	1,193
Price contingencies	0,000	28,725	51,749	55,312	3,923	39,709	0,103	0,185	0,198	0,014	0,800	0,800
Total Project costs	1,508,037	858,732	780,882	567,997	30,512	3,746,159	3,072	2,792	2,030	0,109	1,988	1,988

REPUBLIC OF CONGO
WILDLANDS PROTECTION AND MANAGEMENT PROJECT
PROJECT COMPONENTS BY YEAR

	<u>FY 93</u>	<u>FY 94</u>	<u>FY 95</u>	<u>FY 96</u>	<u>FY 97</u>	<u>Total</u>
	<u>(92/93)</u>	<u>(93/94)</u>	<u>(94/95)</u>	<u>(95/96)</u>	<u>(96/97)</u>	
	(CFAF Million)					
<u>Baseline costs</u>						
PMU	127,192	96,716	92,388	43,654	-	359,950
Training	78,000	79,200	79,200	52,800	-	289,200
Consultancies	158,600	89,420	89,420	56,170	-	393,610
C.E.R.G.E.C	50,740	19,659	18,339	2,495	-	91,234
C.E.R.V.E	81,639	11,048	18,994	10,832	-	122,513
Nouabalé-Ndoki	307,367	223,296	176,477	158,955	15,207	881,302
Conkouati	252,392	112,125	95,550	65,581	-	525,648
Dimonika	101,921	62,181	37,080	31,784	8,938	241,904
Léfini	198,853	78,370	79,749	73,268	46,869	477,109
Lake Télé	7,210	27,244	19,586	12,601	0,000	116,641
<u>Total baseline</u>	<u>1413,912</u>	<u>799,259</u>	<u>706,785</u>	<u>508,141</u>	<u>71,013</u>	<u>3499,111</u>
Physical Cont.	61,362	54,575	53,020	30,467	0,628	200,052
Price Cont.	28,540	6,841	6,507	4,808	0,300	46,996
<u>Grand Total GEF</u>	<u>1503,814</u>	<u>860,675</u>	<u>766,312</u>	<u>543,416</u>	<u>71,9423</u>	<u>3746,159</u>

REPUBLIC OF CONGO
WILDLANDS PROTECTION AND MANAGEMENT PROJECT
SUMMARY ACCOUNTS BY YEAR

	92/93	93/94	94/95	95/96	96/97	Total	92/93	93/94	94/95	95/96	96/97	Total
	(CFAF Million)						(US\$ Thousand)					
Investment Costs												
Reserve civil works	163	37	12	7	-	219	604	137	44	26	-	811
Other civil works	89	2	-	-	-	91	330	7	-	-	-	337
Goods	50	4	-	-	-	54	185	15	-	-	-	200
Vehicles/Boats	121	3	12	2	-	138	448	11	44	7	-	510
Office Equipment	93	-	-	-	-	93	344	-	-	-	-	344
Office Supplies	7	-	-	-	-	7	26	-	-	-	-	26
Research Equipment	75	16	3	2	-	96	278	59	12	8	-	357
Shipping	19	2	3	-	-	24	70	7	12	-	-	89
Resident Experts	190	157	127	57	21	552	705	583	470	211	78	2047
Total Investment Costs	807	221	157	68	21	1274	2990	819	582	252	78	4721
Recurrent Costs												
Salaries	141	142	132	128	-	543	522	526	489	474	-	2011
Travel	14	13	13	7	-	47	52	48	48	26	-	174
Vehicle O & M	34	30	27	24	-	115	126	111	100	89	-	426
Equipment O & M	18	17	18	9	1	63	67	63	67	33	4	234
Other O & M costs	1	34	34	32	2	103	4	126	126	119	7	382
MUCODEC	12	15	15	11	-	52	44	55	55	41	-	195
Consultations	164	96	92	76	-	428	607	356	342	281	-	1586
Other Incr. Op. Costs	158	136	138	80	-	512	584	504	511	296	-	1895
NGO management costs	72	37	25	16	-	150	267	137	93	59	-	556
Total Recurrent Costs	614	520	494	383	3	2014	2273	1926	1831	1418	11	7459
Total Baseline Costs	1421	741	651	451	24	3288	5263	2745	2413	1670	89	12180
Physical contingencies	143	72	65	46	1	327	530	267	241	170	4	1212
Price contingencies	-	29	51	54	4	138	-	107	188	200	15	510
Total Project Costs	1564	842	767	551	29	3753	5793	3119	2842	2040	108	13902

REPUBLIC OF CONGO

WILDLANDS PROTECTION AND MANAGEMENT PROJECT

Estimated disbursement schedule and profile

A. Disbursement Schedule a/

<u>Bank's FYS</u>	<u>Bank's Semesters</u>	<u>Per Semester</u> US\$ Million	<u>Cumulative</u> %
1993	II	0.6	6
1994	I	1.2	12
	II	2.2	22
1995	I	3.4	34
	II	5.0	50
1996	I	6.2	62
	II	7.4	74
1997	I	8.6	86
	II	9.4	94
1998	I	10.0	100

a/ Based on Africa-wide standard disbursement profile for agriculture (June 1992).

B. Disbursement Profile

REPUBLIC OF CONGO
WILDLANDS PROTECTION AND MANAGEMENT PROJECT

Implementation Schedule 1/

<u>Task</u>	<u>Completion Date</u>	<u>Agency Responsible</u>
- Calendar for deployment of field staff	Negotiations (Oct. 26, 1992) (*)	DFP
- Preparation of project work program for CY93	Negotiations (Oct. 26, 1992) (*)	MEFP/DFP
- Establishment of bidding documents for key project contracts	PPA Program (Nov.-Dec. 1992) (*)	MEFP
- Preparation of M&E methodology and CY93 work program	PPA Program (Nov.-Dec. 1992) (*)	MEFP
- Consultations with local populations over alternative activities	PPA Program (Nov.-Dec. 1992) (*)	DFP
- Procurement of key project vehicles, goods and equipment	PPA Program (Jan. to June 2, 1993)	MEFP/PMU
- Preparation of work program for the establishment of the Trust Fund	PPA Program (June 1993)	MEFP/DFP
- Stopping of issuance of logging permits in project priority sites	Grant Effectiveness (before June 2, 1993)	MEF
- Creation of Project Management Unit (PMU)	Grant Effectiveness (before June 2, 1993)	MEFP
- Selection of Project Coordinator and two high-level management staff	Grant Effectiveness (before June 2, 1993)	MEFP
- Establishment of Technical Steering Committee	Grant Effectiveness (before June 2, 1993)	MEFP

1/ An asterisk (*) denotes a task already completed.

Implementation Schedule (Ct'd)

- Establishment of Peer Review Committee	Grant Effectiveness (before June 2, 1993)	MEFP
- Issuance of tax exemption for project-related activities	Grant Effectiveness (before June 2, 1993)	MEFP
- Deposit of CFAF 5 million on project account	Grant Effectiveness (before June 2, 1993)	MEFP
- Signature of two separate twinning arrangements between CERVE and CERGEC on one hand, and two foreign institutions on the other	before June 2, 1993	PMU/CERVE/ CERGEC
- Arrival of Principal Technical Advisor (PMU) and Technical Assistants for CERVE and CERGEC	before June 2, 1993	PMU
- Arrival of Technical Assistance team for Conkouati	before June 2, 1993	PMU
- Arrival of Technical Assistant for Dimonika	before June 2, 1993	PMU
- Project Launch Workshop	May 31, 1993	PMU
- Arrival of Technical Assistance team for Léfini and Lake Télé	June 30, 1993	PMU
- Beginning of deployment of government staff in the reserves	June 30, 1993	DFFC
- Finalization of key M&E indicators	June 30, 1993	PMU
- First semi-annual report	June 30, 1993	PMU
- First local NGO consultation	June 30, 1993	PMU
- First TSC meeting	June 30, 1993	PMU
- Tutelage of Dimonika Reserve transferred to the Ministry in charge of protected areas	June 30, 1993	DFFC/MDTS
- First meeting of the Peer Review Committee	December 15, 1993	PMU

Implementation Schedule (Ct'd)

- First audit of project accounts	April 30, 1994	PMU
- Plan for review of the general legislation concerning protected areas	June 30, 1994	MEFP/DFP
- Preliminary steps to gazette the project sites	June 30, 1994	DFP
- Mid-Term Review mission	June 30, 1995	PMU
- Mid-Term Review report	September 30, 1995	PMU
- Enactment of new legislation concerning protected areas	December 31, 1995	MEFP/DFP/MEF
- Establishment of Trust Fund	December 31, 1995	MFPE
- Establishment of national permanent management structure in charge of reserves (NPMS)	December 31, 1995	MFPE
- Adoption of legal statutes for the project priority sites	December 31, 1995	MFEP
- Full government staff deployment in project priority sites	December 31, 1995	DFP
- Grant closing date	December 31, 1997	
- Project Completion Report	March 31, 1998	NPMS

Legend:

CERGE C	National Geographic and Cartographic Center
CERVE	National Herbarium
DFP	Direction of Flora and Fauna Conservation
MEFP	Ministry of Economy, Finance and Planning
MEF	Ministry of Water and Forestry
MDST	Ministry for Technical and Scientific Development
M&E	Monitoring and Evaluation
NPMS	National Permanent Management Structure in charge of reserves
PMU	Project Management Unit
TSC	Technical Steering Committee

WILDLANDS PROTECTION AND MANAGEMENT PROJECT

Supervision Schedule

Project Yr.	Mission No.	Activity	Expected Skill Requirement	SW
PY1 (FY93)	1	Project Start-up activities Procurement Financial Management Establishment of M&E unit	Task Manager Financial Analyst M&E specialist	3 2 3
	2	Organization/Management Launching of Field activities	Task Manager Protected areas specialist Sociologist/Anthropologist	3 3 5
	3	Review of field activities/ oversee Peer Review Committee Review of legal framework Review of institutional framework Review of Trust Fund	Task Manager Legal specialist Institutional specialist Trust Fund specialist	2 2
PY2	1	Review of PMU and field activities Review of M&E Review of Financial Performance for 1993	Task Manager M&E specialist Financial Analyst	2 3 2
	2	Review of field activities oversee Peer Review Committee Review of alternative economic activities	Task Manager Rural development specialist	3
	3	Review of Training Interim Evaluation Procurement Review	Training Specialist Task Manager Financial Analyst	2 2 2

WILDLANDS PROTECTION AND MANAGEMENT PROJECT

Supervision Schedule (cont.)

Project Yr.	Mission No.	Activity	Expected Skill Requirement	SW
PY3	1	Mid-Term Review Confirmation/Reorientation of Project Design	Task Manager Protected area specialist M&E specialist Institution Specialist Legal Specialist Financial Analyst Sociologist/Athropologist	3 3 3 3 2 2 3
		Implementation of field activities	Task Manager Protected area specialist Sociologist/anthropologist	2 2 2
		Review of field activities oversee Peer Review Committee Review of modalities for transition to a permanent structure	Task Manager Institution specialist	2 2
PY4	1	Review of field activities Review of M&E Review of financial performance for PY3	Task Manager M&E specialist Financial Analyst	3 2 2
		Review of field activities Review of Alternative economic activities	Task Manager Rural development specialist	2 2
		Review of field activities oversee Peer Review Committee	Task manager	3
	2	Review of Training Review of Trust Fund	Protected areas specialist Sociologist/anthropologist Training specialist Trust Fund specialist	3 3 2 2

REPUBLIC OF CONGO

CONGO WILDLANDS PROTECTION AND MANAGEMENT PROJECT

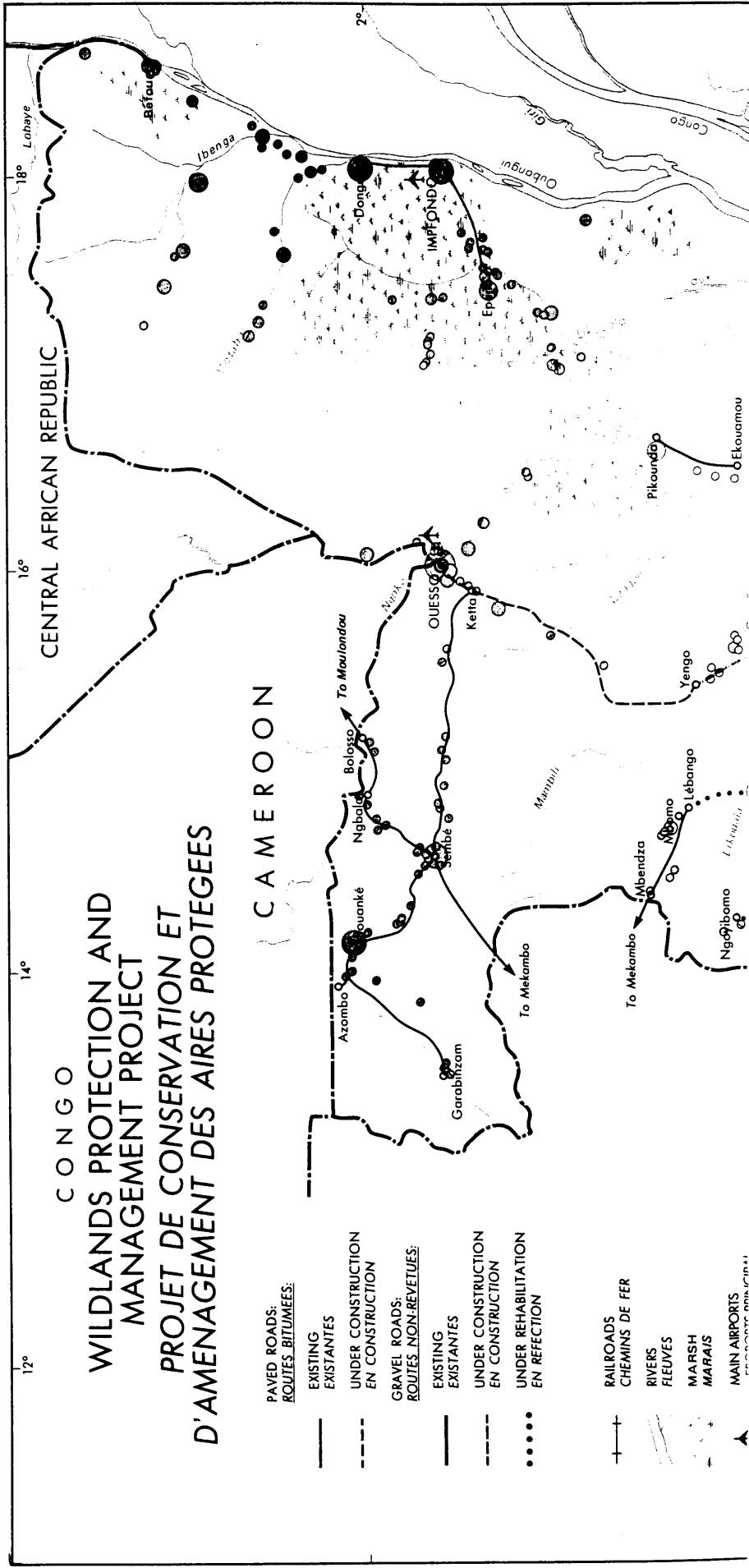
Environmental Analysis

I. Issues raised in the Environmental Analysis

1. **Long-term Biodiversity protection.** Overall, the project will have a positive impact on the conservation of Congo's biodiversity. It should be viewed as a baseline catalyst to long-term biodiversity conservation in Congo. The positive impacts from the GEF will be greater protection and management of biodiversity than currently exists in Congo. If large tracts of forest and wetlands are legally set aside for strictly biodiversity conservation then a major global contribution will have been made by the GEF. However, it is very important to clarify that these reserves should not be viewed as the only areas in need of biodiversity conservation. Rather, extensive surveys and management actions will need to be undertaken to identify and conserve biodiversity throughout Congo including within the UFAs.
2. **Sustainability.** Some kind of a professional Congolese staff and infrastructure should emerge, although this will depend upon the GEF's capability to provide for recurrent costs after the four-year period of the Congo GEF. The ultimate success of the project will depend upon the capacity of Congo to continue biodiversity conservation after the GEF funding expires. A major risk and thus environmental impact could be the folding of the project after the GEF's money has been spent and what little is earmarked for a trust fund cannot sustain the initiative in the long term.
3. **Local populations.** The concerns of local populations not yet weaned from poaching and other resource extraction in reserves will have to be mollified. Local populations, especially in the vicinity of most existing reserves, may be disadvantaged by a cut off of traditional sources of food and other products. Proposed GEF studies may be able to address this issue and examine alternatives. In general, there will have to be some allowance or mitigation for hunting and other resource extraction by indigenous peoples in protected areas. The rate of game meat and other extractions will have to be determined in each reserve.
4. **Environmental assessments.** Detailed management plans must be developed for each reserve and those management plans subjected to an environmental assessment.
5. **Inclusion of other areas.** The project needs to emphasize that more biodiversity probably needs to be protected outside of the GEF sites. The GEF is a catalyst for biodiversity conservation. Regarding protected areas, it would be advantageous for the GEF to condition the grant with assurances for the establishment of more reserves in Congo. Although resources may be stretched thin, the GEF could still call for the establishment of a protected area in the Mt. Nabemba-Garabinzam area.
6. **Relationship between the GEF and other IBRD projects.** It should be clear that the Congo GEF biodiversity conservation should not be viewed as mitigation for other natural resource management endeavors by multilateral and bilateral organizations. The GEF does not free other Bank actions in Congo, for example, from looking out for biodiversity in the EAs for those actions. The GEF is not a biodiversity mitigation bank which future or concurrent Bank development actions (e.g., road building, logging, planning, etc.) can draw from.

7. **Training.** Biodiversity conservation is a very technical matter and will require numerous university-educated Congolese as well as vocational training of technicians, park guards, etc. Completion of the wildlife school in Garoua, Cameroon may be sufficient for a chef de poste with a high school education but the conservator of a protected area should at least be a college graduate. The Congo GEF should consider promoting a wildlife and fisheries or similar conservation department, or at least some ecology and natural resource management classes, at the university in Brazzaville. In addition, one of the protected areas could be suitably equipped to serve as a university field station or training site for students. Peace Corps volunteer teachers could be employed at the university and field level.
 8. **Monitoring.** Given the current political instability and indebtedness of Congo and the lack of trained personnel in Congo, project monitoring by the Bank and the Project Management Unit will be crucial to success.
 9. **Consultation Meetings.** The EA process is supposed to consider the views and recommendations of Congolese and local NGOs. Such consultations are vital to increase local cooperation and understanding. The inclusion of another 1.5 million ha of land into a system of protected areas is a major decision affecting Congo's future. At a time when Congo is moving toward democracy, public participation should be encouraged. The indigenous people, who live near or inside of existing and proposed protected areas, may rely upon game meat and fishing in those areas and may want to voice their opinions on the establishment and management of protected areas. Those living near or inside of existing protected areas may view their use of those areas as part of their livelihood even if their decade-long use of those areas may have been illegal.
 10. To date there have been several discussions, including the appraisal mission, with Congolese officials. These appear adequate for the general approach of the GEF. Some international NGOs which will implement the GEF have been working with Congolese for several years and have become familiar with part of the socio-economic setting in which reserves must function. The Man and the Biosphere Dimonika site evidently has paid little heed to local aspirations and much work and confidence building will be required during the management plan formulation. It is during the formulation of management plans for each of the reserves that the most fruitful interchange will take place to make local populations part of reserve management.
- II. How the issues raised will be dealt with in the project**
1. **Long-term Biodiversity protection.** The Congo GEF project would be the first in a series of interventions in the Congo to protect biodiversity. The project would act as a catalyst to attract other donors and projects. The establishment of a trust fund would also reinforce the country's capacity for sustainable biodiversity protection.
 2. **Sustainability.** This issue will be addressed through several means: (a) the establishment of a trust fund; (b) the development of economic alternative activities; and (c) the application of Government resources which are available for the reserve protection, but which have never been systematically used.
 3. **Local populations.** The reserve management plans would include designating core areas where no hunting or commercial extraction would be permitted and multiple use areas and buffer zones where some subsistence hunting and resource extraction would be permitted. The activities planned at the reserve level would include the development, with the local communities, of alternative activities to be funded through the project, and/or by other donors and in conjunction with other projects (in particular the National Agriculture Extension Project).

4. Environmental Assessments. The management plans and work programs for each reserve would be submitted to the Technical Steering Committee for review at least six months prior to execution. If any activity poses a potential environmental threat, the TSC would require an environmental assessment before implementation.
5. Inclusion of other sites. The PMU and the herbarium would work together to identify areas outside the core five GEF sites suitable for inventories and surveys. These areas will include the Mt. Nabemba-Garibenzam, Mt. Fouari and Massif du Chaillu areas. The gazetting of Mt. Nabemba-Garibenzam would have to be preceded by a series of inventories and sociological studies to establish where the limits of the reserve should be. The PMU would begin these preliminary steps under the project with the goal of eventually gazetting the new areas.
6. Relationship GEF/IBRD project. The GEF project would not be viewed as mitigation for other possible IBRD or related projects. All other IBRD projects would follow the operational directives and guidelines put forth by the World Bank and would take into consideration all World Bank policies, including the new forest policy.
7. Training. The training component of the GEF project would focus primarily on guards, conservators and reserve personnel. This training would focus on-the-job training. A complementary project funded by the U.S. Government, the ATLAS project, will train higher level personnel and will fund undergraduate and graduate degrees for high-level decision makers in the field of natural resources and protected area conservation. In addition to this, Peace Corps volunteers would participate in reserve management in three reserves: Nouabalé-Ndoki, Konkouati and Dimonika.
8. Monitoring. The monitoring and evaluation component of the project will be an extremely important component of the project. A national specialist in the PMU would be in charge specifically of overseeing the Monitoring and Evaluation program. He/she would be assisted by international short-term consultants. At the reserve level, the program would be similarly designed and executed by trained staff, supported by the PMU and international short-term consultancies.
9. Consultation Meetings. Preliminary consultations with some local populations have been conducted, but further consultations will be required before management plans are designed. Given their importance, these are due to start before grant effectiveness under a special Project Preparation Advance (PPA).



C O N G O

WILDLANDS PROTECTION AND
MANAGEMENT PROJECT

PROJET DE CONSERVATION ET
D'AMENAGEMENT DES AIRES PROTEGEES

- PAVED ROADS:
ROUTES BITUMEES:
- EXISTING
EXISTANTES
- UNDER CONSTRUCTION
EN CONSTRUCTION
- GRAVEL ROADS:
ROUTES NON-REVEETUES:
- EXISTING
EXISTANTES
- UNDER CONSTRUCTION
EN CONSTRUCTION
- UNDER REHABILITATION
EN REFECTON
- RAILROADS
CHEMINS DE FER
- RIVERS
FLEUVES
- MARSH
MARAIS
- MAIN AIRPORTS

12°

14°

16°

18°

2°

CENTRAL AFRICAN REPUBLIC

C A M E R O O N

Lohaye

Bafou

Ibanga

Douala

Yaoundé

Garabnzam

Azombo

Ngoulaké

Ngbola

Bolosso

To Mouloundou

Nouak

Ouessou

Ketta

To Mekambo

Mbendza

To Mekambo

Ngabomo

Lébangou

Ngabomo

Lékouala

Yengo

Pikoundou

Ekouamou

Oubangui

Congo

Mamou

Mamou

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


Mamou











10°

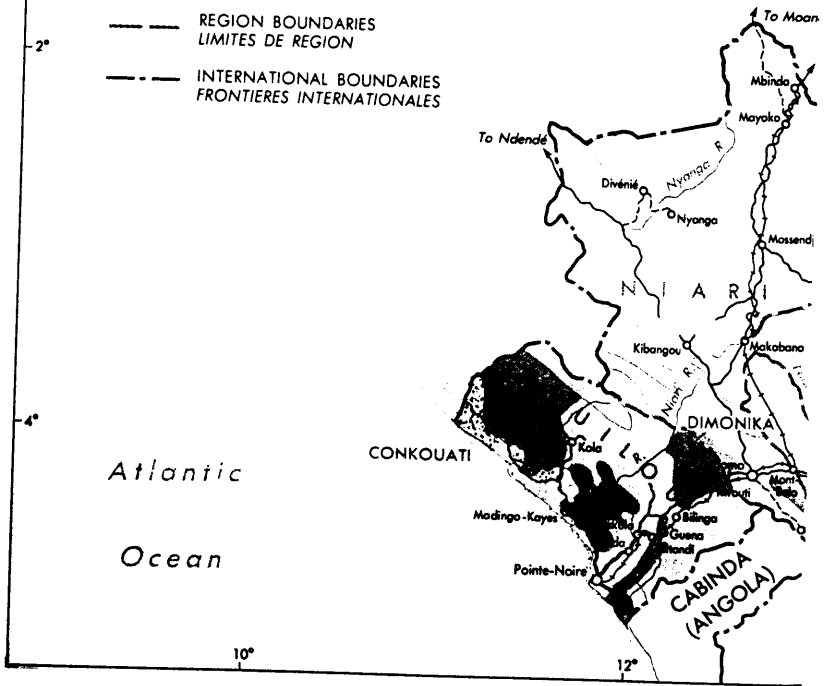
CONGO

WILDLANDS PROTECTION AND MANAGE PROJET DE CONSERVATION D'AMENAGEMENT DES AIRES PRO PROPOSED PROTECTION AREA S

GEF PROTECTED AREA SITES
LES SITES PROTEGES DE GEF

-  MIXED CLOSED FOREST
FORET OMBROPHILE MIXTE
-  INUNDATED FOREST
FORET INONDEE
-  OPEN FOREST
FORET CLAIRE
-  GRASSLAND SAVANNAHS
SAVANES HERBEUSES
-  SAVANNAH AND GALLERY FOREST
SAVANES HERBEUSES ET FORET MESOPHILE
-  WETLAND SAVANNAHS
PRAIRIES FLOTTANTES

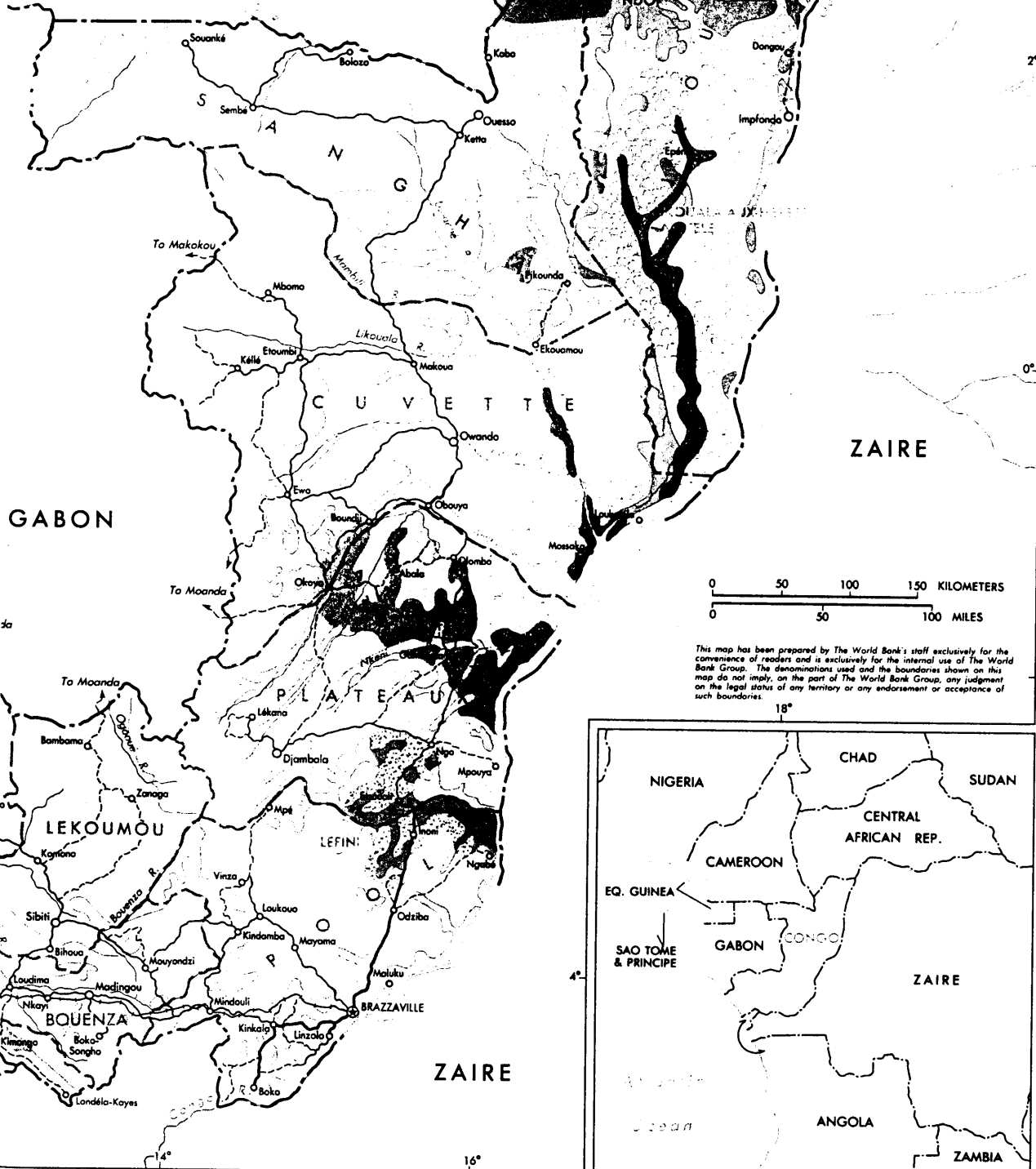
-  NATIONAL CAPITAL
CAPITALE
-  MAIN TOWNS
VILLES PRINCIPALES
-  PRIMARY ROADS, PAVED
ARTERES PRINCIPALES, PAVE
-  PRIMARY ROADS, GRAVEL AND EARTH
ARTERES PRINCIPALES, GRAVIER ET TERRE
-  SECONDARY ROADS, EARTH
ROUTES SECONDAIRES, TERRE
-  RAILROADS
VOIES FERRES
-  RIVERS
FLEUVES
-  MARSHES
MARAIS
-  REGION BOUNDARIES
LIMITES DE REGION
-  INTERNATIONAL BOUNDARIES
FRONTIERES INTERNATIONALES



MENT PROJECT
ET
OTEGEES
ITES

CENTRAL AFRICAN REPUBLIC

CAMEROON



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