

Prepared by Dr. Goetz Schuerholz

SUSTAINABLE FINANCING FOR BIODIVERSITY CONSERVATION OF MADAGASCAR THROUGH SUPPORT OF PROTECTED AREAS

CONCEPT PAPER IN PREPARATION OF A FULL GEF PROJECT
(GRANT FOR ENDOWMENT FUND)

Submitted to the GEF Secretariat
by The World Bank
on behalf of the Ministry of Environment and the Ministry of Water and Forests
of Madagascar

SUMMARY:

Madagascar's protected areas (PAs) are recognized samples of some of the most species-rich and endemic-rich ecosystems of the world. Surrounded by some of the poorest people, however, and managed inadequately due to the lack of qualified personnel and funds, they are under increasing risk of encroachment and exploitation. The primary objectives of GEF support are to contribute to the sustainable financing of the operational costs of the PA system, to promote sustainable land and resource use in the support zones of conservation areas, and to effectively address the need for ecological connectivity through ecological corridor development and the establishment of additional "ecological stepping stones", in an attempt to halt the alarming rate of wildlife habitat destruction and species disappearance. GEF funding is expected to provide seed money for a Trust Fund as part of a Foundation that will be established with the assistance of the Worldwide Fund for Nature (WWF's Madagascar Programm Office) and Conservation International (CI) for the benefit of Madagascar's PA system and sustainable biodiversity conservation as integral part of the country's final phase of its Environmental Programme (EP3). The Project will assist in establishing replicable approaches to dealing with the root causes of environmental threats, especially poverty and community weakness, through community empowerment, partnership agreements and benefit sharing. It is expected that the project will forge long-term international partnerships between governmental conservation agencies, NGOs and the international donor community at large. The Project is fully integrated into Government development priorities and fully endorsed by the Government of Mozambique, the World Bank and the international donor community. The Project would give concrete content to the final phase of the National Environmental Action Plan (NEAP) adopted in 1989.

Costs and Financing (USD million):

GEF:	-Project	US\$	8.0 million
Co-financing:	-WWF	US\$	0.5 million
	-CI	US\$	0.5 million
	-Other International	US\$	10.0 million
	-Government/Beneficiaries through debt conversion and PA revenues	US\$	10.0 million

ABBREVIATIONS and ACRONYMS

AFD	<i>Agence Française de Développement</i>
ANAE	<i>Association Nationale d'Actions Environnementales</i>
ANGAP	<i>Association Nationale pour la Gestion des Aires Protégées</i>
CAPE	<i>Composante d'Appui aux Aires Protégées</i>
CBRM	Community Based Resource Management
CI	Conservation International
COAP	<i>Code des Aires Protégées</i>
COS	<i>Comité d'Orientation et de Suivi</i>
DD	<i>Direction des Domaines</i>
DEF	<i>Direction des Eaux et Forêts</i>
DGIS	Netherlands Development Agency
ENP	Environmental National Policy
EP 1, 2, & 3	Environmental Programme, phases 1,2 and 3
EU	European Union
FTM	National Geographic Institute
GDP	Gross Domestic Product
GEF	Global Environment Facility
GIS	Geographic Information System
GNP	Gross National Product
GoM	Government of Madagascar
HIPC	Highly Indebted Poor Countries (Initiative)
IFAD	International Fund for Agricultural Development
IA	Implementing Agency
IUCN	The World Conservation Union
KfW	Kreditanstalt für Wiederaufbau
MAB	Man and Biosphere
MDS	Multi-Donor Secretariat
MEF	Ministry of Water and Forests
MIRAY	Name of USAID funded project implemented by a Consortium of Pact, CI and WWF
MoE	Ministry of Environment
NEAP	National Environmental Action Plan
NGO	Non-Governmental Organisation
NORAD	Norwegian Agency for Development
NP	National Park
ONE	<i>Office National pour l'Environnement</i>
OP	Operational Programme
PA	Protected Area
PAGE	<i>Programme d'Appui à la Gestion de l'Environnement</i>
Plan GRAP	<i>Plan de Gestion du Réseau National des Aires Protégées de Madagascar</i>
SAGE	<i>Services d'Appui à la Gestion de l'Environnement</i>
SCAC	<i>Service de Coopération et d'Action Culturelle (France)</i>
SFC	Sustainable Financing Commission
TFSC	Trust Fund Steering Committee
UN	United Nations
UNDP	United Nations Development Programme
USAID	U.S. Agency for International Development
WCPA	World Commission on Protected Areas

*Concept paper in support of a full GEF proposal for the sustainable financing of
Madagascar's Protected Area Network., August 24, 2002*

WCS	Wildlife Conservation Society
WWF	World Wide Fund for Nature / World Wildlife Fund (US)
WB	The World Bank

1. Project Title:

Sustainable financing for biodiversity conservation of Madagascar through the support of protected areas

2. GEF Implementing Agency:

The World Bank

3. Country in which the project is being implemented:

Madagascar

4. GEF Focal Area(s):

Biodiversity; Multi-Focal Area; International Waters.

5. Operational Programme/Enabling Activities/ Short-Term Measures:

Given the range of ecological conditions in Madagascar, the GEF project covers the four groups of focal ecosystems identified in the GEF Operational Strategy for Biodiversity. The proposed project fits within OP#12 Integrated Ecosystem & Natural Resources Management, and is relevant to the criteria of OP#8 Waterbody based Operational Programme, as well as OP#4, Mountain Ecosystems and OP#2 Coastal, Marine & Freshwater Ecosystems.

6. Country Drivenness:

In recognition of the global significance of the country's biodiversity and the need for its urgent protection the Government of Madagascar (GoM) was the first in Africa to elaborate a National Environmental Action Plan (NEAP) as early as 1989, six years prior to signing the Convention on Biological Diversity. The NEAP was designed for a 15-year period, grouped into three five-year Environmental Programme phases (EP 1, 2 and 3). Institution building became the top priority of EP1 resulting in the creation of three new institutions under the supervision of the National Council for Environment and the Ministry of Environment on par with the Ministry of Water and Forests. The three institutions created under the jurisdiction of the Ministry of Environment were the National Office for Environment (ONE), the National Association for the Management of Protected Areas (ANGAP), and the National Association for Environmental Action (ANAE). Phase 1 also included the strengthening of relevant public sector institutions, more specifically, the Land Titling Directorate (DD), the Water and Forests Directorate (DEF) and the National Geographic Institute (FTM). Programme implementation is coordinated by ONE, and by an annual meeting of a steering committee (COS: Comité d'Orientation et de Suivi) composed of representatives of Government Agencies, NGOs, the civil society and donors.

At the time of elaborating the NEAP and EP1, the country did not have the proper institutional framework to deal with environmental issues and programmes. As a result, the work was developed with a large external input. In contrast, the Second and Third Phase Programmes (EP2 and EP3) have and are being prepared by national institutions, through a country-driven participatory process that has developed since

mid-1994. This was achieved in close cooperation with donors (regular meetings of the COS) and multi-donor missions.

For EP2, the investment operations adopted by the country in cooperation with the international donor community follow an integrated sector approach (Sector Investment Programmes), which is expected to improve the effectiveness of public expenditures. It covers all or most priority activities related to the environment, is prepared by local stakeholders, supported by all donors active in environmental issues in Madagascar, minimizes the reliance on international long-term consultants, and involves common implementation arrangements.

The EP2 spans the period 1997 through 2002. The focus of phase 2 is *inter alia* on (a) multiple-use forest ecosystem management which includes participatory planning, zoning and management of forest areas; (b) the enhancement of national parks and related ecotourism, including the completion of the country's protected area system expansion Programme; and the (c) conservation management of coastal and marine ecosystems which includes the creation and establishment of associated protected areas.

EP3 will focus on sustainable financing of the activities created by the Environmental Action Plan to date and the continuation of initiatives started during the previous phases. This covers the completion of the protected area network with emphasis on marine and coastal areas as well as forest ecosystems. The third phase will also concentrate on the participatory planning and sustainable development of ecological corridors that have been identified by the Development Plan for the national system of Madagascar's protected areas (Plan GRAP), elaborated in 2001 by ANGAP in close cooperation with the local Programme Office of the World Wide Fund for Nature (WWF).

The GoM's commitment to environmental issues and nature protection is reflected by its good record of recognizing and ratifying pertinent international and regional conventions in the environmental arena (see section 11: *Country Eligibility*) and its struggle to overcome its overwhelming environmental problems with the help of the international donor community.

Madagascar's commitment to biodiversity conservation is clearly illustrated by the Environmental Charter of 1990 and more recently, by the logical framework matrix that the country has developed on its own accord for the third phase of the National Environmental Action Programme. The Environmental Charter, promulgated in 1990, states *inter alia* that:

- The environment is a major concern for the government (Article 3);
- The NEAP constitutes the basis for all actions in the environmental field (Article 5);
- Environmental management is ensured by the government, local authorities, legally created NGOs and all citizens (Article 7).

The Malagasy NEAP actors and donors/partners have created an innovative Multi-Donor Secretariat (MDS), which serves as an exchange platform and informal coordination body for improving the implementation and impacts of the Environment Programme. The MDS is seen internationally as an effective management and

dialogue tool for the NEAP which has served as a model for several other African countries.

ANGAP has emerged as an effective key player in PA management on a regional and international scale, recently publishing its five-year vision for the management of the PA Network in Madagascar (Plan GRAP), presented at the international conference on PA management in Bangkok, Thailand ("Beyond the Trees", organized by WWF and the Thai Ministry of Environment).

In May 2001, ANGAP, along with IUCN and WWF and with funding from other partners, organized an "International Symposium on the Sustainable Financing of Protected Areas and other Environmental Programmes." ANGAP was lauded for its efforts and invited by the chairman of IUCN's "Sustainable Financing Commission" to play a lead role during the 2003 World Parks Congress in Durban, South Africa.

The project is fully endorsed by the GEF operational focal point.

7. Context:

Significance of Biological Diversity. Madagascar has been called the single highest major biodiversity conservation priority in the world, owing to its combination of high diversity, endemism, and degree of threat. Madagascar is one of the 17 recognized megadiversity countries which represent 80% of the world's biological diversity. Although Madagascar occupies only about 1.9% of the land area of the African region, it has more orchids than the entire African mainland, and is home to about 25 per cent of all African plants. About 10,000 plant species have been identified with 940 endemic species of trees and large shrubs alone of which 96 per cent are endemic. Plant species show a very high level of local endemism, mostly due to bioclimatic reasons. Sixty-six per cent of the endemic plant genera, for example, are only found in the humid forest ecoregions. The diversity of ferns is equally impressive: of the 694 fern species recorded 57% per cent are endemic on a species level and 1.7 per cent at the genus level.

Several new angiosperms and gymnosperms have recently been discovered, but not yet described. Madagascar is also home to a large diversity of medicinal plants which are of critical importance to the pharmaceutical industry. It has been suggested that with the rapid destruction of the remaining natural forest, species will disappear before they are discovered. At present, only 15 per cent of the country's natural ecosystems are left intact

Overall, about 80 per cent of Madagascar's plant species are endemic, and for animals the proportion is usually even higher, the best examples being the lemurs, close to 100 per cent of which occur naturally only in Madagascar. Of the 346 reptile species recorded, 314 are endemic. Only two other eco-regions in the world, i.e., Caribbean and Meso-America, can match Madagascar's diversity in reptiles. Of its reptiles, *Eretmochelys imbricata* is listed in IUCN's red data book as critically endangered and *Caretta caretta*, *Chelonia mydas*, *Lepidochelys olivacea*, *Dermochelys coriacea*, *E. madagascariensis*, *Geochelone yniphora* and *Pyxis planicauda* are listed as endangered. Ten additional reptilian species are listed as vulnerable. Raxworthy (in press) suggests a high risk of extinction for 18 reptile species.

The level of endemism for identified amphibians is exceptionally high (i.e., of the 187 species described 99 per cent are endemic). Approximately 50 additional amphibian species have been recorded but not identified yet. It is believed that more than 300 amphibian species occur in Madagascar, which equals 3.7 per cent of the world's amphibian fauna. This confirms Madagascar's significance as one of the most significant "megadiversity hotspots" of the planet. The country's avifauna is equally rich in endemism. Of the 280 bird species recorded with 204 species breeding in Madagascar, 110 species are listed as endemic.

Madagascar may best be known for its primates. It is home to 53 lemur species grouped into five endemic families. Ten lemur species are listed as critically endangered and 20 as endangered. Several new species have been discovered only recently. Within the higher-order taxa endemism is also extremely high in Madagascar, making even the less-diverse taxa exceptionally valuable on a global scale. For instance, although there are only eight genera of endemic Malagasy freshwater fish, the genetic information in these species has been compared to the entire very rich cichlid fish fauna of the African rift lakes. Many fish species have already disappeared, mostly as a result of introduced fish species. Madagascar has also been selected recently as a critical site for marine conservation worldwide.

Protected Areas and Conservation Priorities.

The network of Madagascar's protected area system is composed of 18 National Parks, five "Integral" Nature Reserves and 23 Special Reserves. In addition, two marine areas have been brought under protection with four more identified that are currently being created (see Annex 1). In addition, around 15 per cent of the land surface area is covered by biodiversity-rich native forest.

Of the 46 terrestrial protected areas 23 are actively managed by ANGAP, which is the designated institution responsible for the management of the country's protected areas. Six other protected areas are managed by WWF, one by Conservation International (CI), and one by the Wildlife Conservation Society (WCS) under a Memorandum of Understanding with ANGAP. Twenty three terrestrial PAs and marine parks are currently not being managed, leaving them largely unprotected.

To fully elaborate the conservation lessons learned in EP1, GEF financed a participatory process for the design of the biodiversity elements of the EP2. The GEF preparatory activity involved two stages. The first stage was a scientific priority-setting workshop followed by a second stage, a participatory priority-setting process, which integrated both scientific findings and local stakeholder priorities. The workshop assembled over one hundred of the foremost authorities on the biodiversity of Madagascar. These specialists defined priority areas for species groups, identified historic patterns of habitat loss and current human pressure. Through a participatory process, the workshop participants elaborated an integrated set of geographic priorities for biodiversity and research. This output was then taken to the stakeholder level to evaluate possible solutions, institutional needs, and conservation approaches. The scientific priority-setting process found that over half of the highest priority research and conservation areas lay outside of parks and reserves. The stakeholder consultations revealed the need to work with communities to manage forests and to develop a more decentralised approach to solving environmental problems.

Based on the workshop results and other available scientific information, ANGAP, with the assistance of WWF, prepared the five-year action plan for the management and expansion of the existing Protected Area System, the "Plan GRAP", to be implemented between 2001 and 2006. The action plan provides a comprehensive overview of the existing PA network, and the proposed expansion programme. The expansion programme is organized by priorities specified for each of the six ecoregions and the three transitional zones characterizing the country. Taking into account the mostly small size of the country's protected areas, the need for ecological connectivity and expansion of existing PAs is fully recognized by the Plan GRAP and has been addressed in great detail in the expansion programme.

The following table shows how large an area within each ecoregion is currently protected by statutory PAs. This may serve as a tentative indicator of how representative the system of current PAs is and which ecosystems are currently being under-represented by PAs. In this context it is noteworthy that less than 3 per cent of Madagascar's total land surface area is protected by statutory conservation areas compared to a world average of 8-12 per cent of a country's land surface.

Ecoregion	Total Area of Ecoregion in km²	Area covered by PAs in km²	% of Ecoregion covered by PAs
Northern Highlands	20,094.3	1,604.2	8.0
Ecoregion East	116,062.2	6,292.4	5.4
Central Ecoregion	169,567.0	3,051.1	1.8
High Mountains	3,353.8	113.8	3.4
Ecoregion West	207,541.0	5,224.1	2.5
Ecoregion South	61,225.7	1,114.5	1.8
Transition North	11,341.1	91.2	0.8
TOTAL	589,185.10	17,491.30	3.0

The National Environmental Action Plan has been the primary vehicle for channelling support to the management of protected areas, other forest areas, wetlands and coral reefs in Madagascar. Because of the country's low GDP per capita, high level of indebtedness and widespread poverty, government resources for the environment are very limited. Financial and technical support has therefore come in the past principally from the international donor community.

The intensive level of outside funding has allowed ANGAP to evolve into a stable and functional organization. To date ANGAP has mostly been financed by external sources.

Economic Status of the Country. Madagascar's annual per capita income has plummeted by over 40 per cent over the past two decades and stands now at US\$230. According to recent poverty assessments, more than 75 per cent of the country's population live below the poverty line. Ninety-two per cent of the poor live in rural areas. In other words, 68 per cent of the total population is rural poor. The population's sense of impoverishment is accentuated by poor health conditions and a decline in education standards.

The Malagasy economy is natural resource-based. Agriculture (including livestock, fisheries and forests) determines the global economic performance and is itself affected by national policies. The agricultural sector accounts for 31 per cent of GNP

and employs over 70 per cent of the work force. Although the number of foreign tourists is relatively low (approximately 150,000 per year coming from abroad), tourism in general and ecotourism in particular are expected to grow with improved infrastructure development in the country and improved management and expansion of the protected area system. Income indicators have deteriorated in the current past, fuelled by the current political instability.

Threats to Biodiversity and the Root Causes. Madagascar is infamous for its high degree of environmental degradation. More than 80 per cent of the country's original forest cover has disappeared and the rate of forest destruction is still growing, accelerated through the 68 per cent rural poor population who partly depend on the natural resources for their survival. The area covered by primary forest has decreased to 15 per cent. It is noteworthy that the forest cover would disappear within 25 years if current trends were to continue. This also results in the loss of topsoil (up to 150-200 tonnes per hectare per year on bare land). Poverty and the low level of agricultural technology (e.g., slash-and-burn agriculture) compounded by a rapid population increase (over 15 million rising at 3 per cent/year) are the main causes of natural resources degradation, including deforestation, vegetation fires, soil erosion, overgrazing by livestock, and loss of soil fertility. The threat of deforestation, bush fires, and extensive cropping of marginal lands are removing the ground cover necessary to stabilize the highly fragile soils.

Forest destruction and poor land use eliminates wildlife habitat at an alarming rate, resulting in unknown loss of plant and animal species, many of which are not yet known to science. Furthermore, unique ecosystems become increasingly fragmented, threatening their ecological integrity and resulting in decreasing levels of genetic variability of unique wildlife populations, a situation that ultimately leads to species extinction. Environmental degradation and habitat destruction threaten not only the biological diversity, but also watershed and soil stability vital to the agrarian economy. Poverty continues to threaten the sustainability of the natural resource base, and the rural poor need more options to utilize available natural resources in a sustainable manner. The negative impact of environmental degradation on the economy remains very high. The country is losing largely endemic species and essential ecosystems of environmental, genetic, and medical importance, thereby making Madagascar one of the world's top priorities in terms of environment and conservation.

The negative impact of environmental degradation on the economy remains very high. The economic cost of lower agricultural productivity due to soil loss, siltation and water shortage, damaged infrastructure, and the need to build new infrastructure continue to place a heavy burden on the country's GNP.

The root causes of terrestrial biodiversity loss in Madagascar are the same as those escalating the phenomenon of environmental degradation in general. The combination of expanding human populations using inappropriate agricultural technologies, with little security of land tenure and few opportunities besides subsistence agriculture, are overexploiting existing agricultural and marginal lands, encroaching on forest areas and statutory PAs in search of new land. Contributing to this is a breakdown in traditional regulatory mechanisms caused by increasing human migration within the country. These effects are further compounded by poorly regulated commercial exploitation of forests for timber due to weakness in central policies and institutions,

and a failure to invoke the cooperation of all stakeholders, particularly those at local and regional levels (see root causes analysis: maize, sisal, tobacco cultivation).

While inadequate management continually threatens the existing protected areas, the major part of the country's biodiversity still lies outside statutory protected areas. Hence, biodiversity loss is a direct consequence of forest loss. While coastal and marine sedimentation resulting from soil erosion is widespread, the consequences on marine biodiversity are little known. Currently the distribution, status and threats to marine biodiversity as a whole are little known and understood. A concerted effort is currently made to enhance the knowledge of marine and coastal ecosystems and to include designated areas of high ecological value and those under greatest threat into the protected area system.

Following Madagascar's transition to a democratic regime in the early 1990s, there were great expectations that the country would adopt more growth-oriented economic policies and start reversing several decades of economic decline. This breakthrough has not yet fully materialized, and the conditions necessary to stop poverty from spreading have yet to be established. The recent political uncertainty following the controversial election process in late 2001 are expected to compound the problems. Therefore, the vast majority of Madagascar's population will continue to depend for their livelihood on low-productivity extensive agriculture - the main and most severe source of environmental degradation.

Environment and Environmental Action Programme. Aware of its environmental and economic problems, the GoM fully stands behind its 1989 NEAP with the continuing support of key donors, international agencies and NGOs, led by The World Bank. The NEAP, together with the National Environmental Policy and the Environmental Charter, clearly recognize the link between environmental protection and economic development. Against this background the NEAP was designed to be implemented over a period of 15 years. It consists of the following six programmes:

- Protecting and managing the national heritage of biodiversity, with a special emphasis on parks, reserves and limited to gazetted natural forests, in conjunction with the sustainable development of their support zones;
- Improving the living conditions of the population. This centres on rural areas by improving the protection and management of natural resources. Particular attention would be paid to watershed protection, reforestation, and agroforestry;
- Promoting environmental education, training, and communication;
- Developing mapping and remote sensing tools to meet the demand for natural resources and land use management;
- Developing environmental research on terrestrial, coastal, and marine ecosystems. Establishing mechanisms for managing and monitoring the environment. The NEAP was given legal power in 1990 by the adoption of the National Environment Charter and the National Environmental Policy (Law 90-033, Dec.21, 1990).

Further details on the legal framework related to the environmental sector are included in Annex 2.

The Proposed Trust Fund. One of the principal objectives of the NEAP's third phase covering the period 2002 to 2007, aims at reinforcing the accomplishments of EP1 and EP2 and thus providing the basis for sustainable financing of the environmental programme in Madagascar.

In 2000, a USAID-sponsored workshop on sustainable financing for the environment led to the creation of a National Sustainable Financing Commission (SFC). The commission's main task is to design a financing strategy for EP3. At the core of the strategy is a goal to manage a gradual shift in favour of internally managed funds and away from external project assistance. The commission was set up as one of three working groups under the umbrella of a Steering Committee charged with the design of the EP3.

In 2001, at the request of the SFC, the Minister of Environment appointed a Trust Fund Steering Committee (TFSC) in order to establish a trust fund for protected areas in Madagascar by the end of 2002. This process is currently being implemented by the TFSC in close cooperation with ANGAP, CI and WWF. ANGAP has provided support for trust fund preparation through EP2 funding available through The World Bank. CI, KfW and WWF are all providing technical assistance for design of the trust fund, including its fundraising strategy. The TFSC is composed of non-governmental members serving in an individual capacity and representing expertise in different sectors, including conservation, banking, private sector, legal and non-profit management. With the assistance of a Coordinator and technical consultants, the TFSC has to date succeeded in drafting several documents for creation of the proposed foundation, including: a trust fund profile, legal statutes and operational procedures.

It is proposed that the trust fund, the "Madagascar Protected Areas Foundation", be established in Madagascar as a foundation under the Malagasy Foundation Law N° 95-028. With assistance from legal counsel, the TFSC has determined that the legal status of foundation is the most appropriate legal form for a trust fund in Madagascar. The Malagasy Foundation in Environment, "Tany Meva", has operated successfully with this legal status since 1995. Although the Foundation would be legally registered in Madagascar, most of its assets would be invested offshore.

The Foundation will be designed to manage an endowment fund and sinking funds. Revenues to be generated by the endowment fund would mostly be used to cover financial shortfalls in operational costs of protected areas, whereas the sinking funds would focus on financing more general environmental programmes as well as addressing infrastructure needs for protected areas.

The Madagascar Protected Areas Foundation is perceived as a pillar to the larger sustainable finance agenda. It is expected to lead the mobilization of substantial funding necessary to cover the core costs of the to-be-expanded protected area network and its expansion, **selected projects in support zones**, and the sustainable development of priority ecological corridors. In the draft strategic document, the SFC proposes to use the third and final phase of the NEAP, EP3, as a testing ground for innovative financing approaches, including the use of donor funds. In parallel, individual agencies are preparing their own strategies to improve cost recovery and revenue opportunities. ANGAP is in the process of developing a marketing and business plan aimed at the diversified international tourism industry. The Ministry of Water and Forests (MEF) is gradually restructuring the concession fee system and is

moving towards decentralization. The ONE has prepared a strategy for higher cost recovery of its environmental impact assessment review fund, and the Ministry of Water and Forests is moving more towards Community Based Resource Management (CBRM) projects and activities that actively involve and benefit communities.

8. Project Rationale and Objectives:

Recognizing the urgent need for biodiversity conservation that is acknowledged as one of the country's most valuable assets, the GoM has made efforts in allocating funds to this sector. Realizing, however, that the country will never be able to generate the sustainable funding for the implementation of the environmental programme as identified in the EP3 documents, the Plan GRAP and/or to cover the costs of the protected area system on its own, the GoM is requesting continuing international support. This concept paper forms part of a strategy, spearheaded by the GoM, to establish a sound financial basis for the sustainable economic development of the country that has to go hand-in-hand with the conservation of the country's fragile ecosystems through the support of its protected area network as an integral part of the EP3.

The global environment objective of the financing package to be supported by GEF aims to curb the loss of globally significant biodiversity by strengthening Madagascar's protected area system through sustainable financing of its recurrent costs. It is hoped that this will assist in reducing the pressure on the PA system, **promoting sustainable land and resource use in the support zones of conservation areas**, and effectively addressing the need for **ecological connectivity** (i.e., ecological corridor development, establishment of ecological stepping stones etc.). The GEF-supported programme will help Madagascar to conserve its unique biological diversity that may well be among the world's most important ones in terms of number of endemic species, higher-order endemism and genetic information per unit area.

The GEF funding will provide the seed money for the proposed endowment fund in support of the sustainable financing of the protected area network, its expansion and the sustainable development of designated priority ecological corridors as part of the EP3. Specifically, the GEF objective is to ensure that the root causes of the loss of globally significant biodiversity are fully addressed. To meet this objective, GEF will support the protected area system and activities which contribute clearly to reducing the loss, and improving the sustainable use of globally critical biodiversity and which are beyond the resources of the Malagasy Government. The requested GEF funding will form part of a financial package that is expected to be established with the assistance of the donor community and of the private sector.

9. Expected Results and Activities of Full Project:

The principal result of the project will be the secured financial sustainability of Madagascar's protected area system. Generic issues to be addressed are *inter alia*: (a) the need to secure funding for specified activities that are not covered by the Foundation; (b) the need for the elaboration and implementation of a capacity building strategy on all levels regarding PA management; as well as (c) the urgent need to improve the livelihood of economically marginalized communities.

Key results and activities to be achieved through GEF co-financing may be summarized as follows (it is understood that the listed activities will have to be

amended and specified based on the results of further preparatory work and stakeholder planning meetings).

Result 1: Secured Sustainable Financing for Selected Priority Protected Areas.

It is expected that the proposed Madagascar Protected Areas Foundation will be established initially with pledged seed money from WWF and CI. This provides the basis for specific fundraising activities that address the public and private sector. GEF funds will be used as a major contribution to the endowment fund (i.e., to cover recurring costs of protected areas), whereas private sector funding and bilateral donor funding will be used for target-specific investments (sinking funds). It is expected that the German debt money would be managed as a sinking fund since it would be denominated in local currency and be at high risk of loss of value because of local inflation.

Activities:

- Establish the institutional basis for the proposed Trust Fund;
- Establish the legal and administrative framework conditions for the Madagascar Protected Areas Foundation as integral part of the Foundation to be created for the EP3;
- Submit grant proposal (concept paper and -on approval of the concept paper by the GEF Secretariat- the full project document to GEF);
- Secure co-financing from GoM/HIPC (debt conversion with the Government of Germany and other countries if applicable);
- Initiate innovative fund-raising campaign;
- Capitalize and activate new funding opportunities (i.e., “green tax” etc.);
- Develop capacities for fundraising within the Foundation;
- Define priority protected areas to be supported by the Trust Fund;

Establish an evaluation and monitoring process for the Trust Fund to be implemented by GEF and other major contributors in order to assure that this conservation Trust Fund meets the checklist of evaluation criteria designed by GEF.

Result 2: Secured Ecological Integrity for Designated Priority Protected Areas.

Sub-Result a: Improved management of protected areas.

Activities:

- Provide sustainable funding for operational costs;
- Pursue continuing donor support regarding investments and infrastructure development for PAs (ANGAP and MoE);
- Cooperate with support zone communities at all levels in order to develop “ownership”;
- Integrate support zone communities into decision-making management process and the elaboration/updating of management plans for the PAs;
- Formalize support zones in management plans for PAs;
- Design and secure revenue-generating operations for the benefit of and sharing with support zone communities (other than revenues generated through the PA from admissions, concessions and gate fees);
- Enhance awareness development;
- Initiate integrated participatory land use planning process in support zones;
- Update the need assessment for capacity development of PA personnel.

Sub-Result b: Protection of designated priority protected areas.

Activities:

- Define area-specific threats to the designated priority conservation units and design mitigation/protection programme accordingly;
- Apply WCPA self-assessment score for designated priority protected areas.

Result 3: Improved Representation of Terrestrial and (Fresh-) water Ecosystems through the Protected Areas Network.

Activities:

- Implement the Plan GRAP according to the priorities defined by the Plan GRAP (coastal, marine and forest ecosystems);
- Cooperate with the Ministry of Water and Forests in establishing forest conservation areas and other protected areas of ecological importance;
- Increase Community Based Resource Management efforts and projects and delegate management authority to local communities (Decentralization);
- Pursue opportunities for the creation of Biosphere Reserves;
- Secure international support of to be newly created protected areas (ANGAP and Ministry of Water and Forests);
- Promote capacity development with special reference to marine and coastal ecosystems;
- Facilitate support zone and ecological corridor development;
- Initiate participatory planning and development of ecological corridors connecting identified priority areas;
- Promote economic development compatible with overall biodiversity conservation objectives;
- Design and implement rehabilitation programmes for degraded lands in support zones and ecological corridors (i.e., changes in land use, agricultural technology, capacity development, etc.).

Result 4: Improved Ecological Connectivity of the PA Network.

Activities:

- Improve ecological connectivity of the PA network through the implementation of Plan GRAP;
- Secure inter-agency/-institutional communication and cooperation for sustainable corridor and support zone planning and development;
- Assure adequate legal and administrative framework conditions;
- Promote capacity development and awareness building for support zone and corridor communities on all levels (political, private sector, technical, community basis);Secure additional financing for economic micro-planning and subsequent implementation of defined programmes for corridors and support zones.

The four results described are an integral part of the results described for the EP3. Results 1 to 3 are expected to be achieved primarily through this project, whereas result Result 3 will be part of the more global picture of EP3.

10. Sustainability and Replicability of the Full Project:

It is hoped that the proposed Foundation will provide the basis for the long-term conservation goals for Madagascar's PA system. Involvement of local communities

and authorities in conservation management will be crucial for the sustainability of the protection efforts to be financed through the Foundation. Promotion of alternative livelihoods and local sustainable development activities will be an important element in transforming the present unsustainable natural resource use and will also reduce pressure on the PAs. Lessons to be learned from this Foundation are expected to benefit the establishment of trust funds elsewhere.

11. Country Eligibility:

The following table summarizes the international and regional conventions that have been signed and/or ratified by the GoM, indicating the country's eligibility for funding under the GEF guidelines.

Conventions and Protocols	Status
Convention on Biological Diversity	Ratified 1995
African Convention on the Conservation of Nature and Natural Resources	Ratified 1970
Convention on International Trade of Endangered Species (CITES) Amendment article 11 Amendment of Gaborone	Ratified 1975 Ratified 1982 Ratified 1995
Ramsar Convention of 1971	Ratified 1998
UNESCO Convention on World Heritage	Protected site: Tsingy de Bemaraha et Rova Ambohimanga
Convention on the Protection of Coastal and Marine Environment of East Africa –Nairobi 1985	Ratified 1998
Convention on the Protection of Seas Against Hydrocarbon Pollution	Signed
UN Convention on Sea Rights	Ratified
UNESCO Convention on the Man and Biosphere Programme (MAB)	Mananara North
Convention on Migratory Species (Bonn 1979)	Signed
UN Convention on Climate Change	Ratified 1998
Basel Convention on Control of Transborder Movement of Dangerous Waste and its Disposal	Ratified 1999
Convention on Prevention of Desertification	Ratified 1996
Kyoto Protocol	Signature pending
Protocol on Biotechnology Risks	Consultation in Progress

12 Stakeholders Involved in Project:

Key stakeholders involved in the project are the Ministry of Environment, the Ministry of Water and Forests, the relevant sector ministries/agencies, local authorities in the region, NGOs, the private sector, local communities, international donor agencies and academic and scientific institutions. For a detailed list of stakeholders refer to Annex 3.

13. Information on Project Proponent and Recipient:

The project proponents are the Ministry of Environment (MoE) and the Ministry of Water and Forests (MEF). The MoE has overall responsibility for the coordination of the National Environmental Action Plan's second phase and upcoming third phase (EP 2 and EP 3). In the third Sylla Government (June 2002), this Ministry has become a "stand-alone" Ministry. In this capacity, the MoE provides coordination -- through the National Environmental Office (ONE) -- for the National Parks Service (ANGAP), ONE, which is responsible for policy and NEAP coordination, and ANAE, responsible for small-scale rural development programmes.

The Ministry is represented in all six Provinces of Madagascar where it has established regional offices for the coordination, supervision and monitoring of field activities. Further details on the Ministry are provided in Annex 4.

The Ministry of Water and Forests is the co-proponent of this project. MEF is the legal authority for the management of the country's forest lands which include indigenous forests, reforested areas and forest plantations, amounting to a total of 80% of the country's forests under active management/exploitation but with little protection of its rich biodiversity. It has been well documented that the majority of Madagascar's biodiversity is concentrated on its native forests.

Like most of the country's government institutions the MEV has suffered in the last decades from shortages of qualified personnel, funding and equipment. This does not allow the Ministry to properly comply with its legal responsibilities. Personnel in MEV has been cut by 50% and has been reduced from 300 employees in the late 1980s to 150 persons as of today. This process continues with positions becoming available through retirement being frozen. The shortage of personnel currently restricts the activities of MEV to a an absolute minimum, mostly concentrating on administrative tasks with focus on issuing logging permits. MEV has practically no means for monitoring, supervision and law enforcement.

It is expected, however, that the recently elected Government will streamline the portfolio of the Ministry and that revenues generated from a more sustainable forest use will increasingly used for resource protection.

It has become apparent that many forest areas under the jurisdiction of MEV are in urgent need of protection, in particular forest areas that constitute designated support zones of proclaimed protected areas and ecological corridors. This will be of special importance in the light of the new decentralization policy of the country that is linked to the increasing transfer of forest management responsibilities to local communities. It is expected that this will lead to the creation of new protected areas under regional and local jurisdiction.

ANGAP will be the main beneficiary of the Foundation. Since its creation in 1990, ANGAP has rapidly evolved into an efficient agency that has developed a strong institutional profile and a sound programmatic vision. Its core staff originates from the Ministry of Water and Forests. Due to insufficient human and financial resources, ANGAP initially had to rely on the assistance of NGOs for the management of key PAs. With increasing capacity development ANGAP has been able to gradually and more efficiently assume its responsibilities. As of June 2002, ANGAP is responsible for 46 PAs, including two marine protected areas with plans to create four new marine PAs within the EP3. At present, ANGAP actively manages 23 protected areas with an

additional eight PAs managed by NGOs. That leaves 19 areas without management personnel and/or protection.

In order to increase its management effectiveness at the field level, ANGAP established five regional directorates in the provinces of Antsiranana, Mahajanga, Toamasina, Toliara and Fianarantsoa. The regional ANGAP directors, along with the Antananarivo-based directors, meet with the Director General's office on a monthly basis in order to ensure effective management of the PAs (*Comité National du Réseau des Aires Protégées/CONARAP*). ANGAP has recently undertaken the task of carrying out a self-assessment of its management effectiveness using a methodology applied by the World Commission on Protected Areas (WCPA). The results indicate a 58 per cent effectiveness rate.

14. *Linkages to National Priorities:*

The first national priority of the Government of Madagascar aims at poverty alleviation through rapid economic development. In this context the GoM recognizes that the conservation of biodiversity through the network of protected areas is directly linked to national priority activities. Protected areas are prime tourist destinations, generating much needed revenue for the management of the PAs and the benefit of communities located in the support zones. With ANGAP's proposed tourism marketing strategy, the GoM expects substantial contributions to the country's macro-economy through the sector of ecotourism, realizing that this may only be achieved through a strong commitment to the conservation of the PA system and biodiversity at large.

The GoM has demonstrated its proven commitment to the cause by confirming ANGAP as a "public utility" organization in 1991, adopting the Protected Area Management Plan (Plan GRAP) in 2000, and by presenting the Protected Area Act to the National Assembly and Senate for ratification. In addition, the government covers 30 per cent of ANGAP's personnel budget.

15. *Financing Plan of Full Project:*

The total programme cost equals the shortfall of the estimated annual operational cost of Madagascar's protected areas. Based on a recent estimate by WWF, CI and ANGAP the total minimum operational costs per year for the 23 protected areas currently actively managed by ANGAP, plus the six areas currently managed by WWF, CI and the Wildlife Conservation Society (WCS), are approximately US\$ 3.1 million. This estimate covers all wages and recurring costs. It does not include infrastructure and equipment needs.

The remaining 19 gazetted protected areas that are currently without any management input, plus the new areas to be created are expected to require an additional US\$ 2 million annually to cover minimum operational costs. The total funds needed to cover the operational costs of Madagascar's protected area system could therefore be expected to be approximately US\$ 5 million per year (low estimate) to US\$ 8 million per year (medium to high estimate).

The overall goal of the GoM and ANGAP is to provide half of the recurrent costs of the PA system through the Government budget (covering wages) and revenues to be generated by ANGAP through ecotourism and innovative fundraising opportunities.

The GoM has already committed to providing financing through a debt swap agreement negotiated with the Government of Germany (for debt pre-dating the Highly Indebted Poor Countries (HIPC) debt relief for Madagascar).

It is suggested that the proposed Foundation sets a fundraising target for its endowment fund of approximately US\$50 million to be used in support of designated priority areas. This would provide approximately US\$ 1,700,000 for the programme based on the following formula:

US\$4,000,00	gross return @ 8% average return
Minus US\$500,000	minus 1% asset management fees
Minus US\$1,500,000	reinvested for inflation at 3% rate
Minus US\$2,000,000	net return
Minus US\$300,000	administrative cost @ 15% (could be less for protected areas fund)

The fundraising target may be increased over time and the programme to be expanded beyond the designated priority areas as more funding opportunities become available

WWF and CI have pledged US\$1 million for the legal establishment of the Foundation. Government contributions would be committed as a result of the pre-HIPC debt relief agreement with Germany. Additional co-financing will have to be secured from other donors subsequent to the successful registration of the Foundation. CI and WWF have committed to assisting the Foundation to develop an effective fundraising strategy.

16. IA Coordination and Linkages to GEF and IA Programmes and Activities:

The following table shows past donor involvement related to biodiversity conservation and environmental protection within the framework of the NEAP:

Sustainable soil and water management	France, Germany, IFAD, Japan, Norway, Switzerland
Multiple-use Forest Ecosystem Management	France, Germany, Switzerland, USAID, WWF
National Parks and Tourism	EU, Germany, France, Netherlands, USAID, WWF, CI
Marine and coastal environment	UNDP, WWF, CI
Regional and local management	France, UNDP, USAID
Strategic activities	UNDP, USAID
Support activities	IFAD, France, USAID, WWF

The next table summarizes specific donor-supported projects related to biodiversity conservation and /or protected areas in Madagascar since 1997:

DONOR	PROJECT	BENEF.	Start	Finish	AMOUNT in million
GEF	Water and forest management	MEF	06/97	06/01	0.9 USD
GEF	Protected area management	ANGAP	06/97	06/01	2.6 USD
GEF	Regional capacity building	SAGE/	06/97	06/01	4.6 USD

		ONE			
GTZ	Efficient charcoal use to protect natural forest	GreenMad	04/97	03/06	17.5 DEM
GTZ	Integrated forest development	MEF	03/98	02/06	25.5 DEM
KfW + KfW	Andringitra & Marojejy National Park	WWF	06/98	06/03	11.0 DEM
KfW	Ankarafantsika Reserve	CI	06/97	06/02	13.0 DEM
KfW	Marovoay watershed management	Erosion Programme	01/98	01/04	6.5 DEM
NORAD	Zombitse Reserve Management	WWF	01/98	12/02	6.4 NOK
WB	Sustainable use of natural resources	EP2	06/97	06/02	30.0 USD
French GEF (AFD)	Plateau Mahafaly ecosystem conservation	WWF	10/01	10/05	6.0 FRF
SCAC	Natural resource mgt. transfer and training	EP2	09/97	03/02	12.0 FRF
SCAC	Natural resource mgt land tenure	EP2	06/02	06/05	5.5 FRF
UNDP	Support to biodiversity and marine components	EP2	01/98	12/02	9.6 USD
EU	Community forest		01/0 (? ? ?)	12/03	1.1 EUR
EU	Bemaraha National Park conservation & dev.	ANGAP	12/95	06/00	0.9 EUR
EU	Bemaraha phase 2	ANGAP	06/00	12/05	5.0 EUR
USAID	Support to ecoregional process, ANGAP, MWF	Miray	07/98	06/02	10.0 USD
USAID	Support to ecoregional planning process, community forest mgt. and compatible economic development	Landscape Developmt Initiative	07/98	06/03	19.0 USD
USAID	MWF	MEF	06/90	06/02	5.5 USD
DGIS	MWF	MEF	06/97	06/04	1.5 USD

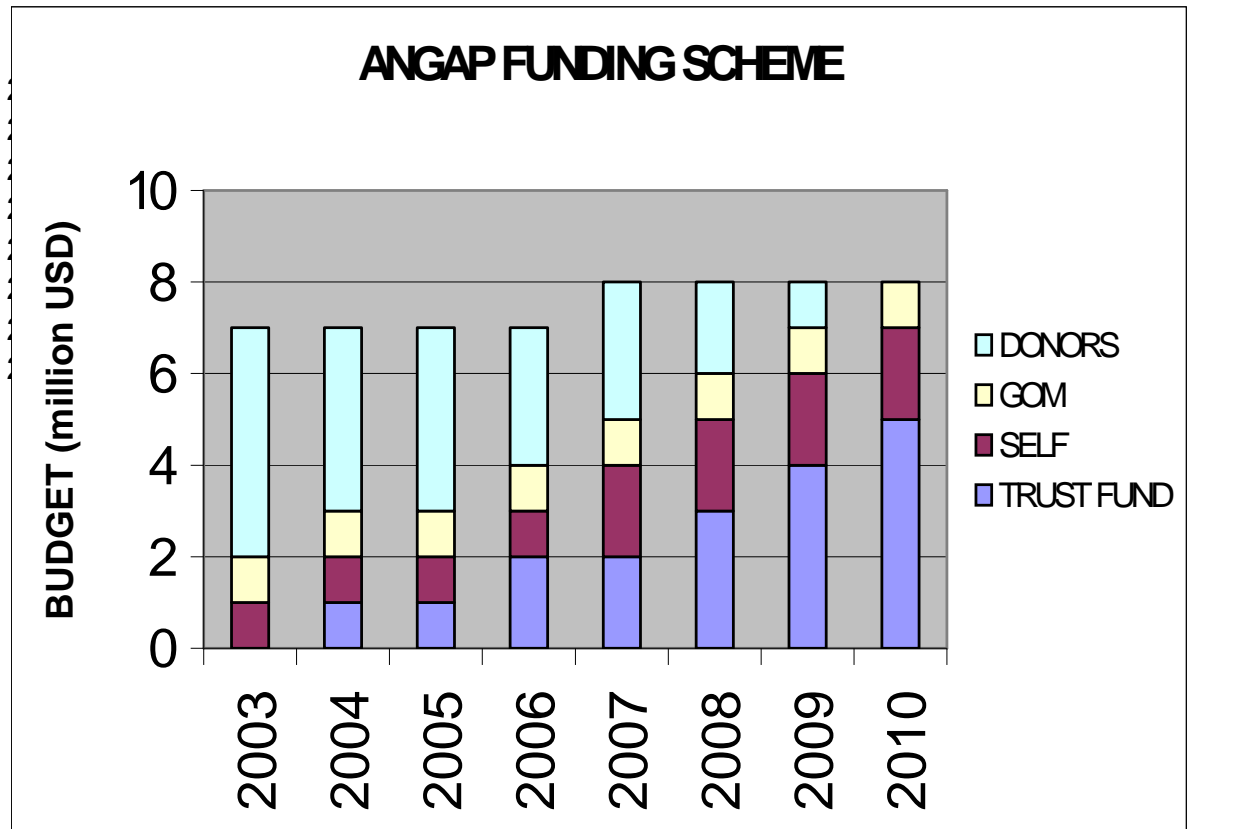
The project will establish appropriate linkages with related projects and build on the lessons learned from EP1 and EP2.

17. Proposed Project Development Strategy and Financing:

The funding scheme for the capitalization of the Foundation is based on a few key innovative elements (see following Figure), including:

- Initial capitalization will be provided by CI and WWF through \$1 million in pledged donations. This seed funding will allow the Foundation to be legally registered in Madagascar by meeting a legal requirement for minimum capital for a foundation (US\$ 300,000). It will also launch a fundraising campaign, allowing the Foundation and its partners to more effectively raise funds abroad and leverage these funds.

- GEF (World Bank) would provide their EP 3 contributions via the Foundation. This contribution would be divided into capital for the endowment fund and funding for “traditional” conservation programmes through a sinking fund. For example, if GEF were to provide US\$30 million for EP3, US\$10 million could be used to capitalize the Foundation’s endowment fund and the rest would be invested in a sinking fund.
- The contributions from the Government of Madagascar would be committed as a result of the pre-HIPC debt relief agreement between Madagascar and Germany, totaling some DEM 20 million (US\$10 million) equivalent over 19 years.



It is expected that donor funding will decrease as interest revenues increase with a growing capital endowment.

This hypothetical funding scheme for ANGAP is based on a number of hypotheses, conditions, and projections as follows:

- The Foundation will receive its first capitalization and investment in 2003 and, therefore, will start funding protected areas only in 2004;
- The internal revenues of ANGAP (park entry fees, service fees, etc) will increase steadily for the first four years and are expected to double only as of year 5;
- Contributions by the Government of Madagascar will remain US\$1 million per year;

- The direct contribution of donors will decrease steadily, and no additional donor funds will be necessary after 2010;
- The total budget of ANGAP will stay around US\$7 million for the first four years and will increase to US\$8 million in 2007, and remain stable until 2010;
- Based on the assumption of a net return on investment of 8 per cent for the first two years, the capital needed to generate US\$1 million will have to be US\$ 16 million. At the same rate, it will have to be US\$78 million in 2010, taking into consideration inflation.

FOCAL POINT ADDRESS

Général Charles Sylvain Rabotoarison
Minister of Environment
Ministry of Environment
12 rue Farafaty.
B.P. 571
Ampandrianomby,
Antananarivo, 101
Madagascar

Fax : (261) 20 22 419 19
Phone : (261) 20 22 413 59
: (261) 20 22 418 47
: (261) 20 22 409 08

E-mail : minenv@dts.mg

Minister of Water and Forests

*Concept paper in support of a full GEF proposal for the sustainable financing of
Madagascar's Protected Area Network., August 24, 2002*

Annex 2: legal framework related to the environment

The National Environmental Policy:

In 1985, Madagascar hosted the International Conference for the Conservation of Natural Resources on Sustainable Development. This led to the adoption of the National Strategy for Natural Resources Conservation. This strategy (the first in Africa) stressed the need for the outreach to and the involvement of the population on all levels, the need for a behavioural change towards the environment, the need for awareness building and increase in knowledge, competence and the evaluation capacity related to all key actors.

A detailed analysis of the root causes for the rapid environmental degradation and loss in biodiversity led to the development of the Environmental National Policy (ENP). The Malagasy Environmental charter, adopted as Law 90-033 in 1990, translated the ENP into operational terms. The ENP aims at the ...“reconciliation of the Malagasy population with its environment in order to safeguard sustainable development”... and focuses on a series of strategic issues including:

- Strengthening institutional frameworks;
- Increasing private sector initiatives and empowering civil society in the management of the environment;
- Integrating the environmental component into development planning; and
- Improving environment monitoring tools.

The ENP has been translated into the National Environmental Action Plan (NEAP), which is expected to slow the downward spiral of degradation by reconciling people with the environment and by promoting the sustainable use of natural resources. The NEAP includes three consecutive environmental programmes:

- EP1: 1991-1997, focusing on the strengthening and implementation of environmental agencies (ONE, ANGAP, ANAE, MEF, FTM, CFSIGE, DDOM) legislation (MECIE) and ICDPs.
- EP2: 1997-2002, in addition to the NEAP's objectives, develop programme management and an ecoregional approach to environmental planning/management. This phase also included the implementation of the CNE and the CIME.
- EP3: 2002-2007: will focus on emphasizing and sustaining the lessons learned from EP2 and providing financial sustainability for the NEAP.

Forest Legislation:

The Forestry Policy was approved by the Decree 97-1200 in 1997. It includes the implementation of a National Forestry Directory Plan and Regional Forestry Directory Plans, as well as a review of the previous forestry legislation. The forestry policy aims to:

- stop the degradation process of forest resources;
- improve the management of forest resources;
- increase the forest cover and assess use potential; and

- increase the economic potential of the sector.

Legal and institutional framework of protected area management

The first protected areas were created in 1927 when they were managed by the Water and Forest Department until the creation of ANGAP in 1991. ANGAP is a “Public Utility” association approved by the Decree 91-592 in 1991. Thus, ANGAP can receive government funds, sign international conventions and agreements, and generate revenues as long as they are related to protected area management.

ANGAP's structure includes a General Assembly, a Board of Directors, and a General Directorate that supervises the Departments and coordinates the protected area network management.

Annex 3: Stakeholder Analysis

	STAKEHOLDER	CONSTITUENCY	ROLE / ACTION IN NEAP
GOVERNMENT	National Council for Environment (CNE)	Independent body. 1/3 from National Assembly, 1/3 local and regional authorities, 1/3 civil society	- Responsible for general orientation of environment. Acts as a "Parliament" for the environment.
	Inter-Ministerial Committee for Environment (CIME)	Consultative and controlling body directly attached to the Prime Minister's office. Includes representatives from all ministries. Presided by the General Secretary of MoE	- Ensures the effective cross-cutting integration of environmental management for the sustainable development of the country.
	Ministry of Environment (MoE)	Malagasy Government's lead ministry for environmental issues.	- Overall coordination of the National Environmental Action Plan (NEAP – EP 2 and EP 3).
	Ministry of Water and Forests		- Manages all classified forests (for conservation, exploitation). Is CITES management authority. - Supervises the General Directorate of Water and Forests (DGEF)

NEAP INSTITUTIONS	National Office for Environment (ONE)	Board of directors includes high-ranking officials from various ministries.	<ul style="list-style-type: none"> - Daily coordination of technical and financial execution of the NEAP programmes. - Formulates and transfers the policies, strategies and management instruments for environment management. - Promotes local and regional management and ecoregional approach. - Coordinates the coastal and marine environment programme in EP 2 (now passed on to an independent body named SAGE).
	National Association for Protected Area Management (ANGAP)	Private association with a Board of Directors balancing public and private sector presided by the Minister of Environment.	- Management of biodiversity conservation through the management of the protected area network in Madagascar either directly or through coordination with other conservation organizations.
	National Association For Environmental Actions (ANAE)	Created by the NEAP, reports to the Ministry of Environment.	- Development and funding of small rural development projects related to protection against erosion and watershed management.
	Department of Water and Forests	Department of the Water and Forest Ministry	- Responsible for the management of all forests and water bodies outside the PA system.
DONOR COMMUNITY	Multi-Donor Secretariat	Two-person Secretariat funded by the donors and hosted by the World Bank	<ul style="list-style-type: none"> - Coordinates the actions of all donors participating in the NEAP. - Collects and shares information from and with the donor community and NEAP stakeholders.
	The World Bank	Regional office based in Antananarivo covering Madagascar, Mauritius, Seychelles and the Comoros	- Main donor for the EP 2, ONE, ANGAP, ANAE.

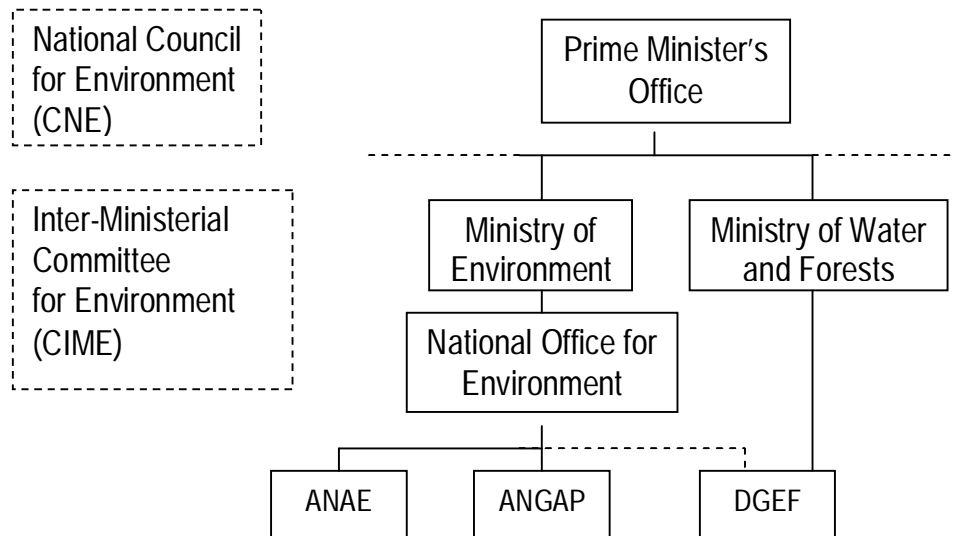
USAID	The US Agency for International Development has contributed to the NEAP since its inception in 1990	<ul style="list-style-type: none"> - Funds the Miray programme for biodiversity conservation run by the Pact/WWF/CI Consortium - Funds the Landscape Development Intervention programme run by "Project Chemonics International" - Funds, e.g., PAGE, the support programme for environmental management, run by IRG
KfW	The German Bank for Reconstruction and Development is a major contributor to the environmental sector	<ul style="list-style-type: none"> - Funds the development and operations of four protected areas in cooperation with WWF - Finances the elaboration of this concept paper and follow-up - Has pledged major debt-swap funding as contribution to proposed Trust Fund for PAs
GTZ	German Technical Cooperation.	- GTZ is involved in forest control programmes, as well as energy and community forestry activities. It provides in-country coordination for Germany's contributions to the NEAP.
AFD / FFEM	The French GEF is funded by the French Government. Its actions are coordinated in the field by the <i>Agence Française de Développement</i> (AFD)	- The French GEF provides funding for ecotourism development and community forestry initiatives (EP 2).
European Union	Funds activities through the European Development Fund.	<ul style="list-style-type: none"> - The EU is marginally involved in the NEAP funding conservation activities in Bemaraha National Park, and community forestry activities in the Fort Dauphin region. - It is an active donor in rural development programmes.

INTERNATIONAL NGOs	WWF	Madagascar and West Indian Ocean Regional Programme Office of WWF International	<ul style="list-style-type: none"> - Manages protected areas and ecotourism support programmes through the Miray consortium programme funded by USAID, as well as WWF. - Co-funds and manages six PAs: Marojejy and Anjanaharibe (North-East), Andringitra and Ivohibe Peak (Central mountains), Zombitse and Vohibasias (South-West). - Carries out a nation-wide environmental education programme. - Co-manages research. - Carries out conservation programmes in biodiversity, community forestry and marine conservation.
	Conservation International – Madagascar (CIMAD)	Madagascar branch of the US-based conservation organization.	<ul style="list-style-type: none"> - Manages / implements the forest component of the Miray programme. - Manages the Zahamena National Park (East). - Funds and implements research activities.
	Wildlife Conservation Society (WCS)	US-based NGO (New York).	<ul style="list-style-type: none"> - Co-manages with ANGAP Masoala National Park (North-East).
	Madagascar Institute for the Conservation of Tropical Environment (MICET)	Malagasy partner of the Institute for the Conservation of Tropical Environment – Stony Brooke.	<ul style="list-style-type: none"> - Provides support for researchers working in Ranomafana National Park (South-East)
LOCAL INSTITUTE	Forestry School of Antananarivo (ESSA Forêts)	Forestry Department of the Agronomic School of the University of Antananarivo	<ul style="list-style-type: none"> - Trains foresters. - Manages a forestry field school in Beza Mahafaly Special Reserve (South-West)

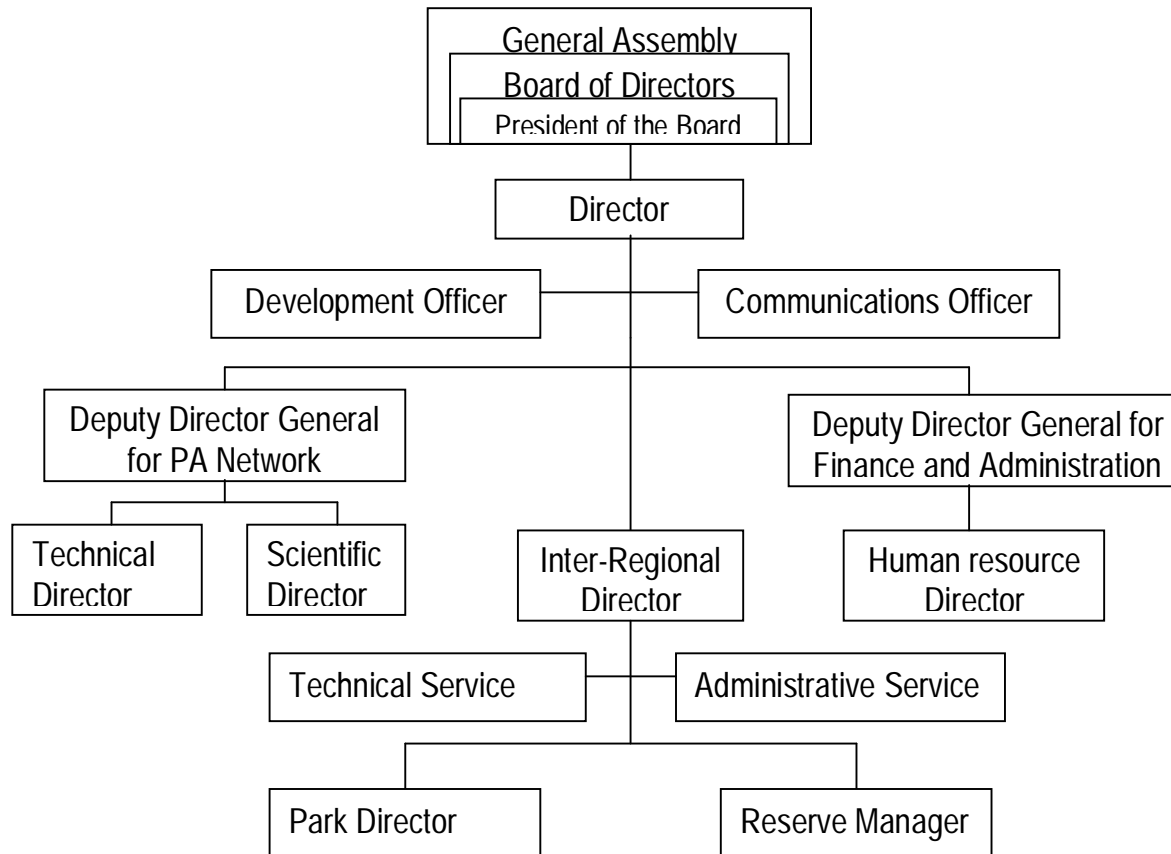
	National Centre for Environmental Research (CNRE)	Private institution under the "tutelle" of the Ministry of Scientific Research	<ul style="list-style-type: none"> - Carries out research on environmental issues. - Was actively involved in the development of the National Biodiversity Strategy.
	National Centre for Oceanographic Research (CNRO)	Private institution under the "tutelle" of the Fisheries Resources Ministry	<ul style="list-style-type: none"> - Implements oceanographic research along west coast of Madagascar. - Trains young Malagasy researchers, and provides technical support on a consultancy basis (inventories, etc.).
OTHERS	Regional and local authorities	Organize voluntary structures for regional and local planning	<ul style="list-style-type: none"> - Coordinate the integrated planning of the regions or communities in terms of development and environment. - Follows up on the execution of the programmes.
	Population	Populations living in support zones of PAs	<ul style="list-style-type: none"> - Take greater responsibilities in managing their natural resources through the GELOSE empowering process (Sets up community development projects funded with 50 per cent of park entry fees).

Annex 4: Institutional Analysis (NEAP Organizational Chart)

During EP2 (1997-2002), the National Environmental Action Programme (NEAP) was organized as follows:



ANGAP'S organizational Structure (as of 06/30/02):



Human Resources of ANGAP: Total : 714

- Headquarters: 69, Field : 645
- Senior Management: 44, Middle Management: 139, Non-Management: 531
- Males: 617, Females: 97

ANGAP has developed a five-step process for its strategic approach to sustainability:

1. Protected Area Act (COAP)

- Establish a legal framework that allows an efficient management of the protected areas in Madagascar.
- Confirm ANGAP's status as the principal institution for protected area management.

2. Protected Area Management Plan (Plan GRAP)

- Determine the distribution of territories that should constitute the protected area network.
- Define the main management priorities for each PA and the entire network according to the Government mandate.

3. Organizational Audit

- Assess the appropriateness of current structure, management systems and competencies in regard to the plan's needs.
- Propose adjustments and reinforce capacity of the organization to face future challenges.

4. Sustainability Planning

- Determine precise management orientation for the short and medium term.
- Assess perennial resource needs as well as prospective revenues for the long term.
- Establish a business plan that includes marketing and financing plans.

5. Sustainable Financing Programme

- Identify funding opportunities and finance sources that will ensure steady funding to ANGAP's operational costs (creation of a trust fund, specific taxes, user fees, commercial profits, gifts, contributions, service fees, partnerships, etc.)