United Nations Development Programme

Country: Madagascar

PROJECT DOCUMENT

UNDP GEF PIMS no. 4172

Project Title:

Network of Managed Resource Protected Areas

UNDAF Outcome(s): Living conditions and productivity of rural population within target zones are improved.

UNDP Strategic Plan - Environment and Sustainable Development Primary Outcome: Expanding access to environmental and energy services for the poor

UNDP Strategic Plan Secondary Outcome: The UNDP goal in the area of environment and energy is to strengthen national capacity to manage the environment in a sustainable manner while ensuring adequate protection of the poor. Specific results have been identified to mainstream environmental and energy issues into development planning; mobilize finance for improved environmental management; address increasing threats from climate change; and build local capacity to better manage the environment and deliver services, especially water and energy

Expected CP Outcome(s): Environment in and surrounding Targeted conservation zones is protected

Expected CPAP Output (s): [Project Objective] To expand the PA system of Madagascar by developing a sub-network of managed resource protected areas in represented ecological landscapes, co-managed by local government and communities and integrated into regional development frameworks.

[Project Components:] *(1)* New PAs created under IUCN Categories V and VI as a foundation for a functional and effective sub-network of Managed Resources Protected Areas based upon a common vision and management principles; *(2)* Institutional capacity among key stakeholder groups provides the enabling framework for decentralized MRPA governance assuring biodiversity conservation and sustainable natural source-based economic growth; *(3)* Financial sustainability of MRPAs is strengthened through innovative entrepreneurial public-private partnerships and mobilization of public funding

Implementing Partner: Environment Programme Management Unit (UPCE)

Responsible Partners: Ministry in charge of Environment and Forests (MEF)

Brief Description: Madagascar's combination of elevated overall biological diversity and exceptional endemism is globally unique. The proposed project aims to build upon recent successes in creating Managed Resource Protected Areas (MRPAs) that are well-adapted to the country's cultural, social and economic conditions. It will help to establish an influential MRPA network within the Madagascar Protected Areas System that will include all MRPA stakeholders. The new network (SAPM) will contribute to an update of the National Protected Areas System Management Plan that includes MRPAs. As in many developing countries, Malagasy Category V PAs do not exactly conform to IUCN guidelines and the GOM will negotiate with this global conservation body to create a new sub-category. The project will add five MRPAs covering 1,527,151 ha to the national PA register and facilitate a further 1,286,816 ha through partner interventions. These additions account for 4.9% of the national territory or almost half of the country's commitment to have 10% of the country under PAs. The targeted MRPAs are deemed to be among the most critical for ensuring adequate representation of Malagasy biodiversity and are judged to have excellent long-term viability prospects as they are deemed resilient to climate change impacts and other stresses. The project will focus on building capacity at national, regional and local levels with a strong emphasis on the latter. Establishing effective local stakeholder governance and management systems will be a key factor in long-term MRPA success and sustainability. MRPAs have the dual role of ensuring effective biodiversity conservation and stimulating economic growth. The project will therefore put considerable effort into developing innovative mechanisms that stimulate economic growth among local stakeholders through partnerships with the private sector to develop added-value markets for labeled products and services. These measures will help to break the perpetual subsistence cycles that maintain rural poverty and generate direct revenues for the MRPAs. The latter is aimed at avoiding persistent donor dependence through financial self-sustainability.

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Total resources required (total project funds)	$14,218,011
Total allocated resources (UNDP managed funds)	**$8,499,610**
Regular (UNDP TRAC)	$2,500,000
GEF	$5,999,610
Other (partner managed resources):	
o Government *(not monetized)*	*In-kind*
o NGOs	$5,633,400
o Other	$63,000

Agreed by (Government): Le Secrétaire ... 21/12/12 — RANDRIANARISOA P. Manganirina, Ingénieur des Eaux et Forêts

Date/Month/Year

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UNDP Project Document

Government of Madagascar
Executive Implementing Partner:
Environmental Projects Coordination Unit (UCPE)

In collaboration with the Ministry in charge of Environment and Forests (MEF) and other co-financiers

United Nations Development Program

UNDP GEF PIMS no. 4172

Network of Managed Resource Protected Areas

Brief description

Madagascar's combination of elevated overall biological diversity and exceptional endemism is globally unique. The proposed project aims to build upon recent successes in creating Managed Resource Protected Areas (MRPAs) that are well-adapted to the country's cultural, social and economic conditions. It will help to establish an influential MRPA network within the Madagascar Protected Areas System that will include all MRPA stakeholders. The new network (SAPM) will contribute to an update of the National Protected Areas System Management Plan that includes MRPAs. As in many developing countries, Malagasy Category V PAs do not exactly conform to IUCN guidelines and the GOM will negotiate with this global conservation body to create a new sub-category. The project will add five MRPAs covering 1,527,151 ha to the national PA register and facilitate a further 1,286,816 ha through partner interventions. These additions account for 4.9% of the national territory or almost half of the country's commitment to have 10% of the country under PAs. The targeted MRPAs are deemed to be among the most critical for ensuring adequate representation of Malagasy biodiversity and are judged to have excellent long-term viability prospects as they are deemed resilient to climate change impacts and other stresses. The project will focus on building capacity at national, regional and local levels with a strong emphasis on the latter. Establishing effective local stakeholder governance and management systems will be a key factor in long-term MRPA success and sustainability. MRPAs have the dual role of ensuring effective biodiversity conservation *and* stimulating economic growth. The project will therefore put considerable effort into developing innovative mechanisms that stimulate economic growth among local stakeholders through partnerships with the private sector to develop added-value markets for labeled products and services. These measures will help to break the perpetual subsistence cycles that maintain rural poverty and generate direct revenues for the MRPAs. The latter is aimed at avoiding persistent donor dependence through financial self-sustainability.

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Acronyms

ADAPS	Association for the Development of Agriculture and Farmers in Sambirano
AFD	Agence Française de Développement/French Association for Development
BCMM	Bureau des Cadastres Miniers de Madagascar/Madagascar Mining Registry
CBD	Convention on Biological Diversity
CCD	Convention to Combat Desertification
CI	Conservation International
CITES	Convention on International Trade of Endangered Species
CMS	Convention on Migratory Species and Wildlife
CNFEREF	Centre National de Formation, d'Etudes et de Recherche sur l'Environnement et Foresterie
COAP	Code des Aires Protégées/Protected Areas Code
COGES	Comité de Gestion (des Aires Protégées)/PA local Management Committee
COI	Indian Ocean Commission
CSR	Corporate Social Responsibility
DCBSAP	Directorate of Biodiversity Conservation and the Protected Areas System
DPPSE	Directorate for Programs Planning and M&E
DREF	Regional manager of Environment and Forest
DSRP	Poverty Reduction Strategy Document
DWCT	Durrell Wildlife Conservation Trust
EIA	Environment Impact Assessment
EIR	Extractive Industry Review
EITI	Extractive Industry Transparency Initiative
FAPBM	Foundation for Protected Areas and Biodiversity of Madagascar
FDI	Foreign Direct Investment
FFEM	French Global Environment Facility
FID	Development Intervention Fund
FLO	Fair-trade Labeling Organizations International
FRAM	Parent Associations *(préciser que c'est au sein des écoles primaires)*
FSC	Forest Stewardship Council
GDP	Gross Domestic Product
GFIC	Inter-Commune Land Tenure Services
GEF	Global Environment Facility
GOM	Government of Madagascar
IUCN	International Union for the Conservation of Nature
KfW	German Development Bank
MBG	Missouri Botanical Garden
MECIE	Décret de Mise en Compatiblité des Investissements avec l'Environnement/ Decree on Investments' Due Diligence with respect to Environment
MEF	Ministry in charge of Environment and Forest
MEM	Ministry Mines and Hydrocarbons
MRPA	Managed Resources Protected Areas
MDAT	Ministry in charge of Decentralization and Land Management
MNP	Madagascar National Park
MSC	Marine Stewardship Council

NEAP	National Environmental Action Plan
NGO	Non-governmental Organization
OED	Oxford English Dictionary
ONE	National Environment Office
OPCI	Public organism for inter-commune cooperation
PA	Protected Area
PBM	Project Board Meetings
PGRM	Programme for the Management of the Mineral Resources
PoWPA	Program of Work on Protected Areas
PPG	Program Preparation Grant
PRD	Regional Development Plans
PSDR	Rural Development Support Project
QMM	Quit Mineral Madagascar
REDD	Reducing Emissions from Deforestation and Forest Degradation
SAPM	Madagascar Protected Areas System
SEA	Strategic Environment Assessment
SNAT	National system of territory management
SRAT	Regional System of territory management
UCPE	Environmental Projects Coordination Unit
UNDP	United Nations Development Programme
UNICEF	United Nations International Children's Emergency Fund
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
WCPA	World Commission on Protected Areas
WCS	Wildlife Conservation Society
WWF	World Wildlife Fund (for Nature)

SECTION I: Elaboration of the Narrative

PART I: Situation Analysis

INTRODUCTION

1. The global importance of Madagascar's biodiversity is well known. The combined overall levels and endemism, particularly at the higher family and genus taxonomic levels are unparalleled in any other comparable ecoregion. Taking vascular plants and vertebrates as an example, the country has 23 endemic families and more than 470 endemic genera, as well as fully one-fourth of all of the world's primate species. Notwithstanding its relatively small land area, nearly 4% of all plants on earth occur only on Madagascar and the diversity and endemism of its herpetofauna is one of the highest on earth.

2. Biological inventories carried out over the previous 30 years have demonstrated that a significant proportion of endemic species were not afforded security through existing protected area coverage. For this reason, the Government of Madagascar publicly launched an ambitious program to triple the extent of its protected area network. The aims were to meet IUCN-recommended targets of at least 10% coverage of the national territory and to ensure that biodiversity representation was as complete as possible. Not unexpectedly, this move was widely hailed internationally and rallied efforts to provide resources to achieve this goal.

3. The 2003 initiative became known as the Durban Vision and later as the Madagascar Protected Areas System (SAPM - *Système des Aires Protégées de Madagascar*). State-of-the-art computer modeling helped to identify potential future PAs and environmental groups successfully lobbied for a moratorium on extractive industries in these areas. Today, around 5 million hectares are under temporary protection status and awaiting full PA status.

4. PA promoters quickly realized that a radical new paradigm was required if the new PAs were to succeed. This departed from a wide acknowledgement that the traditional IUCN Category I, II and IV PAs presented limitations vis-à-vis the newly-formulated national policy, which aimed at having PAs act as drivers for poverty reduction and economic growth. While there was no doubt that these stricter PA categories have a key role to play in conservation, they are too restrictive with respect to local sustainable development. For this reason, most of the new PAs were designated as Category V and VI PAs that are increasingly termed Managed Resource PAs[1] or MRPAs. Combining local development aspirations and effective biodiversity conservation of course presents a significant challenge but a wide range of stakeholders is willing to take it on.

5. MRPAs are new but are already beginning to attract financial support among traditional large donors. However, MRPA promoters are highly cognizant of the risks of massive donor aid,

[1] In French: *Aires Protégées de ressources naturelles gérées*

having seen that Madagascar National Parks (the agency responsible for the management of IUCN Category I, II and IV PAs) has become overly dependent on long-term donor support. Promoters recognize that, by their very definition, MRPAs can be and should be able to create their own financial sustainability based on their own resources, albeit after a period of investment in good governance and effective management capacity.

6. As MRPAs have the dual role conserving biodiversity and promoting economic development, there is a growing perception that they are a means to break the persistent rural poverty linked to subsistence farming. Subsistence also translates into continued encroachment into natural habitats in search of land and other resources, thus causing continued loss or degradation. Transferring natural resource management responsibility has already encouraged communities to conserve and wisely use these resources, but now it is timely to promote innovative approaches that will eventually stimulate more entrepreneurial activities that stimulate rural economic growth as a means to break the poverty/subsistence cycle. Among others, these may include REDD and REDD++, selective high-value timber, ecotourism and improved enhanced-revenue agricultural productivity.

7. A recent massive upsurge in mining, oil and gas investment is undoubtedly welcome for a poor nation like Madagascar. If these industries develop, there may be a risk of conflict and even closure of PAs, especially as mining concessions and oil exploration blocks largely overlap with biodiversity-rich areas and many MRPAs. However, many companies have shown quite remarkable sensitivity to biodiversity conservation goals: indeed, there are a clear signs that coexistence is possible and even opportunities for PAs to benefit from CSR programs and perhaps direct capital investments.

8. Finally, periodic political crises in Madagascar appear to constitute a repeated threat to PA creation and successful establishment[2]. Political priorities may shift away from a strong biodiversity focus, increased economic stress may combine with reduced law enforcement to lead to higher levels of direct threats to PAs, and donor support may be temporarily withdrawn. MRPAs must identify and consolidate resilience measures to override these periodic crises and be sufficiently independent from the negative effects of these crises.

CONTEXT AND GLOBAL SIGNIFICANCE

Biodiversity context

Madagascar's exceptional biodiversity

9. Madagascar is widely considered to be among the world's highest conservation priorities because of a combination of overall high diversity, exceptional endemism and high levels of threat. For example, it has been identified as a global hotspot by Conservation International and is one of WWF's 35 priority places, the most important areas on the planet for biodiversity. Most bioclimatic models indicate that there are at least five distinct ecoregion ranging from the year-round humid forests in the east through more strongly seasonal environments to the

[2] Within the last two decades, crises have occurred in 1991, 2002 and 2009.

succulent and spiny forests and bush in the arid lands south. More recent analyses of existing data demonstrate also that biological and ecological heterogeneity is also marked within each ecoregion resulting in exceptionally high local endemism. This characteristic is most marked in the seasonally dry western forests and the arid southern environments but is also clearly evident in the humid eastern and central forests that were long believed to be relatively heterogeneous[3]. One at least partial explanation is linked to the existence of high-altitude Pleistocene refugia and associated corridors of redispersal or centers of micro-endemism[4]. Whatever the mechanisms, the result is that Madagascar boasts a combination of overall diversity and endemism unparalleled in any comparable major ecoregion on earth.

10. Indo-Madagascar separated from Africa and other Gondwanaland continents some 160 million years BP and subsequently split again around 65 million years ago. Since then, natural colonization has been rare and the flora and fauna has evolved in isolation from other regions of the earth. While strong Gondwanaland connections remain quite evident, the isolated biota is truly unique, reflected in the exceptional degree of family- and genus-level endemism that has no comparisons elsewhere on earth. In effect, Madagascar is a living laboratory that helps scientists understand how 'primitive' ecological communities long since replaced elsewhere may have evolved.

11. Most of Madagascar's terrestrial biota is dependent on healthy natural habitats and ecosystems. At the present, forest loss is generally irreversible as anthropogenic pressures normally persist and natural regeneration is difficult. If left to itself, Eastern humid forests appear to be able to slowly regenerate through successive stages over a long period of time, but the slower growing Western seasonal forests are less resilient to marked degradation or clearance and seldom, if ever, become re-established.

12. Remaining natural terrestrial habitats form a broken ring around the island (see Annex 1, Map 2). There are numerous relatively large blocks but many are fragmented to differing degrees. Large blocks are critical for the long-term viability of their communities and component species. Besides maintaining a diverse genetic group and sufficient space for populations to recover from natural events such as cyclones or disease outbreaks, larger blocks are important in terms of climate change resilience. Regarding the latter, the large lowland Menabe block in the mid-west and upland areas such as the Northern Highlands are known climate refugia. The Northern Highlands also are arguably critically important for natural climate change population displacement and should thus help to buffer the current short-term warming trends emanating from emissions. It should be noted that while large natural blocks are generally the most appropriate for conserving healthy ecological communities, it is not always possible to exercise this option. Some ecological communities are naturally limited spatially and have receded over the last two millennia as a result of human activities, sometimes to very small areas indeed. Notable among these are the Eastern littoral forests. All of the remaining blocks are relatively small but are definitely worth conserving as their levels of floristic and invertebrate endemism are exceptional.

[3] For example, see Kremen. C. *et al*. (2008). Aligning conservation priorities across taxa in Madagascar with high resolution planning tools. Science 320: 222-226.
[4] Wilmé, L. *et al*. (2007). Biogeographic evolution of Madagascar's microendemic biota. Science 312: 1063-1065.

13. The Eastern humid forests have attracted most attention from conservation groups and they are the best protected through protected areas and species programs. However, much of the more accessible lowland regions have been deforested as well as many of the higher elevations, notably in the central area of Madagascar. Much of what remains occurs on the steep eastern escarpments and in some of the most remote and rugged terrains. Some of the most critical conservation needs at present are to maximize conservation efforts for remaining lowland and littoral forest, but it should be noted also that much of the Northern Highlands remain unprotected even though they are important for climate change resilience. These highlands comprise the only high elevation Pleistocene refugia that are still intact. They are also vast and abut natural vegetation corridors that span more than 2,000 m in altitude, more than any other region in Madagascar. For this reason, it is important to target the entire mountain system including its lower flanks for conservation and sustainable development, notably in the distinct north-western Sambirano floristic domain and the northern slopes further to the east. While the floristic distinctiveness of the Sambirano has long been known, it has only recently become clear that faunal local endemism is also exceptional. Similarly, research during the previous 10 years has shown that the northern slopes of the Northern Highlands constitute a marked ecotone wherein diversity is exceptional and local endemism high.

14. Many scientists believe that the Western seasonal forests are the most vulnerable to human pressure and are thus of very high priority for conservation[5]. These forests are highly fragmented compared to those of the east and relatively few large blocks remain. The latter are usually on fairly infertile sand or in rocky areas. Recent inventories clearly demonstrate that heterogeneity and local area endemism are the most marked in the country, meaning that it is essential to target all significant blocks for conservation if biodiversity is to be maintained. Several western lakes and mangroves are also key to the survival of rare and threatened freshwater turtles and aquatic birds.

15. The arid Southern Ecoregion was once believed to be relatively well protected naturally owing to its unpredictable and harsh climate, and lack of surface water. However, the growing human population and lack of fertile land have fueled a migration into this area during the last decade and it has experienced a dramatic rise in natural habitat loss, the reverse of trends elsewhere in the country. Furthermore, several mining ventures have been initiated and a significant proportion does not appear to be well-regulated. It is therefore encouraging to see that the protected areas coverage of this ecoregion is being rapidly expanded through the efforts of Madagascar National Parks and a small number of NGOs.

16. Recent evaluations conducted under the auspices of the Indian Ocean Commission and led by WWF show strong indications that the importance of Madagascar's coastal biodiversity has been underestimated in the past. The coasts, measuring more than 5,000 km are home to the largest and most diverse mangroves in the Western Indian Ocean and support the planet's third largest near-continuous barrier reef system. The diversity of certain taxonomic groups such as corals and mollusks in Madagascar appear to be higher than in any other part of the Western Indian Ocean including the Red Sea. Also, the northern Malagasy coral reef systems may be source areas for the Southwest Indian Ocean, and the country's coastal waters are vital to sea

[5] Several articles in *The Natural History of Madagascar* (2004) (eds. S.M. Goodman & J.P. Benstead) and Malagasy Nature **1** (2009) make this point.

turtles and cetaceans, and there appear to be permanent populations of coelacanths in the southwest of the country.

17. Some coastal and marine habitats are directly stressed by human activities. These include mangrove clearance, artisanal overfishing of selected species, unregulated tourism and, locally at least, pollution. These stresses may be further compounded by terrestrial forest loss in major watersheds as increased sediment run-off may add to the risk of greater marine ecosystem vulnerability. These combined pressures significantly increase the risk of climate change vulnerability within marine ecosystems.

18. With respect to the present project, the north-western coastal waters off the Diana Region are deemed to be the most critical as they are the most biologically diverse and productive of all Malagasy seas and, indeed, within the Western Indian Ocean coastal areas. The most important sites for reducing anthropogenic stress on the Diana seas are the Ampasindava Peninsula and the Northern Highlands. The present project will therefore contribute to multi-stakeholder efforts to reduce climate change vulnerability by acting to reduce land-based stresses. It may be noted, also, that climate stresses will also undoubtedly be a significant issue in terrestrial ecosystems and all project sites will have a strong climate change component.

19. Madagascar's biodiversity constitutes an essential resource for its people but its potential values are as yet largely untapped. Some 80% of the country's population is entirely dependent on natural habitats for traditional medicines for which there are many hundreds of species utilized and a plethora of treatment applications. Rural communities in particular are dependent on other ecological goods and services such as clean water, and are beginning to benefit from nature-based tourism.

20. The growing national and international markets for essential oils from endemic Malagasy species (Mandravasarotra, *Cinnamosma fragrans*; Katrafay, *Cedrelopsis grevei*) together with positive results from recent bioprospecting indicate that many opportunities to develop organic and fair trade in favor of local people are still unexplored.

Protected area system: Current status and coverage

The National Network of Parks and Reserves

21. Protected areas in Madagascar were first established in 1927 and were among the first in the African Region. The early sites were Category I strict nature reserves, but national parks (Category II) and special reserves (Category IV) were added. In 1991, the National Association for Management of Protected Areas (ANGAP)[6] was created to manage this national network that at the time comprised 23 PAs. These categories were inscribed within a new Protected Areas Code, or COAP. No other PA categories were recognized. Category I PAs were created to represent outstanding near-pristine habitats and their ecological processes. The only activities authorized therein are management (protection, surveillance and monitoring) and approved research. This was deemed to be too restrictive with respect to potential tourism and all but two

[6] Please note that ANGAP was renamed Madagascar National Parks in 2008.

of the original Category I reserves have been transformed into national parks. Category II sites are generally considered to be areas of outstanding biodiversity value where sustainable tourism is possible because of natural beauty, ease of access and/or high-interest species. Special reserves were originally created to conserve particular species or ecological communities but they are essentially indistinguishable from national parks and many are popular tourism destinations. Furthermore, these Category IV sites do not fit easily into IUCN's definitions where this type of PA involves direct management in favor of particular habitats or species.

22. All categories of PA must have a clear internal zoning system. The most important zones are the core areas where biodiversity is strictly conserved. The surrounding areas within the PA can be zoned for settlement, traditional sustainable use, research and tourism. Theoretically, there should have been no settlements in the PA when it was established but, in a few cases, this was the case. However, it is more common to encounter settlements established during the 1970s-1980s, a period when PAs were all but abandoned by the administration. Zoning for settlement and traditional resource use is defined in written agreements between ANGAP and the communities involved.

23. From the beginning of its existence, ANGAP adopted a policy of sharing entrance fees, with 50% allocated to local communities. Representatives from neighboring communities allocate funds to projects of their choice. The only restriction is that projects must not conflict with the PA's conservation objectives, and most involve social infrastructure development or restoration such as granaries, schools and dispensaries. Popular PA tourism venues can generate more than the funds attributed to the communities by the state. There is no doubt that PA revenues are welcomed by local people and help to engender goodwill. However, there are challenges that require resolution. Firstly, revenues are significant only at a handful of PAs, notably Isalo, Andasibe and Ranomafana. Secondly, less than half of all PAs in the network currently attract tourists as many are too remote and/or accessible. ANGAP has tried to resolve these issues by sharing revenues from high earners with non-tourist PAs and by allocating other budgets to development projects.

24. In 2001, Madagascar's first national PA system plan[7] confirmed what many conservation practitioners had increasingly suspected: the existing network of 47 parks and reserves, covering 1.7 million hectares, did not adequately represent the country's biodiversity. Most of the surviving natural forest was not represented, freshwater ecosystems were largely excluded and there were virtually no marine PAs. PA coverage at that time was only 2.9% of the national territory (See Annex 1, Map 1), far below IUCN recommendations of at least 10%. Of significant concern were the results of new field surveys showing that numerous species and some types of habitat did not occur within the network. These new data were beginning to show that: (a) diversity had been significantly underestimated during older surveys; and (b) numerous species have limited geographical ranges thus helping to explain the island's extraordinary richness and endemism.

25. At the same time, conservationists began to conclude that the relatively strict PAs in Category I, II and IV might not always be the most effective means to conserve biodiversity as

[7] This is the National Protected Area System Management Plan developed by ANGAP now known as Madagascar National Parks. The plan is frequently referred to as the PlanGRAP based on its French acronym.

they only allow for limited integration of traditional natural resource use. Local community dependence on these resources was well known, and their 'closure' within PAs can lead to resentment. Many PA practitioners also felt that having greater local involvement in PA affairs may also help to lower management costs and therefore contribute to sustainability, a major preoccupation for all.

26. These new lines of thinking encouraged the GOM and conservation NGOs to propose innovative approaches that would radically improve biodiversity representation in PAs and, at the same time, bring into play innovative governance systems emphasizing local ownership. The opportunity to launch these approaches came at the 2003 Vth World Parks Congress in Durban, South African.

The Durban Vision and the new Madagascar Protected Areas System

27. At the World Parks Congress, the president of Madagascar announced that his country would immediately work towards a tripling of the national PA system through new parks and reserves. He also announced that Madagascar would develop innovative approaches to PA management that effectively protected biodiversity while also contributing to sustained economic growth. In short, Madagascar would become a world leader in biodiversity management. Soon after, the Ministry of Environment and Forests (MEF) invited conservation stakeholders – principally ministries responsible for natural resources and environmental NGOs – to form a national commission to guide the process of steering this early Durban Vision towards the more formal Madagascar Protected Areas System (*Système des Aires Protégées de Madagascar*, SAPM). This SAPM Commission eventually broadened to include other stakeholders in the tourism sector and even attracted people from the mining industry. As the scale of the Durban Vision became clearer, a range of thematic sub-commissions formed to develop guidelines and other tools in such fields as prioritization of potential new PAs, management categories, governance, legislation, management effectiveness, sustainability, community safeguards, and monitoring and evaluation. Regional commissions also formed to examine local issues more closely. IUCN was invited to send experts to ensure compliance with this body's global recommendations and guidelines as well as those of the Convention on Biological Diversity (CBD).

28. Appreciating the vast scope of SAPM, the Ministry of Environment and Forests (MEF) created a new Directorate of the Protected Areas System (Direction du Système des Aires Protégées, DCBSAP). This new directorate was given responsibility to coordinate the development of SAPM, including policy, legislation and implementation. SAPM includes all PAs in the national register, including those managed by Madagascar National Parks and those promoted as Category V or VI PAs by other. In effect, what we see today are two distinct sub-sets or networks, each with a different management philosophy. Thus, Category I, II and IV sites under Madagascar National Parks have a realtively strict focus on conservation with somewhat limited local engagement, whereas the Category V/VI network balances conservation with economic growth while also promoting local governance. It is for this reason that the latter network is increasingly considered to comprise Managed Resource Protected Areas, or MRPAs.

29. Through a long participatory process, the commissions identified the national priorities with regard to the creation of new PAs based upon biodiversity conservation objectives. Criteria included representation of distinct habitats, ecological communities and species, as well as the need to create viable PAs. The latter translates most efectively into large blocks of relatively intact habitat. Given the remarkable biological heterogeneity of Madagascar ecoregions, it is not surprising that virtually all of the country's remaining natural forest habitats were deemed a priority for the future SAPM. Forests were prioritzed using MARXAN and ZONATION software, with the former including socio-ecomic data and the latter ristricted to biodiversity measures. Lakes, rivers, mangroves, small islands and coral reefs were also prioritized based on shared knowledge and expert opinion.

30. Government guidelines stated that the target for SAPM was to be 6 million ha or roughly 10% of the national territory (although this original guidelines did not take into consideration marine priorities adequately). By 2008, the SAPM commissions did indeed identify some 6 million ha of remaining terrestrial habitats as priorities but it became evident that there were insufficient promoters or financial resources to bring them into new PAs.

31. National policy requires that PAs should contribute to poverty reduction and sustainable development. Similarly, the creation of new PAs must avoid harmful effects on local stakeholders and, where appropriate, be accompanied by suitable compensation measures. Guidelines were established to help stakeholders develop a community safeguards plan, a document mandatory for all new PAs. The economic values of PAs are now widely appreciated by political decision-makers, witnessed by their inclusion into regional development plans.

32. The desire to create pro-poor PAs meant that new categories of PAs were needed where local people took responsibility for managing their own natural resources. Following extensive consultations with IUCN, the GOM chose to modify the COAP to include all IUCN PA categories – I-VI. The added categories – III, V and VI facilitate direct management by local communities and the private sector. The latter two also more fully integrate development and biodiversity conservation.

33. The SAPM commissions and their constituent members working actively on establishing new PAs opted to create Category V and VI sites, with most being in the former. It should be noted that Category V sites in Madagascar differ conceptually from those in many European countries where traditional activities have created a highly modified environment that retains significant scenic and/or biodiversity interest. In Madagascar, the sites were prioritized on the basis of their intact or little-modified natural habitats, and evolved as Category V due to the ongoing interactions between local communities and these habitats. The Category VI sites include some large natural forest blocks wherein few local communities exist.

34. Opting for Category V and VI immediately raised significant technical challenges, notably how do we move from management by a relatively well-financed professional organization to a scenario where governance is primarily local, multi-stakeholder and essentially inexperienced? A second major question was sustainability: most new PAs we dependent on limited NGO funding and few of the international donors would commit long-term support based on arguments that they needed to guarantee their previous investmets into Madagascar National

Parks and its established national network. Clearly, new and innovative sustainable financial mechanisms would be needed that capitalize on the intrinsic values of each of the new MRPAs and, at the same time, buffered them from the vagaries of donor/government commitment. In effect, the Category V and VI MRPAs would need to demonstrate tangible benefits and become an integral part of the regional/local development landscape.

35. The first step in creating new PAs was temporary classification. A dossier was drawn up for each new PA and included a map, signed assent by stakeholders, a safeguard plan, a Social and Environmental Impact Assessment (SEIA) based on comprehensive local consultation, and a simplified management plan. Temporary protection allowed for a nominal two-year period during which delimitation, zoning and planning were to be completed in order to obtain full legal protection signed off by the Council of Ministers. Some new PAs created by Madagascar National Parks did obtain full protection at Category II national parks during this period. However, new sites that were promoted by NGOs still have only temporary protection. The reason for the latter appears to be the more complex nature of Category V and VI PAs. The vast majority of temporarily protected new sites have now completed their dossiers for full legal status. These will be submitted when the current political crisis is over.

36. Officially today, 50 new PAs covering 3,528,922 ha have been added to the national Register which now accounts for a total of 5,248,922 ha (see Annex 1, Map 3).[8] (Most are still under temporary protection but a few are now fully protected). As many as 29 sites covering 2,308,000 ha are classified as Category V, whereas five sites covering 785,000 ha are in Category VI (the future classification of some temporarily MRPAs has yet to be determined).[9] PAs in both categories are collectively known as 'Managed Resource Protected Areas' (MRPAs)[10], clearly reflecting the linkages between livelihoods, economic development and biodiversity conservation. The relative importance of Category V reflects the number of sites where human interactions with natural habitats is particularly evident and where dependence on them is marked.

37. All MRPAs are zoned in a manner similar to PAs managed by Madagascar National Parks. Virtually all MRPAs now have Priority Conservation Zones (PCVs) defined in agreements between NGOs, government representatives and local communities. Theoretically, these are similar to the core zones in Category I, II and IV PAs but in practice may allow for some traditional resource uses. PCVs are essentially identical to Category II PAs. Few promoter NGOs have developed zoning outside of the PCVs at present although a few have begun to identify zoning for sustainable economic development. Ultimately, there may be an opportunity to have the MRPA zoning officially recognized by regional government (and therefore not just by the MEF-SAPM). This would probably help to ensure that the MRPA's goals were widely accepted. It is equally desirable to integrate MRPA zoning into larger-scale regional land use management planning.

[8] These figures are presented in an Inter-Ministerial Order signed by the MEF and MEM in 2008. (Arrêté Interministériel 18633 / 2008 / MEFT / MEM du 17 octobre 2008).
[9] It should be noted that there are several 'official' documents summarizing current PA coverage and that the figures differ somewhat depending on the source.
[10] Although 'managed resources protected areas' is commonly known as the definition of Category VI PAs.

38. It should be noted that the GOM allocated a four-year period to create the new PAs. In part, this was believed to be an adequate time frame but was also based on agreements between MEF and the Ministry of Energy and Mines (MEM)[11] calling for a moratorium on mining in potential new PAs identified through the prioritization process (more details on this agreement are presented below). The allotted time turned out to be unrealistic for several reasons: (a) MRPAs presented entirely new challenges for which there was no prior experience, particularly with respect to negotiating with a broad gamut of stakeholders; (b) the need to balance more effectively local development interests and biodiversity conservation; and (c) developing new standards and formal guidelines for MRPAs was conducted through broad participation requiring considerable time.

39. The impact of limited time are expressed not only by the fact that new MRPAs still await full legal protection, but also by the existence of several areas of the country now identified as priorities but where the process of establishing new MRPAs has still not begun. The latter is explained by the following. The importance of some new sites required time-consuming biological and social inventories conducted by experts such as the research NGO Vahatra or Conservation International's (CI) Rapid Assessment Program. Secondly, some potential PAs are in some of the remotest areas of the country, with many being relatively vast. The Northern Highlands targeted in the present proposal constitute a good example, and will require the combined efforts of several NGOs to create a sustainable PA. Fortunately, the GOM conferred an open-ended temporary protection status for such areas.

40. The present PA coverage is shown in Annex 1, Map 3. For comparison, the results of the ZONATION priorities are also presented (Annex 1, Map 5). It is clear that, once completed, Madagascar's natural forest and freshwater habitats will be adequately covered by the national PA system based on our current knowledge of biodiversity dispersion patterns. In addition, the close similarity between actual PA coverage and ZONATION priority areas indicates an effective representation of species, as this analysis is based primarily on taxonomic priorities.

41. Finally, the fact that new PAs created by Madagascar National Parks are all category II sites whereas those promoted by NGOs and the private sector are all Category V or VI (albeit there are a few small Category III sites) means that there are essentially two quite distinct sub-systems or networks within SAPM. This was not an intentional or even an anticipated outcome. These are marked by quite different approaches to governance and management objectives, and these are examined below.

MRPA network development

42. Firstly, it must be stated very clearly that there is ***one unique and coherent SAPM***, even if it does comprise two quite distinct sub-networks. As we will see, there is also no difference in their respective contributions to biodiversity representation and conservation of biodiversity. Indeed, it must be stressed that MRPAs were identified and prioritized primarily on the basis of biodiversity criteria. Integrating local development ambitions at the site level does not compromise conservation goals; indeed in the long term they are expected to enhance them.

[11] Inter-Ministerial Order 18633 / 2008 / MEFT / MEM du 17 octobre 2008

These complementarities, combined with the differences, are best presented in a comparative table (Table 1).

Table 1. Similarities and Differences between the Madagascar National parks and MRPA networks

Feature	Madagascar National Parks	MRPA network
IUCN Category	I, II and IV	Primarily V and VI, some III (usually integrated)
Biodiversity representation and conservation	– Ranges from centers of exceptional diversity/endemism to sites with distinct communities and/or flagship species – Most sites moderately large, others either very large or small (potential long-term viability indicator)	– Ranges from centers of exceptional diversity/endemism to sites with distinct communities and/or flagship species – Many sites very large, many moderately large, smaller number relatively small
Promotion (proposing establishment)	– Category I sites limited to GOM (Madagascar National Parks or SAPM) – For Categories II and IV, open to any private party	– Open
Zoning system	– Core conservation zones where only surveillance, monitoring and research are permitted – Internal buffer zone where settlement, subsistence use and tourism areas are defined	– Priority Conservation zones where non-management and research activities are limited – Land-use management planning for investment/development initiatives
Reporting framework	– Internal – park/reserve, inter-regional direction, head office – Annual reporting to national board of directors and general assembly	– SAPM and SAPM commissions – Region – Commune and local community structures – Private sector partners
Governance/ management	– Internal three-tiered hierarchy – Possible delegation to third-party NGOs or professional organizations – Co-management committee with local stakeholder representation at park/reserve	– Complex partnerships and role designation involving ministry representatives in the region, local communes, local economic interest groups, private sector (including NGOs and research bodies)
Private land ownership	– Not permitted	– Permitted
Private investment	– Limited to tourism concessions for lodges and other facilities, or research stations	– Encouraged based on land-use management objectives – Tourism, agriculture, livestock, other
Community development	– 50% tourism revenue shared with neighboring communities for projects of their choice – Mostly social infrastructures – Occasional additional local development grants	– Trend towards stimulating entrepreneurship among local interest groups – Focus on high added-value products and services (certified) – Private sector – community partnerships

Feature	Madagascar National Parks	MRPA network
Integration strategy	– Integration intro regional development strategies – Full integration into commune development plans	– Full integration into regional development and land-use management planning – Full integration with commune development plans
Sustainability strategy [a]	– Revenues from tourism, research and filming fees – Continued dependence on donors – Partnerships with NGOs	– Requires NGO or other donor funding for establishment phase – Trend towards self-sustainability based on improved private sector investment, local revenue generation and off-take – Payments for environmental services (local and international)[b] – Direct conservation payments [c] – Industry corporate social responsibility programs (mining, oil, agribusiness etc.) – Seeking private sector endowments through the Madagascar PA and Biodiversity Foundation

Notes:
[a] These may include local services such as water supply and international opportunities such as carbon offsets.
[b] Includes community events (games, competitions, festivals, etc.) and payments for community-based ecological monitoring.

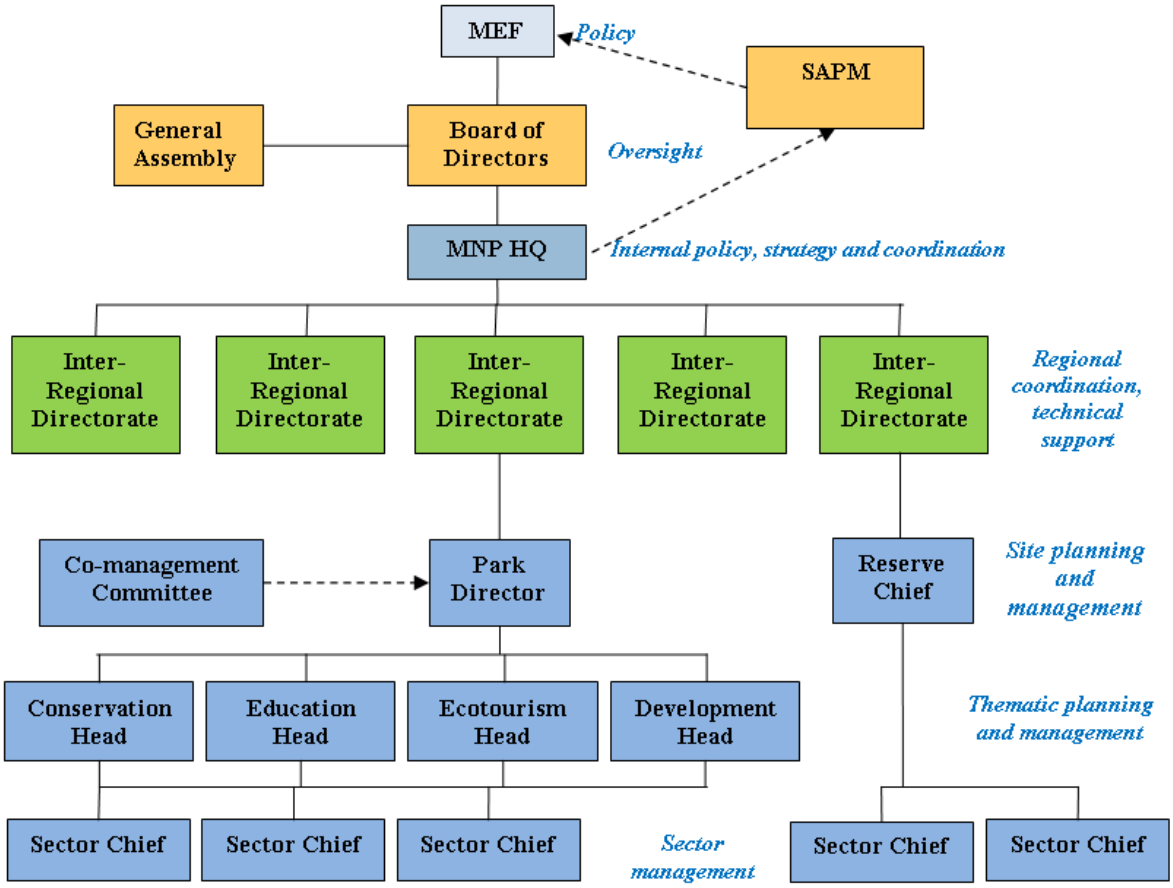
PA Management Regimes

43. The MEF has overall responsibility for all registered PAs through DCBSAP. Although Madagascar National Parks falls under the MEF, it has its own internal management system. This entity has a Head Office in Antananarivo, five Inter-Regional Directorates (Direction Inter-régionale, DIRs) based in the former provincial capitals[12], and a park or reserve office on site. Management hierarchy is shown in Figure 1.

[12] Antsiranana, Mahajanga, Toamasina, Fianarantsoa and Toliara.

Figure 1. Madagascar National Parks management hierarchy

The two site-level hierarchies can vary depending on the size and relative importance of the park or reserve. Smaller reserves tend to have no thematic heads, but large reserves may have them. Thematic areas may vary between sites. For example, there may be no need for an ecotourism leader. A local co-management committee advises the park director or reserve chief. Local people may also work with staff on management issues. The role of SAPM is still unclear.



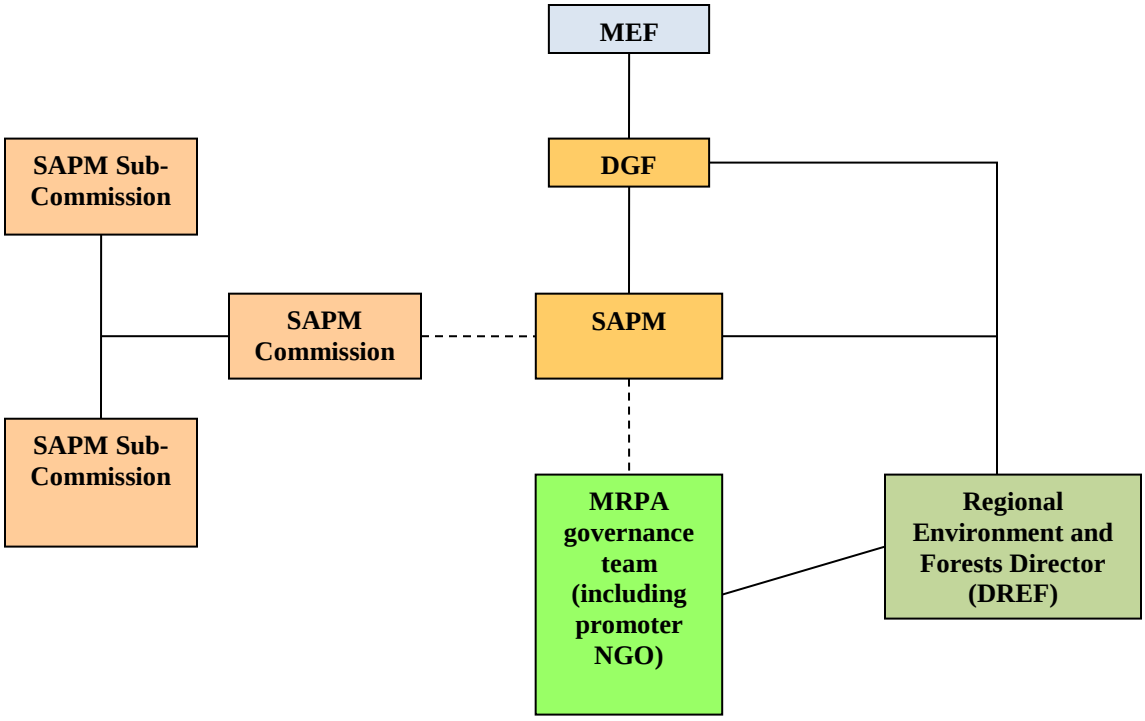
44. This structure has long been in place. The DIRs were established at a time when the country was shifting from having six provinces towards the current 22 regions. Their purpose is to decentralize support to parks and reserves. Each DIR has a Finance & Administration staff plus a technical and science expert. The latter two visit individual PAs to provide support as required.

45. The local co-management committee helps to ensure that stakeholder interests are upheld. Where money is available for development, projects are prioritized by this committee. It also organizes local surveillance groups to inform staff of problems or other significant issues. Park or reserve staff may ask these groups to assist them in surveillance or monitoring.

46. The Madagascar National Parks hierarchy has stood the test of time but it is not considered the best solution for the new MRPAs. First, it is relatively costly to have permanent full-time staff at three levels. Secondly, it does not readily encourage local people to take responsibility for the PA as there is already a professional team in place.

47. MRPA governance structures are still evolving and, for the time being, most are heavily dependent on the promoter NGOs. It requires time to determine the most effective local structures, particularly the respective roles of the region, communes and local stakeholder groups. Larger MRPAs may eventually opt to recruit a full- or part-time staff, but this must be paid for from revenues accrued by the PA. It is highly likely that local governance structures will vary between sites, and it is one of the aims of the present project to determine what works best. Each site is supported by its respective promoting NGO and SAPM (Figure 2).

Figure 2. Simplified representation of current MRPA management responsibilities.



48. The governance and implementation structures within the MRPA vary between sites but there are some common elements. At the present time, each MRPA governance structure is catalyzed by the promoting NGO that usually has a small staff on site. These individuals mobilize local interest groups or associations that represent either particular interests (such as farmers, fishers or artisans) or individual communities. It is also common for the NGOS to provide financial and technical support for multi-commune groups called Public Organizations for Inter-Communal Cooperation (*Organisme Public pour la Coopération Inter-communale*, or OPCI). OPCIs are legally-recognized entities and comprise mayors from adjacent communes working together on common development interests. Acting with one voice, the OPCI is a more

powerful influence group than individual mayors. In many cases, the NGOs have helped to create OPCIs with a view to have them focus primarily on the MRPA. Experience to date suggests that this is not always effective, and it seems to be better when OPCIs deal with all development interests including, but not limited to, the MRPA.

49. The region are also implicated in MRPA management, but incentives ought to be created for a stronger engagement from their part. Most importantly, MEF and by corollary SAPM is represented in the region by their Regional Directorate for Environment and Forests (*Direction Régionale de l'Environnement et Forêts*, DREF). The DREF is responsible for MRPA oversight and is required to provide technical support such as control of illegal activities. At the present time, the degree to which this is happening varies between regions.

50. Decentralized bodies representing ministries other than the MEF are also important at the regional level. In particular, we cite the Regional Directorate for Land Use Management (*Direction Régionale de l'Aménagement du Territoire*, DRAT) under the Ministry responsible for decentralization and land use planning. The role of the DRAT will be particularly critical when MRPAs develop their internal zoning plans and then move towards having them integrated into regional development and land use management plans, a factor that is considered to be essential for long-term MRPA sustainability.

51. Establishing durable and effective governance structures remains one of the biggest challenges for MRPA promoters and will be a focus of this project.

Political expectations for MRPAs and reality in the field: Rural Poverty Reduction and Economic Development

52. Madagascar adheres to the UN's Millennium Development Goals (MDGs). From this, the overarching policy, '*Madagascar naturally'* and the Madagascar Action Plan (MAP) which specifically refer to PAs as motors for development. While it is not clear whether these documents are still valid during the current political crisis, the perceived role of PAs in development has not changed. In this respect, MRPAs may be considered to be particularly pro-poor as they directly link rural development to biodiversity conservation. It is of great interest therefore, to examine whether MRPAs are rising to this challenge and, if so, how they are doing so. It is equally interesting to briefly examine how other rural development initiatives contribute to either poverty reduction, economic growth or both.

Traditional agricultural practices and markets

53. Madagascar's population is largely rural with 70% dependent on extensive and low-productivity agriculture. Agricultural activities are primarily orientated towards supplying two principal markets:

- Providing crop and livestock products to meet the country's internal markets. These markets are far from being fully satisfied in part because production is close to stagnation levels whereas demographic growth is estimated at 2.5%. Effectively, most farmers and pastoralists are tied to subsistence production, a situation difficult to break free from. A

further difficulty is that most farmers are cash-strapped and often forced to sell their produce when prices are at their lowest: i.e., peak harvest times when produce is most common in the market. Furthermore, the same producers are obliged to buy crops for their own families' food needs during the pre-harvest period when prices are highest. It may be noted that few subsistence farmers know about or have opportunities for increasing the price of their produce through organic/fair trade certification. Such market opportunities are likely to be relatively limited for the coming few years (for example, hotels, the national airline, major supermarket outlets) but new markets conceivably could be found abroad, perhaps in neighboring SADC countries where basic crops are not produced locally but potential clients exist.

- Selling cash crops such as coffee, cocoa, spices and essential oils for export markets. Malagasy products are well-known for their intrinsic qualities due in particular to favorable soil and climatic conditions, as well as non-intensive production practices (essentially organic) that are perceived to enhance their value in terms of flavor and aroma. However, cultivation practices remain highly traditional and volume is rather low.

54. There are two clear challenges and opportunities for MRPAs with respect to the above. Firstly, these sites are characterized by a dominance of subsistence farming and pastoralism. Subsistence can be interpreted as sustained poverty and hardship, so there is an opportunity for MRPA development activities to focus on breaking the cycle and bring about real economic growth for at least some communities. The second opportunity is closely linked to breaking this cycle. Added-value product lines (fair trade and organic) can be developed and sold in existing or new markets, raising local incomes significantly.

Rural development programs

55. Once completed, the national Poverty Reduction Strategy Document (DSRP) was integrated into the Madagascar Action Plan. Financing for development social infrastructures was provided by the Development Intervention Fund (FID) and special funding was allocated for rural development assistance through the Rural Development Support Project (PSDR). Several donors also focused funds on specific rural development sectors. These include: relatively large-scale funding from the World Bank, UNDP and GEF for extensive Sustainable Land Management (SLM) noted earlier; USAID sustainable livelihoods programs in support of targeted PAs; French Government support to sustainable development around selected PAs, notably in the arid south; German Government funds for forest management; and Swiss support for forestry and rural agriculture. All such projects are required by the GOM and the funding nations to have a clear environmental focus, and, as can be seen from the above summary, several had an additional clear supporting role for selected PAs. We estimate the amount made available to PAs was approximately US$ 1,200,000/year prior to the current political crisis, while the amount for all sustainable development was considerably higher.

56. Most, if not all, environmental NGOs have initiated rural development programs around their targeted PAs, most notably in an around Category V and VI MRPAs. Much of the funding base comes from the larger multi-and bilateral donors noted above, but some NGOs have been

able to mobilize internal institutional funding or have been supported by private foundations. In general, NGO-mobilized funding for rural development is relatively limited with a consequent impact on geographical scale of interventions and the likelihood of durable positive impacts.

57. Some of these rural development projects have achieved measurable success with respect to improved livelihoods and environmental/biodiversity benefits. Success appears to be linked to the long-term commitment of the donors and implementing partners, but it is also clear that political support for the national and regional government, including local representatives from technical support ministries is an important factor. Some rural development programs, however, appear to have had less durable positive effects on rural livelihoods and the environment. It is useful to examine some of the keys to success.

58. An interesting case concerns the complementary actions of the FID and the Rural Development Support Program (PSDR). While it is an oversimplification of their programs, the process essentially involves a diagnosis of local needs and aspirations, followed by feasibility/impact assessments and implementation. The FID assesses social development needs in each commune and, as may be anticipated from its mandate, the assessments generally include a list of infrastructures as a priority for financing. Projects tend to focus on these infrastructures and provide once-off support with little or no follow-up. This is perhaps not surprising given the vast geographical scale of the PSDR's mandate and its rather limited resources. Thus, while the good intentions of the FID and PSDR are not in question, there must be some doubts regarding sustainability of many of the interventions. We may also question the focus on social infrastructures. These are no doubt of general utility but they appear to divert funds for direct poverty reduction schemes. Using the poverty index ratings for the project's targeted MRPAs as a proxy for rural communities (see Annex 4), it is highly apparent that poverty must be a major preoccupation and a target for intervention.

59. Large-scale rural projects implemented by well-funded professional development agencies have had measurable impacts on livelihoods and have built upon existing economic sectors and even introduced new options. Many have linked infrastructure development to improve access to isolated communities and to open up markets. However, successful as these have been, many such projects appear to be working on improving subsistence conditions rather than encouraging aspirations to move above this socio-economic barrier.

60. USAID's Ecoregional Initiative (ERI) has, however, shown some promise in breaking the subsistence barrier. This project involved a 'full-package' health-population-environment approach focusing on improved well-being and revenues. One of the keys to success was ERI's ability to identify and bring into play improved markets for local agricultural products.

61. Another approach with considerable promise is that of the Malagasy environmental NGO Fanamby. This NGO focuses on private partnerships for sustainable tourism and certified[13] value-added products such as spices and essential oils. With regard to tourism, Fanamby financed the construction of a forest lodge at the Anjozorobe MRPA and assisted local communities to develop an agreement with a private tour operator. The resulting agreement

[13] Fairtrade Labelling Organizations (FLO) standards are used by Fanamby. The NGO facilitates both fair trade and organic labelling.

covers rental fees, and guaranteed local employment and produce purchase. The increase in revenue flow to households is summarized in Table 2.

Table 2. Revenues generated by the Saha Lodge for the Antsahabe community at Anjozorobe MRPA

YEAR	2006	2007	2008	2009
Visitors	262	650	604	1,199
Guide fees	192	433	418	578
Hotel salaries	42	-	686	8,206
Community income [a]	169	112	3,660	4,389
Market gardening [b]	-	-	171	327
Total income	403	545	4,935	13,500

Notes: All monetary values in USD calculated from average annual exchange rates for MGA and discounted for inflation. The lodge was opened in 2006 and refurbished in 2007 when in was closed for some months.
[a] The community receives a fixed percentage of hotel and guide revenues.
[b] 28 families grew local produce for the hotel in 2008, 45 families in 2009.

62. In parallel, Fanamby established a fair trade/organic marketing organization (*Sahanala*, translating as the field in the forest) for certified products produced by farmers neighboring MRPAs. The increased revenue flow to local people (see Table 3) has encouraged a voluntary percentage off-take that is used for MRPA recurrent costs. The 2009 household incomes from ginger, red rice and vanilla respectively represent a 400%, 80% and 285% rise over pre-intervention incomes (MGA 25/yr at Anjozorobe, MGA 28 at Daraina). This situation is unique in Madagascar and augers well for both breaking the subsistence cycle and PA financial sustainability. These approaches were developed with support from a grant from UNDP/GEF at Anjozorobe (Project MAG/03/G31/A/1G/72) and replicated at the Daraina MRPA. The clear success of Fanamby's MRPA projects has now begun to attract the attention of other NGOs working at similar PAs and wanting to adopt similar approaches. The potential is described in Annex 6.

Table 3. Revenues by household generated from three improved crops at Anjozorobe and Daraina MRPAs

Product [a]	Households [b]	2006	2007	2008	2009
Ginger	60	9	12	81,667	125
Red rice	30	14	18	48	45
Vanilla [c]	83-169 [d]	45	69	151	108

Notes: All monetary values in USD calculated from average annual exchange rates for MGA and discounted for inflation.
a Essential oil production began in 2009 and is not included.
b Yearly figures are income/household/year.
c Vanilla is produced at Daraina. Other crops were produced at Anjozorobe.
d The number of producers rises each year.

Protected Areas Funding and Future Sustainability

63. Madagascar National Parks has enjoyed more than 15 years of generally consistent financing from major donors and NGO partners. Before the recent political crisis, donors were organizing future efforts to maintain support following closure of the current three-phased 15-year Environmental Action Plan within which PAs were a continuing high priority. Today, this

commitment is less certain but some significant funding may be anticipated as it is unlikey that all donors will abandon entirely their past investments and sucesses in biodiversity conservation.

64. In 2004, the Foundation Law governing trust funds was revised and enacted. Immediately after, the government, CI and WWF created the Madagascar Protected Areas and Biodiversity Foundation (FAPBM). This body was designed to act as a trust fund supporting PAs and related biodiversity conservation activities. Once established and functional, it set a rather modest intitial capital acquisition goal of USD 50 million, the greater part of which has been secured. The interest generated from the capital will be allocated to individual PAs based on a rigorous selection protocol. Additional draw-down funds are also available but are usually earmarked for specific sites or activities. Donor interest is high and many are channeling much of their PA financial support through the Foundation, including the World Bank as well as German and French bilateral aid. Many of the donors earmark their funds to Madagascar National Parks sites and only a relatively small proportion is available for MRPAs at present (USD 400,000-500,000). The combination of a rather limited interest generation, the focus on Madagascar National Parks and temporary donor withdrawal from Madagascar, on account of the recent political crisis, means that there are few prospects for funding MRPAs through the Foundation at least for the near- to medium future. A positive sign, however, is that one of the present project's MRPAs will be funded by the Foundation in the immediate future (Mahavavy-Kinkony).

Box 1. MRPA sustainability approaches.

- ***The MRPA must be appreciated and appropriated by local communities and decentralized authorities, leading to clear commitment to its goals.***
  The most likely means of achieving this aim is to improve livelihoods based on increased revenues linked to the MRPA.
- ***The long-term viability of the MRPA must be guaranteed and visibly verifiable, and demonstrate a clear contribution to representing and conserving Madagascar's exceptional biodiversity.***
  Donors and decision-makers will be most interested in well-managed and MRPAs that demonstrate effective conservation and revenue generation.
- ***The MRPA must safeguard the interests of all stakeholders with respect to traditional activities and benefits emanating from the site, and that these interests should be integrated through the course of MRPA definition, establishment, planning and management.***
  Traditional utilisation should be seen as an opportunity rather than a threat, and be fully integrated into management.
- ***Private sector interests such as oil, mining and agribusiness do not necessarily conflict with local conservation or community development goals, and can be integrated into MRPA and regional planning.***
  These businesses should be viewed as opportunities for long-term financing and livelihood improvement.
- ***Sustainable financing options and opportunities must be identified and established.***
  The MRPA network should eventually be able to pay for itself.

65. The potential risk of becoming too dependent on scare donor funds means that many MRPA promoters are looking for alternative approaches that will help to ensure long term financial sustainability. Some of the most promising options appear to be centered on finding ways in which the MRPA improve local income generation, offsetting a proportion for recurrent management costs such as surveillance and monitoring. In this respect, the approaches adopted by Fanamby at Anjozorobe and other MRPAs seem to indicate potential winning solutions.

66. Carbon offsets with large international companies have been used to raise funds for two MRPAs, Makira and the Mantadia-Zahamena Corridor. These deals were quite substantial but were once-off arrangements. Carbon offsetting is a relatively new phenomenon in Madagascar.

The necessary regulatory frameworks have still to be developed. However, the Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (REDD and REDD++) programs indicate that carbon markets may be an attactive option in the future, especially with repect to voluntary markets. It may be noted that NGOs currently developing carbon market strategies face a significant hurdle: it is as yet uncertain whether and when carbon contracts will be made with the result that local communities are not convinced that they will reap any advantages.

67. The challenges related to sustainability have recently encouraged a small group of NGOs (notably Durrell, Fanamby, CI and WWF) to identify the issues involved and to propose innovative responses. The emergent strategies have subsequently caught on within SAPM and are summarized in Box 1. In addition to this, rates of natural regeneration in Malagasy forests are generally low, especially in the strongly seasonal Western Dry Forest Ecoregion.

Policy and Legislative context

Environmental and Development Policies and Charter

68. GOM policy highlights the importance of the country's biodiversity with respect to development and appear to rank it on par with petroleum, mining and agribusiness as means to reduce poverty and stimulate rapid economic growth

69. Madagascar approved a national Environmental Charter and updated it in 1997 and 2004. This instrument sets out the countr'y policy regarding the environment and is the base law for sectorally specific laws including the Protected Areas Code (COAP) and the Compatibility Law for Investment With Respect To Environment (MECIE) as well as providing a framework for the environmental articles in the Minining Code and soon to be published Petroleum Code (see below).

Protected areas code (COAP)

70. The COAP came into law in 2001. It set out the principles for the existence of the network, notably the need to represent Madagascar's diverse ecosystems through a mosaic of territories in order to represent and conserve the national natural heritage. Madagascar National Parks was mandated to manage the national network comprising parks and reserves in IUCN categories I, II and IV, but was also called upon to encourage and support the creation and consolidation of privately owned and managed reserves known as volunatary protected areas.

71. With the onset of the Durban Vision, it became apparent that the COAP needed a thorough revision to accommodate the inclusion of IUCN categories III, V and VI as well as to allow for new governance systems and management authorities. These new elements were developed by a multi-stakeholder sub-commission within SAPM with advice from IUCN experts. They have been integrated into a revised COAP but enabling laws have yet to be passed. Subsequently, as the new Petroleum Code was being prepared, the Ministry of

Environment and Forests engaged legal and environmental experts to revise the COAP once more and the revised code was passed into law in 2008.

72. It should be noted that those PAs that are currently classed as Category V sites in Madagascar do not quite fit the definitions developed by IUCN. Normally, Category V sites should be areas where long-term interactions between people and their environment have produced a harmony between traditional land/resource use and biodiversity maintenance. In contrast, the Madagascar situation deals with traditional uses that are often destructive over time if not better regulated. Similar situations are found in many developing countries and IUCN is fully aware of the problem. Work on Category IV sites in Madagascar should therefore contribute to a resolution of the problem by IUCN.

73. The new COAP allows for privately owned land to be included in category III, V and VI PAs, most of which is traditionally owned and untitled. However, considerable ambiguity remains regarding the COAP and the national land tenure policy that awaits future inter-ministerial meetings to resolve these issues. This does not prevent natural resource management transfers to communities from being integrated into new PAs but there are persistent concerns that the owners of these agreements could shift their priorities and thus potentially impact the goals of these PAs.

74. Enabling legislation emanating from the COAP includes safeguards for the environment and local communities. As a precondition for PA establishment, PA promoters must implement a Social and Environmental Impact Assessment as well as develop a safeguard plan to protect the interests of local communities. The enabling legislation also require adherence to standards and practices governing PA creation and management and these are described in guidelines developed by SAPM.

Decentralization, land use management planning and land tenure

75. These factors are critically important to the long-term sustainability of PAs, especially MRPAs. Decentralization has long been a goal of successive government administrations but has only recently began to make significant progress through devolution of authority to the country's 22 new regions. Each of the region is required to develop a sustainable development plan (Plan Régional du Développement, PRD) and an accompanying land use management plan. Both must include management and protection of PAs and environmentally sensitive areas.

76. MRPA internal zoning or land use management planning parallel those of the regional plans insofar as they have essentially the same goals: sustinable development and protection of the natural heritage. There is thus an excellent opportunity to reinforce political support for the site within the region by integrating MRPA plans into the larger regional plans. Such a move eventually may also help MRPAs to access government development funding.

77. MRPAs and Category III sites differ from other PAs within SAPM in that private land holdings are permitted by the COAP. In some cases, the land may be titled before the MRPA is created but the vast majority of land is under customary ownership. As part of the aim of MRPAs is to promote sustainable economic growth through private investment, there is a clear

advantage in supporting local customary landowners in obtaining legal tenure. However, under current tenure laws, this is not possible. All Malagasy PAs are considered to be 'special reserve areas' within which the land tenure services are not allowed to title land. This must be resolved if MRPAs are to encourage private investment in compatible economic growth.

Mining and petroleum

78. Madagascar is rich in minerals, although many deposits are likely to be too small for commercial exploitation. The Mining Code was revised in 2005 in order to encourage investment in this sector. In broad terms, the Code permits a first-come, first served concessions system and regards concession ownership as a right that cannot be withdrawn except as a result of unlawful behavior. This presented a problem when MEF claimed set-aside areas as potential future PAs to be included in SAPM. Many of these areas were already under mining concessions. In the event of PAs being confirmed in such areas, mining companies would not be obliged to relinquish their claims and could demand financial compensation if they opt for abandonment. In response to strong protests from the mining sector, the Ministry of Mines and Hydrocarbons (MEM) and the MEF signed an Inter-Ministerial Order to place a moratorium on mining in the proposed potential SAPM areas for a two-year period followed by a second term of the same duration, the maximum the Mining Code would permit. Remarkably, the mining sector agreed and worked with MEF and its partner NGOs to resolve case-by-case conflicts.

79. Notwithstanding the moratorium, there are many remaining potential conflicts with respect to pre-SAPM concessions. In general, larger more established mining companies are prepared to work out acceptable coexistence agreements with MRPA promoters and some are even willing to consider contributing financially to future MRPA strategy development (see the letters in Section IV, Part I). Such companies seem to express a genuine interest in demonstrating corporate social and environmental responsibility, a move that will certainly help in their drive to secure investment backers. However, it is less clear how less well-established companies will behave, especially those with little or no history of corporate responsibility and/or dependent on less demanding investors. The scale of overlapping interest between mining and PAs is summarized in Map 4. For more details with respect to individual MRPAs, see the maps in Annex 1.

80. With respect to the oil and gas sector, a new Petroleum Code is expected in 2010. The GOM sought technical assistance from the Norwegian Government during its development and it is expected that its recommendations for good governance and environmental problem avoidance/minimization will be retained.

81. Petroleum licenses are provided by the GOM through a special body coordinating strategic minerals and metals (*Office des Mines Nationales et des Industries Stratégiques*, OMNIS). This process is based on a system of bidding for fixed blocks. The vast majority of blocks that have been taken up include sensitive land and sea ecosystems, and many cover MRPAs (see Map 4 in Annex 1). No blocks have entered into production at the present time but two are believed to be commercial viable.

82. As we have seen earlier, mining and petroleum development is permitted within MRPAs, subject to certain conditions. Mining and petroleum ventures are required to conduct Environmental Impact Studies (EIAs) at every stage of project. This is an obligation under MECIE. The National Environment Office (*Office National pour l'Environnement*, ONE) reviews these analyses and issues permits to proceed. Summarized EIAs are also made available to the public, following an earlier period of on-site public consultations. MECIE EIA standards are based upon recognized international norms (ISO 14001) but they do have some limitations. Briefly, although they focus on the most obvious threats and risks to biodiversity and society associated with a development project, they do not take into account the full range of local stakeholder interests such as traditional fishing, commercial tourism development or the uniqueness of several Malagasy ecosystems. As a result, there have been recent calls to conduct broader Strategic Environmental Assessments (SEAs) that look at multiple investments and other stakeholder interests over a larger geographical sea- or landscape. SEAs have proven to be more effective than EIAs in establishing land use management plans that integrate and/or protect these different interests.

83. Finally, several extractive industry companies are experimenting with the voluntary Business and Biodiversity Offset Program, BBOP. BBOP calls for a hierarchical approach beginning with avoidance of negative impacts on biodiversity and eventually providing options for compensation in the form of offsets. BBOP calls for no net biodiversity loss but some companies in Madagascar are considering a net gain policy: i.e., they will contribute to project-related biodiversity conservation schemes beyond their contractual obligations with the GOM.

THREATS, ROOT CAUSES AND IMPACTS

84. The threats, risks and impacts that are most important for the newly created MRPAs can be broadly summarized under three main headings: (i) habitat/land use change; (ii) overexploitation of natural resources; (iii) invasive alien species; (iv) pollution; and (v) climate change.

85. It is important to distinguish between *existing* threats and *potential* threats (risks). Existing threats are immediate and usually tangible, and, when relatively severe, must be the focus of mitigation/reversal efforts. Some risks may be future possibilities that can be planned for and thus hopefully avoided or minimized.

Habitat/land use change

86. The majority of Madagascar's endemic species are forest-dependent. The most important direct threat leading to habitat loss and/or land use change is clearance for shifting agriculture. Most of Madagascar has relatively infertile soils and few farmers have the financial resources to invest in fertilizers. Apart from irrigated bottomlands, land under natural forest is generally more fertile than fields that have been cultivated or fallowed for several years. Farmers cut forest to allow the wood to dry and subsequently burn it to provide ash that enhances soil

fertility. Shifting agriculture is undoubtedly a long-standing tradition that may pre-date human colonization of Madagascar and is widely practiced. This practice is also driven by lack of access to fertile irrigated land and/or by new markets opened such as an increased demand for maize and other crops for livestock feed. Economic migration fuelled by limited availability of suitable cultivatable land coupled with rapid demographic growth and high unemployment also means that people seek untouched forest areas for their crops.

87. Freshwater lakes are often converted into rice paddies and the altered landscape may be unsuitable for many endemic species. Mangroves were once traditionally left alone as there was sufficient land elsewhere that was less risky with respect to periodic flooding and over-mineralization of the soil. The same demographic and economic drivers noted above fuel recent clearance of mangroves for cultivation and settlement.

88. Settlement may result in habitat loss but it is usually associated with land clearance for cultivation. New roads may cause habitat loss and fragmentation but it is currently rare to see this happening in pristine forests.

89. The production sites of mining and petroleum activities may coincide with natural habitat (compare e.g. Maps 6 and 7 with Map 5 in Annex 1). Many types of mining require rather large areas to be cleared but responsible companies may be expected to opt for biodiversity offsets to ensure no net loss. In general, the size of oil wellheads is smaller than a typical mining area and it is possible to offset the drilling stations through lateral drilling from areas that are less environmentally sensitive. Historically, oil companies bulldozed seismic lines regardless of habitat type. This practice has been replaced by pedestrian seismic practices and is unlikely to be a significant problem in the future. However, older bulldozed lines have facilitated settlement, habitat clearance and illegal logging that have had persistent negative impacts on ecosystem viability. Both mining and oil ventures may require extensive land for on-site processing. They may also need to develop extensive road or pipeline facilities.

90. Like many countries in the African region, the GOM is setting up land-lease agreements with developed nations for the purposes of agricultural production or, in the case of richer arid countries, water access/export rights. These Foreign Direct Investments (FDIs) are claimed to be mutually beneficial to the host and lesor countries. The German Tehnical Cooperation Agency, GTZ, and the European Union recently reported that even though a land lease covering 1.3 million ha has been cancelled in the last year, the area under contract still amounts to 1,660,000 ha, with 1,231,000 ha allocated to agro-fuels, 386,500 ha to food production and the remainder unspecified (see Annex 1, Map 9).[14] Some of the land leases overlap with new MRPAs but the companies have so far acted responsibly and taken care to work with their promoters in order to avoid forest clearance or other forms of negative land use change. However, it is not clear whether such responsible behaviour will be observed in future FDI arrangements.

[14] Foreign Direct Investment /FDI) in Land in Madagascar:
http://capacity4dev.ec.europa.eu/eu-working-group-land-issues/foreign-direct-investment-land-developing-countries

Overexploitation of Natural Resources

91. Charcoal production is perhaps the most severe form of overexploitation in natural forests. It is somewhat localized as this industry depends on having nearby urban markets, but can radically alter the structure and composition of forests. As terrestrial forest resources are exhausted, some charcoal production has shifted to mangrove areas. Theoretically, these ecosystems are more robust than terrestrial forests and can regenerate quicker, but the intensity of harvesting can lead to significant degradation. Charcoal is driven by a high demand in large towns and cities where it is the least expensive fuel for cooking. Alternative energy sources such as gas or coal briquettes have failed or had limited success in attracting users because of their high price or because people are conditioned to relying on charcoal.

92. Commercial forestry practices involving selective logging have an impact on forest biodiversity. Known direct effects are changes in forest composition and structure that appear to favor alien invasive species. In addition, logging access roads facilitate new settlement that is invariably accompanied by forest clearance for cultivation. However, the domestic needs are so constant and export prices so high that the GOM has legitimate reason to continue exploitation. As a result of non-respect for forestry regulations, there is currently a widespread moratorium on large-scale commercial forestry but this can be expected to lift once capacity to enforce the law is strengthened. Commercial forests have also formed associations in an attempt to enforce best practices through peer pressure.

93. Unfortunately, illegal logging is rife and can have a long-lasting, marked influence on forests. This threat has increased sharply during the current political crisis when law enforcement has been weakened. The drivers of illegal timber extraction are varied. Some of Madagascar's hardwoods are very valuable and can fetch high prices on the international market, attracting some of the less scrupulous operators in the country. Secondly, the demand, especially from East Asia, is extraordinarily high and purchasing companies usually do not have policies for environmentally responsible practices. Finally, poverty and unemployment may drive local people to illegal logging ventures.

94. Illegal logging is often accompanied by hunting animals for food and can facilitate the establishment of alien invasive species.

Invasive Alien Species

95. Alien invasive species have tended to be overlooked in Madagascar but their impacts can be quite severe and highly persistent. In natural forests, these species may become established as a result of partial forest fragmentation or logging. Good examples of fragmentation effects include invasion by the scrubby tree *Ziziphus mauritania* that has severely hindered natural regeneration and led to major ecological imbalance in parts of the Menabe-Antimena MRPA. Similarly, elsewhere in the seasonal Western Ecoregion forests *Lantana camara* has had similar persistent negative effects. With regard to timber exploitation selective light logging conducted

50 and 150 years ago have led to persistent changes caused by alien invasive plants[15] and can have long-term impacts on lemur population densities.[16] It is no wonder, then, that most of recent effort that has gone into creating new PAs in Madagascar has focused on maintaining large viable natural forest blocks and, where possible reversing or stabilizing historical fragmentation and degradation.

96. Alien invasive species have had significant impacts in freshwater ecosystems. Deliberate introductions of food and/or game fish have led to extirpation of some of the country's unique freshwater species. The parthenogenic crayfish, *Procambarus* sp. ('Marmokrebs') has recently appeared in Madagascar and is known to be highly invasive elsewhere in the world. Fortunately, it is still restricted to the environs of Antananarivo but could spread and threaten the endemic species in the genus *Astacoides*.[17]

Pollution

97. Pollution is generally not yet a major threat in MRPAs. Various experts have suggested that pollution from irrigated sugar cane may be contributing to a gradual die-off among baobabs (*Adansonia grandidieri*), a landmark species dominant in the Menabe-Antimena MRPA but to date there is no evidence for or against. Similarly, irrigated sugar cane production may be releasing effluent into river systems and their mangroves in the Mahavavy-Kinkony MRPA no effects have been noted. However, the risk of pollution is likely to increase in the future if and when mining and oil production occur within or near MRPAs. We may expect that responsible companies will make efforts to avoid spillage or pollution but accidents can occur. Pollution may occur at then production site or may occur during transportation to ports and at sea. In principle, pollution risks are identified during the EIA process but may not always be adequately addressed during operations and monitoring.

98. The national Marine Pollution Control Unit (*Organe de lutte contre la pollution marine*, OLEP) has a well-trained staff and has standing response plans in all of the coastal regions. OLEP can also mobilize other administrations to combat oil spills and has worked with NGOs to control pollution in seasnsitive marine areas. However, there is no service dedicated to terrestrial pollution and we must depend promarily on the capacity of the polluter company to take action.

99. The FDI land lease agreements for agro-fuels and food production noted above may also increase the risk of pollution if they are ever to materialize. Pesticides and fertilizer-laden pollution may significantly impact natural habitats, even those at some distance from crop production areas.

Climate Change

[15] Brown, K.A. & Gurevitch, J. (2004). Long-term impacts of logging on forest diversity in Madagascar. PNAS.
[16] http://icte.bio.sunysb.edu/pdf_files/whiteetal1995.pdf.
[17] See: http://www.springerlink.com/content/w4635m7327471764/.

100. As we have seen, natural climate change during the Pleistocene has been enormously influential in shaping patterns of Malagasy diversity and endemism. In this regard, we may reasonably anticipate that there is considerable intrinsic resilience within Madagascar's biodiversity, even thought the predicted rates of climate change in the coming years are almost certainly unprecedented.

101. The national meteorological office periodically reports that some climate change impacts are beginning to appear in Madagascar, notably more severe and frequent weather events such as convection storms and cyclones. Whether these trends are short-term or real, it is clear that climate change will be a key factor affecting viability of PAs in the future. In the previous three years, the MacArthur Foundation has funded CI, WCS and WWF in order to identify likely impacts and to test appropriate adaptation measures. These same NGOs were also tasked with identifying the regional climate change vulnerability within the country.

102. Some of the outcomes of this work are predictable: (i) larger, relatively intact blocks of forest are more likely to be resilient that isolated or fragmented blocks; (ii) there will be changes in species ranges as climate changes locally; and (iii) altitude-dependent species ranges are expected to change. Many animal species may be expected to adapt to climate change-induced range shifts fairly easily, especially those with large population ranges. Mountainous areas with a good altitudinal span of forest cover may be key refugia and range shift areas. Some more localized species may not have the same degree of flexibility, and climate models indicate that the rate of change may be too rapid for forest tree species and coral reef ecosystems to adapt in time.

103. Most MRPAs are relatively large, a measure considered to be a natural adaptation to climate change stress. Additional proposed adaptation measures focus on minimizing non-climate anthropogenic stresses such as pollution and overexploitation. The same rationale is applied in other regions of the world where climate change impacts are believed to be particularly important. WWF is leading efforts to train environmental agencies in assessing climate change impacts together with adaptation approaches. This expertise will continue to be provided during the present project.

LONG-TERM SOLUTION AND BARRIERS TO ACHIEVING THE SOLUTION

104. The **long-term solution** is to establish an effectively-managed and well adapted MRPA sub-network that demonstrably contributes to biodiversity representation and conservation. At the same time, it must also be able to demonstrate that the underlying philosophy of integrating biodiversity conservation, poverty reduction and sustained economic growth is indeed an apt and effective means of mainstreaming biodiversity in national development policies and strategies.

105. The MRPA network must be able to deliver upon, and demonstrate three critically important parallel outcomes. First, the MRPA network must be able to demonstrate that: (i) it includes some of the most important biodiversity areas in Madagascar, and (ii) it can safeguard

these sites in perpetuity ***at least*** as well as the existing more traditional, stricter Category I, II and IV PAs managed by Madagascar National Parks. The most important barriers will be establishing and subsequently demonstrating that the new and innovative governance and management goals are well adapted to local aspirations and are effective. Secondly, the MRPA sub-network must be able to demonstrate that it contributes significantly to poverty reduction and sustained economic development at regional and local levels. This is critical with respect to attaining local community appropriation and buy-in, as well as active support form regional decision-makers responsible for development planning. Thirdly, each MRPA must be able to demonstrate its ability to attract financial support from government and donors, particularly during its initial investment phase, as well as establish long-term revenue streams that contribute to its sustainability.

106. Based on the above, the long-term solution is based upon three pillars: (a) the selection and creation of six[18] fully legally protected MRPAs chosen on the basis of their contribution to representation and conservation of Malagasy biodiversity, their social acceptance, and opportunities to attract private sector investment; (b) consolidation of locally adapted, effective and motivated governance structures that clearly respond to regional/local sustainable development aspirations and national conservation strategy goals; and (c) the development of business strategies that seek to promote business opportunities in and around individual MRPAs, attract offsets and CSR support from industry, and develops additional funding sources through the Foundation and carbon offsets. Underlying these pillars is the need to ensure that regional and communal administrations together with local communities value their respective MRPAs and thus commit to their long-term goals and sustainability.

107. As we have seen, there is a formidable array of barriers to be addressed if the long-term solution is to be attained. No single project can hope to address the gamut in its entirety, and several different stakeholders and projects will need to combine their efforts towards the commonly held MRPA goals. However, the present project is the best placed to spearhead the process of removing MRPA barriers, either directly or indirectly. Direct barrier removal by DCBSAP and NGO project partners will focus on regional and local solutions adapted to different sites. This will be accompanied by support to MEF and the voluntary SAPM commissions working in the capital with regard their efforts to lobby for policy, legal and strategy modifications in favor of MRPAs and sound rural land use planning.

108. There are three key barriers that must be removed if this project is to succeed and these are presented below. It should be remembered that each barriers is multifaceted, and the solution to each sub-component requires a specific approach.

Barrier1. The role of MRPAs in conserving Madagascar's biodiversity while at the same time contributing to sustainable development remains unclear, and the policy and legal frameworks are as yet incomplete.

109. This barrier has four sub-components: (a) selection and design; (b) the strengths and weaknesses of existing governance and management approaches, and their adaptation to

[18] Two MRPAs will be operationally treated as a cluster, making it therefore five project sites.

MRPAs; (c) establishing an MRPA network as a means to share experience and lobby more effectively for MRPA support; and (d) policy and legislation.

MRPA selection and design

110. MRPAs represent a new approach to biodiversity conservation and, although there is wide agreement on their value and social acceptance, there is neither sufficient experience to provide guidelines on why certain sites should be designated as either Category V or VI as opposed to Categories I-IV, nor is there a clear consensus on how these sites should be designed.

111. Fortunately, a relatively large body of biological information has been collated and analyzed to identify the highest priorities for terrestrial and freshwater conservation in Madagascar.[19] However, beyond confirming the biodiversity importance of individual sites, these do not provide any guidance on what PA category is most appropriate or whether a given site would benefit from multi-category zoning. For this reason, the SAPM Commission has produced a guide to determining the most appropriate category and the steps required to create an MRPA. The guide is based on IUCN recommendations and in-country experience.

112. History and internal preferences also mean that different institutions opt *a priori* for a particular category, with no real consideration of its aptness. For example, Madagascar National Parks has opted to establish only new Category II national parks in their network expansion drive, even though this may not be the best designation for accommodating social concerns e.g. Similarly, some conservation NGOs tend to favor Category VI as it places more emphasis on conserving 'wilderness' areas rather than an integration of biodiversity and local development aspirations more strongly emphasized for Category V. When tested using IUCN's updated category evaluation framework[20], several such proposed Category VI MRPAs emerged as being most closely aligned with Category V and their status has been corrected.

113. Based on the above, there is a clear need to set clearer guidelines on establishing decision frameworks to determine whether new PAs should be Category V or VI, or indeed a different category. The present project aims to do this based on prior experience and knowledge attained during the present project. Criteria may include the spatial configuration of the proposed MRPA with respect to occupancy, land use practices, distribution of natural areas and their condition, local dependency on natural areas, social acceptance, and the existence of options to develop business opportunities. It is of course a given that each MRPA must be a national conservation priority and be in good enough condition to be viable, resilient, and attractive to donors.

114. MRPA design presents a new set of challenges compared to Category I-IV PAs. While the site must be designed to ensure sustained areas of biodiversity value, the MRPA must be conceptualized spatially in such a way as to maximize potential with regard to local social aspirations and economic development opportunities. A further challenge is that Category V

[19] MARXAN analyses conducted by SAPM, Pleistocene refugia and micro-centers of endemism published in 2006 (Science 312: 1063-1065), ZONATION analyses published in 2008 (Science 320: 222-226), and preliminary reports by CI, WCS and WWF on climate change resilience.

[20] Dudley, N. (Editor) (2008). *Guidelines for Applying Protected Area Management Categories.* Gland, Switzerland: IUCN. x + 86pp.

MRPAs often have fragmented natural habitat cover interspersed with settlement, agriculture and pastoralism, and, like Category VI sites, often involve significant local community dependence on these natural areas. Highly fragment natural habitats require innovative design that captures all of the most important sites for conservation while at the same time allows for a full integration of local land ownership and use. In turn, heavy dependence on natural habitats means that certain species or ecological communities may be overly stressed and/or degraded. Although these may be initially interpreted as significant barriers, good MRPA design and zoning should be able to turn them into opportunities. For example, stresses on natural ecological communities could be reduced by better use of transformed land through new or improved agriculture, hedged carbon-based sylviculture, or through well-designed and marketed ecotourism, with both creating new economic opportunities to local people.

MRPA networking

115. A limited degree of networking has occurred in recent years, with stakeholders from selected MRPAs meeting annually to share experiences under the umbrella of USAID's Miaro program. These encounters have not been particularly well structured, have not addressed some of the most pressing MRPA issues such as governance structure effectiveness and sustainability, and probably have had little lasting impact. Such meetings are rather costly but may be key to identifying and addressing barriers to successful MRPA establishment and sustainability, especially during the early stages of MRPA creation and consolidation.

116. In the mid- to long-term, it may be sufficient, and certainly less costly, to organize meetings between MRPA promoters (largely NGOs but perhaps regions) to address key issues, and then subsequently rely upon them to relay information to stakeholders at their respective sites. In order to be effective, barrier and solution issues must be based upon experience gained in the field, rather than at a more theoretical level. A parallel approach would be to ensure good communications facilities at the MRPA allowing for regular knowledge sharing between sites.

117. At present, MRPA lobbying for political and financial support tends to be based on either individual site needs or on the goals of particular promoting institutions, in the case where one NGO or other entity is involved in several sites. There is no solid lobbying block to defend the common interests of all MRPAs with respect to integration into national, regional and local land use and development policy and planning, sustainable financing, improved legislation and law enforcement. One of the critical issues in the near future may be land use policy reform that places MRPAs clearly in the development landscape and therefore potentially less vulnerable to competing sectors such as mines and oil. A second is likely to be competitiveness with respect to traditional donor support for PAs; at present, many donors may not be convinced that new MRPAs are as important for biodiversity conservation as the existing Madagascar Parks Network or perhaps not as effective. It is therefore critically important to create an influential network with enough credibility and influence to address these and other issues.

118. The DCBSAP will responsible for establishing an MRPA Network. It would seem clear that MRPA operators would be willing to join such a network and contribute to its development. The Network would essentially be similar to the SAPM sub-commissions but could act as a lobbying force to promote MRPA interests.

Policy and legislation

119. Policy and legislation are indisputably the responsibility of the GOM although the regions may enact additional conservation legislation locally.[21] However, responsible governments take care to listen to civil society and make any amendments that are well reasoned and justified. Based upon its principal implementing partners, the role of the present project will be to identify policy and legislation barriers, and to propose improvements based on direct experience within MRPAs. As we have seen, there are several key barriers that need to be addressed, several of them apparently having been partly or entirely unrecognized before the PPG's analysis.

COAP

120. Since it was revised in 2008, the COAP may be considered to be a solid legal framework for PAs in general, as well as an adequate base for MRPAs. However, its draft enabling laws must be carefully reviewed to take into account a range of issues including land tenure and governance structures/roles (with some flexibility).

Land tenure and PAs

121. Current land tenure legislation is adapted to Category I-IV PAs that are the direct property of the state. This creates difficulties for MRPAs where there is mixed state and private tenure. Private tenure with MRPAs is particularly complicated when it is customary and the farmer or other type of stakeholder wishes to legalize ownership in order to secure current and future investments. Under the present land tenure law, the GOM considers all PAs to be special areas where the land tenure agency is not permitted to allocate fully legal ownership. As most, if not all, MRPAs have considerable customary tenure; this is a major barrier to long-term MRPA goals.

Mining and Petroleum Codes

122. The Mining Code and the forthcoming Petroleum Code appear to address issues relating to environmental loss or degradation in some detail but it is not clear whether they will respect either the COAP's interdiction on exploration and production in either Category I-IV PAs or priority conservation zones that are essentially equivalent to Category II PAs within MRPAs. The Mining Code is specifically unclear regarding pre-existing concessions obtained before MRPA temporary protection status. Effectively, it is possible for concession owners to propose exploration and production and let the EIA results convince government whether it is justified and approved. While companies with clear corporate responsibility policies and ethical investors may prefer to avoid conflicts with conservation interests, we may anticipate that less responsible companies may not face the same constraints. An additional factor may be the quality of individual EIAs as the ONE has limited personnel in this domain.

[21] Legal instruments government decentralization covers legislation by the regions but the mechanisms are still unclear.

123. By law, any oil or mining company must compensate stakeholders for environmental degradation or destruction, and social or economic impacts on local communities. One problem with this is that the value of biodiversity has never been evaluated in Madagascar, and existing studies carried out elsewhere would likely provide only vague guidance. A second barrier is that MRPA stakeholders, primarily government, are legally bound to compensate mining or oil companies should they succeed in forcing abandonment of pre-existing concessions. If this were to occur it would be well beyond the capacity of either government or NGO partners.

124. The Petroleum Code calls for mandatory SEAs as a more holistic complementary support to project-focused EIAs. SEAs are certainly welcome but they do present drawbacks. An SEA would be the primary responsibility of government, and there is currently no mechanism to allocate funding responsibility to individual extractive industry projects as a means to cover SEA costs, usually significantly higher than those of an EIA. For these reasons, ONE has expressed reluctance regarding mandatory SEAs.

125. There are some potential solutions to the above barriers. One possibility is to successfully lobby and convince appropriate ministries that the codes and their enabling laws are modified to interdict mining or oil development in MRPA priority conservation zones. However, it is not at all sure that the MEM would close of this option through legal means. A second option would be to ensure that EIAs and, should they become mandatory, SEAs are an effective means to convince mining and oil companies that operations in priority conservation zones would be unwise and potentially costly ventures. In addition, well-reasoned large-scale land-use planning may be a means to find a compromise between MRPAs, mining and oil projects and other pertinent sectors such as agriculture and tourism. Based on recent experience and PPG analyses, this last option may be the most likely means of solution.

Barrier 2. Institutional experience, capacity and motivation for MRPA development are relatively weak, and mechanisms for governance and coordination are still relatively poorly defined.

126. Until the mid-2000s, all but a few private PAs were managed by a single national agency, Madagascar National Parks. Government, donors and NGOs were able to invest considerable funding and technical support into training and capacity building for this institution. However, the Durban Vision and SAPM provide an ambitious geographical and conceptual expansion of the PA system that cannot be absorbed by the existing institutional framework as the capacity within Madagascar National Parks is already fully stretched. In addition, this institution does not feel that its mandate should be expanded to MRPAs, preferring to focus on stricter Category I, II and IV PAs. Therefore, the main bulk of MRPA creation and development was handed over to NGOs working with decentralized institutions operating at the regional level and more locally. The regions, communes and local communities essentially had had no prior experience with PAs. In parallel, the experience of environmental NGOs was largely limited to supporting communities in establishing management transfers (GELOSE and GCF[22]) aimed at ensuring

[22] These two forms of management transfer enable local communities to sign a contract with the GOM for the right to manage natural resources in a well-defined area. The approaches were widely tested during EP II and EP III. All such areas must have a clear conservation function. NGOs have often supported management transfers in environmentally important areas in order to

conservation and sustainable utilization of key biodiversity areas. In addition, NGOs and local communities have no law enforcement authority.

127. Promoting MRPA governance options largely centered on partnerships between NGOs, local government, communities and the private sector is a marked shift from have a single professional agency operating nationwide. This shift could not possibly happen overnight and the most effective MRPA governance mechanisms still await identification through on-site testing, a major objective of the present project. The shift also requires institutional realignment and cooperation, both of which are often slow in coming about.

128. The decentralization process that has been on-going through the past decade has set a clear framework for local multi-stakeholder MRPA governance. Decentralization is based on the principal of subsidiarity[23], or the transfer of responsibility to local stakeholders. However, integrating the new concept of multi-stakeholder MRPAs has created a steep learning curve, not least because PAs have been traditionally perceived as somewhat of a luxury and hardly pertinent to local sustainable development aspirations. Fortunately, these perceptions are changing and MRPAs are generally viewed more positively by regional governments and local communities. Indeed, a slowly growing number of regional administrations and communes now actively call for MRPA establishment in their respective development plans.

129. Notwithstanding these positive trends, creating well-managed MRPAs faces a series of important barriers. These may be best considered as: (a) governance and coordination; (b) capacity and motivation; and (c) integration into broader political and development landscapes.

Governance and coordination

130. One of the most important motivational forces behind the concept of MRPAs is the belief that management costs should be lower than those of Madagascar National Parks sites, given that one does not have to finance a permanent local, regional and national staff and their respective infrastructures.

131. However, as experience accrued, MRPA promoters were faced with an apparent dilemma regarding MRPA costs. Compared to Madagascar National Parks sites where only a single Management Committee (*Comité de Gestion*, COGES) is required to integrate local aspirations, MRPAs by definition must integrate the interests of a far larger array of stakeholders. The latter not only involve representatives from local communities as in the majority of COGES, but extend to the regional administration and its line ministry representatives and private sector operators. Apart from the potential financial costs getting all of these interests into working flora (discussed below), the sheer complexity appears to condemn MRPA management and coordination to a morass of meetings and potential conflicts of interest that are likely to hinder – or even effectively block – progress.

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encourage conservation and sustainable resource use. The acronyms for GELOSE and GCF translate as 'Secure Local Management' and 'Community Forest Management,' respectively.

[23] The on-line OED defines subsidiarity as: *'(In politics) the principle that a central authority should perform only those tasks which cannot be performed at a more local level.*'

132. Experience from a range of sites seems to confirm that governance complexity is indeed a significant barrier to MRPA development at the present time. Most of the variations currently being tested are proving to be highly cumbersome and/or essentially ineffective. Governance streamlining is therefore a priority preoccupation for promoters along with the closely related need to establish of sustainable financing mechanisms. It is thus important to define the principal governance barriers as precursor to developing solutions.

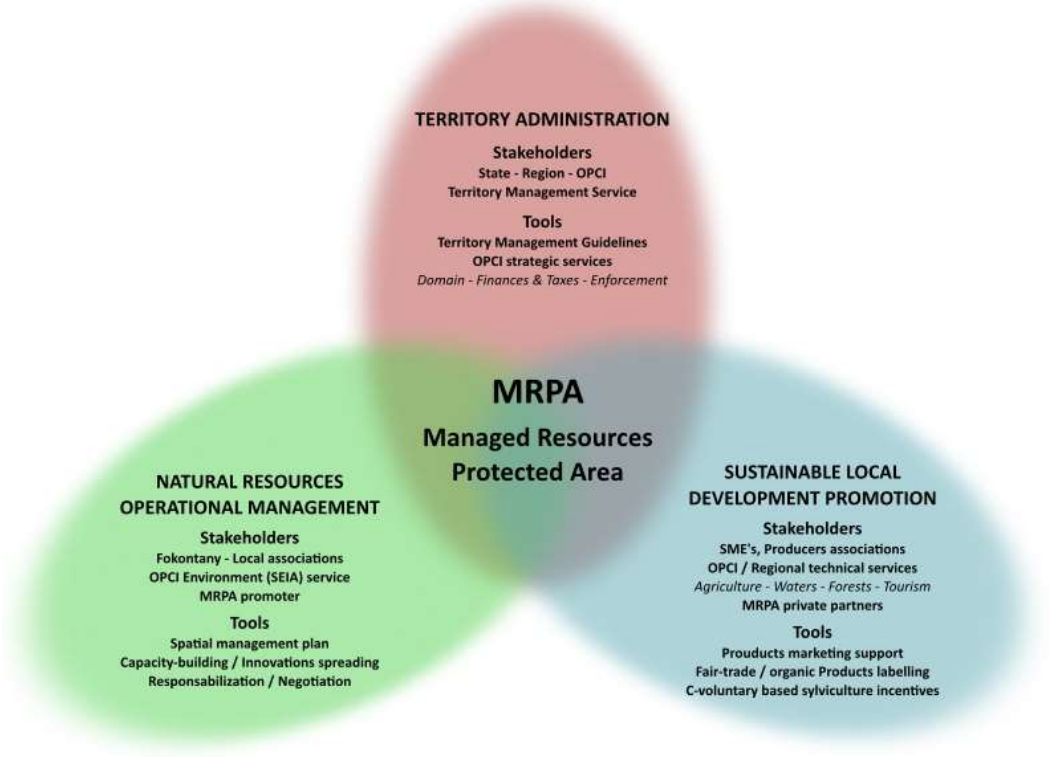
133. A primary barrier is enabling and motivating local communities, communes and OPCI – those most directly concerned with the MRPA – to take an active role in the site's protection and management. Given their role in setting local development goals, OPCIs would appear to be a promising vehicle for promoting the interests of MRPAs under their jurisdiction. This appears to work best when the OPCI is enabled and motivated to develop multi-sect oral plans including infrastructures, social services and environmental management as part of broad development plan that corresponds to their perceived priorities. However, many OPCIs have arisen through support from NGOs promoting MRPAs and tend to overly focus on biodiversity with respect to more pressing development priorities. Such an approach is almost doomed to failure from the start because they fail to motivate OPCI interest.

134. Legally, the OPCI is mandated to call upon the region and its line ministry representatives to implement specific development activities it deems to be priority. In practice, neither the communes/OPCI nor the regions have budgets to respond to more than a fraction of requests. In addition, there are regular conflicts between the regional line ministry services and OPCIs and/or communes regarding national policy and local aspirations. In effect, the OPCIs are often felt to have no real teeth at the present time and are consequently overridden by the region's perceived priorities which may or not include local MRPAs. This barrier could be removed by strengthen capacity among OPCI to lobby regions more effectively and/or acquire their own funding from donors.

135. Active regional participation in MRPA development is ultimately critical to the success of these new PAs. MRPAs must benefit from the region's active support if they are to be taken seriously as sustainable economic development drivers and/or opportunities. If this is achieved, the MRPA will automatically be integrated into PRDs and accompanying land use management plans, and thus enjoys strengthened political backing. Daraina, one of the prospective project sites, has already had some success in this regard.

136. The complexity of stakeholder interests and institutional roles is summarized in Figure 3. It is highly simplified by indicates the overlapping relationships between territorial land use planning interests and those of sustainable rural development and natural resource/biodiversity management. MRPAs appear to be uniquely positioned to bring these three interests together within one well-defined geographical area.

Figure 3. MRPA stakeholder interests and institutional roles



137. A future challenge involves moving from the current weakly effective management organization found in most MRPAs today towards a more effective, streamlined and cost-effective governance system. Table 4 indicates possible scenarios for positive change over a period estimated before the current political crisis to be a minimum of 5 years depending on the complexity of individual MRPA and how effective capacity building will be. Given the difficulties caused by the crisis, the dates are likely to be too optimistic.

Table 4. Potential future shifts in MRPA lead and implementation

	CURRENT	**3 YEARS**	**5 YEARS (OR LONGER)**
Biodiversity/ sustainable natural resource management	Management: DREF Support: DGF / NGOs Partners	Management delegated (targeting operationalisation): Mandated NGOs / Association / *Collectivités Territorielles décentralisées* CTDs Eventually DREF Support : DGF/ DREF	Co-management: Mandated NGOs/ Association / CTDs Eventually DREF Technical Partner support may be periodically required

	CURRENT	3 YEARS	5 YEARS (OR LONGER)
Territorial planning and administration	Managing entity: DREF Support/Implementation: NGO partners, Région, *Vice-Primature de développement et d'aménagement du territoire* VPDAT , DRAT, MEF	Management: Mandated NGOs/ Association / *Collectivités Territorielles décentralisées* CTDs/Identified management structure Implementation: Regional land tenure office, DREF	Management: Mandated NGOs/ Association / CTDs/Structure de gestion identifiée Implementation: DRAT and GFIC, DREF
Economic development	Management: Partner NGO/DREF Implementation: Local interest groups/communes and in some cases private sector	Management : Mandated NGOs/ Association / CTDs/STD/Structure de gestion identifiée Implementation: NGOs/ local associations / local economic interest groups, OPCI and private sector,	Management: Mandated NGOs/ Association / CTDs/STD/Structure de gestion identifiée Partners: private sector, local associations and economic interest groups

Explanations:
All the previously existing MRPA management contracts have expired by end 2012. Instead, a delegated management contract for the sites is in the process of finalisation.
MEF has a leading role in the project's oversight, coordination and M&E.
NGOs, associations and site-level stakeholders are service providers and ensure project implementation together with UCPE, which functions as the PRODOC implementing partner.
MEF is expected to play a lead role throughout as per its mandate to set policy and facilitate the operationalisation of the SAPM
GFIC = *Guichet Foncier Intercommunal* (Inter-Commune Land Tenure Service). These entities are only now beginning to emerge and are designed to provide service to a number of neighboring communes. It is cost-prohibitive to have one service per commune.
The time intervals are indicative only. Depending on the level of current progress and resource availability, time required may be shorter or longer.
The model is based on analyses of MRPAs managed by a range of promoters.

138. In order to be effective, capacity and motivation among all stakeholders involved in MRPA management must be strengthened and this is addressed in the following section. Whatever decision-making/oversight body emerges at the site level, it may wish to create a professionally-trained full-time executive unit responsible for communications, coordination and conservation actions such as surveillance and monitoring. The unit would be best recruited from local communities and may need to comprise geographical sub-units when the MRPA is large. The range of skills in the executive unit would not cover all the skills required for MRPA management, and regional services would need to provide technical input.

139. It would seem that the OPCI will be a key player within the decision-making/oversight body. However, the PPG analyses indicate that additional interests should be represented, particularly those of the regional administration and the private sector. Environmental NGOs may also wish to be included to safeguard biodiversity values.

140. In cases where MRPAs are very small and involve only a single commune, there is little interest in taking the OPCI approach. In such cases, the commune or individual communities may take upon this role.

141. It is still unclear how long it will take for promoter/mandated NGOs should be involved in MRPA governance and management. While phased withdrawal is generally preferred by NGOs, there may be cases where they remain to play a reduced role such as endangered species management.

142. Ideally, MRPA governance and management should be modeled on standard business practices. Thus, governance/management structures should comprise the equivalent of an executive body responsible for management implementation, a board of directors responsible for approving management strategy proposals as well as ensuring the MRPA adheres to an agreed vision, and thirdly, a general assembly representing all stakeholder interests. However these may eventually be articulated, the MRPA will need to develop sustainable financing mechanisms to cover their operational costs. This is addressed under barrier 3.

Capacity and motivation

143. A considerable effort has been made to develop management tools that address the needs of MRPAs. These include planning tools for technical management plans, monitoring and management effectiveness evaluation, drawing upon CBD and IUCN/WCPA guidelines. These tools have engendered considerable interest and generated positive results when tested in the field, and are now widely in practice. However, while capacity to apply these tools has increased sharply (they are designed to be simple to use by a wide range of stakeholders), capacity and motivation to organize efficient management structures and to implement MRPA plans is still seriously weak. Similarly, capacity for conflict resolution, an important aspect in MRPA start-up, is also very low.

144. One of the biggest barrier is the almost total lack of experience among regional and local stakeholders regarding MRPA (or indeed any PA) governance and management. The rapid expansion of the national PA system, largely through the creation of MRPAs has led to more than 3 million hectares under legal protection together with an increase of literally thousands of new stakeholders. It is therefore not surprising that capacity remains weak at the present time.

145. An additional barrier to local stakeholder capacity strengthening revolves around the traditional livelihoods of local communities and their access to education. As we have seen, rural communities are largely preoccupied by the day-to-day issues involved in subsistence farming or livestock rearing, and it is a challenge to promote a longer-term perspective that embraces biodiversity conservation. Education and literacy correlate positively with wealth and economic security, and it is therefore no surprise that most rural people have not invested more than a minimum in their own education. This situation is not helped by the tendency to concentrate secondary education schools in larger towns that may be a considerable distance from many rural communities.

146. The decentralization of decision-making authority within the ministries from the capital to the regions is a welcome move. However, it does present some potential capacity barriers. First, most of the MRPA experience and capacity within the MEF are concentrated in the various directorates within the capital, notably in SAPM. Individual DREFs in the regions are mandated

to promote and coordinate all of the MEF's different policies, and in practice PAs are often lowest on the list. The underlying reasons are quite understandable as DREFs have been exposed to a training regime that focuses on traditional commercial forestry and not on community-based sustainable management or PAs. A similar phenomenon is also reflected in other ministries such as those responsible for mining, oil and land use management planning, where training and experience has focused on economic development where PAs have little or no perceived value.

147. The country's 22 regional administrations largely have limited experience either in governance in general or in biodiversity management in particular. While it is encouraging to see that successive central governments have placed considerable emphasis on environmental management and biodiversity protection, experience indicates that overall economic, land-use and environmental planning capacity is growing at a pace that cannot meet the current challenges of SAPM, especially with respect to MRPAs. In general, we can observe the same barriers at the commune level. Both the regions and communes are obliged to establish and implement sustainable development plans for their respective geographical areas. These plans must have a clear environmental component that protects important biodiversity areas and reduces or prevents loss of essential natural resources. However, overall capacity to plan, especially with respect to land use management integrating biodiversity concerns, is clearly constrained by current capacity limitations. This is perhaps most clearly demonstrated by: (a) the small number of PRDs that have been finalized, and (b) the quality of environmental plans within many of the PRDs and most of the CRDs. It is particular interest to recall the apparent disconnection between the real needs of the communities and commune-level development plans noted earlier. Thus, planning experts and advisors have tended to convince communes that their main priorities are new or restored infrastructures such as new schools, clinics, irrigation systems and even administrative offices. In contrast, poverty indices strongly suggest that local communities are in dire need of support to develop improved economic activities aimed at breaking the persistent poverty/subsistence cycle.

148. OPCIs exist somewhere between regions and their constituent communes. It should be recalled that OPCIs were legally mandated to recommend development initiatives of common interest to several or all of their member communes. Their ability to execute their mandate in real terms faces two barriers. One barrier concerns governance, coordination and financing, but this will be addressed below. The second concerns capacity within the communes to program development priorities (including the MRPA) across commune boundaries. As OPCIs should play a major role in defending MRPA interests, it will be important to focus on strengthening their capacity.

149. Madagascar National Parks is entirely focused on its own network of Category I, II and IV parks and reserves. The MEF has therefore been obliged to create SAPM in order to fill the void regarding MRPAs. SAPM comprises a small, highly-motivated team responsible for coordinating policy legislation, strategy development and new PA establishment. The small size of the team and responsibility for such a broad mandate are obvious causes of limited SAPM internal capacity. A second factor is the overall lack of team experience, especially with respect to promoting and coordinating the creation of viable MRPAs. SAPM have regularly sought

support from CBD, IUCN and Madagascar-based NGOs in order to build internal capacity as rapidly as possible.

150. Most well-established oil, gas and mining corporations have developed responsible environmental and social policies and strategies. These are seen as prerequisites for a social and environmental license to do business and help to attract investors. Such companies usually have full-time, well-trained and experienced staff overseeing compliance to these policy commitments. Many companies of this kind have demonstrated a degree of sensitivity to biodiversity that goes beyond that required by Malagasy law. The same companies have generally ensured that they consult with environmental groups before they become operational in ecologically sensitive areas. Unfortunately, this is not the case for many mining and oil companies that are emerging in some Asian countries (but by no means restricted to them) where national legislation and limited corporate history combine to create a company mindset that excludes or minimizes sensitivity regarding the environment and societal concerns. As mining, oil and gas are undergoing rapid expansion in Madagascar, involving many investors that lack responsible corporate policies, we are clearly faced with an urgent need to build understanding of these concerns as well as capacity to address them.

151. Finally, it should be noted that the capacity challenges posed by MRPAs are new to their supporting NGOs as well. MRPA champions that they undoubtedly are, few NGOs have taken time to reflect on how to build their own internal capacity for these challenging new approaches in the great rush to create MRPAs in the aftermath of the Durban declaration. If this situation does not improve rapidly, many MRPAs will be little more than paper parks. Fortunately, many NGOs have become acutely aware of their capacity limitations and are seeking solutions. The present project is perceived to be a major opportunity to help bring this about.

152. In practice, environmental NGOs will have to continue to take the lead in building capacity, especially at regional and site levels. A common barrier to ensuring this role has been the difficulty in motivating well-trained personnel to be based for long periods in the field. Most would prefer to be based in Antananarivo or other large towns where social services are concentrated. NGOs involved in MRPA development must be prepared and able to offer salary and benefits package that makes it attractive to competent individuals to be based in the field.

153. The term ‘motivation’ has only recently crept into the jargon of the environmental community in Madagascar and, at present, few institutions understand its implications. It is, however, critically important to emphasize the role of motivation in MRPA development and sustainable resource management. The present project recognizes the importance of motivation as a driver for successful MRPA establishment. For example, local community members directly benefitting economically from MRPA projects will be motivated to improve their livelihoods and, in parallel, should become progressively more aware of the advantages of the protected status. Similarly, regional and commune decision-makers should be motivated by tangible development in their respective territories emanating from leverage exerted by the MRPA. Finally, it is clear that SAPM and its national SAPM commissions are already highly motivated. However, demonstrated success at the site level is a strong motivation with respect to meeting ministry and even higher-level government demands for a functional and effective SAPM. Although there are exceptions, most MRPAs have generated only weak motivation at

best. As it is such a potentially powerful driver in favor of MRPAs, motivation will be addressed more fully in discussions on the third barrier below.

154. To conclude, addressing capacity weakness among a wide range of stakeholders must be a major priority for the present project. The most urgent solutions involve actors directly involved in MRPAs: these are local communities and their internal interests groups, the OPCIs, the communes, and the MRPA executive management body together with its oversight and advisory organs. Each of these actors is central to MRPA sustainability as they are either permanently presents (communities and executive body) or elected by local people (communes and OPCIs). These actors should provide a degree of resilience during times of political instability. National and regional governments may change during such events, but communes and communities are generally stable. Capacity strengthening will also be important with respect to regional administrations, NGOs promoting MRPAs, the private sector including extractive industry companies, and ministry personnel in the capital.

<u>MRPA integration into broader political and development landscapes</u>

155. It is sufficient to recall here that each MRPA must be considered as an individual land use planning initiative in its own right with a dedicated governance/management system. This has been discussed at length in the governance discussion above.

156. However, we have noted earlier that MRPAs would significantly benefit from being integrated into their respective regional development and land use management plans. This would confer a significant degree of political protection, especially in the face of competition/threats from such activities as mining, oil or agribusiness. MRPA promoters are free to recommend such actions to the regions.

157. There are several known and potential barriers to MRPA integration within regional plans. To begin with, national and regional land use planning attempts have consistently failed for several reasons, most notably due to the lack of coordination and cooperation within and between ministries. However, the strong push for government decentralization together with the clarity and coherence of the most recent regional planning analyses/proposals indicate that future efforts may bear fruit.

158. Perhaps the second most significant barrier is the relative importance attributed by the regions to MRPAs relative to other land use options. For example, if oil or gas is discovered, the region may prefer its development rather than having an MRPA.

159. The two barriers may be overcome by a combination of demonstratively effective land use management planning *within* the MRPA and well-formulated lobbying at the regional level. Internal land use management planning in MRPAs is indeed a priority strategy within the present project, and will be accompanied by lobbying for broader MRPA integration.

Barrier 3. MRPAs have so far been unable to attract sufficient donor interest for initial investments, and have rarely been able to develop economic opportunities to generate revenues for enhanced local development and MRPA management needs.

160. Traditionally, the bulk of Malagasy PA funding has come from donors and NGOS. Funds tend to be allocated unevenly between PAs, with Madagascar National Parks still preferred by some of the larger biodiversity donors. Donors and NGOs have consistently aimed to progressively reduce their funding to individual PAs in the reasonable anticipation that, once they are fully functional, they should be able to generate a significant proportion of their own revenue needs through ecotourism and other economic activities. Within Madagascar National Parks, the national network has been able to meet less than 10% of operational costs, even after 15 years of existence and a steady rise in visitor numbers. The lesson would appear to be that heavy reliance on visitor fees is not a solution to sustainability, at least as currently practiced within national parks.

161. There are several lessons to be learned from Madagascar National Parks. Firstly, donor support to biodiversity in Madagascar is not unconditional. It is therefore less reliable as a long-term strategy for the long-term financial sustainability of PA management.

162. The recently created Madagascar Foundation for Protected Areas and Biodiversity (Fondation pour les Aires Protégées et la Biodiversité de Madagascar, FAPBM) was intended to fulfill an increasing important funds coordination role for all Malagasy PAs. In the long-term, the Foundation is expected to become the principal funding source for PAs but the current rate of capital acquisition indicates that this role will not be fulfilled for several years. The current target is a capital base of US$ 50 million, and interest generated from this investment would only cover a relatively small investment of Malagasy PA needs. Regarding MRPAs, a current barrier is a persistent preference for some of the Foundation's largest donors to fund Madagascar National Parks PAs on the reasonable logic that they wish to protect their prior long-term investments. MRPAs have not been excluded from funding, but the proportion allocated to date is very small. In an ideal world, the Foundation should advocate for a more equitable distribution among different PA categories. Perhaps this will occur in the future when its board of directors gains more confidence and MRPAs begin to demonstrate more clearly their importance to biodiversity conservation and management effectiveness. Greater funding equity would also necessitate a massive increase in the Foundation and/or funds specially earmarked for MRPAs.

163. It is widely considered that MRPAs should be less dependent on long-term donor support than other PAs. By definition, these sites should be able to generate revenues from their own natural resources, albeit with the bulk going to local communities. There is also a willingness among several MRPA promoters to engage with business, thus opening a diverse array of financial opportunities. Potential options include certified organic/fair trade products such as spices and essential oils, ecotourism concession, and mining and petroleum corporate social responsibility programs, but so far only a few MRPA promoters have explored options and only to a limited extent (but see engagement letters in Section IV – Part I).

164. Few PAs have developed business plans even though virtually all sites have reasonably credible technical land use and operational plans. Most donors require business plans as a precondition to funding. The existence of good-quality adaptable business plans must be an imperative for all MRPAs.

165. Conditions for trading high value products such as spice and essential oils appear to be very favorable. The in-country and international demand is steadily rising, licensed traders abound, and the quality in Madagascar is highly appreciated. Certified organic/fair trade products are particularly lucrative due to their higher prices. The current barriers are as follows. Product options are relatively limited in the Western dry forest ecoregion. NGOs are largely unfamiliar with the business world and lack experience or knowledge in creating opportunities. NGOs may be reluctant to venture into new business opportunities and prefer to maintain focus on improving subsistence production. Buyers generally require minimum volumes and consistent quality. The start-up years are also problematic as producers must be gain confidence in their products and may be dismayed if they cannot sell owing to failure to meet production quotas. Experience in Fanamby indicates that product quality can be maintained but requires constant oversight. Finally, there is only one trader[24] that specifically markets MRPA products and this is not yet a fully functional commercial operation.

166. Even leaving aside the value of gate fees, ecotourism is unquestionably a significant potential revenue earner and experience clearly demonstrates that is possible to establish private sector-community-NGO partnerships for professional services. Potential barriers include: difficulties in marketing particular sites that are still poorly known; successfully competing with other PAs on existing circuits and packages offered by tour operators; and periodic political unrest that causes massive drops in visitor numbers.

167. The potential for offsets linked to mining and petroleum is evident from Rio Tinto's QMM project. QMM's willingness to match funding from a major donor and its NGO partners for PA creation is also a positive sign, as it Total's willingness to invest up to € 5 million in local community development. Several reputable companies have committed to establishing CSR programs and biodiversity schemes worldwide. The principal barriers in Madagascar are likely to the following: to varying degrees, NGO fear that proven economic mineral and oil reserves could cause government reversal on PA commitments in favor of industry, and many remain hesitant to engage with corporations for ethical reasons; most projects are still in the exploration/confirmation stage and companies may reasonably decline social and biodiversity commitments until production decisions are made; signs are positive regarding potential mineral and oil reserves, but these may prove unfounded and the sector declines; the extractive industry sector is increasingly attracting companies with little or no history/interest in doing any more than their minimal contractual requirements with respect to compensation and environmental protection. Political instability may act in favor of such companies as responsible corporations may consider the risks to be too high and withdraw.

168. Carbon projects offer potentially valuable sources of long-term financing in favor of MRPAs and their local communities through traditional CDM or REDD mechanisms. However, several significant barriers exist and have not been eased by recent COP15 decisions. The vast majority of natural forest is state property and questions remain about how revenues are allocated between the state and local communities. Delays in negotiating global and national conditions and contracts may lead to community unwillingness to invest in long-term agreements that are still unproven. Slow forest regeneration coupled with low carbon density is also typical in the

[24] This is *Sahanala*, created by Fanamby.

drier regions in Madagascar where biodiversity priorities are particularly high. On the positive side, voluntary carbon projects may be an interim solution and the can generate upfront payments. They may involve both forest maintenance and reforestation to create new carbon sinks.

169. None of the above barriers are insurmountable. The solution appears to lie in diversifying options and adapting them to local conditions. Diversification would help to protect MRPAs from fluctuating market demands or other unforeseen factors and, if wisely planned, could form the mainstay of revenue streaming for both the MRPA recurrent costs and its neighboring communities.

INTRODUCTION TO PROJECT SITE INTERVENTIONS

170. The PIF originally identified seven target MRPAs that have either temporary protection or have been identified as priority areas in national biodiversity analyses. Section was based on four criteria: (a) biodiversity representation (habitats and species); (b) social receptivity to conservation goals; (c) prospects for establishing partnerships with the private sector; and (d) acceptable governance threshold in local government which assures institutional performance. Based on the analysis and consultations carried out during the PPG phase, it was possible to confirm selection for five of these sites, with remaining two dropped on the basis of criteria (a) and (d). Two additional sites (Ampasindava and Daraina) are now included as they are deemed to meet all criteria and offer exceptional opportunities with respect to (a) and (c). Table 5 summarizes the qualities of each site together with their current status and potential partnerships[25]. Note that MEF is a full partner at all sites. More detailed site profiles are presented in Annex 2.

Note: Several CSO operating in Madagascar are currently active in different MRPA sites throughout the country and have contributed substantially to improving the management of these PAs (there are over 40 MRPAs the whole country). Other sites are however at very incipient stage of operationalisation, including some that have been selected to benefit from this project. A more thorough survey on the state of project sites from a point of view of operationalisation and standing partnerships between MEF and different CSOs with respect to site promotion will be carried out by UCPE prior to any relevant procurement decision with respect to project funds.

[25] These are already indicated for four of the five MRPAs in the Inter-Ministerial Order 18633 / 2008 / MEFT / MEM du 17 octobre 2008

Table 5. Summary presentations of targeted MRPAs.

MRPA NAME, AREA, STATUS/ CATEGORY AND ECOREGION	KEY CHARACTERISTICS
[1] Menabe-Antimena Proposed area: 219,304 ha Status/ Category: Temporary and full (a) protection (V) Part of Menabe forests, mangroves and Bedo Lake (125,320 ha), Baobab's Alley (320 ha) already in temporary status. Andranomena Special Reserve (6,420 ha) already in definitive status. Ecoregion: Western dry forest, Mangroves	Western seasonally dry forest dominated by 3 Red-listed endemic baobabs. This site is considered to be one of the most important for conserving rare, locally endemic threatened species. A range of species only occur here, including *Pyxis planicauda* (EN), *Hypogeomys antimena* (CR) and *Microcebus berthae* (EN). Mangroves are extensive and are beginning to be under threatened in some areas. The mangroves are important for two rare endemic aquatic birds: *Halaeetus vociferoides* (CR) and *Anas bernieri* (EN). Traditional activities are based on subsistence rice (where irrigation is available), maize, peanut production and extensive pastoralism. Offshore and onshore may be present and rare earth elements are indicated in the MRPA. The MRPA is a popular tourism venue because of the ease of seeing wildlife including 'difficult' species such as the Fossa and because of its Baobab Alley known worldwide. Fanamby was earlier mandated by the MEF to create and manage this MRPA. The Region also asked the NGO to lead in establishing a new Category III PA within the larger MRPA. Asity identified this MRPA and has since been the primary on-site promoter. It has acted to have the MRPA temporally protected and to develop initial management structures. Project partners wish to have Fanamby continue this role, working eventually towards a take-over by the DREF. The roles of the partners are: CNFEREF – training; DWCT – flagship species management, ecological monitoring; community participation; DPZ ecological research: MNP – Andranomena Special Reserve; CI – finance; WWF – Community-based mangrove management.
[2] Mahavavy-Kinkony Proposed area: 278,642 ha Status/ Category: Temporary protection (V)	This area is one of the most important for its aquatic birds and vast numbers are present year round. The estuaries attract vast numbers of waders, including flamingos. Notable endemic species include *Halaeetus vociferoides* (CR), *Anas bernieri* (EN) and *Amaurornis oilivieri* (EN). Lake Kinkony harbors endemic fish species and the dry forests support healthy populations of lemurs even though they are somewhat fragmented. Industrial production occurs within the MRPA but traditional economic activities include extensive pastoralism, rice and fishing. Iron ore deposits are known south of the MRPA and are likely to be mined. Oil prospects seem to be promising. The MRPA has some ecotourism potential because of the high diversity and numbers of aquatic birds. The most

MRPA NAME, AREA, STATUS/ CATEGORY AND ECOREGION	KEY CHARACTERISTICS
Ecoregion: Western dry forest, lakes, mangroves, estuaries	likely tourism would be likely be specialized for bird tours. However, it is far from existing circuits. Asity identified this MRPA and has since been the primary on-site promoter. It has acted to have the MRPA temporally protected and to develop initial management structures. Fanamby has been supporting Asity with respect to management and governance. FAPBM have provided financial support.
[3] Daraina Loky-Manambato Proposed area: 248,409 ha of which 70,619 ha in temporary status Status/ Category: Temporary protection (V) Ecoregion: Transitional between Western and Eastern	With a surface area of 240,000 ha, the Protected Area of Loky-Manambato (Daraina) brings a diversity of in ecosystems and unique fauna and flora including the emblematic golden crowned lemur (*Propithecus tattersalli* EN). 127 species of birds, and 111 species of Herps were inventoried. 1,517 species of plants, of which 4 new gender and 50 new species. Wetlands and coastal habitats host Bernier's Teal (*Anas bernieri EN*), Madagascar Heron (*Ardea humbloti* CR), Madagascar sacred Ibis (*Threskiornis bernieri* EN) and a colony of several Terns species (*Sterna fuscata*). The fragmented landscape reflects the ancient practice of slash and burn and the persistence of cattle farming. Despite important irrigated rice-fields, herding is responsible of bushfires. The traditional gold mining impacts locally and sporadically through alluvial gold deposits in the forests. The seasonal inaccessibility of the site limits the management measures by relevant departments, but local radio brings an efficient tool. Fanamby has long been the only NGO promoter at this site. It enjoys excellent relations with the SAVA DREF, the municipalities official platform (OPCI LMM) and numerous local community cooperatives and associations.
[4] Ampasindava Peninsula & Galoka chain Proposed area: 187,305 ha: 150,675 ha for Ampasindava 36,630 ha for Galoka Status/ Category: Unprotected (V) Part of Ampasindava (89,950 ha) and Galoka chain (8,150 ha) already in temporary status. Ecoregion: Eastern humid forests (Sambirano transitional), mangroves	These two sites presents similar natural and human context and conservation issues and opportunities; thus, they are considered as one site. Forests are highly transitional expanding from the low-altitude sandstone sclerophyllous forests (5 endemic *Sarcolaenaceae* family species), typical humid/subhumid Sambirano forests to sub-montain humid forests on the summits. The biodiversity of this area, the heart of the Sambirano floristic domain, is relatively poorly known but recent inventories and surveys indicate a highly distinct flora with numerous local endemics (*Mimusops sambiranensis* (CR), micro-endemic succulent species on rocky outcrops) and many new to science. The Sambirano has numerous locally endemic faunal species including lemurs (*Microcebus sambiranensis* (EN), *Mirza zaza* (DD) and *Avahi unicolor* (DD)), reptiles (*Phelsuma vanheygeni*) and birds (*Haliaetus vociferoides* (CR), *Threskiornis bernieri* (EN), *Ardea humbloti* (EN)). The people living in the area mostly belong to the Sakalava ethnic group, with numerous Tsimihety migrants, who are primarily responsible for increasing pressure being placed on local forests as a result of slash and burn agriculture. Some significant massifs are sacred for the local Sakalava and thus are traditionnaly protected. The mangroves are important for shrimp and crab production. Traditional economic activities are largely based on shifting rice cultivation and much of the forest has been cleared. This area has high potential for organic/fair trade vanilla, cocoa, coffee and essential oil production. Offshore and onshore oil is taking place and significant reserves of rare earth elements are reported.

MRPA NAME, AREA, STATUS/ CATEGORY AND ECOREGION	KEY CHARACTERISTICS
	At present, tourism is restricted to coastal resorts but these could be extended to mangrove and forest circuits. Both Fanamby and MBG have long targeted this site as a future MRPA, and MBG has conducted extensive forest inventories. WWF is particularly interested in developing climate change adaptation strategies at this site as it influences the Diana marine area, a target for this NGO.
[5] Ambohimirahavavy-Marivorahona (b) Proposed area: 593,491 ha Status/ Category: Unprotected (VI) Part of Ambihimirahavavy corridor (230,187 ha) already in temporary status. Ecoregion: Eastern humid forests, northern sub-region	Only three massifs reach above 2000 m, one in the north (Tsaratanana), one in the centre (Ankaratra), and one in the south (Andringitra), each of which is a source area for a network of rivers that are potential "retreat-dispersion" watersheds. The Northern Highlands comprise the most extensive and complex of the three and this scenario predicts several centers of endemism in this region. Amongst the most threatened biodiversity specific to this area: *Propithecus candidus* (CR), *Plethodontohyla guentherpeters* (EN), *Platypelis mavomavo* (EN), *Platypelis tetra* (EN), *Brachytarsomys villosa* (EN), *Sarothrura watersi* (EN). The area is mostly uninhabited, but some anthropogenic pressures occur on the Eastern and Western lower altitude flanks (slash-and-burn, logging). Promoter: WWF was mandated by MEF to re-establish management systems for two neighbouring PAs. These are now managed by MNP but WWF has continued in the area with projects on lemur conservation, community-based forest management and REDD. This is one of the most difficult future MRPAs to manage and requires the overall size and influence of WWF to mobilize partners, and the organization's long history in the area is a key asset. Site partners: The roles/interests of site partners are: Madagascar National Parks – extending the Tsaratanana Strict Nature Reserve further into Northern Highlands; Fanamby and CI -

Notes:
(a) Most of Menabe-Antimena has a temporary protection status, awaiting transfer to full protection after the current political crisis. The Andranomena Special Reserve is a Category IV site managed by Madagascar National Parks but has now been integrated into the MRPA management regime.
(b) These sites are grouped together as parts of a single PA complex that cover the extremely rich biodiversity of the Northern Highlands and their foothills, an area increasingly seen to be quite distinct from other Eastern Ecoregion forests. The complex also includes a Category I site (Tsaratanana), one Category II site (Marojejy) and two Category IV sites (Manongarivo, Anjanaharibe-Sud).

STAKEHOLDER ANALYSIS

171. The MEF is responsible for all of SAPM and coordination is carried out by DCBSAP. One significant challenge for the project will be to strengthen capacity and motivation for MRPAs among Malagasy NGOs as most of these PAs are supported by international bodies. Most of the latter are either fully or largely staffed by Malagasy but we believe there is a need to expand the strength and participation of truly indigenous institutions. The Voahary Gasy national NGO platform includes only three fully national organizations that are promoting MRPAs, Fanamby, Asity and Voakajy Madagasikara, although others are involved in similar conservation/ rural development initiatives.

172. Table 6 summarizes the major categories of stakeholders and their involvement in the project.

Table 6. Key Stakeholders and roles and responsibilities

STAKEHOLDER	ROLES AND RESPONSIBILITIES
MEF	MEF has overall responsibility for the environment and forests. The MEF has a main directorate called DPPSE (Directorate for Programs Planning and M&E). It also has two general Directorates, one in charge of the environment, the other in charge of the forest. The DCBSAP exists within the DG of forestry. MEF is responsible for delivery of protection status for all PAs. In the regions, the DREFs represent all directions within the ministry, including SAPM. DREFs will be offered training in MRPA management and will be updated on MRPA progress. In Menabe, the MEF's semi-autonomous CFPF is a direct project partner. Its main interests at present are ecotourism, research and training.
DCBSAP	DCBSAP is responsible for coordinating SAPM (and its commissions) although Madagascar National Parks has its own mandate to manage all Category I, II and IV PAs within its own national network. Most of the Category V and VI MRPAs under SAPM are promoted and supported by environmental NGOs with guidance from SAPM, the primary agency responsible for project delivery. SAPM is responsible for elaborating proposing policy to MEF, PA legislation and management guidelines, and for coordination of all CBD activities. Policy reform is based significantly on information emanating from site practitioners. SAPM approves all MRPA management and business plans.
ONE	ONE is part of the MEF but has a considerable degree of autonomy. ONE is responsible for applying MECIE and reviews and approves project EIAs. This institution also ensures that new PAs are in compliance with obligations to develop population safeguard plans. Should they become legally binding, ONE will be a key player coordinating SEAs. ONE regularly collaborates with environmental NGOs to evaluate mining and oil EIAs and activities on the ground.
Madagascar National Parks	This institution is collaborating with the project in the Menabe Region. The project will provide support to Andranomena Special Reserve and help to build ecotourism expertise and products. The Northern Highlands group of MRPAs is adjacent or close to existing parks and reserves managed by this institution. Their creation and effective management will provide added protection of this important biodiversity region through mutual buffering and collaboration. It is hoped that Madagascar

STAKEHOLDER	ROLES AND RESPONSIBILITIES
	National Parks will also benefit for innovative revenue generating initiatives.
MEM	MEM periodically collaborates with MEF and its environmental NGO partners to resolve potential or real conflicts between PAs, mining and oil. There are also infrequent but regular open exchange meetings. MEM appreciates being well informed about conservation initiatives.
FAPBM	The Foundation is mandated to provide significant financial support to all Malagasy PAs.
UCPE	UCPE is an association with as a mandate to coordinate environmental projects. UCPE has been identified to implement the PEIII project financed by the World Bank. UCPE will function as the Executive Implementing Partner for this project
Donors	The primary stakeholders are UNDP and GEF. The present project is a logical follow-on of earlier projects funded by these agencies and thus offers further progress towards MRPA sustainability with respect to earlier investments. USAID has invested significantly in MRPAs and information obtained in the present project will provide guidance when it decides to renew their investments. KfW supports Madagascar National Parks in Menabe. Several other donors are increasingly interested in making linkages between MRPAs, poverty reduction and rural development, such as AFD and FFEM. Exchanges will be of mutual interest.
Environmental NGOs involved in PA management	The project strategy implies the engagement of CSOs/NGOs in the operationalisation and management of sites on the ground. Several environmental NGOs have been active in Madagascar in the field of PA management. These include Fanamby, Asity, CI, DWCT, MBG, WCS and WWF. Some of these NGOs have previous and specific experience in the co-management of MRPAs, others less so, and some have already been involved in the management of some of the site, upon government's request. The mentioned NGOs have expressed an interest in working in MRPAs and in the project as a vehicle to doing so.
Other NGO	The project will exchange information with a range of environmental NGOs, especially those promoting MRPAs and/or local community development in key biodiversity areas. The forum comprising Malagasy NGOs is a good platform for this collaboration.
Regions	Regional decision-makers are a key partner. The project will support land use management planning, MRPA development and tourism development.
Communes	Communes associated with MRPAs will be one of the most important target groups. The project will invest heavily in capacity building with respect to land use management planning, economic development and MRPA management. OPCIs will benefit from the same support.
Local communities, associations and economic interest groups	Local communities together with their associations and economic interest groups are a key partner and their effectiveness is critical to project success. The main aims are to increase their organizational and management skills while at the same time supporting their efforts to develop and manage more lucrative economic options. These actions should have the added value that community members will be strong advocates for their respective MRPAs and actively participate in management.
Private sector	The project will foster local community-private sector partnerships of mutual interest on e.g. ecotourism.
Extractive industries	While mining and oil development are often perceived negatively by environmental groups, we believe that there are opportunities for win-win situations. Cooperation with environmental groups presents an opportunity to obtain a social and environmental license, as well as clear opportunities for CSR and offset initiatives.

STAKEHOLDER	ROLES AND RESPONSIBILITIES
	The MRPA in turn may benefit from investments into site management and support to local development initiatives. It is also possible that large-scale mining or oil projects may contribute to an MRPA sustainability fund through the FAPBM.
Certified/labeled product operators	Linking organic/fair trade markets to MRPAs offers an attractive opportunity to marketers as it not only is seen to support Madagascar's wildlife in general but can be further tagged with a high biodiversity PA or even species.
Research groups and higher education institutions	Vahatra and MBG will be among those invited to fill knowledge gaps with regard to biodiversity. The project will explore possibilities to strengthen and continue the professional masters training with the University of Antsiranana for PA practitioners.

BASELINE ANALYSIS

173. Knowledge gaps. The biodiversity of several sites, notably in the Northern Highlands complex is not adequately inventoried. However, more general national- and ecoregion-level biodiversity analyses have allowed us to estimate the relative importance of these sites. On the social and economic front, the same sites have faced similar data gaps but we were able to obtain general impressions from rapid visits, government statistics and satellite imagery. A general overview of oil gas and mining has been possible, together with an analysis of trends and major MRPA/extractive industries issues. However, development in these industries is likely to be somewhat fluid, necessitating regular updating. All of the above gaps must be addressed when the project commences in order to have good baseline data for planning and implementation.

174. Protected area coverage and design. The NEAP provided significant time and resources to strengthen the national PA system. Today, Madagascar benefits from an extensive network that should ensure that at least the most important sites are represented. Newer PAs are designed to be robust in the face of anthropogenic pressures, natural catastrophes and accelerating climate change.

175. Many of the newer PAs still await definitive legal protection and some critically important sites have not even obtained the intermediary protection status. The present project will address these issues for seven new PAs. SAPM maintains a PA register that is regularly updated.

176. Since the launch of the Durban Vision and the creation of SAPM, there has wide consensus that Category V and VI MRPAs are well-adapted to Madagascar's particular social and biodiversity protection needs. However, the newness of this concept and the need to integrate a host of multi-stakeholder interests presents some formidable challenges. While most MRPAs have succeeded in establishing at least minimal conservation success, few have been able to catalyze effective *managed resource* strategies in favor of either sustainable economic development or biodiversity protection, let alone both.

177. In part, this is due to a lack of experience and knowledge among environmental NGOs that promote new MRPAs. Traditionally, their focus has largely centered on biodiversity conservation with little serious attempts to develop innovative sustainable and profitable economic opportunities. An understanding of the need to improve capacity and performance in this respect is now gaining momentum.

178. MRPAs, by definition, must be able to integrate the interests of multiple stakeholder interests. Some of these may be inherently unpalatable to conservation NGOs, such as sustainable timber extraction, mining, oil and agribusiness. Be that as it may, many such ventures could bring long-term benefits to the MRPA and its surrounding communities and therefore merit serious consideration when harmonious co-existence is a possibility.

179. From the analysis of MRPA management and land use plans (PAGs) during the PPG, it is apparent that several environmental NGOs (albeit a decreasing number) continue to view many traditional community-based economic activities as direct threats to conservation goals. Many of these activities have to be integrated into the MRPA strategies as they are critical with respect to local livelihoods and may even offer a platform for improving economic practices.

180. MRPA governance and management. The rather complex nature of MRPAs and their varied stakeholder interests require innovative governance and management structures and strategies. These are inherently more complex than those of the stricter Category I, II and IV parks and reserves managed by Madagascar National Parks. Several approaches have been adopted in the country's new MRPAs but it is fair to state that none have been consolidated to provide models for other sites. Effective governance and management structures remain an elusive goal for all Malagasy MRPAs, although some emerging models are beginning to show promise.

181. Most of the more promising governance/management models involve some form of role-sharing between communes and their OPCIs, village-level interest groups, and the regional authorities including the DREF. Depending on the MRPA examined. The above entities are roughly comparable to the board of directors or the executive in a commercial business, depending on how they are organized. Our PPG analyses indicate that, at least for larger multi-commune MRPAs, the OPCI is the most promising entity for the equivalent of a board of directors and could play the role of the executive, at least in part. Alternative executive options include paid or unpaid local community members. The third broadly comparative group within a standard business model is the general assembly. This concept is less difficult to apply to MRPAs as it translate into representation of all stakeholder interest groups that may either recommend strategies and actions to the 'board' or respond to the latter's decisions.

182. The above corporate is likely to be an over-simplification in many MRPAs. For example, many environmental NGOs supporting an MRPA may have specific interests in terms of particular habitats or species. Their knowledge and management skills would be very useful when designing, approving or implementing specific management strategies. Similarly, private tourism operators may be invited to develop community-owned and co-managed lodges and circuits and they are thus part of the executive team.

183. As we have noted, the OPCI appears to play a key role in MRPA governance and management. Our PPG analyses indicate their commitment to the MRPA is strongest when the protected site is part of a broader sustainable development/conservation rather than the main focus. Having an MRPA focus for the OPCI has been the strategy of several NGOs and has generally had mixed results.

184. MRPA governance and management capacity. Capacity to establish and govern/manage MRPAs in Madagascar is growing steadily but some important barriers must still be overcome. The most critical targets are the executive and decisional entities with the MRPA management structure and must be a major focus of the project. There is also a need to continue to focus on organizational capacity building among a wide spectrum of target groups, notably community level associations, economic interest groups and communes. The likelihood of project success will be further enhanced by strengthening capacity among regional leaders and the MEF, in particular SAPM and the DREFs. Finally, all of the NGO partners that aspire a role as MRPA promoter must review their own internal capacity to deliver on this project. Such an analysis will be of considerable interest to other NGOs supporting MRPAs and to donors funding PAs in general. In summary, capacity strengthening is on a par with governance/MRPA structures as game-changing project priorities.

185. Target and well-designed capacity strengthening expanded beyond direct MRPA needs/ interests may help to establish a more secure future for MRPAs by building a broader understanding of the role of PAs in Madagascar developmental landscape. The existing professional masters diploma course developed recently by the University of Antsiranana and MBG could be integrate into a broader public administration curriculum. This may attract present-day and future influential decision-makers.

186. MRPAs in the broader political and development landscape. PPG analyses strongly indicate that MRPAs are more likely to succeed in the long-term if they are integrated into national and regional land use management planning. This process would provide a stronger political commitment to MRPAs. To date, only a few regions have prioritized MRPAs or other parks and preserves. MRPAs themselves offer a powerful opportunity to demonstrate the economic, social and environmental values derived from sound land use management planning: they are spatially well-defined and focused on clearly identified local aspirations and biodiversity goals.

187. MRPA sustainability. MRPAs cannot count on GOM funding, at least for the foreseeable future. There is some possibility in the more distant future that financial legislation will be clarified in the more distant future and that green taxes (XX review financial barriers and context sections) will begin to flow, but there is no indication that MRPAs will be beneficiaries.

188. In addition, notwithstanding its good intentions, the Foundation's contribution to MRPAs is also likely to quite limited, in part because of donor ear-marking for Madagascar National Parks sites. The Foundation's interest-generating capital investments are likely to remain modest for some time to come meaning that funding for all types of PAs will be limited.

189. As we have seen, MRPA sustainability is multi-faceted but we focus here on sustainable financing. Funding for the initial investments in MRPA development may prove difficult for many sites and their promoters, although there are signs that interest among Madagascar's traditional donor community is growing. Large-scale donor funding is certainly attractive – even essential – for the initial MRPAs investment phase (infrastructures, capacity strengthening, analyses…) but it would be unwise for sites to become reliant on these incomes once they are operational and shifting to recurrent costs. Indeed, MRPAs would be failing in their mandate if donor dependence persists as they should be aiming for sustainability through their use of natural resources.

190. There are numerous options for sustainable revenue generation including high added value bio-products, ecotourism and agreements with extractive industries. While a few MRPAs have begun to tap these opportunities, we are still just at the tip of the iceberg. These potential avenues must be explored thoroughly, barriers must be identified and removed, and follow-through targeted action and investment mobilized. The key to success will undoubtedly be establishing community-private-NGO partnerships to bring the professionalism and marketing advantages of the private sector to finding mutually beneficial, workable solutions for equitable development.

191. The near total absence of business plans within the MRPA sub-network is a glaring weakness. Donors and private sector partners will be less likely to seriously consider MRPA proposals without a well-founded plan.

192. Extractive industry risks and opportunities. Malagasy PAs have enjoyed robust political support within the GOM when challenged by mining and the oil industries, including MEM. To a considerable extent, industry has shown considerable sensitivity when exploring business options.

193. However, these industries are continually evolving and there are signs that interest among responsible corporations is increasingly being overtaken by companies with less social and environmental sensitivity. This could reverse recent positive trends if action is not taken.

194. There is no legal interdiction on mining or oil extraction in MRPAs. However, it must be hoped that the GOM and individual companies would avoid the core priority conservation zones and any potential off-site risks that may be identified. In addition, a thorough EIA should provide guidance on whether mining or drilling should be allowed.

195. The MECIE may be considered adequate for EIAs. For the most part meet Extractive industry EIAs international standards (but there are some glaring exceptions). However, there are some problems to be resolved. There is limited capacity to interpret the often technically complex reports, and there is considerable room for improving public consultation.

196. SEAs offer a more robust and multi-sectoral means to evaluate the broader impacts and risks emanating from extractive industries. They also offer a means to evaluate the long-term interests of a wide range of economic activities and social values, including MRPAs. Mandatory

application of SEAs has been called for by MEM but we must await the end of the current political crisis.

197. Notwithstanding these risks, extractive industries offer opportunities to MRPAs including, but not limited to: biodiversity offsets, integration of CSR programs into local land use management and capacity-building strategies, and contribution to endowment funds for PAs such as the Foundation. These opportunities should be examined carefully and actions taken as deemed appropriate.

198. Long-term MRPA resilience. The impacts of the current and recent historical crises strongly argue for the need to have resilience built into MRPA design and strategies. The latter would be beneficial with respect to period rupture of donor support for biodiversity that has not been linked to political crises.

199. Our PPG analyses suggest the most effective way of attaining resilience is to garner strong support at the regional and, particularly, local levels. If local communities and regional decision-makers perceive that their MRPA is a solid and reliable contributor to local sustainable development and significantly improving local livelihoods, they are more apt to defend the site against resource from 'resource anarchy' during unstable times.

PART II: Strategy

PROJECT RATIONALE AND POLICY CONFORMITY

Fit with the GEF Focal Area Strategy and Strategic Program

200. The project is consistent with the first Strategic Objective in the GEF Biodiversity Focal Area: Strengthening National Systems of Protected Areas. It fulfills the eligibility criteria under Strategic Program 3: Strengthening Terrestrial Protected Areas. This project will strengthen capacities for the co-management of protected areas by government-private sector-NGO-community partnerships, thus overcoming barriers to PA system expansion. This is expected to improve the effectiveness and cost efficiency of management, ensuring that scarce PA funds are optimally employed in mitigating threats to biodiversity. The project is equally aligned with the UNDAF Outcome #4 "The livelihoods and productivity of rural populations in target zones are improved" and the Outcome of the Country Programme #4.2 "The environment is protected in and around targeted protected areas".

201. Secondly, the project will diversify funding streams to sustain site action, by identifying and developing fiscal mechanisms to support social-fencing activities or to improve the general investment context for environmentally-friendly private sector development and local entrepreneurship in MRPAs and surrounding territories. While not constructed as a national PA finance initiative, the project will nevertheless expand PA finance options in Managed Resource PAs by engineering market based solutions that seek to integrate biodiversity objectives in production activities occurring within or adjacent to PAs. In this regard, the project may be seen

to contribute to Strategic Objective 2: To mainstream biodiversity in production landscapes/ seascapes and sectors, in particular Strategic Program 5, Fostering markets for biodiversity goods and services.

202. The project will build on the successes and lessons from the approach of previous projects in Anjozorobe-Angavo, such as the UNDP/GEF project "Communities conservation and participative for the biodiversity in the corridor of Anjozorobe- MAG/ 03/G31/A/1G/72". The project will also build on experiences of similar nature that have been implemented in Madagascar so far.

203. Key monitoring tools, typical of GEF Biodiversity projects, will be applied. These include the Management Effectiveness Tracking Tool, or METT, which also includes UNDP's PA System Financial Sustainability Scorecard, as well as UNDP's Capacity Development Scorecard (See PRODOC Annex 2).

204. SAPM's suite of mandatory PA management guidelines will also be applied as they have recently been adapted to account for differences in IUCN category. The principal tools will be PA management guidelines adapted from the Miradi framework and management effectiveness guidelines adapted from CBD and IUCN/WCPA guidelines.

Rationale and summary of GEF Alternative

205. **In the baseline scenario**, none of Madagascar's MRPAs have attained full protection and will thus remain more vulnerable to changes in political will regarding development alternatives that arise in their respective regions. These MRPAs will be more or less paper parks until full protection is attained. With the recent significant reduction in donor funding due to the political crisis, the MRPAs may not be sufficiently competitive against longer established PAs managed by Madagascar National Parks when funding increases in the future.

206. Two or three of the MRPAs targeted by the project appear to be eligible for world heritage status and have been proposed to UNESCO Centre. They will remain ineligible until is full legal status is acquired.

207. All of Madagascar's MRPAs are still heavily dependent of donor or NGO support. While a small number have developed innovative revenue streams that cover a proportion of recurrent costs, the majority have so far failed to identify, test and promulgate similar initiatives and continue to focus community development on subsistence activities. This means that MRPAs could fail in their sustainability objectives and in regard to *managing resources* for the good of their biodiversity and local communities.

208. Local capacity and options for sustainable management of biodiversity goods and services are currently weakened by the stresses of subsistence living. Continued subsistence is likely to maintain a heavy dependence on biodiversity that in turn continues to degrade natural habitats and threaten rare and endangered species.

209. **In the GEF alternative scenario**, capacity and financial barriers will be removed, enhancing the effectiveness of MRPAs. Direct consequences will include legally protected MRPAs; increased revenues contributing significantly to sustainability based productive use of biodiversity goods and services, effective governance regimes, and progressive integration of MRPAs into national and regional development planning.

210. The project is estimated to consolidate a total of 1,527,151 ha in five temporary protected MRPAs through transition to full legal protection status. In the past, this process has been relatively time-consuming as MRPA establishment was a new phenomenon. With accrued experience, the project is now proposing to establish full legal protection for a further 1,286,816 ha in five new MRPAs that currently has only temporary protection status and are being supported by CI and WWF (See table in Annex 3 below METT Table 1). These combined initiatives will add 2,813,967 ha to the national register of PAs with full legal protection.

211. A direct benefit of the project will be the addition of a range of priority biodiversity areas to the national PA system. This will include sites of global conservation importance such as the Northern Highlands and the Menabe, and will provide enhanced protection for globally unique habitats and a host of threatened species. This is evidenced by the inclusion of some project MRPAs in the national indicative list for World Heritage Sites. A less obvious direct benefit will be the protection of a range of sites that are judged to be critical for climate change resilience and maintenance of the ecological processes contributing to Madagascar remarkable species diversity and astounding local endemism.

212. The project aims to massively increase capacity with regard to governance and management of biodiversity goods and services. This will include managing MRPAs for the good of their biodiversity and neighboring communities, together the introduction of innovative government-private sector-NGO partnerships aimed at fostering entrepreneurial initiatives that may eventually help to break the perpetual subsistence economy.

213. The philosophy basis of MRPAs is subsidiary and equity. This translates into a scenario where local people take increasing responsibility for their own natural resources in a social environment that takes into consideration the aspirations of different groups within the society.

PROJECT GOAL, OBJECTIVE, OUTCOMES AND OUTPUTS/ACTIVITIES

214. **The project's goal is to contribute to an effective and sustainable national PA system through the addition of MRPAs that ensure efficient representation and conservation of Madagascar's globally exceptional biodiversity while at the same time drive sustained pro-poor economic growth.**

215. **The project objective is to expand the PA system of Madagascar by developing a sub-network of managed resource protected areas in represented ecological landscapes, co-managed by local government and communities and integrated into regional development frameworks**.

216. In order to achieve the above objective, and based on a barrier analysis (see Section I, Part I), which identified: (i) the problem being addressed by the project; (ii) its root causes; and (iii) the barriers that need to overcome to actually address the problem and its root causes, the project's intervention has been organized in three components (also in line with the concept presented at PIF stage), under which three 'outcomes' are expected from the project:

Outcome 1: New PAs created under IUCN Categories V and VI as a foundation for a functional and effective sub-network of Managed Resources Protected Areas based upon a common vision and management principles.

Outcome 2: Institutional capacity among key stakeholder groups provides the enabling framework for decentralized MRPA governance assuring biodiversity conservation and sustainable natural source-based economic growth.

Outcome 3: Financial sustainability of MRPAs is strengthened through innovative entrepreneurial public-private partnerships and mobilization of public funding.

217. Outcome 1 will deal with the consolidation and expansion of Category V and VI MRPAs. These MRPAs are widely perceived as an effective solution to ensure effective biodiversity representation and conservation, while at the same time contributing significantly to poverty reduction and economic growth based on natural resource use. Outcome 2 will address the critical need to rapidly build capacity among new MRPA actors, particularly at local and regional levels. In parallel, it will focus on building effective and durable local governance structures and management systems. Output 3 is designed to promote innovative financial strategies for MRPAs that diversify economic growth options for local stakeholders and help to break the persistent subsistence economy through entrepreneurism. It will also seek to ensure that increased revenue generation will support MRPA activities, eventually removing or reducing dependence on donor support.

Outcome 1: New PAs created under IUCN Categories V and VI as a foundation for a functional and effective sub-network of Managed Resources Protected Areas based upon a common vision and management principles.

218. Under Outcome 1, the project will ensure that temporary legal protection for a total of 1,527,151 ha in Category V MRPAs moves to full protection. In parallel, a further 1,286,816 ha in new Category V and VI MRPAs will be indirectly supported through the MRPA sub-network and MRPA Forum, facilitating the process of attaining full legal protection. Existing SAPM PA tools will be used to develop high-quality management and land use plans (PAGs), and community safeguard plans, prerequisites for full protection status. The sites will also be demarcated by mapping based on participative on-site negotiations. For the new sites, survey and inventories will be conducted in order to determine spatial biodiversity conservation priorities and land use as a basis for zoning and land use planning and zoning. The surveys will also identify potential options for enhanced economic growth. Basic management infrastructures will be developed and monitoring/evaluation systems established.

219. The national PA system management plan was produced in 2001 and therefore requires updating. This is especially important as the current plan predates the revised COAP and its coverage of Category III, V and VI PAs. The project will therefore support sections of the new plan covering MRPAs.

220. As MRPAs constitute a relatively new approach to biodiversity conservation that still requires testing and refinement, we deem it very useful to catalyze the establishment of a national MRPA sub-network forum within SAPM that can help stakeholders. In addition, the COAP definitions of the roles of MRPAs needs to be translated into a clearer vision and management principles that should be applied to all sites.

221. The outputs necessary to achieve this outcome are described below.

Output 1.1 A clear vision and principles for an MRPA sub-network are formalized within the PA register (MRPA objectives and management arrangements).
The planned MRPA sub-network will be created within SAPM and is likely to attract a significant membership. Site promoters are testing a wide array of approaches, and it is not clear whether they all respond adequately to guidelines regarding economic growth sustainability called for in the COAP. There is no doubt that all MRPA promoters wish to integrate these elements into site goals and strategies but many are expressing concern over their effectiveness. For these reasons, the sub-network should define more precisely how MRPAs can combine economic growth with biodiversity conservation so that local stakeholders significantly increase the financial security and well-being while sustainable revenues for the MRPA are secured. Recent history shows that these factors are critical to long-term success and sustainability. The recommendations of the sub-network should help SAPM when the COAP's enabling laws are prepared. Finally, SAPM will communicate its results to IUCN in order to contribute to resolving the difficulty of assigning new PAs in many developing countries to Category V under current definitions. It is likely that SAPM will suggest a new sub-category for V. The project will support the establishment and functioning of a 'MRPA forum' for sharing knowledge, information and experiences with the aim of improving the management of the MRPA sub-network. Themes to be covered by the forum may include MRPA financial sustainability, governance and management capacity, monitoring and enforcement regimes, and improved local economic growth. Activities of the forum will include an annual conference and the maintenance of an electronic supportive platform. These coalescing activities at the level of the MRPA sub-network will enable the project to not just directly support the operationalisation of the project's target sites covering 1,527,151 ha (see Table 5 for a list), but to also facilitate the consolidation of five additional sites within the SAPM estate covering 1,286,816 ha. The incorporation of these indirect sites in the project will assist the GOM to meet its declared commitment to place at least 10% of national territory under protection.

Output 1.2 Baseline inventories facilitate zoning and help define options for sustainable natural resource-economic growth (biodiversity values, social values, economic options

and cultural reference data obtained for sites to be included in land use planning and business plans).
Inventory data will help to confirm spatial biodiversity conservation priorities and provide the basis for zoning. Social and cultural surveys are required for land use planning and identification of potential enhanced economic growth opportunities coherent with local social and cultural values. These data will be invaluable for develop strategies for Outcome 3. They will also provide a baseline for determining effective governance and management arrangements presented under Outcome 2. Applying the above data to the project's targeted sites may guide other MRPAs promoters as there is a strong tendency to focus heavily on biological inventories at the expense of culture, society and potential economic opportunities.

Output 1.3 PAs gazetted (management plan approved, participatory boundary demarcation into core & buffer areas; site registration as permanent PA).
PAGs and community safeguard plans will be completed and/or refined based on cultural, social, economic and biodiversity profiles. Participative defined boundaries, zoning and land use will be finalized. The completed dossiers will be submitted through SAPM for government approval and inclusion in the national PA register.

Output 1.4 An updated national PA system plan ensures that MRPA zoning and objectives are systematically integrated into legalized regional and local land use planning and mapping.
The PAG developed for each site will include a detailed internal land use plan. This is deemed essential for developing well-adapted, enhanced economic growth and sustainability strategies. The project also aims to have MRPA land use planning and associated strategies recognized by local communes, OPCIs and the region as means to gain political support. Going further, it will be important to integrate MRPA conservation, land use and economic growth strategies into the PRD and its accompanying regional land use planning strategies. This will require leadership by the MDAT through its respective DRAT as well as inputs from a range of other ministries. Integrating MRPA strategies and land use into the broader regional approach will help to ensure that MRPA ambitions are respected. Particular risks may include potential mining and oil development, oft favored by politicians and local people alike. The existing national PA system management plan is a decade old and must be revised (as planned under PoWPA). Project partners, in collaboration with the MRPA sub-network described under Outcome 1, will coordinate sections of the revised plan dealing with Category V and VI PAs.

Output 1.5 Basic PA infrastructures and management tools in place: (administrative stations, radio communication network, field materials).
Required PA infrastructures include those directly necessary for conservation activities in the priority conservation zones together with those deemed critical for economic growth strategies described under Outcome 3 (such as local FM radio stations for information sharing). These will be identified and implemented in a participatory manner by governance stakeholders presented under Outcome 2.

Output 1.6 Monitoring systems instituted to track pressures, state and economic growth indicators.
Key monitoring tools, typical of GEF Biodiversity projects, will be applied. These include the Management Effectiveness Tracking Tool, or METT, which also includes UNDP' PA System Financial Sustainability Scorecard, as well as UNDP's Capacity Development Scorecard (see Annex 2). These will be accompanied by UICN/WCPA-based SAPM monitoring tools, and individual MRPAs will provide information to update tracking of PoWPA implementation.

Outcome 2: Institutional capacity among key stakeholder groups provides the enabling framework for decentralized MRPA governance assuring biodiversity conservation and sustainable natural source-based economic growth.

222. Under Outcome 2, the governance and management arrangements will be established and/or refined at all project MRPAs. Capacity needs assessments will be conducted or updated in order to develop capacity building strategies for key stakeholders. Removing barriers to, and establishing effective governance and management are arguably the most challenging aspects of the project.

223. A particular challenge will be in establishing governance systems that are resilient to periodic political instability or policy shifts occurring when government changes democratically. Building resilience is based on three assumptions. First, changes at the national level are likely to lead to corresponding shifts within regional administrations but will not necessarily incur shifts at the local level (communes, OPCIs, villages). For this reason, building competent and well-motivated local governance structures must be a cornerstone of MRPA sustainability. Secondly, political appointees within the regions are likely to change, but the administrations include ministry technicians whom are likely to remain at post. Their continued presence is important for implementing long-term MRPA strategies. Thirdly, ministry heads may be replaced periodically but the technicians working in departments such as SAPM are likely to be retained. If these three assumptions are correct, they provide a clear indication of where governance and capacity targets are most critical to project success.

224. MRPAs are solidly founded upon the concept of collaborative management where the control is largely in the hands of local stakeholders. Collaborative management requires that there is a process of information sharing, consultation, negotiation and the development of specific agreements, formal sharing of authority and responsibility, and transferring of control to local stakeholders.[26] Greater control increases expectations, motivation, commitment and accountability among these stakeholders. Information sharing and consultation help to ensure that MRPAs are inclusive with respect to interests that is not strictly local such as regional tourism operators wishing to develop multi-site circuits. They also help facilitate regional technical support and conformity to national MRPA policy.

[26] A good model is presented in Borrini-Feyerabend 1996, Pimbert & Pretty 1997). In Elke Mannigel (2002): *Participatory solution of land use conflicts in protected area management in the Brazilian Atlantic Forest*. Presented at the Conference on International Agricultural Research for Development, Deutscher Tropentag 2002.

225. Based on this concept, MRPA governance systems are necessarily more complex that those established for PAs under Madagascar National Parks. The latter involve a single permanent professional executive unit exercising full authority, albeit in consultation with local stakeholders and limited partnership with tour operators. In contrast, multiple actors will be involved in MRPA planning and implementation as interests will differ between local communities. What, then, are the most effective MRPA governance models?

226. Corporate governance/management models can provide broad guidance where there should be: (a) a group that is responsible for planning and implementation; (b) a decisional/ oversight body with the role of (≈ board of directors); and (c) a mechanism for full stakeholder participation (≈ shareholders' general assembly). Although overly simplified for an MRPA, it is possible to adapt these models to their governance: indeed, if something similar is not put in place, there is a real risk of anarchy where the fundamental goals of MRPAs are undermined by strong self interest.

227. Stakeholders involved in planning and implementation will include individual communities, regional/local government, local economic interest groups such as farmer and/or fisher associations, investors such as tourism operators and traders, and supporting environmental or development NGOs. OPCIs may play an important role in helping to integrate MRPA interests into wider multi-commune priorities and help in coordinating activities. The OPCI may therefore be part of the decisional/oversight body but it will also be important to include members of the regional administration and business leaders in order to mainstream MRPAs into regional development strategies and land use management planning. These partners will also be critical with regard to removing barriers such as land tenure problems and limited investment capacity.

228. Creating effective working governance structures is a process and requires time. Based on the PPG analyses, it is almost certain that NGO promoters must be part of the executive structure and facilitate the development of local management structures that will progressively assume full responsibility. NGO involvement is particularly important in the early stages as local interests will be primarily economic and not necessarily guarantee protection and surveillance of key biodiversity areas. In principal, the latter are the responsibility of the DREF and his/her team, but they do not have resources to maintain full-time commitment to the MRPA.

229. The success of the MRPA will depend on developing economic development groups within and across communities together with strategic partnerships between communities, communes, the region and the private sector. The region is important in terms of integrating the MRPA into broader development strategies. The private sector will play a critical role in developing viable ventures that create opportunities and markets for local economic interest groups and entrepreneurs. The increased revenues generated by the MRPA and related development project must contribute to management costs, especially those involving biodiversity protection, surveillance and monitoring. Effective cost recovery has already been demonstrated at the Anjozorobe MRPA where formal private sector-community agreements set financial contributions for management, and the model can be adapted to other sites.

230. Whatever governance and management structures evolve to suit local conditions, they must be efficient and cost-effective.

231. It will be important to compare progress and success in the project with respect to alternative approaches adopted by promoters in other MRPAs. Comparisons will facilitate evaluation of the most effective approaches with respect to local conditions, MRPA size differences and management objectives derived for Category V and VI sites.

232. Capacity building and strengthening will be a major component of the project and will be tailored to the needs of different stakeholders. Emphasis will be given to the most critical governance and management structures, notably the OPCI and its constituent communes and communities.

233. The outputs necessary to achieve this outcome are described below.

Output 2.1 Governance structures, rules, roles and responsibilities for site co-management are agreed by all partners, formalized and established.
Governance and management arrangements must be approved by MRPA stakeholders and thus will require significant public consultation. The finalized arrangements must also be approved by stakeholders. A critically important objective is to ensure that governance and management arrangements are cost-effective. The challenge will be create streamlined but effective arrangements that are sustainable. This will be no easy task given the wide array of stakeholder interests and required partnerships. Daraina and Anjozorobe will provide useful models in this respect. Finally, it will be necessary to review progress and success at regular intervals. This will aid in correcting problems and in reorientation as necessary.

Output 2.2 Community land tenure, natural resource management rights and responsibilities are formally recognized and upheld.
Current contradictions in land tenure and PA legislation create difficulties for legalizing local land tenure with the boundaries of MRPAs. Ultimately, these must be corrected by the ministries concerned but is will be essential to find interim solutions at the local level. This short-term solution will require that customary rights are recognized (as supported by current laws) and upheld. This will require agreement at community (fokontany), commune and regional levels. These agreements must be inscribed in MRPA and regional land use planning processes. Land tenure security is vital with respect to economic growth initiatives. In a similar vein, it will useful to secure GELOSE and GCF agreements as a basis for developing sustainable economic activities compatible with conservation activities.

Output 2.3 Capacity strengthening tools developed and operational for key stakeholders.
Capacity development/strengthening will be an on-going process targeting all stakeholders, and must be aligned with governance, management and economic growth objectives. Key targets will include central government administrations involved in developing the MRPA Network. In particular, DCBSAP and the General Director for Land Use Management will be targeted. Regarding MRPA governance, once stakeholder

roles and responsibilities have been identified, capacity development will be ensured through formal training sessions, mentoring and exchange visits where experiences can be compared. Guidelines for governance and management will also be developed and adapted to different target groups. Professional support will be continuously available from project partners. Developing management/land use plans, business plans and effective surveillance/monitoring regimes will be especially critical. With respect to land use management planning and tenure issues, project partners will engage the support of national and international experts. Training will be provided through formal sessions and mentoring. Decision-makers will require special training on the importance of MRPAs and how they link to regional planning. The project will whether it is cost effective to expand an existing diploma course offered by the University of Antsiranana, MBG and Fanamby on NRM related areas. The mentioned course package or other(s) deems appropriate will be tailored to decision-makers and other professionals involved in MRPAs. This course is seen to be a means of developing long-term interest and commitment to MRPAs within the context of national and regional development/land use planning. Cooperatives and special interest groups involved in economic growth initiatives will require regular support and training from project partners, especially those that are professionals in their respective fields. It is likely that project partners will identify internal training needs in order to address the capacity development needs of other stakeholders. Periodic evaluations of capacity strengthening effectiveness will be undertaken to refine and reorientation activities.

Output 2.4 Technical services equipped and mobilized to respond to local initiatives associated with MRPA objectives.

The decentralized ministerial technical services based in the regions should play a critical role in building capacity and enabling MRPA initiatives. Their interest in MRPAs may vary depending on other priorities and it will be important to foster motivation and cooperation. An influential OPCI with technical and business plans will be pivotal in this respect, but it may also be necessary to garner support from the region and the ministries' head offices in the capital.

Output 2.5 Sub-network forum for local MRPA stakeholders (public, civil society, private sector) motivated and operational.

In parallel with the national sub-network (see Output 1.1), there is an interest in establishing local networking arrangements. The national body is principally concerned with policy application, overall oversight/coordination and lesson-sharing between MRPAs. Local stakeholders will undoubtedly have a more practical day-to-day perspective revolving around their respective roles and interests. Their concerns and solutions to barriers will be very useful to members of the national forum. Recent experience has shown that knowledge-sharing meetings involving representatives from MRPAs that share similar agro-ecological, cultural and social conditions are useful, even though they are relatively expensive to organize. Such events will be included to complement other site-based capacity strengthening processes.

Output 2.6 An effective communication system, especially targeting communities and their respective interest groups, facilitates civic participation, informed decision-making and MRPA implementation.

Experience shows that effective communications are vital to MRPA success, especially when the sites are large. One of the most powerful is local FM radio run independently and providing an array of social information/exchange services[27]. Until now, most FM radio projects catalyzed by PAs have relied on continued donor/NGO support and there is a need to ensure that there is a shift towards financially independent and/or profit making ventures. Additional communication strategies will include information system through Q/A session on radio and through local and national newsletters.

Outcome 3: Financial sustainability of MRPAs is strengthened through innovative entrepreneurial public-private partnerships and mobilization of public funding.

234. MRPAs must seek innovative ways to fulfil their dual roles of sustainably financing their conservation objectives and driving local economic growth. It is also imperative that they do not fall into the trap of remaining donor dependent. Also, they must help to shift local economies away from subsistence towards more consistent and lucrative ventures that reduces pressures on the PA while also strengthen community and political interest in the MRPA. Yet, the project does not impose standard economic development models on all project sites. Rather, it favours the strengthening of economic dynamics that are compatible with conservation.

235. The first step in this process the preparation of well-reasoned business plans. Each MRPA must do this and there is also an interest in having the sub-network consider the same in order to finance corollary initiatives such as the creation of a commercial marketing entity dedicated to supporting MRPAs.

236. There exists a broad array of business opportunities that may be developed by MRPAs and their neighboring communities. Some of these are already tapped by a small number of MRPAs but so far this is no more that scratching the surface of potential options. The list of possibilities below includes those that have proved promising, but the project will explore new avenues as they are recognized or emerged. For example, several MRPAs incorporate highly productive mangroves wherein opportunities such as timber production or shellfish production (this has potential for carbon storage) but no economic options have been proposed.

237. It is probably favorable to develop a range of economic growth options at each site as a means to buffer against political or market volatility, as well as to test the added values of different initiatives in varied local conditions. Diversifying options may also useful with respect to time requirements for market development. For example, REDD and REDD++ may be highly promising but may become operational after several years. Community interest and commitment will therefore be difficult to obtain.

238. It is a given that partnerships are critical to sustainability. Public-private partnerships between business, communities and NGO promoters are essential and, once they are running

[27] The project will draw upon the lessons and successes at Loky-Manambato.

effectively, the NGO can progressively withdraw. Business partnerships would appear to be essential with respect to engendering innovative, entrepreneurial attitudes and approaches to PA management. In today's economic climate, such a spirit is more likely to encourage outside investment as opposed to current PA approaches that unwittingly foster maintenance of a subsistence mindset.

239. Finally, it will not be enough to stimulate economic growth among local stakeholder groups. The MRPA must also be able to generate revenues in order to progressively cover its recurrent costs. Part of this income may emanate from 'taxes' or agreed contributions for local economic interest groups (this works in Anjozorobe) but the MRPA management may be wise to explore possibilities of tapping into communal and/or regional taxes. Theoretically, the mechanisms are legislated but so far have eluded implementation.

240. The outputs necessary to achieve this outcome are described below.

Output 3.1 Business plans developed for individual MRPAs and sub-network operations (costs quantified for management; non-state revenue options are defined, economic opportunities at each site).
It is essential that each MRPA develops a convincing plan. It should integrate the PAG, the recommendations emanating from multi-sectoral surveys and inventories, and land use management plans for the site. Business planning will follow on from the development of management/land use plans. The business plans should include the elements described in Output 3.3 described below. Site-based plans must be approved by the majority (or all) stakeholders, and be integrated into the PRD. Success may be enhanced if the sub-network cooperates to develop one or more business plans covering sectoral activities impacting more than one MRPA, such as micro-credit scheme development, volume marketing or regional sustainable tourism circuits exploiting several sites.

Output 3.2 Develop contractual contribution systems for sustainable MRPA financing through incentives for innovative and improved revenue streams that also drive economic growth and reduce pressures.
As production and revenues for economic interest groups grow, there should be opportunities to negotiate agreements covering off-takes to cover MRPA recurrent costs. Local producers or service providers will recognize that their improved wealth is directly or indirectly linked to the MRPA's environmental goods and services and should be willing to pay an appropriate 'tax.' It will almost certainly be necessary to build such obligations or voluntary commitments into the initial partnership/venture agreements. The level of financial offset will vary depending between products and services, as well as added value obtained.

Output 3.3 Rules and procedures for sustainable tourism and managed reforestation concessions, biodiversity offsets and CSR developed and implemented in collaboration with the competent public and private institutions.
When well designed, sustainable tourism in MRPAs is a proven economic growth driver but the potential market is still largely untapped. Some of the knowhow has already been

acquired, and private sector partnership interest/opportunities are reasonably well known. Several of the project's offer major opportunities to develop new facilities and regional circuits, while others may be more suited to specialist tourism such as bird tours or special/habitat species attractions linked to existing high visitor volume regions. These will be analyzed with full local interest groups and tourism operator participation. As high potential ventures are identified, they will be drawn up under operator-local group agreements. The project may provide initial investment support, but this should be recovered once ventures are operational. Managed reforestation concessions are part of the REDD++ option but offer additional economic opportunities through sale of timber. Surprisingly, few projects have been launched, perhaps because reforestation as it widely practiced in Madagascar has suffered heavy failures. However, this does not mean that the concept is unworkable, as evidenced by vast reforestation planting conducted by QMM in favor of local communities. There are fewer barriers to reforestation in the humid east compared to the western ecoregion, but innovative approaches should be developed and tested in the latter as natural forest production is very low. Biodiversity offsets are of considerable interest to mining and oil companies, especially when the latter have sound environmental and social policies. Offsets are largely untried to date but opportunities may arise in the near future when these industries become operational. It is noteworthy that the BBOP offset hierarchy is appreciated by the GOM and many companies, and that there is a growing call to go beyond these standards by aiming for net biodiversity gain rather than no net loss. Extractive industry CSR policy is potentially exciting option for MRPAs with their economic growth preoccupations. As noted earlier, there is no *a priori* legal reason why mining or oil production cannot occur in an MRPA as long as biodiversity goals are respected and local communities agree. At a global level, there exist promising models for CSR/PA integration and complementarities, offering guidelines for similar partnerships in Madagascar. Finally, it may be possible to persuade oil, gas and mining companies to make one-off contributions to ear-marked MRPA sub-accounts managed by the FAPBM.

Output 3.4 Investment provided through micro-credit and the project catalyzes local entrepreneurial initiatives.

The project will initially focus on consolidation and expansion of proven products but will explore potential new avenues. It may be necessary to catalyze the creation of a commercial entity dedicated to marketing MRPA products but the economic feasibility awaits analysis. One possible option at present is to transform the Fanamby-supported *Sahanala* label into a commercial company. The advantage of *Sahanala* is that it creates the links between the local producer groups and buyers, both at national and international levels. An alternative option will be to integrate MRPAs into existing producer associations (such as ADAPS in the Sambirano region) It will be important to aggregate additional market value by coordinating production systems across multiple MRPAs. This will help to ensure that production agreements are met and may leverage higher prices through volume. It may be noted that the products currently marketed by *Sahanala* and other marketing entities in Madagascar are often considered as non-timber forest products. In many cases throughout the world, this grab bag of products does little more than provide a little supplementary income to the producers. This is not the case with Sahanala products as most are high added value products with strong market

demands, and labeling significantly adds to the sale price. In addition, spice and essential oil producing areas tend to be among the wealthiest in Madagascar, even when labeling is not involved.

Output 3.5 Labeling is facilitated and market access negotiated for organic and/or fair trade in conservation compatible production, services and local entrepreneurial initiatives.

Closely linked to Output 3.5, the present strategy aims to add value to products and services through labeling. Regarding products such as spices and essential oils, labeling will adhere to FLO standards. Apart from the reasonably well-known international markets for organic/fair trade products, there are indications that in-country markets potentially exist, albeit on a smaller scale. For example, Air Madagascar has agreements with *Sahanala* for eco-labeled peanuts. There is potential similar interest among hotels and restaurants, especially those catering to a high-end, responsible clientele.

Output 3.6 Revenues from voluntary carbon agreements (including REDD++) contribute to upfront funding for community-based reforestation ventures and MRPA management.

Although carbon offers a growing opportunity to mobilize significant investments in MRPAs, continuing legislative difficulties and the strict monitoring requirements[28] indicate that it is not particularly desirable to invest in projects in the framework of CDM (regulated markets) at this time, unless under the auspices of REDD (see Output 3.7). However, voluntary carbon markets present better-adapted opportunities for MRPAs as they have fewer and less strict regulations, as well as a tendency to favor local social and economic considerations in less developed nations. Unfortunately, the global economic downturn has forced many companies to put social and environmental investment projects on hold. Not all options have evaporated, however, and national/international voluntary agreements may be possible in the foreseeable future. Agreements will require that framework conditions are established such as improved land tenure, transparent revenue distribution mechanisms, establishment of production facilities (nurseries, technical support), and the integration of reforestation into MRPA land use planning. Finally, the emergence of entrepreneurial and dynamic sylviculture ventures should facilitate future negotiation of carbon agreements that conform to CDM requirements.

Output 3.7 Revenues from REDD and agreements are invested in earmarked FAPBM sub-accounts.

MRPA sub-network partnership with the FAPBM offers opportunities to leverage funds specially targeted to these PA categories. There are indeed indications that private philanthropic foundations are increasingly interested in MRPA approaches as opposed to traditional parks and reserves. These entities have relations with major financial portfolio managers and often with responsible business, thus opening the possibility for additional leverage. In the mid- to long-term it may be desirable for the FAPBM to lobby specifically for bi- and multilateral donor support to MRPA sub-accounts. This possibility would be significantly enhanced if MRPAs: (a) developed excellent business plans; (b) clearly demonstrated their ability to effectively manage biodiversity; (c)

[28] Recently, new satellite imagery techniques have been introduced to Madagascar that are less costly and more rapid that traditional carbon monitoring systems. These are currently being tested and will be available free to all stakeholders.

showed tangible success in poverty reduction and boosting local economic growth; and (d) made measurable progress trend towards sustainability. Finally, Madagascar National Parks has never banked its revenues in the FAPM, preferring to manage them directly. In the long-run this may cause problems with transparency, especially as the institution is periodically forced (for example, during NEAP phase intervals and political crises) to use revenues earmarked for community development to cover its own recurrent costs. Such an option may be attractive to MRPAs but agreements would have to be carefully drawn up to ensure equity. Earmarked funds should be for direct MRPA management and community development.

Output 3.8 Options for increased public funding for MRPAs are identified and negotiated.
Attempts to obtain public funding for PAs have generally failed even though legal opportunities to do so exist. For example, the decree defining the management modalities of the National Forest Fund (Decree 2001-1123) states that the fund must be allocated to environmental protection. Allocations are decided by a committee comprising GOM, decentralized administrations, conservation NGOs and commercial forestry sector, but the fund is essentially non-operational. Other public revenues are generated by individual communes and the regions. The latter consumes most of this revenue, and none has been recycled into biodiversity conservation. While the barriers are formidable, the project nonetheless will explore options.

PROJECT INDICATORS

241. The project indicators contained in Section II / Part II (Strategic Results Framework), and which are elaborated in this chapter, include only impact (or 'objective') indicators and performance (or 'outcome') indicators. They are all 'SMART'[29]. Experience across the UNDP/GEF portfolio shows that a small number of SMART and high-level indicators is the best way to monitor a project.

242. The project may however need to develop a certain number of process-oriented indicators to compose the 'M&E framework' at the site level. These indicators are also expected to feed into the project's overall M&E framework. It is envisaged that the project's overall M&E framework will build on UNDP's existing M&E Framework for biodiversity programming.

243. The organization of the log frame is based on the general assumption that: *if* **(1)** the governance frameworks for enabling MEF's long term plan of consolidating the PA system through the addition of MRPAs parks can be realized; **(2)** *if* the institutional capacity to coordinate and fund the management of MRPAs is enhanced; *and if* **(3)** if mechanisms for MRPA financial sustainability are identified and put in place; *then* the the expansion the PA system of Madagascar by developing a sub-network of managed resource protected areas in represented ecological landscapes, co-managed by local government and communities and

[29] Specific, Measurable, Achievable, Relevant and Time-bound.

integrated into regional development frameworks will be a **success**. Conservation of Madagascar's unique biodiversity will be significantly enhanced and local people will benefit tangibly. This logic is based on the barrier and root-cause analysis carried out during the PPG phase (refer to Section I, Part I, chapter 'Long-Term Solution and Barriers to achieving the Solution').

244. In turn, the choice of indicators was based on two key criteria: (i) their pertinence to the above assumption; and (ii) the feasibility of obtaining / producing and updating the data necessary to monitor and evaluate the project through those indicators The following are therefore the project's key indicators:

Table 7. Elaboration on Project indicators

INDICATOR	**EXPLANATORY NOTE**
At objective level to expand the PA system of Madagascar by developing a sub-network of managed resource protected areas in represented ecological landscapes, co-managed by local government and communities and integrated into regional development frameworks.	
1. Full legal protection for critical habitat and species representation through PAs increases by 177% from a baseline of 1,987,486 ha.	▪ Direct project intervention will lead to the establishment of 1,527,151ha of terrestrial MRPAs with full legal status within the national register. Refer to Table 5 for an overview of the five targeted sites. ▪ Indirectly, the project is anticipated to influence the establishment of an additional 1,286,816 ha terrestrial MRPAs with full legal status. This pertains to five sites that only have temporary protection.
2. Loss of natural forest within in target MRPAs Priority Conservation Zones less than half of the national average for unprotected areas.	▪ The 2000-2005 national annual average loss of natural forests in non-protected areas was 5.3% calculated from CI estimations. This map[30] published in 2006 will be used to establish baselines for target MRPA PCZs. ▪ Forest loss reports are normally produced every five years approximately and will be used for future assessments.
3. Fire frequency in MRPA Priority Conservation Zones compared to unprotected natural forest areas within the same region.	▪ The University of Maryland Fire Information for Resource Management Systems publishes daily fire reports that can be consolidated into annual values. ▪ A given area within Madagascar can be designated for fire monitoring and the rate within MRPA PCVs can be compared to ecologically comparable unprotected natural habitats. ▪ Fire monitoring will be set up for each target MRPA.
At outcome 1 level - New PAs created under IUCN Categories V and VI as a foundation for a functional and effective sub-network of Managed Resources Protected Areas based upon a common vision and management principles.	

[30] Madagascar: Changement de la couverture des forêts naturelles / Change in natural forest coverage (1990 -2000-2005) USAID MINENVEF / Réalisation: CI, IRG, ONE, FTM,

INDICATOR	EXPLANATORY NOTE
1. Increased scores on the GEF4's PA Management Effectiveness Tracking Tool "METT" for all five target MRPAs. [1] Menabe-Antimena 67 [2] Mahavavy-Kinkony 56 [3] Daraina-Loky-Manambato 78 [4] Ampasindava-Galoko 6 [5] Ambohimirahavavy-Marivorahona 5	▪ The METT tool provides a very useful measure of progress with respect to the baseline included here. ▪ The target MRPAs currently fall into two distinct score clusters – higher scores for those MRPAs that already have NGO support and very low scores those that currently do not. ▪ Currently supported sites should increase scores by a minimum of 20%.
2. The enforcement of MRPA Zoning Plans for critical PAs is effective, as measured by the annual number of infractions reported on each site by communes and local communities.	▪ A refinement of this indicator and appropriate targets will be defined once Plans are in force and a monitoring system for infractions is in place.
At outcome 2 level – Institutional capacity among key stakeholder groups provides the enabling framework for decentralized MRPA governance assuring biodiversity conservation and sustainable natural source-based economic growth.	
1. Progressively increased scores on the UNDP's Capacity Development Scorecard for of Protected Areas Management over the baseline average ratio of 51% for the targeted MRPAs.	▪ The UNDP's Capacity Development Scorecard for Protected Areas Management provides a comprehensive measure of capacity improvements over the baseline, covering individual, institutional and systemic capacity levels. As a tool widely used in UNDP/GEF protected area projects, it can be easily applied by a relevant group of stakeholders. Its results may be independently validated through project evaluations. ▪ An increase of at least 25% is expected. ▪ Capacity will be measured at mid-project and at project completion.

INDICATOR	EXPLANATORY NOTE
2. Communities' perception of their livelihood stake in the good stewardship of biological resources in MRPAs, measured through the periodic and independent application of the 'Most Significant Change' (MSC) technique.	▪ The MSC Technique was developed by a consortium of NGOs working in development, which includes CARE International, Oxfam, Learning to Learn (Australia), UK's Christian Aid and Exchange, Ibis and Mellemfolkeligt Samvirke (both from Denmark) and Lutheran World Relief, United States of America. The technique is a form of participatory M&E for projects, programs and other development initiatives. It foresees that many project stakeholders are involved both in deciding the sorts of change to be recorded and in analyzing the data that corroborate both monitoring and evaluation reports. Essentially, the process involves the collection of significant change (SC) stories emanating from the field level, and the systematic selection of the most significant of these stories by panels of designated stakeholders or staff. The designated staff and stakeholders are initially involved by 'searching' for project impact. Once changes have been captured, various people sit down together, read the stories aloud and have regular and often in-depth discussions about the value of these reported changes. When the technique is implemented successfully, whole teams of people begin to focus their attention on program impact.
3. Increased land tenure security for local communities.	▪ The rationale for this indicator is as follows: (i) it is a form of protection against land grabbing; (ii) migration into the MRPA should be reduced; (iii) it should encourage local stakeholder investment and productivity because of improved land tenure; and, as a corollary, (iv) it should reduce the risk of destructive shifting agriculture linked to low investment in land and production. ▪ The project will refine this indicator and establish land tenure baselines within the first year and measure changes at mid-project and project completion.
At outcome 3 level – Financial sustainability of MRPAs is strengthened through innovative entrepreneurial public-private partnerships and mobilization of public funding.	
1. Increased scores on the UNDP's Financial Sustainability Scorecard for National Systems of Protected Areas over the baseline for the targeted MRPAs.	▪ In the GEF4 funding cycle, the Financial Sustainability Scorecard is part and parcel of the general 'Tracking Tools' for Strategic Objective 1 (SO1) projects. ▪ An increase of at least 20% on absolute terms is expected.
2. Number of households benefitting from MRPA intervention and their mean revenues.	▪ Baseline average household revenues have been established for selected communities and economic interest groups in Daraina-Loky-Manambato. As new economic growth activities are identified and established, baselines will be extended to new target groups. ▪ Number of beneficiary households and their changes in revenue linked to project interventions will be measured at mid-project and project completion...

INDICATOR	EXPLANATORY NOTE
3. Funding secured for MRPA management operations.	▪ Local cooperatives are expected to continue to pay 10-25% of extra revenues generated through MRPA-assisted projects. ▪ MRPA service fees (such as gate fees) are still to be defined officially by SAPM but some MRPAs are already experimenting with visitor fees. ▪ The project will seek partnerships with the private sector to obtain funding for local development and conservation activities. These partnerships may include extractive industry CSRs. ▪ It is possible that local communes may opt to include MRPA-related projects in their development plans. These projects may funded by the commune or region. This has never happened to date but is a potential source of future funding. ▪

RISKS AND ASSUMPTIONS

245. The project strategy, described in detail within this project document, makes the following key assumptions in proposing the GEF intervention:

- Lessons learned from earlier work, e.g. the Anjozorobe project, can be successfully applied to the MRPAs, but additional strategies will be identified as work progresses at project MRPAs progresses.

- Baseline conditions and successful practices in the selected sites can be extrapolated with reasonable confidence level to other MRPAs in Madagascar.

- Increased awareness and capacity will lead to a change in behaviour with respect to the role of MRPAs in effectively conserving areas of high biodiversity and at the same time driving local economic growth.

- Regional and communal administrations, as well as local communities, choose to cooperate with project partners towards MRPA consolidation.

- MRPA Zoning is an effective tool for conserving key ecosystems intact within an overall context of landscape management and sustainable use of biodiversity.

- MRPAs will gradually become a national priority for Madagascar as knowledge and information is made available.

- MRPA establishment/ strengthening will be supported by all stakeholders as tangible benefits are perceived, especially at regional and local levels.

- Biodiversity-friendly business activities are feasible in the MRPA context and they have strong buy-in and participation from both communities and investors.

- Threats and risks to MRPAs' biodiversity posed by the operations of extractive industries can be reasonably controlled and mitigated, and if not then compensated for.

- Entrepreneurial initiatives and leadership can successfully emerge in the MRPA context, so that innovative sources of environmental funding can be tapped into.

246. During the PPG phase, projects risks were updated from what has been presented at the PIF stage. They were further elaborated and classified according to UNDP/GEF Risk Standard Categories[31], and assessed according to criteria of 'impact' and 'likelihood':

Table 8. Elaboration of Risks

IDENTIFIED RISKS	CATEGORY	ELABORATION
Periodic political crises may lead to increased pressure on biodiversity.	POLITICAL	Madagascar's rural population is heavily dependent on environmental goods and services. Since independence, the country has undergone periodic political unrest when government influence in rural areas may be diminished. For example, the MEF may not be able to control illegal logging or charcoal production. Political unrest is often marked by deliberate bushfires, a traditional form of popular protest, but fortunately these do not specifically target PAs even though they are perceived to be government property. The current political crisis has seen a massive rise illegal logging and, perhaps to a lesser extent, animal trafficking for the restaurant and collector trades. Interestingly, the PAs that have been hardest hit are those managed by Madagascar National Parks and perceived to be government property. Few MRPAs appear to have been seriously affected.
Future governments may not continue the long trend of being supportive of PAs.	POLITICAL	There has been a trend since the mid-1980s for successive governments to increase political commitments to environmental protection and PAs. The current administration is believed by many to have broken with this trend as witnessed by illegal logging and other environmental abuses. However, the administration has not altered GOM commitment to SAPM.

[31] Includes the following eight categories: environmental; financial; operational; organizational; political; regulatory; strategic; and other.

IDENTIFIED RISKS	CATEGORY	ELABORATION
GOM may favor short-term economic advantages of extractive industries over longer-term benefits of PAs.	POLITICAL	Potential mining and oil revenues may be so significant that the GOM may decline to designate full legal status to temporarily protected MRPAs, or may opt to degazette them once this status is achieved. The GOM may also favor mining or oil drilling emplacement in core biodiversity areas in cases where costs can be significantly cut or technical alternatives are not feasible.
Insufficient investment by GOM, the private sectors and donors may limit financial opportunities for MRPAs.	FINANCIAL	The GOM has consistently limited investment in PAs and has been unable to meet co-financing agreements with donors. Donor support may be interrupted as their programs shift between successive phases, causing difficulties in maintaining continuity on-site. Donors may suffer from sector fatigue or shift their priorities from PAs to other sectors. The private sector investment may be deemed too risky with respect to political and economic stability affecting production and/or markets.
Absorption capacity among communities, local government and NGOs to establish sustainable MRPAs may be insufficient.	STRATEGIC	This is the most significant risk. MRPAs are designed to governed and managed by local stakeholders with support from the regional administration. None of these groups have been exposed to PA management in the past and have had little interest in formal PAs. Donor-driven time limits to establishing MRPAs may result in project success being deemed inadequate or disappointment, leading to abandonment.
Climate change impacts may increase MRPA vulnerability, reducing long-term viability.	ENVIRONMENTAL	Many conservation practitioners and researchers now believe that climate change effects are being felt in PAs. Climate change impacts are believed to be most evident when they are exacerbated by anthropogenic stresses that heighten vulnerability. In the long-term, habitats and ecological communities may change and conditions for key species may degrade.
Migration may reverse MRPA successes.	OTHER	It is a well-known phenomenon that the combined influences of poverty, population growth and lack of suitable land drive economic migrations. Farmers may seek unoccupied land such as natural forest to grow crops, harvest timber or produce charcoal as a means to earn money. Economic migration may occur when mines or oil production facilities are developed as people seek jobs. In addition to natural habitat clearance, migration may increase anthropogenic stresses from higher population density, especially as rural populations are heavily dependent on their environment.

Box 2. Risk Assessment Guiding Matrix						
	Impact					
Likelihood		CRITICAL	HIGH	MEDIUM	LOW	NEGLIGIBLE
	CERTAIN / IMMINENT	Critical	Critical	High	Medium	Low
	VERY LIKELY	Critical	High	High	Medium	Low
	LIKELY	High	High	Medium	Low	Negligible
	MODERATELY LIKELY	Medium	Medium	Low	Low	Negligible
	UNLIKELY	Low	Low	Negligible	Negligible	Considered to pose no determinable risk

Table 9. Projects Risks Assessment and Mitigation Measures

IDENTIFIED RISKS	IMPACT	LIKELIHOOD	RISK ASSESSMENT	MITIGATION MEASURES
Periodic political crises may lead to increased pressure on biodiversity.	Low	Certain / Imminent	Medium	MRPAs must be designed and managed in such a way that they are resilient to political upheaval. This can be achieved most effectively by engendering local buy-in by local stakeholders and through increasing financial and governance autonomy. The risk of increased pressure on biodiversity in MRPAs seems to be less important that in sites managed by the parastatal Madagascar National Parks and may indicate that positive local attitudes are helping to reduce the risk.
Future governments may not continue the long trend of being supportive of PAs.	Medium	Unlikely	Negligible	There are no indications that the GOM will reduce its general political support to PAs as part of national development policy, even though different administrations may vary with respect to level of priority accorded to them. Progress over the previous two decades has created a favorable image of Madagascar on the global stage and successive governments would hesitate to put this at risk. Media coverage, internet blogs and organized civil society reactions indicate that awareness of natural resource and biodiversity values has never been higher than at present. Future governments are likely to pay serious heed to this public interest. Demonstrating the value of MRPAs with respect to sustainable development

IDENTIFIED RISKS	IMPACT	LIKELIHOOD	RISK ASSESSMENT	MITIGATION MEASURES
				strategies should also help to reduce this risk.
GOM may at times favor short-term economic advantages of extractive industries over longer-term benefits of PAs.	Critical	Moderately likely	Medium	A solution to this risk is to clearly demonstrate the long-term value of MRPAs with regard to national and regional development strategies. Promoting local stakeholder support linked to social, cultural and economic values should also contribute to risk reduction. The definition of clear zoning and regulations, including no-go zones, should help when negotiating with government and extractive industries companies regarding protection for the MRPA's core biodiversity areas. In the rather likely event that local degradation of destruction will be decided upon, it will be necessary to apply the BBOP hierarchy for compensation or offsets.
Insufficient investment by GOM, the private sectors and donors may limit financial opportunities for MRPAs.	High	Moderately likely	Medium	It will be important to demonstrate that MRPAs are an effective means of conserving high-biodiversity areas. Equally, it will be necessary to demonstrate that they can significantly contribute to economic growth, especially in a pro-poor manner. Although many tourism operators may have been discouraged by the lack of opportunities to invest in PAs, MRPAs must foster a favorable investment climate and actively seek their participation. MRPAs are particularly well-placed to test and develop new and innovative products for which there is consistent or rising market demand. Working together, MRPAs could establish trade links that guarantee delivery quotas and increase local revenues. In the longer-term, MRPAs must avoid the trap of becoming donor dependent by establishing financial systems that are largely autonomous.
Absorption capacity among communities, local government and NGOs to establish sustainable MRPAs may be insufficient.	Critical	Likely	High	Addressing this critical risk must be a major preoccupation for the project and a focus for its investment. Finding workable governance solutions adapted to local needs and conditions must be a focus from the start. Once governance structures in place, the project should

IDENTIFIED RISKS	IMPACT	LIKELIHOOD	RISK ASSESSMENT	MITIGATION MEASURES
				support them in order to cover their initial management costs such as recruitment of rangers and coordination. Targeted capacity building will be a priority throughout the project.
Climate change impacts may increase MRPA vulnerability, reducing long-term viability.	Medium	Likely	Medium	Most of the protected areas targeted by the project are relatively large, a factor favorable to long-term robustness and viability. Existing data indicate that several, such as the Northern Highlands and Menabe-Antimena, are naturally resilient to climate change. The key to minimizing climate change impacts will be to reduce other direct anthropogenic stresses to levels where they do not exacerbate the effects of climate shift.
Migration may reverse MRPA successes.	High	Moderately likely	Medium	Migration is a universal human right and this will of course be respected by the project. However, the impacts of migration may be reduced through the following measures. First, a clear zoning plan accompanied by management rules and approved by local stakeholders may discourage migrants from occupying or unsustainably using core biodiversity areas. Secondly, customary land tenure systems and community territorial ownership should be recognized by local authorities and defended. Should local communities accept settlement by migrants, the new arrivals should be encouraged to participate in MRPA development.

Political crises and their impacts

247. The current political crisis that began in February 2009 is one of several that has occured in Madagascar since independence. The direct causes include general public disatisfaction with incumbent governments, unpopular policies, corruption and political rivalry. The crises lead to a broad swath of negative impacts on society in general and can impact the environment.

248. A direct consequence of the current crisis is the steep withdrawal of multi- and bilateral funding across all sectors, including the environment. Donors have either withdrawn entirely or are not renewing agreements with government, although some continue to fund humanitarian

activities and environmental projects through the UN system or NGOs. A recent update[32] issued by the UN in Madagascar documents the negative impacts on of the crisis on health, education, livelihoods, famine relief and cyclone preparedness and indicated that donor reticence may exacerbate these impacts.

249. The timing of the current crisis was particularly unfortunate from an economic view. The impacts of a global economic downturn were already being felt in some sectors when it occurred and the internal political upheavals exacerbated them. One of the most visible consequences of the crisis and its accompanying loss of donor support has been a measurable increase in economic stress for ordinary people. For example, revenues and employment generated by tourism reached its highest ever levels in 2008 and seemed destined to continue to rise. Farming output was rising steadily in some regions as price caps were removed and land tenure strengthened.

250. A recent World Bank blog notes that the current crisis is not so much political, but rather it is a governance crisis.[33] Furthermore, it is widely believed within the conservation community that government is likely to change at crisis end but PA policy commitment is unlikely to weaken. This belief is based on government awareness of the prestige endowed on the country when the Durban Vision was announced and that there has been no stated policy change since the crisis began. In addition, the SAPM administration is likely to remain in place. Among the proposed solutions are decentralization of governance to the regions and more local levels, and a strengthening of civil society including NGOs. These clearly dovetail closely with the aims of the proposed project.

251. Notwithstanding that the current crisis has had major negative impacts on Madagascar's ordinary citizens and its biodiversity, some positive signs have emerged. National press coverage of illegal forestry has made front page news regularly and openly questions why it is being 'allowed' to occur. There is general agreement that public opinion regarding biodiversity has improved and that its illegal pillaging is not acceptable. This contrasts with historical public perceptions that donors and NGOs are more interested in lemurs than the everyday difficulties of the Malagasy people. In parallel, civil society groups have become more vocal and actively challenge government on issues such as environmental abuse. This is a positive sign that indicates a stronger civil society participation in politics when political normality returns.

252. Some international observers[34] have noted that political crises may continue to emerge periodically in the future. There is clearly a need to adapt conservation and sustainable natural resource management initiatives so that they are more resilient to the negative impacts of unrest on biodiversity and PAs. One of the most obvious ways to achieve the latter may be to build upon the strengthening civil society role in defending biodiversity and, indeed, many international NGOs and donors are rallying to support *Voahary Gasy*, a recently formed alliance of Malagasy environmental NGOs that has challenged the GOM on recent events. However, more will be needed to increase resilience at the local level and in the regions where illegal use may be a risk. For this reason, the present project will integrate measures to significantly reduce

[32] United Nations, Office of the Resident Coordinator, Madagascar (2009). Humanitarian Update, August/September 2009.
[33] http://blogs.worldbank.org/africacan/pour-que-la-terre-tourne-aussi-a-madagascar-vers-un-agenda-de-relance-economique.
[34] For example, a recent World Bank fact-finding mission has made this point in discussions with the GOM.

or avoid this risk by helping to build strongly motivated economic interest groups with vested interests in their respective MRPAs and thus willing to defend these very interests.

INCREMENTAL REASONING AND EXPECTED GLOBAL, NATIONAL AND LOCAL BENEFITS

253. **In the baseline situation** (business-as-usual scenario), many of the new MRPAs that have given rise to SAPM will remain largely as paper parks and will struggle to find adequate financial resources for their consolidation. Governance and management systems are likely to remain confused and their effectiveness with regard to biodiversity conservation and sustainable economic growth will remain in doubt. This may lead to reduced local buy-in and participation in MRPA activities. Many MRPAs will continue face difficulties with respect to support from regional and communal decision-makers and as a result may be conflicted by alternative land-use proposals.

254. If the above situation persists, we may reasonably expect that lack of arable land, limited access to improved production technology and continued economic migration will continue to cause forest degradation or loss in the country's most important centers of biological diversity and endemism, a loss that is globally significant. GOM capacity and motivation to control these impacts will be limited. It has been shown clearly that PAs or any kind have helped to reduce forest loss over the previous decade.[35] Although the annual rates of natural forest loss are relatively low, clearing tends to occur deep within the remaining blocks as cultivators and settlers are fearful of being detected by the forest service. This practice leads to progressive forest fragmentation and reduced viability. Given that MRPAs constitute well over half of SAPM, their ineffectiveness would have dire consequences regarding maintenance of Madagascar's biodiversity.

255. Capacity within MEF's SAPM will remain limited, and the department's ability to defend MRPAs against other powerful sectors is likely to be relatively weak. If SAPM and the MEF cannot demonstrate clear MRPA success there is the risk that high level political support within the GOM may wane in the future.

256. While successive governments have continued to favor PAs over the previous two decades, the country's economic situation may sway decision-makers towards rapid economic growth through extractive industries, notably petroleum, mines and agribusiness. A weak and inadequately effective MRPA network would be a difficult alternative to defend.

257. MRPAs have still to develop a positive track record among donors, although some of the more established sites are beginning to attract their attention. If MRPAs fail to demonstrate their effectiveness and a clear trend towards financial sustainability, donors may fall back on the traditional PAs managed by Madagascar National Parks. This would mean that donor dependence will remain persistently high and could cause fatigue.

[35] At roughly five-year intervals, CI has published national forest cover maps. Forest loss is significantly lower in PAs.

258. **In the alternative scenario** (with GEF intervention), systemic and institutional barriers will be removed, enhancing both the ecosystem coverage and representativeness of SAPM's estate and the effectiveness of the terrestrial PAs that will be engineered. At the system's level, the present project will guarantee that the expanded SAPM will include 1,527,151 ha of well managed and effective MRPAs in some of the most critically important terrestrial ecosystems in Madagascar. Through the proposed MRPA Network, a further 1,286,816 ha of effective MRPAs will be consolidated within the SAPM estate. Financial sustainability, governance and management capacity, monitoring and enforcement regimes, and improved local economic growth will be established or strengthened for these areas. The targeted MRPAs will serve as models for others within the MRPA network. Their contribution to global conservation goals will be highly significant as they will extend legal protection to hundreds of locally endemic species, including flagship lemurs, as yet unprotected members of one of the world's richest herpetofauna centers of endemism and diversity, and a host of globally threatened species.

259. One particularly interesting outcome is expected to be the establishment of a new sub-category of PAs within IUCNs current list. Madagascar's Category V PAs do not quite fit IUCN's definition for this type of site, and many countries are experiencing the same difficulty. Given that Madagascar has a long history of working with IUCN on PAs, we may reasonably expect that IUCN will look favorably at proposed solutions to this dilemma.

260. At the national level, the new approaches combining effective biodiversity conservation and local sustainable economic growth will be consolidated, thus confirming that MRPAs are well-adapted to Madagascar's cultural, social and economic conditions. The strong desire among MRPA promoters and their partners to move as rapidly as possible towards financial sustainability will also help to convince GOM decision-makers and donors that investment in MRPAs will bear fruit in the foreseeable future. The MRPA model may also attract PA system managers in similar countries, thereby continuing Madagascar's leadership role in the African region with respect to PA management effectiveness and sustainability.[36]

261. The institution strengthening of this project will focus on several key stakeholders involved with SAPM development and on-site MRPA management. At the national level, the most important will be SAPM. This department is relatively new and in the process of rapidly acquiring experience and knowhow regarding the new MRPA approaches. By fully integrating SAPM into the project and the provision of technical expertise, we can expect SAPM to progressively acquire the capacity and skills to coordinate SAPM effectively. In addition, integrating the Land Use Management Department within the Ministry responsible for Decentralization and Land Use will help to build its understanding of the role of MRPAs in sustainable development and protection of a globally unique natural heritage. The proposed MRPA network will help to strengthen MRPA effectiveness by sharing acquired experience and knowledge among all MRPA practitioners. At the regional level, awareness among decision-makers regarding MRPAs will be strengthened as well as their capacity to integrate them into their respective development and land use management plans. Key stakeholders will include the MEF's DREF's and the regional land use management directors. At the local level, the project

[36] Madagascar is widely perceived to be a leader among Francophone African countries with respect to PoWPA implementation. It has also been invited to co-lead Anglophone African PoWPA training initiatives. Much of the driving interest centered on the new MRPA approaches.

will go far in establishing working models for effective MRPA governance under differing local conditions. This will be accompanied by a major capacity-building effort at this level involving local community members, communes and OPCIs, and the private sector.

262. A major objective and focus of the proposed project is to promote enhanced economic growth opportunities among local communities. The proven successes at Anjozorobe and Daraina-Loky-Manambato will be built upon and extended to the project's targeted MRPAs and, eventually through the network, to other sites. Apart from a significant improvement in livelihoods, key objectives are to have local people take responsibility for their respective MRPAs and to voluntarily contribute to the latter's financial sustainability.

263. Gender mainstreaming will be promoted and closely monitored. Due to the nature of traditional activities at the project sites, it is expected that women will play an important role in all project activities, including management, training and the establishment of substantially improved livelihoods.

COST-EFFECTIVENESS

264. Several considerations pertaining to the cost-effectiveness of the project strategy were analyzed during the PPG process. The project is cost effective for several inter-linked reasons.

265. First, the project takes a precautionary approach by seeking to protect ecosystems before they have become irreversibly degraded. The costs of inaction are high in Madagascar; natural ecosystems once degraded are difficult to restore owing to land fragility, and the costs are extremely high even where restoration is an option, with reforestation costs estimated at up to US$ 350/hectare for moist forests. The slower growing and inherently more vulnerable seasonal forests in the Western Ecoregion are likely to be even more costly and reforestation more prone to failure due to accidental bushfires. Reforestation and restoration by itself is not a cost-effective option for biodiversity conservation.

266. The current project is focused on MRPA establishment and consolidation. Based on the area targeted specifically by the project, the investment costs are US$ 8.92/ha. However, it is more realistic to include additional MRPAs that are being established in parallel by project partners. When this is done the costs are US$ 4.9/ha, a much more reasonable and cost effective figure. For comparison, two PA establishment projects in Guinea Bissau have estimated initial investment costs of US$ 8.84 and US$ 5.36, respectively.[37]

267. Based on an analysis of 10 PAs managed by Madagascar Parks,[38] annual recurrent costs following initial investments was US$ 6.8/ha. This is considerably higher than the average recurrent costs of an MRPA calculated to be US$ 2.85 in the PIF (and reconfirmed during the

[37] This information is provided in the PRODOC for Project 3650, Support for the Consolidation of a Protected Area System in Guinea-Bissau's Forest Belt.

[38] Carret, J.C. & Loyer, D. (2003). Comment financer durablement les aires protégées à Madagascar. Rapport économique. Agence Française de Développement.

PPG). Lower costs for MRPAs are attributed to having fully decentralized governance involving communities and other local stakeholders, together with the absence of the fixed-cost three-level management hierarchy of Madagascar National Parks.

268. Regarding revenue generation to contribute to PA recurrent costs, Madagascar National Parks is essentially limited to lodge concessions together with fees from researchers, film companies and tourists. Apart from the concession areas that are outside of the PA, all fees are derived from the park or reserve. In contrast, MRPAs are designed and delimited to include a larger area that goes beyond the primary conservation areas defined by the PCZs. The rationale of this approach is based on creating a broad range of revenue-generating options through private sector investment and improved production. The primary beneficiaries are of course local communities but there exist agreements with local cooperatives to reinvest a part of the revenue increase in MRPA recurrent costs. This approach is currently being tested at Anjozorobe where reinvest in the MRPA is estimated at US$ 0.42/ha/year. At first sight, these figures seem ridiculously low but it should be noted that: (i) revenue generation initiatives are still in their early testing stages; and (ii) at Anjozorobe the income represents 12.6%. In addition, estimated revenues from local sources for Anjozorobe before the impacts of the current political crisis were projected to be US$ 0.83/ha/year or 25% of annual MRPA recurrent costs. This compares favorably with revenue generation within Madagascar National Parks which is below 10% of annual recurrent costs.

269. Another way to look at cost effectiveness is to examine financial benefits accruing to local communities, bearing in mind that MRPAs have the dual role of biodiversity conservation *and* local economic growth. Once again, data from the Daraina-Loky-Manambato and Anjozorobe MRPAs show that enhanced crop production has led 80-400% revenue increases for 304 local households[39]. It should be noted that these figures refer to expendable cash generated by the new/improved economic activities in 2009 compared to the amount of expendable cash available to households before these initiatives were launched. The figures do not include the value of subsistence crops consumed within the household These figures are of course encouraging but cannot yet be considered to be sustainable improvements. The next steps must therefore involve reduced dependence on the promoter Fanamby, accompanied by an empowerment of local cooperatives to negotiate their own credit access and private sector partnerships.

270. An additional approach that the project intends to explore is partnerships with extractive industry companies. Similar partnership initiatives elsewhere in the world[40] strongly indicate that the benefits include investment in local education, training and development through CSR programs. It is anticipated that extractive industry-MRPA partnerships will lead to higher incomes among local communities and contributions to MRPA recurrent costs.

271. In the long-term, the present project's emphasis on improved land use planning at a landscape level is aimed at increased national or regional investment into the MRPA. At national level, good land use planning should attract investment by the GOM and development

[39] Based on studies of Fanamby on field on annual househol revenues (limited to spendable cash)

[40] Smuts, R. (2010). Are partnerships the key to conserving Africa's biodiversity? Four partnership case studies between mining companies and conservation NGOs. Conservation International.

donors. At the regional level, good planning should encourage local investment: at present there is essentially none emanating from the regions.

272. Finally, it should be noted that MRPAs have been selected on the basis of their contribution to biodiversity representation and long-term viability. Most of the target sites are large, often a key factor in ensuring viability. Large MRPAs also have a lower recurrent cost per hectare. Conversely, some of the targeted MRPAs are quite small which apparently contradicts with the aforementioned logic.

PROJECT CONSISTENCY WITH NATIONAL PRIORITIES/PLANS:

273. The project strategy is fully in line with national plans, priorities and policies. The overarching sustainable development policy, *Madagascar Naturally*, calls for strengthened biodiversity protection in order to conserve a global and national natural heritage, accompanied by a call for sustainable use of these resources for sustainable economic development. This policy was developed into practical strategies in the 2007 Madagascar Action Plan, or MAP. The MAP integrates national poverty reduction, rapid economic growth, decentralization, education, environment and national unity strategies. In particular, it calls for biodiversity to be a pillar for national development and for PAs to drive rural poverty and rapid economic growth.

274. The aspirations expressed in the Durban Vision have now translated into the nascent SAPM and fully integrated into the MAP. The latter calls for a tripling of the national PA system to ensure as effectively and efficiently as possible lasting conservation of the most important areas for biodiversity. MRPAs are also a well-adapted response to policy requiring PAs to contribute to sustainable economic growth, especially in those areas traditionally considered to be less favored by development opportunities and related infrastructures. MRPAs also tend to target areas where poverty is highest.

275. The project is fully aligned with national decentralization policy. On one hand, it targets capacity building among regional stakeholders with respect to land use management planning and implementation, while at the same time sets out to reinforce local institutional capacity to manage local natural resources. It is fully aligned with the National Land Use Management Policy that calls for the establishment and implementation of multi-sectoral regional development and land use plans. Indeed, internal MRPA land use plans may assist regional administrations in developing their larger scale development plans. MRPAs also provide support to local capacity at the commune level with respect to planning and organization. The latter involves helping to organize and strengthen multi-commune OPCIs as a means to more effectively lobby for their development priorities, a key factor in national decentralization and sustainable development policies.

276. GOM policy clearly sets out to promote public-private partnerships for development. The present proposal has a strong focus on the same goal.

277. Finally, the project will help to identify and implement practical solutions to potential inter-sectoral conflicts of interests. In particular, the mining and petroleum administration (MEM) has been quite explicit about the need to avoid conflict with environmental concerns, especially biodiversity protection. The MEM has even gone as far as setting a moratorium on mining in potential new PA areas. However, finding the practical solutions to harmonious coexistence between extractive industries and biodiversity conservation has been more difficult to achieve. In this light, MRPA promoters worked with government and industry to establish protocols for conflict resolution that are mutually acceptable to all sectors. The present project intends to go further in this respect be developing durable coexistence mechanisms that will favor both policies to ensure effective biodiversity conservation and to facilitate mining and petroleum development.

COUNTRY OWNERSHIP: COUNTRY ELIGIBILITY AND COUNTRY DRIVENNESS

278. The Republic of Madagascar has ratified the Biodiversity Convention (CBD), the Climate Change Convention (UNFCCC), the Convention to Combat Desertification (CCD), the Convention on Migratory Species and Wildlife (CMS), the Convention on International Trade of Endangered Species (CITES), and the RAMSAR Convention, among others. Madagascar is therefore eligible for UNDP assistance.

279. With respect to drivenness, the declaration of the Durban Vision and subsequent appearance of SAPM are clear testimony that the country is strongly motivated in its efforts to ensure full and effective biodiversity conservation. The drive to improve the legal framework while also adopting CBD and IUCN best standards and practices are also a clear sign of drivenness. As a party to the CBD, Madagascar is committed to implementing PoWPA. The country's agreement to help strengthen PoWPA implementation capacity within the African Region is a clear confirmation of the original Durban declaration that stated that Madagascar intended to become a regional and eventually a world leader regarding PA development.

280. An effective MRPA network will go a long way in ensuring that SAPM fullfils the country's policy of full biodiversity conservation. It will also contribute to political efforts to reverse environmental degradation and biodiversity loss, while at the same time contributing to sustainable economic growth.

281. Finally, even through the country is in the midst of a political crisis and has witnessed illegal harvesting from PAs, the GOM has not declared any reduction of commitment to SAPM. PAs therefore appear to be remain well enshrined in national policy.

SUSTAINABILITY AND REPLICABILITY

282. Environmental sustainability: All MRPAs established or strengthened under the project will help to ensure the environmental sustainability of Madagascar terrestrial, freshwater and mangrove ecosystems. At the site level, this sustainability will enhanced through land use

zoning and local agreements that integrate biodiversity conservation priorities. These plans and agreements will subsequently be integrated into regional plans, thus enhancing political acceptance and support. Agreements with extractive industries will also help to avoid threat from these sectors. Local appropriation and motivation promoted through tangible benefits will help to ensure environmental sustainability within MRPAs.

283. Financial sustainability: A baseline level of financial sustainability for PAs has been estimated during the preparation of the present document using UNDP's Financial Sustainability Scorecard for National PA System (Annex 3 GEF 4 Complete tracking tools). It is clear that those MRPAs that have enjoyed support from promoter NGOs have the highest score, but it is our intention to increase scores across all sites by project completion. As we have seen early, MRPAs aim to avoid the trap of donor dependence that marks most of the PAs managed by Madagascar Parks. Many have also clearly defined how financial sustainability is part of a larger picture with regard to long-term success, and have chosen to set sustainability as a primary goal within their respective management plans. Outcome 3 specifically targets financial sustainability, drawing upon in part proven successful approaches at Anjozorobe and Daraina-Loky-Manambato but also exploring new ideas such as partnerships with extractive industry and other as yet unidentified private sector operators. One of the key objectives will be to drive local economic growth so effectively that local beneficiaries will voluntarily allocate a part of their increased revenue to MRPA recurrent costs. Another key objective is to convince donors that MRPAs are a highly effective way to combine sustainable economic growth among some of Madagascar's poorest communities with biodiversity conservation. Assuming that this is successful, the project will work with the FAPBM to establish earmarked MRPA sub-accounts and to conduct donor drives to finance MRPA establishment as a step towards consolidating self-sustaining financial strategies.

284. Social sustainability: The project has a strong focus on establishing local ownership and responsibility for MRPAs. It also aims to greatly strengthen regional interest and commitment to MRPAs. One of the keys to successfully achieving these aims will be to demonstrate the contribution of individual MRPAs to local and regional development. If MRPAs are protecting local interests and, at the same time, substantially improving livelihoods and development opportunities, it is highly likely that neighboring communities will support the MRPA and participate actively in its management. Several regional administrations are already convinced that their respective MRPAs are vital to their development aspirations. Actively promoting MRPAs as an economic growth driver can only enhance these perceptions.

285. Institutional sustainability: SAPM is fully engaged and committed to the process of establishing a sustainable MRPA network. As a key stakeholder in the project and as a major beneficiary of capacity building initiatives, SAPM will be highly motivated to ensure that success is achieved. SAPM's success will help to ensure that it maintains support from the GOM as well as increased support from other donors. Finally, it will be critically important to establish effective governance and management structures at the MRPA level. This is a major objective of the project.

286. Replicability: Apart from creating effective and sustainable conservation areas, the proposed national MRPA Network is designed to be a vehicle for replication of successful approaches throughout Madagascar. It will therefore produce and communicate valuable lessons throughout the country. Once best practices and standards are established, network members will work under guidance to update the national PA system management plan which was produced a decade ago. This original plan constituted national PA policy at the time and was widely appreciated by many parties interested in PA development, including donors, the extractive industry administration and the private sector. The updated plan will no doubt receive similar scrutiny, especially as MRPA approaches to conservation and sustainable economic growth are so new. Recent history indicates that MRPA approaches will attract interest among countries facing similar conservation and development challenges. This would indicate that many of the ideas developed, tested and proven successful in Madagascar will be adopted in other countries.

PART III: Implementation Arrangements

287. Two types of funds are managed by UNDP under this project and were included in the Total Budget and Workplan: UNDP's core funds and GEF funds that were entrusted to UNDP as the selected GEF Agency. With respect to the latter, UNDP is accountable to the GEF (the financier) for the use of its funds under the project, which has been duly endorsed by the GEF CEO on 03 November 2010. For the management of both types of funds, UNDP's Financial Regulations and Rules apply. The project will be implemented by the Association "Environmental Projects Coorination Unit" (UCPE), using NGO implementation modality. Implementing Partner for this project will be the Environmental Projects Coordination Unit (UCPE). UCPE is a Civil Society Organisation registred in Madagascar whose mission, as stated in the approved statutes, is "to promote management and conservation of environment and natural resources in general".[41] This chapter defines the accountability relationships vis-a-vis the selected Implementing Partner, as well as other entities that may be involved in project implementaiton, as per UNDP's Financial Regulations and Rules.[42]

288. The adopted CSO implementation modality and the arrangements herein described have been duly endorsed by the Project's Local Project Appraisal Commitee (LPAC) held on 26 March 2012. Furthermore, a capacity assessment of the CSO has been performed. The assessment was deemed adequate by the UNDP Country Office and equally endorsed by the LPAC. Given the nature of managements of and support to MRPAs in Madagascar, UCPE will

[41] UNDP's Programme and Project Management Guidance prescribes the following on CSO implementation: Eligible CSOs are those that are legally registered in the country where they will be operating. Further, the CSO needs to be selected on the basis of an assessment of their legal, technical, financial, managerial and administrative capacities needed to implement the project. In addition, their ability to manage cash may be assessed in accordance with the Harmonized Approach to Cash Transfers (HACT), if this modality of disbursement is found applicable by the UNDP Country Office.

[42] As stated in Financial Regulation 27.02 of the UNDP Financial Regulations and Rules, an implementing partner is "the entity to which the Administrator has entrusted the implementation of UNDP assistance specified in a signed document along with the assumption of full responsibility and accountability for the effective use of UNDP resources and the delivery of outputs, as set forth in such document." (Reference to UNDP's intranet.)

need to forge partnerships with MEF and its directorates and other CSOs for ensuring the operationalisation of sites on the ground. In addition, UCPE's operational capacity for project management will need to be reinforced through the establishment of a Project Management Unit.

289. As per the mentioned Programme and Project Management guidance, UCPE is accountable to UNDP and the government's coordinating agency (in this case MEF) for delivering on the project. More specifically, the accountability of an implementing partner is to: (i) report, fairly and accurately, on project progress against agreed work plans in accordance with the reporting schedule and formats included in the project agreement; and (ii) maintain documentation and evidence that describes the proper and prudent use of project resources in conformity to the project agreement and in accordance with applicable regulations and procedures. This documentation will be made available on request to project monitors (i.e. to UNDP in its project assurance role) and designated auditors.

290. Shortly after the signature of the PRODOC, UCPE is expected to sign a Project Cooperating Agreement (PCA) with UNDP using the standard UNDP format for the purpose.[43] As the selected CSO Implementing Partner, UCPE is also expected to enter into management agreements with other organisations or entities that will play the role of 'Responsible Parties' under the project with the aim of successfully delivering project outputs related to site operationalisation. These will be primarily the Site Promotors. In order to accord transparency and fairness to the selection of Site Promotors, a competitive service procurement process will be launched (see further down).

291. UNDP will monitor the project's implementation and achievement of the project outputs, and ensure the proper use of both UNDP and GEF funds allocated to the project. The UNDP Country Office (CO) will be responsible for: (i) providing financial and audit services to the project; (ii) recruitment and contracting of project staff/consultants, when so requested by UCPE or MEF; (iii) overseeing financial expenditures against project budgets; (iv) appointment of independent financial auditors and evaluators; and (v) ensuring that all activities, including procurement and financial services, are carried out in strict compliance with UNDP/GEF procedures.

292. A Project Coordination Unit (PCU) will be established by UCPE to implement the project. UNDP will ensure that the necessary capacity is in place at the CSO to: (i) host and implement the project in its entirety; (ii) support MEF in its role in the project (in particular DCBSAP and DREFs); (iii) select and engage qualified service providers / sub-contractors to play the role of 'Site Promotor' and ensure the efficient and effective implementation of site level activities in the five targetted sites; and (iv) oversee the implementation of site level activities. UNDP will assist UCPE in defining and setting the adequate structures for the smooth and efficient implementation of the project. In line with the results of the capacity assessment, specialized assistance will be provided to UCPE in the form of short and/or medium term consultations/expertise. (indicative list is provided in Tables 15 and 16).

293. UCPE will have the overall responsibility for achieving the project's goal and objectives, with the support and collaboration of MEF. UCPE's Executive Director will sign and approve

[43] Variations to the standard PCA will require clearance from UNDP/GEF's Legal Support Officer (LSO).

the project financial reports and the financial requests for advances. MEF will designate a focal point for the project with respect to activities where MEF and its central and decentralised structures are expected to play a key role.

294. During the project's inception phase, UCPE will establish appropriate procedures for engaging service provider entities for each of the five project sites for carrying out a suite of activities in view of operationalising the sites. UNDP, in close collaboration with UCPE and MEF, will ensure that all processes are carried in a transparent and technically sound manner, in compliance with UNDP and GEF procedures, and that all activities proposed by service provider entities are in line with and enhance the project strategy. Once selected, service provider entities are expected to enter into management agreements with UCPE. Local authorities, the focal point of MEF and UNDP, will assist UCPE in overseeing the implementation of site-level activities, which will need to be duly detailed in site-level workplans. UPCE will then consolidate a project annual workplan to be presented to UNDP for release of funds.

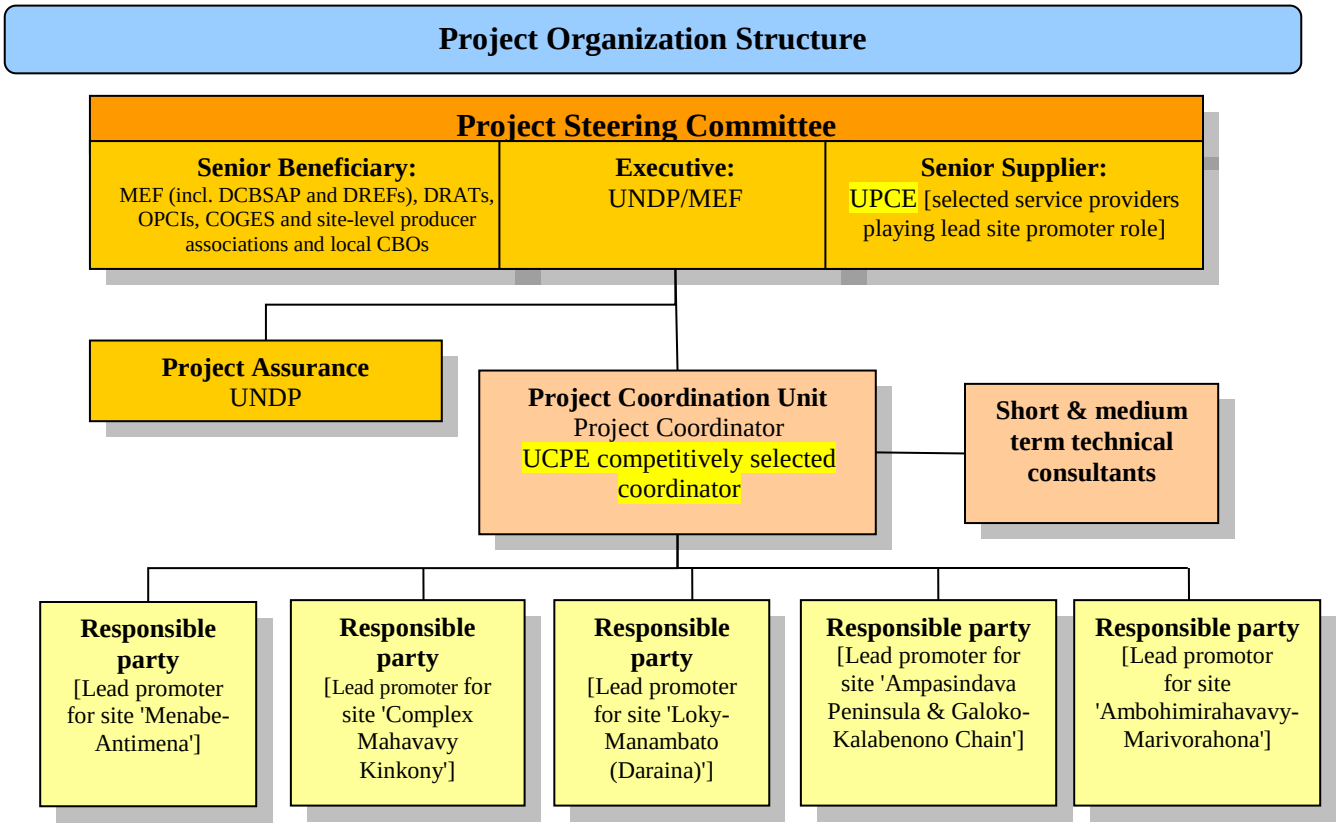
295. A Project Steering Committee (PSC) will be constituted to serve as the project's coordination and decision-making body. The PSC will ensure that the project remains on course to deliver the desired outcomes of the required quality. The PSC will be co-chaired by UNDP and the MEF. The PSC will include representation from: (i) UCPE ('senior supplier'[44]), although without voting rights, as per recommendation in the LPAC; (ii) the selected service providers playing Site Promoter roles, equally without voting rights to avoid conflicts of interest; (iii) MEF (incl. DCBSAP and DREFs), DRATs, OPCIs, COGES, site-level producer associations and local CBOs ('senior beneficiary'[45]) and UNDP ('project assurance'[46]). Representatives of other stakeholder groups may be included in the PSC[47], as considered appropriate and necessary. The PSC will meet at least once per annum (more often if required) to review project progress, approve project work plans and approve major project deliverables.

296. UCPE will produce Annual Work and Budget Plans (AWP and ABP) to be approved by the PSC at the beginning of each year. These plans will provide the basis for allocating resources to planned activities and it will consolidate both the activities at the central level and at the site-level. The latter will be based on site-level costed workplans for the given year produced by Site Promotor organisations and which have been duly cleared by the PM as per project implementation and reporting calendar (to be established during the inception phase). Once the PSC approves the Annual Work Plan this will be sent to the UNDP Regional Technical Advisor for Biodiversity at the GEF Regional Coordinating Unit in Pretoria (South Africa) for clearance. Once the Annual Working Plan and Budget is cleared by the Regional Coordinating Unit it will be sent to the UNDP/GEF Unit in New York for final approval and release of the funding. The PCU will further produce quarterly operational reports and Annual Progress Reports / Project Implementation Reviews (APR/PIR) for review by the PSC, or any other reports at the request of the PSC. These reports will summarize the progress made by the project versus the expected results, explain any significant variances, detail the necessary adjustments and be the main reporting mechanism for monitoring project activities. Contracted Site Promotors will provide

[44] The 'senior supplier' is accountable for the quality of the outputs delivered by the supplier(s)
[45] The 'senior beneficiary' commits user resources and monitors project outputs against agreed requirements
[46] The 'project assurance' will independently verify the quality of the products' or outputs'
[47] E.g. the various partners that provided letters of support to the project.

UCPE with the information required to prepare the annual and quarterly plans and progress reports.

297. An overview of the project organisation structure is shown below.



FINANCIAL AND OTHER PROCEDURES

298. The financial arrangements and procedures for the project are governed by the UNDP rules and regulations for the NGO Implementation Modality that allows UNDP to entrust Civil Society partners with project implementation according to their management capacity. Applicable rules and procedures to be used for implementation of project components and activities by UCPE will be as specified in the Project Cooperation Agreement. The Harmonized Approach to Cash Transfer (HACT) will be used to transfer the financial ressources to UCPE. The micro-assessment of the implementing partner will allow the identification of the concrete transfer modality (advance, direct payment or reimbursement). On that basis, an assurance plan will be prepared to mitigate the financial risk.

299. The financial arrangements and procedures between UCPE and the site-level Implementing Partners will be duly detailed in the respective bilateral management agreements.

AUDIT CLAUSE

300. Audit will be conducted according to UNDP Financial Regulations and Rules and applicable Audit policies.

COMMUNICATIONS AND VISIBILITY REQUIREMENTS

301. Full compliance is required with UNDP's Branding Guidelines. These can be accessed at http://intra.undp.org/coa/branding.shtml, and specific guidelines on UNDP logo use can be accessed at: http://intra.undp.org/branding/useOfLogo.html. Amongst other things, these guidelines describe when and how the UNDP logo needs to be used, as well as how the logos of donors to UNDP projects needs to be used. For the avoidance of any doubt, when logo use is required, the UNDP logo needs to be used alongside the GEF logo. The GEF logo can be accessed at: www.thegef.org/gef/GEF_logo. The UNDP logo can be accessed at http://intra.undp.org/coa/branding.shtml.

302. Full compliance is also required with the GEF's Communication and Visibility Guidelines (the "GEF Guidelines"). The GEF Guidelines can be accessed at: www.thegef.org/gef/sites/thegef.org/files/documents/C.40.08_Branding_the_GEF%20final_0.pdf. Amongst other things, the GEF Guidelines describe when and how the GEF logo needs to be used in project publications, vehicles, supplies and other project equipment. The GEF Guidelines also describe other GEF promotional requirements regarding press releases, press conferences, press visits, visits by Government officials, productions and other promotional items.

303. Where other agencies and project partners have provided support through co-financing, their branding policies and requirements should be similarly applied.

PART IV: Monitoring and Evaluation Plan and Budget

MONITORING AND EVALUATION SYSTEM

304. Project monitoring and evaluation will be conducted in accordance with established UNDP and GEF procedures and will be provided by the project team and the UNDP Country Office (UNDP-CO) with support from UNDP/GEF. The Project logframe (Project Results Framework) in Part III provides *performance* and *impact* indicators for project implementation along with their corresponding *means of verification*. These will form the basis on which the project's Monitoring and Evaluation (M&E) system will be built. The following sections outline the principle components of the Monitoring and Evaluation Plan and indicative cost estimates related to M&E activities. The project's Monitoring and Evaluation Plan will be presented and finalized at the Project's Inception Report following a collective fine-tuning of indicators, means of verification, and the full definition of project staff M&E responsibilities.

305. The project will be monitored through the following M& E activities.

1. Project start-up:

A Project Inception Workshop will be held within the first 2 months of project start with those with assigned roles in the project organization structure, UNDP country office and where appropriate/feasible regional technical policy and programme advisors as well as other stakeholders. The Inception Workshop is crucial to building ownership for the project results and to plan the first year annual work plan.

The Inception Workshop should address a number of key issues including:

a) Assist all partners to fully understand and take ownership of the project. Detail the roles, support services and complementary responsibilities of UNDP CO and RCU staff vis à vis the project team. Discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff will be discussed again as needed.
b) Based on the project results framework and the relevant GEF Tracking Tool if appropriate, finalize the first annual work plan. Review and agree on the indicators, targets and their means of verification, and recheck assumptions and risks.
c) Provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements. The Monitoring and Evaluation work plan and budget should be agreed and scheduled.
d) Discuss financial reporting procedures and obligations, and arrangements for annual audit.
e) Plan and schedule Project Steering Committee meetings. Roles and responsibilities of all project organization structures should be clarified and

meetings planned. The first Project Steering Committee meeting should be held within the first 12 months following the inception workshop.

An Inception Workshop report is a key reference document and must be prepared and shared with participants to formalize various agreements and plans decided during the meeting.

2. Quarterly:
Progress made shall be monitored on a quarterly basis in the UNDP Enhanced Results Based Management Platform. Based on the initial risk analysis submitted, the risk log shall be regularly updated in ATLAS. Risks become critical when the impact and probability are high. Based on the information recorded in Atlas, a Project Progress Reports (PPR) can be generated in the Executive Snapshot. Other ATLAS logs can be used to monitor issues, lessons learned etc. The use of these functions is a key indicator in the UNDP Executive Balanced Scorecard.

3. Annually
Annual Project Review/Project Implementation Reports (APR/PIR): This key report is prepared to monitor progress made since project start and in particular for the previous reporting period (30 June to 1 July). The APR/PIR combines both UNDP and GEF reporting requirements.

The APR/PIR includes, but is not limited to, reporting on the following:

- Progress made toward project objective and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative)
- Project outputs delivered per project outcome (annual).
- Lesson learned/good practice.
- AWP and other expenditure reports
- Risk and adaptive management
- ATLAS QPR
- Portfolio level indicators (i.e. GEF focal area tracking tools).

4. Periodic Monitoring through Site Visits
UNDP CO and the UNDP RCU will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Other members of the Project Steering Committee may also join these visits. A Field Visit Report/BTOR will be prepared by the CO and UNDP RCU and will be circulated no less than one month after the visit to the project team and Project Steering Committee members.

5. Mid-Term of Project Cycle
The project will undergo an independent Mid-Term Evaluation at the mid-point of project implementation (as per dates in the CEO Endorsement Request or as otherwise agreed by the Steering Committee). The Mid-Term Evaluation will determine progress being made toward the achievement of outcomes and will identify course correction if needed. It will

focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF. The management response and the evaluation will be uploaded to UNDP corporate systems, in particular the UNDP Evaluation Office Evaluation Resource Center (ERC).

The relevant GEF Focal Area Tracking Tools will also be completed during the mid-term evaluation cycle.

6. End of Project

An independent Final Evaluation will take place three months prior to the final Project Steering Committee meeting and will be undertaken in accordance with UNDP and GEF guidance. The final evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the mid-term evaluation, if any such correction took place). The final evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF. The Terminal Evaluation should also provide recommendations for follow-up activities and requires a management response which should be uploaded to PIMS and to the UNDP Evaluation Office Evaluation Resource Center. The relevant GEF Focal Area Tracking Tools will also be completed during the final evaluation.

During the last three months, the project team will prepare the Project Terminal Report. This comprehensive report will summarize the results achieved (objectives, outcomes, outputs), lessons learned, problems met and areas where results may not have been achieved. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project's results.

7. Learning and knowledge sharing

Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects. Finally, there will be a two-way flow of information between this project and other projects of a similar focus.

306. M& E budget is summarised in the table below.

Table 10. Monitoring and Evaluation Activities, Responsibilities, Budget and Time Frame

Type of M&E activity	**Responsible Parties**	**Budget US$** *Excluding project team staff time*	**Time frame**
Inception Workshop and Report	▪ Project Manager ▪ UNDP CO, UNDP GEF	Indicative cost: 10,000	Within first two months of project start up
Measurement of Means of Verification of project results.	▪ UNDP GEF RTA/Project Manager will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members.	To be finalized in Inception Phase and Workshop.	Start, mid and end of project (during evaluation cycle) and annually when required.
Measurement of Means of Verification for Project Progress on *output and implementation*	▪ Oversight by Project Manager ▪ Project team	To be determined as part of the Annual Work Plan's preparation.	Annually prior to ARR/PIR and to the definition of annual work plans
ARR/PIR	▪ Project manager and team ▪ UNDP CO ▪ UNDP RTA ▪ UNDP EEG	None	Annually
Periodic status/ progress reports	▪ Project manager and team	None	Quarterly
Mid-term Evaluation	▪ Project manager and team ▪ UNDP CO ▪ UNDP RCU ▪ External Consultants (i.e. evaluation team)	Indicative cost: 40,000	At the mid-point of project implementation.
Final Evaluation	▪ Project manager and team, ▪ UNDP CO ▪ UNDP RCU ▪ External Consultants (i.e. evaluation team)	Indicative cost: 40,000	At least three months before the end of project implementation
Project Terminal Report	▪ Project manager and team ▪ UNDP CO ▪ local consultant	0	At least three months before the end of the project
Audit	▪ UNDP CO ▪ Project manager and team	Indicative cost per year: 3,000	Yearly
Visits to field sites	▪ UNDP CO ▪ UNDP RCU (as appropriate) ▪ Government representatives	For GEF supported projects, paid from IA fees and operational budget	Yearly
TOTAL indicative COST Excluding project team staff time and UNDP staff and travel expenses		US$ 187,000 (+/- 5% of total budget)	

PART V: Legal Context

307. This Project Document shall be the instrument referred to as such in Article I of the Standard Basic Assistance Agreement between the Government of Madagascar and the United Nations Development Programme, signed by the parties on 16 June 1993. Consistent with the Article III of the Standard Basic Assistance Agreement, the responsibility for the safety and security of the implementing partner and its personnel and property, and of UNDP's property in the implementing partner's custody, rests with the implementing partner.

308. The implementing partner shall put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried. It shall also assume all risks and liabilities related to the implementing partner's security, and the full implementation of the security plan.

309. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement. The implementing partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

SECTION II: STRATEGIC RESULTS FRAMEWORK (SRF) AND GEF INCREMENT

PART I: Strategic Results Framework, SRF Analysis

INDICATOR FRAMEWORK AS PART OF THE SRF

Objective/ Outcome	Indicator	Baseline	End of Project target	Source of Information	Assumptions
Objective – To expand the PA system of Madagascar by developing a sub-network of managed resource protected areas in represented ecological landscapes, co-managed by local government and communities and integrated into regional development frameworks.	1. Full legal protection for critical habitat and species representation through PAs increases by 177% from a baseline of 1,987,486 ha.	Of the 1,527,151 ha targeted by the project, 530,880 ha (protection status) are currently supported by Fanamby, Asity and other partners. These have already been demarcated and have temporary protected status. The remaining two sites covering 328,286 ha (temporary status) were given temporary protection in 2008 following the end of the moratorium on mining. 746,335 ha do not have any protection status. They do not have active promoters as yet but have attracted interest from Fanamby, CI, MBG and WWF. They have not yet been precisely demarcated as this required consultation with local stakeholders. Within the additional 1,286,816 ha, not included in the present project but promoted by project partners, two sites are led by CI and the rest are currently being developed by WWF. All of these additional sites are already well-demarcated.	2,813,967 ha have full protection within the national PA register, SAPM.	Mid-Term and Final Evaluations	Lessons learned from earlier work, e.g. the Anjozorobe project, can be successfully applied to the MRPAs. Baseline conditions and successful practices in the selected sites can be extrapolated with reasonable confidence level to other MRPAs in Madagascar. Increased awareness and capacity will lead to a change in behaviour with respect to the role of MRPAs in effectively conserving areas of high biodiversity and at the same time driving local economic growth.
	2. Loss of natural forest within in target MRPAs Priotity Conservation Zones	The baseline values for each MRPA will be calculated from CI's 2006	The target is a maximum loss rate of 2.5% in the MRPA	CI updates on forest loss rates	

Objective/ Outcome	Indicator	Baseline	End of Project target	Source of Information	Assumptions
	(PCZ) less than half of the national average for unprotected areas.	evaluation of rates of annual forest loss up until 2005. Non-protected forests average an annual loss rate of 5.3%.	Priority Conservation Zones, those areas within the sites with the highest value for biodiversity conservation.	expected in 2011 and 2015.	
	3. Trends in fire frequency and extent in MRPA Priority Conservation Zones relative to unprotected natural habitats that are not in PAs.	Baseline values to be defined by specialists upon project inception.	A general and indicative target would be that the fire frequency in MRPA PCZs is less than one-third of unprotected natural forest areas within the same region. More exact target values for each site will be defined by specialists upon project inception.	Consolidated University of Maryland satellite data on annual fire reports.	
Outcome 1 – New PAs created under IUCN Categories V and VI as a foundation for a functional and effective sub-network of Managed Resources Protected Areas based upon a common vision and management principles.	1. Increased scores on the GEF4's PA Management Effectiveness Tracking Tool "METT" for all eight target MRPAs. *(refer to PRODOC Annex 2)*	Baseline scores in 2010: [1] Menabe-Antimena 78 [2] Complex Mahavavy-Kinkony 56 [3] Loky Manambato 67 [4] Ampasindava Peninsula & Galoko Kalabenono 6 [5] Ambohimirahavavy Marivorahona 5	All sites score a minimum of 80. Currently supported sites with the higher scores should increase by 20.	Application of the GEF4's PA Management Effectiveness Tracking Tool "METT" for all eight target MRPA sites vetted by mid-term and final evaluations.	Regional and communal administrations, as well as local communities, choose to cooperate with project partners towards MRPA consolidation. MRPA Zoning is an effective tool for conserving key ecosystems intact within an overall context of landscape management and sustainable use of biodiversity.
	2. The enforcement of MRPA Zoning Plans for critical PAs is effective, as measured by the annual number of infractions reported on each site by communes and local communities.	At present, local communes and communities in the targeted MRPAs have not yet organized to report on infractions.	A refinement of this indicator and appropriate targets will be defined once Plans are in force and a monitoring system for infractions is in place.	MRPA annual site reports and field surveillance.	
Outcome 2 – Institutional capacity among key stakeholder groups provides the	1. Progressively increased scores on the UNDP's Capacity Development Scorecard for of Protected Areas Management over the baseline average	Systemic 14/30 (44%) Institutional 21/45 (55%) Individual 11/21 (54%) (General average 51%)	Scores, expressed in absolute terms, increase by at least 20%.	Application of UNDP's Capacity Development	MRPAs will gradually become a national priority for Madagascar as

Objective/ Outcome	Indicator	Baseline	End of Project target	Source of Information	Assumptions
enabling framework for decentralized MRPA governance assuring biodiversity conservation and sustainable natural source-based economic growth.	ratio of 51% for the targeted MRPAs. *(refer to PRODOC Annex 2)*			Scorecard vetted by the mid-term and final evaluations.	knowledge and information is made available. MRPA establishment/ strengthening will be supported by all stakeholders as tangible benefits are perceived, especially at regional and local levels.
	2. Communities' perception of their livelihood stake in the good stewardship of biological resources in MRPAs, measured through the periodic and independent application of the 'Most Significant Change' (MSC) technique.	Not applicable. The MSC technique is to be applied once the project has been launched and some degree of change has occurred. The baseline corresponds to all assessments that corroborate the situation analysis for this project, particularly with respect to land-uses and livelihoods.	Positive changes in livelihoods are perceived through the independent application of the MSC technique. The results should confirm positive changes in Indicator 2 under Outcome 3 and Indicator 3 under Outcome 2.	Results and analysis from the application of the MSC technique by mid-term and final evaluations.	
	3. Increased land tenure security for local communities.	Baseline to be defined at project inception. This will include assessment of land under customary ownership where owners wish to have legal titling.	Target value to be defined once baseline assessments have been made during project inception.	Mid-term and final evaluations.	
Outcome 3 – Financial sustainability of MRPAs is strengthened through innovative entrepreneurial public-private partnerships and mobilization of public funding.	1. Increased scores on the UNDP's Financial Sustainability Scorecard for National Systems of Protected Areas over the baseline for the targeted MRPAs. *(refer to PRODOC Annex 2)*	Total Score for target MRPAs = 98 out of a total possible score of 197 (i.e., 50%).	Scores, expressed in absolute terms, increase by at least 25%.	Application of UNDP's Financial Sustainability Scorecard (as part of the SO1 Tracking Tools) by CEO Endorsement, mid-term and final evaluations.	Biodiversity-friendly business activities are feasible in the MRPA context and they have strong buy-in and participation from both communities and investors. Threats and risks to MRPAs' biodiversity posed by the operations of extractive industries can be reasonably controlled and mitigated, and if not
	2. Number of households benefitting from MRPA intervention and their mean revenues.	Baseline data are available for Daraina-Loky-Manambato and Menabe-Antimena. Baselines must be established for all target MRPA baselines (0 revenues apart from the above sites) and projected targets set	Values to be determined based on baseline evaluations and projections during project inception.	MRPA site reports and association/ private sector partner records.	

Objective/ Outcome	Indicator	Baseline	End of Project target	Source of Information	Assumptions
		based on opportunities.			then compensated for. Entrepreneurial initiatives and leadership can successfully emerge in the MRPA context, so that innovative sources of environmental funding can be tapped into.
	3. Funding secured for MRPA management operations.	Baseline data are available for Daraina-Loky-Manambato and Menabe-Antimena. Baselines must be established for all target MRPA baselines (0 revenues apart from the above sites) and projected targets set based on opportunities. The latter will involve private sector partners.	Values to be determined based on baseline evaluations and projections during project inception.	Project, MRPA site and UCPE reports.	

LIST OF OUTPUTS PER OUTCOME AS PART OF THE SRF

Project Objective: To expand the PA system of Madagascar by developing a sub-network of managed resource protected areas in represented ecological landscapes, co-managed by local government and communities and integrated into regional development frameworks.	
Outcomes	**Outputs**
1) New PAs created under IUCN Categories V and VI as a foundation for a functional and effective sub-network of Managed Resources Protected Areas based upon a common vision and management principles.	1.1 A clear vision and principles for an MRPA sub-network are formalized within the PA register (MRPA objectives and management arrangements 1.2 Baseline inventories facilitate zoning and help define options for sustainable natural resource-economic growth (biodiversity values, social values, economic options and cultural reference data obtained for sites to be included in land use planning and business plans completion. 1.3 PAs gazetted (management plan approved, participatory boundary demarcation into core & buffer areas; site registration as permanent PA) 1.4 An updated national PA system plan ensures that MRPA zoning and objectives are systematically integrated into legalized regional and local land use planning and mapping 1.5 Basic PA infrastructures and management tools in place: (administrative stations, radio communication network, field materials). 1.6 Monitoring systems instituted to track pressures, state and economic growth indicators
2) Institutional capacity among key stakeholder groups provides the enabling framework for decentralized MRPA governance assuring biodiversity conservation and sustainable natural source-based economic growth.	2.1 Governance structures, rules, roles and responsibilities for site co-management are agreed by all partners, formalized and established 2.2 Community land tenure, natural resource management rights and responsibilities are formally recognized and upheld 2.3 Capacity strengthening tools developed and operational for key stakeholders 2.4 Technical services equipped and mobilized to respond to local initiatives associated with MRPA objectives 2.5 Sub-network forum for local MRPA stakeholders (public, civil society, private sector) motivated and operational 2.6 An effective communication system, especially targeting communities and their respective interest groups, facilitates civic participation, informed decision-making and MRPA implementation
3) Financial sustainability of MRPAs is strengthened through innovative entrepreneurial public-	3.1 Business plans developed for individual MRPAs and sub-network operations (costs quantified for management; non-state revenue options are defined, economic opportunities at each site)

Project Objective: To expand the PA system of Madagascar by developing a sub-network of managed resource protected areas in represented ecological landscapes, co-managed by local government and communities and integrated into regional development frameworks.	
Outcomes	**Outputs**
private partnerships and mobilization of public funding.	3.2 Develop contractual contribution systems for sustainable MRPA financing through incentives for innovative and improved revenue streams that also drive economic growth and reduce pressures 3.3 Rules and procedures for sustainable tourism and managed reforestation concessions, biodiversity offsets and CSR developed and implemented in collaboration with the competent public and private institutions 3.4 Investment provided through micro-credit and the project catalyze local entrepreneurial initiatives 3.5 Labeling is facilitated and market access negotiated for organic and/or fair trade in conservation compatible production, services and local entrepreneurial initiatives 3.6 Revenues from voluntary carbon agreements (including REDD++) contribute to upfront funding for community-based reforestation ventures 3.7 Revenues from REDD and agreements are invested in earmarked FAPBM sub-accounts 3.8 Options for increased public funding for MRPAs are identified and negotiated

310. A detailed activity list and a chronogram of activities per output will be finalized upon project inception.

Part II: Incremental Cost Analysis

Table 11. Incremental Cost Matrix

Cost/Benefit	Baseline (B)	Alternative (A)	Increment (A-B)
BENEFITS			
Global benefits	In the baseline situation (business-as-usual scenario), many of the new MRPAs that have given rise to SAPM will remain largely as paper parks and will struggle to find adequate financial resources for their consolidation. In addition, Madagascar National Parks will not be able to fill the gaps, largely because of capacity constraints, and some of the world's most important biodiversity areas may be lost. While successive governments have continued to favor PAs over the previous two decades, the country's economic situation may sway decision-makers towards rapid economic growth through extractive industries, notably petroleum, mines and agribusiness. A weak and inadequately effective MRPA network would be a difficult alternative to defend.	Under the alternative scenario, institutional capacity and financial barriers will be removed, allowing the creation of effective MRPAs that ensure effective conservation of some of Madagascar's most important biodiversity centers and, by extension, global priorities. The project will directly create 1,527,151 ha in eight MRPAs while the interventions of partners will lead to the protection of an additional 1,286,816 ha. This will help the GOM meet its declared commitment to place at least 10% of national territory under protection. The new MRPAs will help to guarantee the survival of a veritable host of globally threatened species.	Removal of barriers to the protection of about 4.9% of national territory of critically and globally important habitat and species. This represents almost half of the area destined to be under PA regimes. Most of the targeted MRPAs are relatively large with many areas in very good condition, key factors in ensuring long-term viability. The two smaller MRPAs forest ecosystems that are naturally limited to small areas. Recent climate change impact analyses indicate that the selected sites are resilient to climate change as they are sufficient large or represent natural refugium areas. All of the sites will contribute to conservation of globally important biodiversity centers.

Cost/Benefit	Baseline (B)	Alternative (A)	Increment (A-B)
National and local benefits	Lack of arable land, limited access to improved production technology and continued economic migration will continue to erode the country's natural resource base that is key to sustainable national and local economic growth. The benefits of the innovative MRPA approaches that combine effective biodiversity conservation and sustained economic growth will fail to take hold and PA efforts will continue to be restricted to the more traditional, stricter approaches maintained by Madagascar National Parks. In very practical terms, SAPM capacity to coordinate MRPAs will remain limited.	Under the alternative scenario, Madagascar will benefit from medium- to long-term added security for ecosystem goods and services and other benefits from natural habitat protection. At national level, SAPM will continue to develop its professionalism through capacity strengthening and increased motivation. At the local levels, the highly promising strides made in significantly improving local income through MRPA interventions will be maintained, providing opportunities for rural communities to break free from a persistent subsistence economy and greatly improve their well-being. The MRPA approach will demonstrate its ability to combine effective biodiversity conservation with sustained economic growth and as a result PAs will continue to gain public support.	Public appreciation of the value of PAs and wise stewardship of natural resources will increase. MRPAs will add significant value to the national PA system with respect to safeguarding the country's remarkable biodiversity, an important economic resource. They will also increase ecosystem resilience to climate change and land degradation processes which in turn increases sustainable development opportunities. An effective MRPA system also provides opportunities for sustained economic growth and poverty reduction among some of Madagascar's least economically favored populations.
COSTS			
Outcome 1: New PAs created under IUCN Categories V and VI as a foundation for a functional and effective sub	**Baseline: $ 10.57 million** ▪ Financial support from KFW to MNP ▪ World Bank and UNDP non-GEF support to EP3 ▪ Intl NGO support to COFAV, CAZ	**Alternative: $ 15.00million**	**Increment in $ million:** **GEF 2.23** UNDP 0.30 GCF - Intrest Rate (GCF) - Oceane Aventure - WWF 0.90 CI - DURELL 0.52 FAPBM - MBG 0.10 FANAMBY 0.34 Asity 0.05 **TOTAL ($ million) 4.43**

Cost/Benefit	Baseline (B)	Alternative (A)	Increment (A-B)
Outcome 2: Institutional capacity among key stakeholder groups provides the enabling framework for decentralized MRPA governance assuring biodiversity conservation and sustainable natural source	**Baseline: $ 4.42 million** Intl NGO support to DCBSAP	**Alternative: $ $4.17 million**	**Increment in $ million:** **GEF** **1.94** UNDP 1.13 GCF - Intrest Rate (GCF) - Oceane Aventure - WWF - CI 0.68 DURELL - FAPBM - MBG - FANAMBY - Asity - **TOTAL ($ million)** **3.74**
Outcome 3: Financial sustainability of MRPAs is strengthened through innovative entrepreneurial public	**Baseline: $ 9.24 million** PA Foundation support for the implementation of MNP and MRPA programs	**Alternative: $ 13.86 million**	**Increment in $ million:** **GEF** **1.23** UNDP 0.80 GCF 1.81 Intrest Rate (GCF) 0.27 Oceane Aventure 0.06 WWF - CI - DURELL - FAPBM 0.45 MBG - FANAMBY - Asity - **TOTAL ($ million)** **4.62**
Others: Project Management Unit, Program Implementation Technical Support Team, and Indicative Monitoring	**n/a**	**Alternative: $ 1.42 million**	**Increment in $ million:** **GEF** **0.60** UNDP 0.27 GCF 0.19 Intrest Rate (GCF) 0.03 Oceane Aventure 0.01 WWF 0.10 CI 0.07 DURELL 0.05 FAPBM 0.05 MBG 0.01 FANAMBY 0.04 Asity 0.00 **TOTAL ($ million)** **1.42**

Cost/Benefit	Baseline (B)	Alternative (A)	Increment (A-B)
TOTAL COSTS	**Baseline: $ 20.23 million**	**Alternative: $ 33.02 million**	**Increment in $ million:** **GEF 6.00** UNDP 2.50 GCF 2.00 Intrest Rate (GCF) 0.30 Oceane Aventure 0.07 WWF 1.00 CI 0.75 DURELL 0.57 FAPBM 0.50 MBG 0.11 FANAMBY 0.38 Asity 0.05 **TOTAL ($ million) 14.22**

SECTION III: Total Budget and Workplan

Award ID:	00061027	**Business Unit:**	MDG10
Project ID:	00077104	**Project Title:**	Network of Managed Resource Protected Areas
Award Title:	PIMS 4172 FSP Network of MRPAs	**Implementing Partner**	Environmental Projects Coordination Unit - UPCE

GEF Outcome/Atlas Activity	Resp. Party/ Impl Agent	Fund ID	Donor Name	ERP / ATLAS Budget Code	Atlas Budget Description	TOTAL Amount (USD)	2013	2014	2015	2016	2017	Budg Notes
1. Establishment of new MRPPAs	UPCE	62000	GEF-10003	71400	Contractual Services - Individ	450,000	150,000	150,000	150,000			*1*
	UPCE	62000	GEF-10003	71200	International Consultants	18,000	18,000					*2*
	UPCE	62000	GEF-10003	71300	Local Consultants	80,000	16,000	16,000	16,000	16,000	16,000	*3*
	UPCE	62000	GEF-10003	71600	Travel	100,000	30,000	20,000	20,000	20,000	10,000	*4*
	UPCE	62000	GEF-10003	72600	Grants	1,522,903	614,239	400,000	250,000	150,000	108,664	*5*
	UPCE	62000	GEF-10003	72200	Equipment and Furniture	25,000	25,000				0	*6*
	UPCE	62000	GEF-10003	75700	Trainings and Workshops	102,000	40,000	20,000	20,000	19,000	3,000	*7*
	GEF Subtotal Atlas Activity 1 (Outc 1)					2,297,903	853,239	586,000	436,000	186,000	134,664	
	UPCE	04000	UNDP TRAC - 00012	71200	International Consultants	45,000	0	20,000		25,000	0	*8*
	UPCE	04000	UNDP TRAC - 00012	71600	Travel	25,000	12,500				12,500	*9*
	UPCE	04000	UNDP TRAC - 00012	72600	Grants	160,000	65,000	52,500	20,000	15,000	7,500	*5*
	UPCE	04000	UNDP TRAC - 00012	72200	Equipment and Furniture	41,860	20,930				20,930	*10*
	UPCE	04000	UNDP TRAC - 00012	73400	Rental & Maint of Other Equip	25,000	25,000				0	*11*
	TRAC Subtotal Atlas Activity 1 (Outc 1)					296,860	123,430	72,500	20,000	40,000	40,930	
TOTAL ACTIVITY 1 (Outc 1)						**2,594,764**	**852,430**	**658,500**	**456,000**	**226,000**	**175,594**	
2. Institutional capacity & decentralized PA governance framework for MRPAs	UPCE	62000	GEF-10003	71300	Local Consultants	50,000	15,000	10,000	10,000	10,000	5,000	*12*
	UPCE	62000	GEF-10003	71600	Travel	25,000	7,500	5,000	5,000	5,000	2,500	*13*
	UPCE	62000	GEF-10003	72100	Contractual Services-Companies	40,000	12,000	8,000	8,000	8,000	4,000	*14*
	UPCE	62000	GEF-10003	72600	Grants	1,748,118	597,118	450,000	300,000	280,000	121,000	*5*
	UPCE	62000	GEF-10003	72200	Equipment and Furniture	25,000	12,500				12,500	*15*
	UPCE	62000	GEF-10003	73100	Rental & Maintenance-Premises	16,000	10,500			2,000	3,500	*16*
	GEF Subtotal Atlas Activity 2 (Outc 2)					1,904,118	654,618	473,000	323,000	305,000	148,500	
	UPCE	04000	UNDP TRAC - 00012	71200	International Consultants	90,000	18,000	23,000	20,000	20,000	9,000	*17*
	UPCE	04000	UNDP TRAC - 00012	71200	International Consultants	30,000	0	15,000			15,000	*18*
	UPCE	04000	UNDP TRAC - 00012	71300	Local Consultants	10,000	0	5,000		5,000	0	*19*
	UPCE	04000	UNDP TRAC - 00012	71400	Contractual Services - Individ	79,000	15,800	15,800	15,800	15,800	15,800	*20*
	UPCE	04000	UNDP TRAC - 00012	71600	Travel	48,000	14,000	10,000	7,000	14,000	3,000	*21*
	UPCE	04000	UNDP TRAC - 00012	72100	Contractual Services-Companies	173,000	75,000	65,000	3,000	20,000	10,000	*22*
	UPCE	04000	UNDP TRAC - 00012	72600	Grants	400,000	125,000	130,000	70,000	50,000	25,000	*5*
	UPCE	04000	UNDP TRAC - 00012	72200	Equipment and Furniture	227,000	113,500				113,500	*23*
	UPCE	04000	UNDP TRAC - 00012	72500	Supplies	13,800	8,000	1,700	1,300	1,800	1,000	*24*
	UPCE	04000	UNDP TRAC - 00012	74200	Audio Visual & Print Prod Cost	59,500	12,000	30,000	5,000	5,000	7,500	*25*
	TRAC Subtotal Atlas Activity 2 (Outc 2)					1,130,300	381,300	295,500	122,100	131,600	199,800	
TOTAL ACTIVITY 2 (Outc 2)						**3,034,418**	**1,035,918**	**768,500**	**445,100**	**436,600**	**348,300**	
3. PPP & Financial sustainability	UPCE	62000	GEF-10003	71200	International Consultants	129,000	30,000	25,000	25,000	19,000	30,000	*26*
	UPCE	62000	GEF-10003	71300	Local Consultants	50,000	15,000	15,000	10,000	10,000		*27*
	UPCE	62000	GEF-10003	71300	Local Consultants	50,000	15,000	15,000	10,000	10,000		*28*

GEF Outcome/Atlas Activity	Resp. Party/ Impl Agent	Fund ID	Donor Name	ERP / ATLAS Budget Code	Atlas Budget Description	TOTAL Amount (USD)	2013	2014	2015	2016	2017	Budg Notes
	UPCE	62000	GEF-10003	71600	Travel	57,449	17,000	12,000	12,000	11,449	5,000	*29*
	UPCE	62000	GEF-10003	72600	Grants	807,979	287,979	230,000	160,000	80,000	50,000	*5*
	UPCE	62000	GEF-10003	72200	Equipment and Furniture	104,000	62,000	22,000	10,000		10,000	*30*
	GEF Subtotal Atlas Activity 3 (Outc 3)					1,198,428	426,979	319,000	227,000	130,449	95,000	
	UPCE	04000	UNDP TRAC - 00012	71600	Travel	9,050	3,000	2,000	2,000	2,000	50	*31*
	UPCE	04000	UNDP TRAC - 00012	72100	Contractual Services-Companies	137,250	30,500	30,500	30,500	30,500	15,250	*32*
	UPCE	04000	UNDP TRAC - 00012	72600	Grants	450,000	100,000	100,000	120,000	80,000	50,000	*5*
	UPCE	04000	UNDP TRAC - 00012	72200	Equipment and Furniture	55,000	0			55,000	0	*33*
	UPCE	04000	UNDP TRAC - 00012	74200	Audio Visual & Print Prod Cost	23,250	9,250	7,000	3,500	3,500	0	*34*
	UPCE	04000	UNDP TRAC - 00012	74500	Miscellaneous Expenses	100,000	20,000	20,000	20,000	20,000	20,000	*35*
	TRAC Subtotal Atlas Activity 3 (Outc 3)					774,550	162,750	159,500	176,000	191,000	85,300	
TOTAL ACTIVITY 3 (Outc 3)						**1,972,978**	**589,729**	**478,500**	**403,000**	**321,449**	**180,300**	
4. Proj Mgt	UPCE	62000	GEF-10003	71400	Contractual Services - Individ	250,000	55,000	50,000	50,000	50,000	45,000	*36*
	UPCE	62000	GEF-10003	71400	Contractual Services - Individ	145,000	29,000	29,000	29,000	29,000	29,000	*37*
	UPCE	62000	GEF-10003	71400	Contractual Services - Individ	79,000	15,800	15,800	15,800	15,800	15,800	*38*
	UPCE	62000	GEF-10003	71400	Contractual Services - Individ	79,000	15,800	15,800	15,800	15,800	15,800	*39*
	UPCE	62000	GEF-10003	71600	Travel	14,000	4,200	2,800	2,800	2,800	1,400	*40*
	UPCE	62000	GEF-10003	72500	Supplies	23,000	4,900	4,600	4,600	4,600	4,300	*41*
	UPCE	62000	GEF-10003	73100	Rental & Maintenance-Premises	5,000	1,500	1,000	1,000	1,000	500	*42*
	UPCE	62000	GEF-10003	74500	Miscellaneous Expenses	4,161	1,281	800.00	800.00	800.00	480	*43*
	GEF Subtotal Atlas Activity 4 (Project Management)					599,161	127,481	119,800	119,800	119,800	112,280	
	UPCE	04000	UNDP TRAC - 00012	71300	Local Consultants	55,000	11,000	11,000	11,000	11,000	11,000	*44*
	UPCE	04000	UNDP TRAC - 00012	72200	Equipment and Furniture	60,552	25,500			35,052	0	*45*
	UPCE	04000	UNDP TRAC - 00012	73400	Rental & Maint of Other Equip	15,450	4,600	3,100	3,100	3,100	1,550	*46*
	UPCE	04000	UNDP TRAC - 00012	74100	Professional Services	79,000	15,800	15,800	15,800	15,800	15,800	*47*
	UPCE	04000	UNDP TRAC - 00012	74500	Miscellaneous Expenses	88,288	20,000	20,000	18,000	10,000	20,288	*48*
	TRAC Subtotal Atlas Activity 4 (Project Management)					298,290	76,900	49,900	47,900	74,952	48,638	
TOTAL ACTIVITY 4 (Project Management)						**897,451**	**204,381**	**169,700**	**167,700**	**194,752**	**160,918**	
SUB-TOTAL GEF						**5,999,610**	**2,062,317**	**1,497,800**	**1,105,800**	**741,249**	**490,444**	
SUB-TOTAL UNDP TRAC						**2,500,000**	**744,380**	**577,400**	**366,000**	**437,552**	**374,668**	
						8,499,610	**2,806,697**	**2,075,200**	**1,471,800**	**1,178,801**	**865,112**	

Budget Notes	
1	Chief Technical Advisor (proforma costs of an L4 equivalent full-time assignment) for 3 years.
2	Short-term International Consultants on retainer basis throughout the duration of the project: Climate Change and Protected Areas
3	Short-term National Consultants on retainer basis throughout the duration of the project: Spatial and Land Use Planning Expert
4	General Travel: International missions and site visits by central level teams).
5	Service Provision Contracts / Allocation for site level work (pertaining to the five MRPA sites): According to the Annual and quarterly workplan to be agreed upon between service providers and UCPE. Refer to Table 2 and Annex 2 for more details.
6	IT equipment for local associations :Acquisition of Laptops, software licenses and printer and other peripherals for building the capacity of local CBOs
7	Project workshops and meeting costs.
8	Short-term International Consultants: Specialist in the 'Most Significant Change Methodology' (Refer to PRODOC Table 7. Elaboration on Project indicators for explanations on the methodology).

Budget Notes	
9	Travel in connection with the Project Inception and Launching Workshops: At the national level and five at the level of sites.
10	MEF: Motorised equipment for enabling the DREFs (MEF's regional offices) to fulfil their forest monitoring functions vis-à-vis MRPAs: Motorcycles– includes insurance and small allowance for fuel and maintenance.
11	MEF: Renovations for at least 5 DREFs premises for enabling the forestry officers to fulfil their oversight functions vis-à-vis MRPAs.
12	Short-term National Consultants on retainer basis throughout the duration of the project: Institutions & Regulations expert
13	Travel to MRPAs in connection with MEF's forest control function (2) CBO's and OPCI's participation in PSC meetings.
14	MEF: Internet connectivity and other means of communications in site offices.
15	Installation of renewable power supply in at least three sites (where needs were identified)
16	MEF: DCBSAP offices rehabilitation and maintenance.
17	Short-term International Consultants on retainer basis throughout the duration of the project: Training and Capacity Building specialist (on NRM & BD) .
18	Short-term International Consultants: Evaluator (Mid-term + Final).
19	Short-term National Consultants: Evaluator (Mid-term + Final).
20	Long-term national PMU staff: Administrative and Finance Officer
21	Travel to MRPAs in connection with team-building workshops (project retreat) and MRPA sub-network meetings
22	Various Trainings targeting MRPA local staff, OPCI, DREFs, DCBSAP and several CBOs: Protected Area management skills, IT for development, data-collection, planning, budgeting and reporting etc. This will be defined during inception.
23	Acquisition of (1) Communication equipments ; (2) All terrain vehicles; IT Laptops for PMU, MEF and sites, software licenses and printer and other peripherals
24	MRPA/Community-based NR management training materials & Sites Newsletter production
25	(1) Setting up of the MRPAs network Website and Intranet. (2) Production of MRPAs video documentary. (3) SAPM NAPs Newsletter & Rural newspaper production. May be latter broken down into other Atlas lines as needed (e.g. 74100 Professional Services).
26	Short-term International Consultants on retainer basis throughout the duration of the project: Extractive Industries and Biodiversity specialist
27	Short-term National Consultants on retainer basis throughout the duration of the project: Sustainable Tourism and Communications Expert
28	Short-term National Consultants on retainer basis throughout the duration of the project: Private Sector Engagement Expert
29	Domestic travel in connection with Monitoring missions by key MEF to MRPAs with the purpose of leveraging government support to the network.
30	Machinery for processing of biodiversity products (essential oils etc.); agricultural equipment; tree nursery; acquisition of 2 x small motorboats for coastal sites.
31	Domestic travel in connection with Monitoring missions by key MEF to MRPAs with the purpose of leveraging government support to the network.
32	Press visits. TV and radio spots. Participation of key project staff in Parks' Congress etc.
33	Acquisition of additional / substitution: (1) All terrain vehicles ; and (2) small motorboats for coastal sites– according to needs.
34	(1) Setting up of the MRPAs network Website and Intranet. (2) Production of MRPAs video documentary. (3) SAPM NAPs Newsletter & Rural newspaper production. May be latter broken down into other Atlas lines as needed (e.g. 74100 Professional Services).
35	Insurance, bank charges (including admin fees to UPCE) and other sundries for the project coordinating unit.
36	Long-term national PMU staff: National Project Coordinator
37	Long-term national PMU staff: Monitoring and Evaluation Senior Officer
38	Long-term national PMU staff: Project Assistant
39	Long-term national PMU staff: ICT and Database Assistant
40	Management related travel

Budget Notes	
41	Office supplies, fuel, car parts etc.
42	Reserve for maintenance of premises.
43	Insurance, bank charges (including F&A for Foundation) and other sundries for the project coordinating unit.
44	Short-term National Consultants on retainer basis throughout the duration of the project: Communications & Outreach Officer
45	MEF: Additional/substitution laptops, motorcycles & furniture, Land tenure equipments (GPS, loggers) for DREFs
46	Vehicle maintenance.
47	Audit, translations and, if needed, reserve for legal fees.
48	Insurance, bank charges (including F&A for UCPE) and other sundries (including office rent) for the project coordinating unit.

Table 12. Indicative Envelope for Technical Service Provision Contracts per Component

Project Components (Outcomes)	GEF ($)	UNDP ($)	TOTAL funding from the TBW ($)
1) Establishment of new MRPAs	1,522,903	160,000	1,682,903
2) Inst. cap. & decentr. PA gov. framew. for MRPAs	1,748,118	400,000	2,148,118
3) PPP & financial sustainability	807,979	100,000	907,979
Total	**4,079,000**	**660,000**	**4,739,000**
Percentage of grants proposed as a total of the TBW	**68%**	**26%**	**56%**

Note: See Annex 2. Indicative Activities for Site for more details on activities.

SECTION IV: Additional Information

PART I: Co-financing and Support Letters

[Refer to separate file for all letters]

Table 13. Overview of the project's co-financing letters

NAME OF CO-FINANCIER	DATE	AMOUNTS CONSIDERED AS PROJECT CO-FINANCING (IN USD)
UNDP	30-Mar-10	2,500,000
Global Conservation Fund	25-Mar-10	2,000,000
Interest rate on project related investments by GCF	25-Mar-10	300,000
Oceane Aventure	10-Mar-10	65,000
WWF	24-Mar-10	1,000,000
Conservation International		750,000
DURELL	31-Mar-10	570,000
Fondation des Aires Protégées et de la Biodiversité de Madagascar - FAPBM	01-Apr-10	500,000
Missouri Botanical Garden - MBG	01-Apr-10	108,400
FANAMBY	30-Mar-10	375,000
Asity	01-Apr-10	50,000
Total		**8,168,400**

Table Notes:
* This is an in-cash direct contribution, be managed by UNDP in connection with the project under the same budgetary award.

Table 14. Overview of Partners' Support Letters

NAME OF PARTNERS	DATE
ECOCERT SA Succursale Madagascar	10-Mar-10
ECO-SYS ACTION	16-Mar-10
Kudeta	10-Mar-10
Man and the Environment	10/03/2010
Madagascar National Parks	08-Mar-10
Regional Tourism Board of Sainte Marie	March 2010
National Tourism Board of Madagascar	16-Mar-10
Regional Tourism Board of Menabe	March 2010
Palissandre Hotel & SPA	17-Mar-10
Madagascar Oil	16-Mar-10
Syrius / Organic Products	01-Apr-10
Ministry of Environment and Forests (with translation)	02-Apr-10

PART II: Terms of References for key project staff

NATIONAL PROJECT COORDINATOR (PROJECT MANAGER)

Background

The Project Coordinator will be a regionally recruited and selected based on an open competitive process. The Coordinator will have overall responsibility for the delivery of outputs on time, on scope and on budget. He/she will ensure that all UNDP administrative and financial procedures are adhered to. He/She links the interventions of the technical support team and the specialist to realize concrete action on site, based on the objectives and deliverables of the project. He/She ensures consistency and intervention principles of each MRPA with the SAPM.

Duties and Responsibilities

- Coordinate the production of project outputs, as per the project document;
- Coordinate the work of all project staff, consultants and sub-contractors;
- Coordinate the recruitment and selection of project personnel;
- Ensure the supervision of project personnel, once they are under contract to serve the project, by carrying due performance appraisal and linking this to possible contract renewal;
- Prepare and revise project work and financial plans, as required by UPCE and UNDP;
- Liaise with UNDP, FAPBM, DCBSAP, relevant government agencies, and all project partners, including donor organizations and NGO partners for effective coordination of all project activities;
- Facilitate training activities supported by the Project;
- Prepare and revise the Inception Report, Combined Project Implementation Review/Annual Project Report (PIR/APR), Technical reports, Quarterly Operational Reports (QOR) to the GEF, quarterly financial reports, and other reports as may be required by UNDP, GEF, UPCE, the PSC and other oversight agencies;
- Disseminate project reports and respond to queries from concerned stakeholders;
- Ensure the timely and effective implementation of all components of the project;
- Assist community groups, regional and local governments, inter-communal bodies, local NGOs and CBOs, staff, students and others with development of essential skills through training workshops and on the job training thereby upgrading their institutional capabilities;
- Coordinate and assists scientific institutions with the initiation and implementation of all field studies and monitoring components of the project
- Assist and advise the teams responsible for documentaries, TV spots, guidebooks and awareness campaign, field studies, etc; and
- Carry regular, announced and unannounced inspections of all sites and the activities of the project site management units.

Qualifications

- A university degree (preferably advanced) in environmental/natural sciences (e.g. biology) or social sciences (e.g. economics) with consistent specialization in issues conservation and natural resource management;
- At least 10 years of experience in the field of natural resource and/or biodiversity management;

- At least 5 years of project/program management experience;
- Working experiences with ministries, national institutions and NGOs is a plus, but not a requirement;
- Ability to effectively coordinate a large, multi-stakeholder project;
- Ability to administrate budgets, train and work effectively with counterpart staff at all levels and with all groups involved in the project;
- Strong drafting, presentation and reporting skills;
- Strong computer skills, in particular mastery of all applications of the MS Office package and internet search;
- Strong knowledge about political and socio-economic context, in particular at the national and local levels;
- Excellent writing communication skills in French
- A good working knowledge of English is a requirement.

CHIEF TECHNICAL ADVISER

Background

The Chief Technical Adviser (CTA) will be responsible for providing overall technical backstopping to the Project. He/She will render technical support to the National Project Coordinator (NPC), staff and other government counterparts. The CTA will coordinate the provision of the required technical inputs, review and prepare the Terms of Reference and review the outputs of consultants and other sub-contractors. The CTA will be an experienced expatriate. He/She will report directly to the National Project Coordinator.

Duties and Responsibilities

- Provide technical and strategic assistance for project activities, including planning, monitoring and site operations, and assuming quality control of interventions;
- Provide hands-on support to the National Project Coordinator, project staff and other government counterparts in the areas of project management and planning, management of site activities, monitoring, and impact assessment;
- Finalize the Terms of Reference for consultants and sub-contractors, and assist in the selection and recruitment process;
- Coordinate the work of all consultants and sub-contractors, ensure the timely delivery of expected outputs, and ensure effective synergy among the various sub-contracted activities;
- Assist the National Project Coordinator in the preparation and revision of the MRPA Management Plan as well as the Consolidation of Project's Annual Work Plans, vetting and assisting in the improvement of Site Annual Workplan emanating from NGO partners;
- Coordinate the preparation of the periodic Status Report when called upon by the National Project Coordinator;
- Assist the National Project Coordinator in the preparation of the Combined Project Implementation Review/Annual Project Report (PIR/APR), the inception report, technical reports, Quarterly Operational Reports (QOR) to the GEF and the quarterly financial reports for submission to the UNDP, UPCE the GEF and any other donors and Government Departments, as required;

- Assist in mobilizing staff and consultants in the conduct of a due project evaluations (mid-term and final), and in undertaking revisions in the implementation program and project strategy based on evaluation results;
- Assist the National Project Coordinator in liaising with project partners, donor organizations, NGOs, private sector, academia and other groups in order to ensure the effective coordination of project activities;
- Document lessons from project implementation and make recommendations to the Steering Committee for more effective implementation and coordination of project activities; and
- Perform other tasks as may be requested by the National Project Coordinator, Steering Committee and other project partners.

Qualifications

- A university degree (MS or PhD) in Natural Resource Management, Biodiversity Conservation, Environmental Sciences, Social Sciences, Management/Business Administration, Economics, Engineering or any other area relevant for the project theme;
- At least 15 years of professional experience in protected area/conservation planning and management;
- Demonstrable experience in implementing GEF or other equivalent multilateral donor-funded projects;
- Be an effective negotiator with excellent oral and presentation skills;
- A good working knowledge of international best practice in protected area planning and management is desirable;
- Excellent writing skills in English,
- A good working knowledge of French is a requirement.

PROJECT ADMINISTRATIVE AND FINANCE OFFICER

Background

The Accountant will report to the NPC and be primarily responsible for all tasks related to book keeping, assistance in workplan and budget preparation, budget revisions and financial monitoring. He/she will provide general administrative and finance services and cater for the day-to-day finances and accounting needs of the Project. The post holder will be responsible for liaising as appropriate with the remainder of the project team and partners with respect to financial management.

Duties and Responsibilities

- Budget and finance
- Reviews and analyses data with respect to the finalization of cost estimates and budget proposals, in terms of staff and non-staff requirements.
- Provides support to managers with respect to the elaboration of resource requirements for budget submissions/revisions.
- Reviews, analyses and provides input into finalization of the project's consolidated Annual Workplan and Budget for clearance by the NPC and submission to the Project Steering Committee.

- Monitors budget implementation and determines/recommends reallocation of funds when and where necessary.
- Monitors expenditures to ensure that they remain within authorized levels.
- Prepares relevant documentation with respect to budget performance submissions.
- Advises senior management and project coordinators on all aspects of accounts maintenance, budget control, incomes and other financial issues regarding projects implementation, i.e. obligations and future programme/projects budgetary implications.
- Acts as Approving Officer for the project's budgets, ensuring the payment is made against a recorded commitment and requested for goods and services which have been delivered and not paid before, availability of funds against budget lines. Maintains list of authorized personnel to make payments and informs UNDP on any changes to the list.
- Supervises the closing of the monthly accounts, assists in ensuring timely submission of Management Expenditures data to the NPC and the requested financial reports to UNDP; reconciliation and replenishment of bank accounts.
- Ensures strategic financial resource management: Advises senior management staff on co-financing modalities & arrangements, suggests measures for adequate optional utilization of projects funds, and recommends cost savings and redeployments as appropriate.
- Acts as key interface for internal audits and accounts examinations.
- Establish and maintain a set of sound policies, procedures, standards and tools which are consistent with UNDP's policy and practice in order to ensure proper accounting, financial management and control.
- Human resource management: Assist the NPC with the management of HR
- Maintains an overview of all project-financed human resources and the development of HR cost against approved project budgets.
- Advises the NPC on amendments and changes in HR cost and entitlements and resulting amendment requirements of project budgets.

Qualifications

- A university degree in business administration, finance, accounting or a relevant combination of academic qualification;
- At least 5 years of financial management experience;
- Demonstrable ability to administer project budgets, and track financial expenditure;
- Demonstrable ability to maintain effective communications with different stakeholders;
- Excellent computer skills, in particular mastery of all applications of the MS Office package and specific finance application;
- Knowledge of UNDP's Atlas system is a plus;
- Excellent writing communication skills in French; and
- A good working knowledge of English is a plus.

MONITORING AND EVALUATION OFFICER

Background

He/She is responsible for guiding the overall M&E strategy and implementation of related activities within the project and via partners, plus providing timely and relevant information to

project stakeholders. This entails close communication with all involved in M&E design and coordination: core project and partner M&E staff, representatives from the steering committee or similar unit, representatives from primary stakeholder groups, and the national project coordinator.

Critical tasks for the M&E responsible are setting up the M&E system and ensuring it is implemented effectively by the key stakeholders, namely the primary stakeholders and implementing partners. This is undertaken through the joint development of a shared M&E system that is based on existing formal and informal mechanisms and systems among key stakeholders. This needs to be supported by facilitating stakeholders to value, have appropriate capacities for and undertake their own M&E activities, and to link these into an overall assessment of project progress and needed actions.

Duties and responsibilities

- Develop the overall framework for project M&E, for example, annual project reviews, participatory impact assessments, process monitoring, operations monitoring and lessons learned workshops,
- Guide the process for identifying and designing the key indicators for each component, to record and report physical progress against the AWPB. Also steer the process for designing the format of such progress reports.
- Guide the process for identifying the key performance questions and parameters for monitoring project performance and comparing it to targets. Design the format for such performance reports.
- Clarify the core information needs of central project management, the steering committee (or similar body), funding agencies and the cooperating institution.
- With stakeholders, set out the framework and procedures for the evaluation of project activities
- Review the quality of existing social and economic data in the project area, the methods of collecting it and the degree to which it will provide good baseline statistics for impact evaluation.
- With the implementing partners, review their existing approaches and management information systems and agree on any required changes, support and resources
- Develop a plan for project-related capacity-building on M&E and for any computer-based support that may be required.
- Organize and undertake training with stakeholders, including primary stakeholders, in M&E skills, including participatory aspects.
- Guide staff and implementing partners in preparing their progress reports. Together, analyze these reports in terms of problems and actions needed. Prepare consolidated progress reports for project management to submit to the relevant bodies, in accordance with approved reporting formats and timing.
- Review monitoring reports; analyze them for impact evaluation and to identify the causes of potential bottlenecks in project implementation.
- Collaborate with staff and implementing partners on qualitative monitoring to provide relevant information for ongoing evaluation of project activities, effects and impacts.
- Foster participatory planning and monitoring by training and involving primary stakeholder groups in the M&E of activities.

- Prepare reports on M&E findings, as required, working closely with financial controller, technical staff and implementing partners.
- Guide the regular sharing of the outputs of M&E findings with project staff, implementing partners and primary stakeholders.
- Make regular reports to the project board/ decision-making structure, highlighting areas of concern and preparing the documentation for review at meetings

Qualifications

- A university degree (MS or PhD) in Social Sciences or in Statistics

At least several years of proven experience with:

- The logical framework approach and other strategic planning approaches
- M&E methods and approaches (including quantitative, qualitative and participatory)
- Training in M&E development and implementation
- Facilitating learning-oriented analysis sessions of M&E data with multiple stakeholders
- Information analysis and report writing
- M&E system design
- Data processing and with computers

She/He must also have:

- A solid understanding of biodiversity conservation and rural development, with a focus on participatory processes and joint management issues
- Familiarity with and a supportive attitude towards processes of strengthening local organizations and building local capacities for self-management
- Willing to undertake regular field visits and interact with different stakeholders, especially primary stakeholders
- Computer skills

ICT AND DATABASE ASSISTANT

Background

The ICT and Database Assistant will report to the NPC and be primarily responsible for all tasks related to data and ICT management in the project. He/she will assist the Project Coordinator in managing the databases held at the Project Management Unit and their dissemination through ICT tools.

Duties and Responsibilities

- Manage all issues related to the project's use of IT/ICT, including hardware, software, network resources, internet connectivity, including in the field, providing when needed assistance to project partners on such matters.
- Ensure project management unit's databases management, verification and digital archiving
- Coordinate data collections operations from any partnering organization
- Play a pivotal role in the creation and maintenance of the project's website
- Develop, support and maintain practical ICT tools to serve the project and partnering organizations demands, in particular a centralized project M&E system

- Coordinate trainings to support data collections, management and dissemination at the local level
- Ensure database compatibility with UNDP OMD indicators or WDPA system
- Manages any practical documents or reports from the field to the Project Management Unit

Qualifications
- A university degree in computer sciences or related area
- At least 5 years of ICT/IT experience
- Strong communications skills and needs' orientation
- Excellent writing communication skills in French
- A good working knowledge of English is a requirement.

PROJECT ASSISTANT

Background
The Project Assistant will be locally recruited based on an open competitive process. He/She will be responsible for the overall administration and logistics of the project. The Project Assistant will report to the Project Coordinator. Generally, the Project Assistant will be responsible for supporting the Project Manager in meeting government obligations under the project, under UNDP's NGO implementation modality.

Duties and Responsibilities
- Collect, register and maintain all information on project activities;
- Contribute to the preparation and implementation of progress reports;
- Assists the Finance Officer in monitoring project activities, budgets and financial expenditures;
- Advise all project counterparts on applicable administrative procedures and ensures their proper implementation;
- Maintain project correspondence and communication;
- Support the preparations of project workplans and operational and financial planning processes;
- Assist in procurement and recruitment processes;
- Assist in the preparation of payments requests for operational expenses, salaries, insurance, etc. against project budgets and work plans;
- Follow-up on timely disbursements by UNDP Country Office and UPCE;
- Receive, screen and distribute correspondence and attach necessary background information;
- Prepare routine correspondence and memoranda for the Project Coordinator's signature;
- Assist in logistical organization of meetings, training and workshops;
- Prepare agendas and arrange field visits, appointments and meetings both internal and external related to the project activities and write minutes from the meetings;
- Maintain project filing system;
- Maintain records over project equipment inventory; and
- Perform other duties as required.

Qualifications

- A post-school qualification (diploma, or equivalent);
- At least 5 years of administrative and/or financial management experience;
- Demonstrable ability to manage logistics, maintain effective communications with different stakeholders, and arrange stakeholder meetings and/or workshops;
- Excellent computer skills, in particular mastery of all applications of the MS Office package;
- Excellent writing communication skills in French; and
- A minimum working knowledge of English is a plus.

SITE-BASED LANDSCAPE MANAGERS

Background

Under contract with the NGO serving as Site Promoter and reporting to the Head of this NGO in close consultation with the National Project Coordinator and the Chief Technical Advisor, the Landscape Manager will lead the project's team on sites.

Duties and Responsibilities

- Be primarily responsible for the both administrative and technical implementation of project activities at the site level in accordance with the applicable rules and regulations.
- The Landscape Manager will ensure the planning, in particular the preparation of Annual Site Workplan, reporting and monitoring of site activities on time, on scope and on budget.
- Serve as Chief Administrative Officer (or 'Park Manager') of the MRPA site, if one is not in place, for the purpose of implementing the MRPA management plan, until an adequate and more permanent management structure and posts can emerge;
- Work closely with the core team in Antananarivo on the development of the ecological monitoring and MRPA surveillance mechanisms for the respective site(s);
- Establish productive partnerships with local communities and other stakeholders in the conduct of planning, protection and management of the MRPA;
- Implement a park information, education and visitor's program;
- Integrate the roles of local communities, regional and local governments, inter-communal structures, private sector, NGOs, CBOs and MRPA staff in project implementation and operation of the site(s);
- Document the processes involved in the establishment and management of the MRPA;
- Provide continuous and regular updating of the Site Promoter NGO and the Project Management Unit (PMU) on issues and concerns that need their decision and attention.
- He/She will also ensure that the Site Promoter NGO and the PMU are responsive to the needs of the MRPA;

OVERVIEW OF INPUTS FROM TECHNICAL ASSISTANCE CONSULTANTS

Table 15. Brief TOR for Short-term Technical Assistance Consultants

CONSULTANTS	THE CONSULTANTS ARE EXPECTED TO CONTRIBUTE IN PARTICULAR TO THE FOLLOWING PROJECT OUTPUTS:
INTERNATIONAL OR REGIONAL RECRUITMENTS	
Climate Change and Protected Areas Specialist	The consultant will play a pivotal role in the mainstreaming of climate risk and adaptation measure in MRPA management, but also in the effort to tap into finance opportunities in the carbon market, including but not restricted to REDD and REDD++. He/she will also train the project team and partners in relevant climate change issues (mitigation, adaptation and climate finance). Specific contributions: ▪ Output 1.2 Baseline inventories facilitate zoning and help define options for sustainable natural resource-economic growth (biodiversity values, social values, economic options and cultural reference data obtained for sites to be included in land use planning and business plans completion. ▪ Output 1.4 An updated national PA system plan ensures that MRPA zoning and objectives are systematically integrated into legalized regional and local land use planning and mapping [with focus on climate change adaptation mainstreaming] ▪ Output 2.3 Capacity strengthening tools developed and operational for key stakeholders [through knowledge management, training and capacity building] ▪ Output 2.5 Sub-network forum for local MRPA stakeholders (public, civil society, private sector) motivated and operational [through knowledge management, training and capacity building] ▪ Output 3.1 Business plans developed for individual MRPAs and sub-network operations (costs quantified for management; non-state revenue options are defined, economic opportunities at each site) [with focus on potential carbon related revenue streams] ▪ Output 3.2 Develop contractual contribution systems for sustainable MRPA financing through incentives for innovative and improved revenue streams that also drive economic growth and reduce pressures [with focus on potential carbon related revenue streams] ▪ Output 3.3 Rules and procedures for sustainable tourism and managed reforestation concessions, biodiversity offsets and CSR developed and implemented in collaboration with the competent public and private institutions ▪ Output 3.6 Revenues from voluntary carbon agreements (including REDD++) contribute to upfront funding for community-based reforestation ventures ▪ Output 3.7 Revenues from REDD and agreements are invested in earmarked FAPBM sub-accounts ▪ Output 3.8 Identify and lobby for increased public funding for MRPAs
Extractive Industries and Biodiversity Specialist	The consultant will play a pivotal role in the mainstreaming of extractive industries' issues in MRPA management, including through dialogue and negotiations with industry players, government and others as relevant. He/she will also train the project team and partners in relevant extractive industry biodiversity mainstreaming issues. Specific contributions: ▪ Output 1.2 Baseline inventories facilitate zoning and help define options for sustainable natural resource-economic growth (biodiversity values, social values, economic options and cultural reference data obtained for sites to be included in land use planning and business plans completion. ▪ Output 1.4 An updated national PA system plan ensures that MRPA zoning and objectives are systematically integrated into legalized regional and local land use planning and mapping [with focus on extractive industries' BD mainstreaming] ▪ Output 2.3 Capacity strengthening tools developed and operational for key stakeholders [through knowledge management, training and capacity building] ▪ Output 2.5 Sub-network forum for local MRPA stakeholders (public, civil society, private sector) motivated and operational [through knowledge management, training and capacity building]

CONSULTANTS	THE CONSULTANTS ARE EXPECTED TO CONTRIBUTE IN PARTICULAR TO THE FOLLOWING PROJECT OUTPUTS:
	▪ Output 3.1 Business plans developed for individual MRPAs and sub-network operations (costs quantified for management; non-state revenue options are defined, economic opportunities at each site) [with focus on potential CSR, compensation and BD off-setting related revenue streams] ▪ Output 3.2 Develop contractual contribution systems for sustainable MRPA financing through incentives for innovative and improved revenue streams that also drive economic growth and reduce pressures [with focus on potential CSR, compensation and BD off-setting related revenue streams] ▪ Output 3.3 Rules and procedures for sustainable tourism and managed reforestation concessions, biodiversity offsets and CSR developed and implemented in collaboration with the competent public and private institutions ▪ Output 3.6 Revenues from voluntary carbon agreements (including REDD++) contribute to upfront funding for community-based reforestation ventures ▪ Output 3.7 Revenues from REDD and agreements are invested in earmarked FAPBM sub-accounts ▪ Output 3.8 Identify and lobby for increased public funding for MRPAs
Specialist in 'The Most Significant Change' (participatory evaluation) Methodology	The consultant will play a pivotal role in applying the methodology 'The Most Significant Change' (MSC) in pareparation for evaluations. He/she will also train the project team and partners in collecting the data for building a MSC report and make proposals for the organisaiton of the consultation sessions. <u>With a key focus on livelihoods, the consultant will also specifically contribute to:</u> ▪ Output 1.1 A clear vision and principles for an MRPA sub-network are formalized within the PA register (MRPA objectives and management arrangements ▪ Output 2.1 Governance structures, rules, roles and responsibilities for site co-management are agreed by all partners, formalized and established ▪ Output 2.2 Community land tenure, natural resource management rights and responsibilities are formally recognized and upheld ▪ Output 2.3 Capacity strengthening tools developed and operational for key stakeholders ▪ Output 2.4 Technical services equipped and mobilized to respond to local initiatives associated with MRPA objectives ▪ Output 2.5 Sub-network forum for local MRPA stakeholders (public, civil society, private sector) motivated and operational ▪ Output 2.6 An effective communication system, especially targeting communities and their respective interest groups, facilitates civic participation, informed decision-making and MRPA implementation ▪ Output 3.6 Revenues from voluntary carbon agreements (including REDD++) contribute to upfront funding for community-based reforestation ventures
Training and Capacity Building specialist (on NRM & BD)	The consultant will play a pivotal role in building the capacity of government, CBOs and project's local teams for MRPA management. <u>Specific contributions:</u> ▪ Output 1.1 A clear vision and principles for an MRPA sub-network are formalized within the PA register (MRPA objectives and management arrangements ▪ Output 1.2 Baseline inventories facilitate zoning and help define options for sustainable natural resource-economic growth (biodiversity values, social values, economic options and cultural reference data obtained for sites to be included in land use planning and business plans completion. ▪ Output 1.3 PAs gazetted (management plan approved, participatory boundary demarcation into core & buffer areas; site registration as permanent PA ▪ Output 1.4 An updated national PA system plan ensures that MRPA zoning and objectives are systematically integrated into legalized regional and local land use planning and mapping ▪ Output 1.5 Basic PA infrastructures and management tools in place: (administrative stations, radio communication network, field materials). ▪ Output 1.6 Monitoring systems instituted to track pressures, state and economic growth indicators

CONSULTANTS	THE CONSULTANTS ARE EXPECTED TO CONTRIBUTE IN PARTICULAR TO THE FOLLOWING PROJECT OUTPUTS:
	▪ Output 2.1 Governance structures, rules, roles and responsibilities for site co-management are agreed by all partners, formalized and established ▪ Output 2.2 Community land tenure, natural resource management rights and responsibilities are formally recognized and upheld ▪ Output 2.3 Capacity strengthening tools developed and operational for key stakeholders ▪ Output 2.4 Technical services equipped and mobilized to respond to local initiatives associated with MRPA objectives ▪ Output 2.5 Sub-network forum for local MRPA stakeholders (public, civil society, private sector) motivated and operational ▪ Output 2.6 An effective communication system, especially targeting communities and their respective interest groups, facilitates civic participation, informed decision-making and MRPA implementation ▪ Output 3.1 Business plans developed for individual MRPAs and sub-network operations (costs quantified for management; non-state revenue options are defined, economic opportunities at each site) ▪ Output 3.3 Rules and procedures for sustainable tourism and managed reforestation concessions, biodiversity offsets and CSR developed and implemented in collaboration with the competent public and private institutions ▪ Output 3.4 Investment provided through micro-credit and the project catalyze local entrepreneurial initiatives ▪ Output 3.5 Labeling is facilitated and market access negotiated for organic and/or fair trade in conservation compatible production, services and local entrepreneurial initiatives
NATIONAL RECRUITMENTS	
Sustainable Tourism and Communications Expert	<u>Specific contributions:</u> ▪ Output 1.1 A clear vision and principles for an MRPA sub-network are formalized within the PA register (MRPA objectives and management arrangements ▪ Output 2.1 Governance structures, rules, roles and responsibilities for site co-management are agreed by all partners, formalized and established ▪ Output 3.1 Business plans developed for individual MRPAs and sub-network operations (costs quantified for management; non-state revenue options are defined, economic opportunities at each site) ▪ Output 3.2 Develop contractual contribution systems for sustainable MRPA financing through incentives for innovative and improved revenue streams that also drive economic growth and reduce pressures ▪ Output 3.3 Rules and procedures for sustainable tourism and managed reforestation concessions, biodiversity offsets and CSR developed and implemented in collaboration with the competent public and private institutions ▪ Output 3.4 Investment provided through micro-credit and the project catalyze local entrepreneurial initiatives ▪ Output 3.5 Labeling is facilitated and market access negotiated for organic and/or fair trade in conservation compatible production, services and local entrepreneurial initiatives ▪ Output 3.6 Revenues from voluntary carbon agreements (including REDD++) contribute to upfront funding for community-based reforestation ventures ▪ Output 3.8 Identify and lobby for increased public funding for MRPAs
Spatial and Land Use Planning Expert	<u>Specific contributions:</u> ▪ Output 1.1 A clear vision and principles for an MRPA sub-network are formalized within the PA register (MRPA objectives and management arrangements ▪ Output 1.2 Baseline inventories facilitate zoning and help define options for sustainable natural resource-economic growth (biodiversity values, social values, economic options and cultural reference data obtained for sites to be included in land use planning and business plans completion. ▪ Output 1.3 PAs gazetted (management plan approved, participatory boundary demarcation into core & buffer areas; site registration as permanent PA ▪ Output 1.4 An updated national PA system plan ensures that MRPA zoning and objectives are systematically integrated into legalized regional and local land use planning and mapping ▪ Output 1.5 Basic PA infrastructures and management tools in place: (administrative stations, radio communication network, field materials).

CONSULTANTS	THE CONSULTANTS ARE EXPECTED TO CONTRIBUTE IN PARTICULAR TO THE FOLLOWING PROJECT OUTPUTS:
	▪ Output 1.6 Monitoring systems instituted to track pressures, state and economic growth indicators ▪ Output 2.1 Governance structures, rules, roles and responsibilities for site co-management are agreed by all partners, formalized and established ▪ Output 2.2 Community land tenure, natural resource management rights and responsibilities are formally recognized and upheld ▪ Output 2.3 Capacity strengthening tools developed and operational for key stakeholders ▪ Output 2.4 Technical services equipped and mobilized to respond to local initiatives associated with MRPA objectives ▪ Output 2.5 Sub-network forum for local MRPA stakeholders (public, civil society, private sector) motivated and operational ▪ Output 2.6 An effective communication system, especially targeting communities and their respective interest groups, facilitates civic participation, informed decision-making and MRPA implementation ▪ Output 3.1 Business plans developed for individual MRPAs and sub-network operations (costs quantified for management; non-state revenue options are defined, economic opportunities at each site)
Private Sector Engagement Expert	<u>Specific contributions:</u> ▪ Output 2.1 Governance structures, rules, roles and responsibilities for site co-management are agreed by all partners, formalized and established ▪ Output 3.1 Business plans developed for individual MRPAs and sub-network operations (costs quantified for management; non-state revenue options are defined, economic opportunities at each site) ▪ Output 3.2 Develop contractual contribution systems for sustainable MRPA financing through incentives for innovative and improved revenue streams that also drive economic growth and reduce pressures ▪ Output 3.3 Rules and procedures for sustainable tourism and managed reforestation concessions, biodiversity offsets and CSR developed and implemented in collaboration with the competent public and private institutions ▪ Output 3.4 Investment provided through micro-credit and the project catalyze local entrepreneurial initiatives ▪ Output 3.5 Labeling is facilitated and market access negotiated for organic and/or fair trade in conservation compatible production, services and local entrepreneurial initiatives ▪ Output 3.6 Revenues from voluntary carbon agreements (including REDD++) contribute to upfront funding for community-based reforestation ventures ▪ Output 3.7 Revenues from REDD and agreements are invested in earmarked FAPBM sub-accounts ▪ Output 3.8 Identify and lobby for increased public funding for MRPAs
Institutions & Regulations Expert	<u>Specific contributions:</u> ▪ Output 1.1 A clear vision and principles for an MRPA sub-network are formalized within the PA register (MRPA objectives and management arrangements ▪ Output 1.2 Baseline inventories facilitate zoning and help define options for sustainable natural resource-economic growth (biodiversity values, social values, economic options and cultural reference data obtained for sites to be included in land use planning and business plans completion. ▪ Output 1.3 PAs gazetted (management plan approved, participatory boundary demarcation into core & buffer areas; site registration as permanent PA ▪ Output 1.4 An updated national PA system plan ensures that MRPA zoning and objectives are systematically integrated into legalized regional and local land use planning and mapping ▪ Output 1.5 Basic PA infrastructures and management tools in place: (administrative stations, radio communication network, field materials). ▪ Output 1.6 Monitoring systems instituted to track pressures, state and economic growth indicators ▪ Output 2.1 Governance structures, rules, roles and responsibilities for site co-management are agreed by all partners, formalized and established ▪ Output 2.2 Community land tenure, natural resource management rights and responsibilities are formally recognized and upheld

CONSULTANTS	THE CONSULTANTS ARE EXPECTED TO CONTRIBUTE IN PARTICULAR TO THE FOLLOWING PROJECT OUTPUTS:
	▪ Output 2.3 Capacity strengthening tools developed and operational for key stakeholders ▪ Output 2.4 Technical services equipped and mobilized to respond to local initiatives associated with MRPA objectives ▪ Output 2.5 Sub-network forum for local MRPA stakeholders (public, civil society, private sector) motivated and operational ▪ Output 2.6 An effective communication system, especially targeting communities and their respective interest groups, facilitates civic participation, informed decision-making and MRPA implementation
Communications & Outreach Officer	<u>Specific contributions:</u> ▪ Output 1.1 A clear vision and principles for an MRPA sub-network are formalized within the PA register (MRPA objectives and management arrangements ▪ Output 2.1 Governance structures, rules, roles and responsibilities for site co-management are agreed by all partners, formalized and established ▪ Output 2.2 Community land tenure, natural resource management rights and responsibilities are formally recognized and upheld ▪ Output 2.3 Capacity strengthening tools developed and operational for key stakeholders ▪ Output 2.4 Technical services equipped and mobilized to respond to local initiatives associated with MRPA objectives ▪ Output 2.5 Sub-network forum for local MRPA stakeholders (public, civil society, private sector) motivated and operational ▪ Output 2.6 An effective communication system, especially targeting communities and their respective interest groups, facilitates civic participation, informed decision-making and MRPA implementation ▪ Output 3.4 Investment provided through micro-credit and the project catalyze local entrepreneurial initiatives ▪ Output 3.5 Labeling is facilitated and market access negotiated for organic and/or fair trade in conservation compatible production, services and local entrepreneurial initiatives ▪ Output 3.6 Revenues from voluntary carbon agreements (including REDD++) contribute to upfront funding for community-based reforestation ventures ▪ Output 3.8 Identify and lobby for increased public funding for MRPAs

Table 16. Overview of the Project Teams by Financer (estimates for budgeting purposes)

*		GEF	UNDP	Gov	Other Co-financiers	#	at $**	per	duration throughout project		TOTAL
Project Management Unit - PMU											
N	National Project Coordinator	x				1	50,000	year	5	years	**250,000**
N	National Project Director (from MEF/DPPSE or DCBSAP)			x		1	29,000	year	5	years	**145,000**
I	Chief Technical Advisor	x				1	150,000	year	3	years	**450,000**
N	Monitoring and Evaluation Senior Officer	x				1	29,000	year	5	years	**145,000**
N	Project Assistant	x				1	15,800	year	5	years	**79,000**
N	Project Administrative and Finance Officer		x			1	15,800	year	5	years	**79,000**
N	ICT and Database Assistant	x				1	15,800	year	5	years	**79,000**
Short term international consultants											
I	Climate Change and Protected Areas Specialist	x				1	3,000	week	6	weeks	**18,000**
I	Extractive Industries and Biodiversity Specialist	x				1	3,000	week	30	weeks	**90,000**
I	Specialist in 'The Most Significant Change' (participatory evaluation) Methodology		x			1	3,000	week	15	weeks	**45,000**
I	Training and Capacity Building specialist (on NRM & BD)		x			1	3,000	week	30	weeks	**90,000**
I	Evaluator (Mid-term + Final)		x			1	3,000	week	10	weeks	**30,000**
Short term national consultants											
N	Sustainable Tourism and Communications Expert	x				1	1,000	week	50	weeks	**50,000**
N	Spatial and Land Use Planning Expert	x				1	1,000	week	80	weeks	**80,000**
N	Private Sector Engagement Expert	x				1	1,000	week	50	weeks	**50,000**
N	Institutions & Regulations Expert		x			1	1,000	week	50	weeks	**50,000**
N	Communications & Outreach Officer		x			1	1,000	week	55	weeks	**55,000**
N	Evaluator (Mid-term + Final)		x			1	1,000	week	10	weeks	**10,000**
Partner's contribution to and engagement in the project in terms of staff (UPCE, Fanamby, Asity, Durell, WWF, FAPBM, Oceane Aventure and Government)											
N	Government and NGO partners' managerial staff (bundled estimate)			x	x		-	-	-	-	**673,409**
N	Government and NGO partners' technical staff (bundled estimate)			x	x		-	-	-	-	**1,248,428**

Notes: * N = national; I = international. / ** Amounts in this table are for budgeting purposes. Project staff will be paid according to the standards of the implementation modality and contracts will be drawn according to the applicable rules and regulations.

311. In addition to the above, this project will engage NGOs in the provision of technical assistance services at the site level. Indicative (see Annex 2).

PART IV: Stakeholder Involvement Plan

312. The PPG phase included consultations with the project's key stakeholders at the national and local levels. Field trips were carried out to all project sites. Local authorities and community organsaions were presented to the project proposal. In addition, several bilateral meetings were held, mostly with donors, NGO partners and key stakeholders who could not be present during certain site visits. Generally, project design was a highly participatory process, in line with UNDP's and GEF's requirements. Refer to Annex 8 for more detail on the PPG.

313. The expected role of key stakeholder has been described and analysed in Table 6. A full Stakeholder Analysis is contained in Annex 5 and this can serve as a basis. Stakeholders Involvement Plan is to be prepared upon project inception. Furhtermore, table 17 below outlines the coordination with other related initiatives.

Table 17. Coordination and collaboration between project and related initiatives

INITIATIVES / INTERVENTIONS	HOW COLLABORATION WITH THE PROJECT WILL BE ENSURED
UNDP/GEF program supporting the Anjozorobe MRPA.	This project has come to an end but has provided critically important lessons concerning mutually-beneficial private sector-community partnerships for sustainable tourism and marketing of certified products such as species and essential oils. Many of the lessons learned have been integrated into the current proposal. Through Fanamby, Anjozorobe will continue to play a role as a model for economic growth initiatives.
European Union funded support to Fanamby to establish the Daraina-Loky-Manambato MRPA.	This project has now been closed but it provided considerable insight into MRPA governance structures and functions, mining-MRPA arrangements, and certified products marketing. The project helped to organize an OPCI covering all communes involved in the MRPA. It provided capacity-building support and set up a local FM radio station to communicate to all communities living in and near the MRPA. A key lesson is that communication is vital to MRPA success. It also became apparent that the OPCI defends MRPA interests most effectively when the latter are integrated into a more general management of local development issues rather than being the focus of the OPCI. Fanamby worked closely with artisanal gold miners in the region. It provided information on current gold prices and provided improved gold extraction equipment. As a result, the miners have voluntarily assisted surveillance and monitoring. Fanamby also negotiated regularly with several industrial mining companies in order to work out modalities for co-existence and cooperation. Finally, the NGO helped to develop fair trade markets for vanilla producers, greatly increasing income into the region. Through Fanamby, Daraina-Lokymanambato will continue to play a role as a model for economic growth initiatives.
CI-funded grant to Fanamby to establish the Menabe-Antimena MRPA.	This project has helped to define some of the more promising MRPA governance mechanisms. Menabe-Antimena has complex governance arrangements are several conservation organizations have been working there for some considerable time. MEF delegated Fanamby as the MRPA manager and USAID's Miaro program supported efforts to develop management and land use plans adapted to MRPA needs and derived from IUCN guidelines. The format has subsequently been adopted by SAPM as has been replicated in all managed MRPAs. The Menabe Region has a considerable interest in MRPA development and asked Fanamby to help establish a new Category III PA to conserve an outstanding baobab landscape within the MRPA. Madagascar National Parks also collaborates with Fanamby to develop sustainable tourism facilities and services within Andranomena Special Reserve. The baselines established by this project, especially the partnerships,

INITIATIVES / INTERVENTIONS	HOW COLLABORATION WITH THE PROJECT WILL BE ENSURED
	will provide a solid platform for the present project.
CI-funded support to the NGO Asity to establish the Mahavavy-Kinkony MRPA.	This project has been provided technical support by Fanamby, the FAPBM and CI in designing the MRPA. The site will be an integral part of the present project and will soon receive FAPBM financial support to continue the establishment process. The Foundation and Fanamby will continue to work closely with Asity to ensure success at Mahavavy-Kinkony. During the PPG, Asity was contracted by Fanamby to provide baseline data on the MRPA and bird information on all other project sites.
CBD support to DCBSAP to build capacity.	WWF supported DCBSAP efforts to secure CBD funding for capacity building with the MEF through PoWPA. DCBSAP has organized training workshops for itself and the regional DREFs. The project provides useful lessons regarding the most effective means of building capacity and motivation for MRPAs within the MEF and will be built upon by the present project. DCBSAP will also play a critical project role with respect to policy and legislation, as well as liaison/cooperation with other ministries. It will also take responsibility for establishing the MRPA network, thus bringing in all other MRPA promoters not directly involved in the project.
German Government support to Madagascar National Parks in Southwestern Madagascar.	This project focuses primarily on supporting Madagascar National Parks efforts to strengthen national parks in the southwest. Recently, the team met with Fanamby to establish more formal cooperation at Menabe-Antimena.
Durrell Wildlife Conservation Trust (DWCT) programs on species conservation.	DWCT has a strong species focus but works closely with local communities to achieve its aims. It is particularly effective in motivating communities through various forms of direct payments for conservation. It has also helped to develop promising approaches to community-based ecological monitoring. DWCT is an implementation partner in the Menabe-Antimena and the Northern Highlands Complex.
Various WWF programs.	WWF has long been a strong partner with WWF. The two NGOs have numerous overlapping and complementary interests and WWF will be a partner in the current project. WWF will bring to the table its growing skills in climate change adaptation and coastal natural resources management. In return, WWF will adapt and replicate some of the more promising economic growth initiatives developed by Fanamby. Of particular interest in this regard is WWF's SLM project slated to begin in 2010 in the southwest. This project is funded by UNDP/GEF. WWF will be a key partner in the Northern Highland Complex where it is developing REDD carbon offset programs. Several WWF projects are funded by the French Government and these are similar conceptually to the present project.
Missouri Botanical Garden programs.	MBG is an active partner in the project and has helped in the baseline analyses for all project intervention sites during the PPG. MBG will be an active partner in the Northern Highlands: Ampansindava Peninsula and Galoko-Kalabenono.

Box 3. Stakeholders Overview	
NATIONAL LEVEL	
Government bodies: • MEF and DCBSAP • Madagascar National Parks • Ministry responsible for Decentralization and Land-Use Management Planning **Civil Society:** • Asity • Vahatra • Durrell Wildlife Conservation Trust • Missouri Botanical Garden • Conservation International • WWF • Fanamby **Development Partners** • AIM • ADAPS • KfW/GTZ • Swiss Cooperation • French cooperation (AFD and FFEM) • Private sector buyers	**At project MRPA sites** Regional administrations, including regional ministry representatives Communes and OPCIs Project partner NGOs Local community and economic interest groups Private sector (tourism, mines, petroleum, products)

Project Annexes

Annex 1. Project Maps

[Refer to separate file for this Annex for national maps and to weblinks below for the remainder of the maps.]

1. NATIONAL MAPS

1.1 Madagascar administrative map with intervention areas
1.2 Madagascar PA coverage prior to the Vision Durban (mid-2003)
1.3 Madagascar SAPM coverage in 2010
1.4 Madagascar deforestation map with intervention areas
1.5 Madagascar biodiversity priority areas (2009) based on ZONATION analysis
1.6 Mining concessions distribution in Madagascar in 2010
1.7 Madagascar oil blocks occupations in 2005, 2007, 2009
1.8 Oil blocks concessions in 2010 with respect to SAPM coverage
1.9 Land-lease agreements in Madagascar in 2009 (before crisis)
1.10 Madagascar precipitations trends and cyclones (1950, 2000, 2050)
1.11 Madagascar mean temperature trends (1950, 2000, 2050)

2. SITES MAPS

2.1 Menabe-Antimena
2.1.1 Menabe-Antimena existing forests management initiatives or PA management units
2.1.2 Menabe-Antimena fires occurrences per years (nov 2000 - dec 2009) and deforestation history
2.1.3 Menabe-Antimena extractive industries concessions: mining permits, oil blocks & deforestation history
2.1.4 Menabe-Antimena animal & floristic biodiversity collections and deforestation history (GBIF datas)

2.2 Mahavavy-Kinkony
2.2.1 Mahavavy-Kinkony existing forests management initiatives or PA management units
2.2.2 Mahavavy-Kinkony fires occurrences per years (nov 2000 - dec 2009) and deforestation history
2.2.3 Mahavavy-Kinkony extractive industries concessions: mining permits, oil blocks & deforestation history
2.2.4 Mahavavy-Kinkony animal & floristic biodiversity collections and deforestation history (GBIF datas)

2.3 Loky-Manambato
2.3.1 Loky-Manambato existing forests management initiatives or PA management units
2.3.2 Loky-Manambato fires occurrences per years (nov 2000 - dec 2009) and deforestation history
2.3.3 Loky-Manambato extractive industries concessions: mining permits, oil blocks & deforestation history
2.3.4 Loky-Manambato animal & floristic biodiversity collections and deforestation history (GBIF datas)

2.4 Ampasindava-Galoka
2.4.1 Ampasindava-Galoka existing forests management initiatives or PA management units
2.4.2 Ampasindava-Galoka fires occurrences per years (nov 2000 - dec 2009) and deforestation history
2.4.3 Ampasindava-Galoka extractive industries concessions: mining permits, oil blocks & deforestation history
2.4.4 Ampasindava-Galoka animal & floristic biodiversity collections and deforestation history (GBIF datas)

2.5 Ambohimirahavavy-Marivorahona
2.5.1 Ambohimirahavavy-Marivorahona existing forests management initiatives or PA management units
s
2.5.3 Ambohimirahavavy-Marivorahona extractive industries concessions: mining permits, oil blocks & deforestation history
2.5.4 Ambohimirahavavy-Marivorahona animal & floristic biodiversity collections and deforestation history (GBIF datas)

Annex 2. Indicative Activities for Site Promoters

Outcome 1: Establish the new MRPAs and the MRPA network

Promoter Role	***Output #***	***Output description and indicative activities***
Lead	1.1	A clear vision and principles for an MRPA sub-network are formalized within the PA register: ▪ Define MRPA objectives and management arrangements. ▪ Organize stakeholder engagement sessions for validating and crystallizing this vision among them. ▪ Communicate this vision through a variety of means and to different audiences.
Lead	1.2	Baseline inventories facilitate zoning and help define options for sustainable natural resource-economic growth: ▪ Obtain biodiversity values, social values, economic options and cultural reference data for sites to be included in land use planning and business plans completion.
Lead	1.3	PAs gazetted. Full gazettal (and management planning) will imply: ▪ Based on participatory approaches, define the MRPA site and facilitate it gazettal with full legal protection. ▪ Prepare management plan and facilitate their approval ▪ Carry out participatory boundary demarcation into core & buffer areas ▪ Ensure the site registration as permanent PA in the national registry ▪ Prepare input to the legal ▪ Through participatory processes, develop Management and Land Use Plans including clear zoning, surveillance mechanism and ecological monitoring parameters for submission to DCBSAP for approval.
Support	1.4	An updated national PA system plan ensures that MRPA zoning and objectives are systematically integrated into legalized regional and local land use planning and mapping: ▪ Assist the GoM and its partners establish the MRPA Network and contribute to efforts defining MRPA management principles. ▪ Contribute to updating the National Protected Areas System Management Plan, integrating MRPAs.
Lead	1.5	Basic PA infrastructures and management tools in place: ▪ Ensure the building or revamping of administrative stations ▪ Establish a radio communication network ▪ Purchase and maintain field materials.
Lead	1.6	Monitoring systems instituted to track pressures, state and economic growth indicators: ▪ Establish a set of site-level indicators that will inform on the conservation status of ecosystems and species. ▪ Ensure that basic socio-economic surveys are carried out at the level of local communities at least twice during the project's livetime, so that key (gender disaggregated) indicators such as household income, occupation and land-use practices are collected. ▪ Maintain a publicly available database with such results, with due recognition of the project and its donors.

Outcome 2: Capacity development and decentralized governance

Promoter Role	***Output #***	***Output description and indicative activities***
Lead	2.1	Governance structures, rules, roles and responsibilities for site co-management are agreed by all partners, formalized and established: ▪ Based on DCBSAP/SAPM guidelines, organize participatory process to determine roles and responsibilities for different stakeholders and facilitate the establishment of site governance/ management structures. ▪ Formalize these roles and facilitate their exercise through appropriate arrangements and agreements.
Lead	2.2	Community land tenure, natural resource management rights and responsibilities are formally recognized and upheld: ▪ Assess private land tenure issues in the MRPA site ▪ Facilitate the resolution of land conflicts (potential and actual) at region and commune levels. ▪ Establish more permanent mechanism for land conflict resolutions ▪ Agree on 'policies' with respect to new comers seeking land in the MRPA zone with local communities.
Lead	2.3	Capacity strengthening tools developed and operational for key stakeholders: ▪ Assess site-level capacity strengthening needs covering a. ▪ Organize appropriate training and mentoring strategies.
Support	2.4	Technical services equipped and mobilized to respond to local initiatives associated with MRPA objectives: ▪ Support DCBSAP and other central GOM departments to determine essential equipment needs for their regional and site-based representatives and assist in delivering equipment as required. ▪ Assist the project coordination in addressing those needs, including at the regional level. ▪ Facilitate where needed, capacity building events targeting technical services.
Support	2.5	Sub-network forum for local MRPA stakeholders (public, civil society, private sector) motivated and operational: ▪ Work with other partners and assist the project coordination in animating the Sub-network forum for local MRPA stakeholders.
Lead	2.6	An effective communication system, especially targeting communities and their respective interest groups, facilitates civic participation, informed decision-making and MRPA implementation: ▪ Catalyze and support the establishment of a well-motivated forum for local stakeholders at the MRPAs sites in order to encourage knowledge sharing and participatory planning. ▪ Establish communications systems adapted to local conditions and needs in order to promote knowledge sharing and MRPA-related communications.

Outcome 3: Financial sustainability

Promoter Role	***Output #***	***Output description and for some outputs specific activities***
Lead	3.1	Business plans developed for individual MRPAs and sub-network operations: ▪ Collected finance data and costs quantified for MRPA investment and current management ▪ Define and explore non-state revenue options. ▪ Explore other economic opportunities at each site. ▪ Prepare a business plan for the MRPA.

Promoter Role	*Output #*	*Output description and for some outputs specific activities*
		▪ Support similar efforts in other applicable sites according to expertise and need ▪ Ensure the approval of the business plan by DCBSAP ▪ Promote the integration of the MRPA plan into regional development and land use plans.
Lead	3.2	Develop contractual contribution systems for sustainable MRPA financing through incentives for innovative and improved revenue streams that also drive economic growth and reduce pressures ▪ Assess potential options for revenue generation to MRPAs, including, but note restricted to innovative PA finance. ▪ Promote adoption of contractual contributions systems to finance MRPA management. ▪ Ensure that new improved revenue streams will drive economic growth and reduce pressures on MRPAs biodiversity assets.
Lead	3.3	Rules and procedures for sustainable tourism and managed reforestation concessions, biodiversity offsets and CSR developed and implemented in collaboration with the competent public and private institutions: ▪ Assess the potential for the establishment of businesses and investments in MRPAs ▪ Assess the risk to the integrity of MRPA biodiversity assets inherent to the establishment of businesses and investments in MRPAs ▪ Based on direct field experience, contribute to the MRPA network's efforts to establish rules and procedures for sustainable tourism and managed reforestation concessions, biodiversity offsets and CSR. ▪ Apply these rules in the MRPA.
Support	3.4	Investment provided through micro-credit and the project catalyze local entrepreneurial initiatives ▪ Work with the project coordination to establish a conservation-friendly micro-credit programme for MRPAs. ▪ Assist in monitoring such programme.
Support	3.5	Labeling is facilitated and market access negotiated for organic and/or fair trade in conservation compatible production, services and local entrepreneurial initiatives. ▪ Where applicable, exploit the possibility of developing organic and/or fair trade in conservation compatible production
Support	3.6 3.7	Revenues from voluntary carbon agreements (including REDD++) contribute to upfront funding for community-based reforestation ventures. Revenues from REDD and agreements are invested in earmarked FAPBM sub-accounts ▪ Based on ongoing the activities of the Lead Site Promoter candidate NGO, support efforts to develop national carbon offset strategies that favor MRPAs. ▪ Develop field-based strategies for obtaining carbon revenues.
Support	3.8	Options for increased public funding for MRPAs are identified and negotiated

Annex 3. GEF 4 Complete GEF4 SO1 Tracking Tools and Scorecards

PA Management Effectiveness Tracking Tool "METT"
UNDP's PA system's Financial Sustainability Scorecard
UNDP's Capacity Development Scorecard
For the project
Network of Managed Resource Protected Areas

Government of Madagascar
Executing Agency: Ministry in charge of Environment and Forests
Additional partners: ASITY, ONG FANAMBY, Missouri Botanical Garden (MBG), Conservation International (CI), World Wildlife Fund (WWF), Durrell Wildlife Conservation Trust (DWCT), Centre National de Formation sur l'Environnement et les Ressources Forestières (CNFEREF)

United Nations Development Program

UNDP GEF PIMS no. 4172

Section One: Project General Information
- Project coverage in hectares

Section Two: Management Effectiveness Tracking Tool for Protected Areas
- METT Reporting Progress at Protected Area Sites
  - Data Sheet 1 for Menabe- Antimena
  - Data Sheet 2 for Mahavavy Kinkony
  - Data Sheet 3 for Loky Manambato
  - Data Sheet 4 for Ampasindava Peninsula and Galoko-Kalabenono chain
  - Data Sheet 5 for Ambohimirahavavy-Marivorahona
  - Data Sheet 6 Information on International Designations
- Protected Areas Threats
- METT Assessment Form

Section Three: UNDP's Financial Sustainability Scorecard for MRPAs
- Financial Scorecard Part I: Overall financial status of the PA system
- Financial Scorecard Part II: Assessing Elements of the Financing System
- Financial Scorecard Part III: Scoring and measuring progress

Section Four: UNDP's Capacity Development Scorecard for MRPAs Management:

SECTION ONE: PROJECT GENERAL INFORMATION

Project Coverage in hectares

METT Table 1

Targets and Timeframe	Foreseen at project start (ha)	Achievement at Mid-term Evaluation of Project (ha)	Achievement at Final Evaluation of Project (ha)
Total Extent in hectares of protected areas targeted by the project by biome type			
Dry Western ecoregion	390,564	574,733	577,487
Northern Highlands ecoregion	43,459	145,392	455,859
Northern Transition ecoregion	22,369	129,880	246,846
High Mountains ecoregion	5,163	84,795	89,958
Mangroves	33,903	42,199	43,041
Reefs	0	13,101	16,109
Others (intertidal, inland waters)	35,422	84,541	97,851
Total	530,880	1,074,641	1,527,151

Additional MRPA sites indirectly supported by the project through activities in Output 1.1

Promotor	Site name	Area (ha)	Type of forest
WWF	Amoron'i Onilahy	151,561	Dry forest
WWF	Ankodida	10,551	Spiny forest
WWF	Behara –Tranomaro	96,612	Spiny forest
WWF	Ranobe PK 32	144,474	Dry forest
CI	Corridor Ankeniheny- Zahamena	443,252	Rain forest
CI	Fandriana	440,366	Rain forest
TOTAL		**1,286,816**	

METT Table 2

Name of Protected Area	Is this a new protected area? (Y / N)	Area,(ha)	Biome type	Global designation or priority lists [1] (E.g., Biosphere Reserve, World Heritage site, Ramsar site, WWF Global 200, etc.)	Local Designation of Protected Area (E.g., indigenous reserve, private reserve, etc.)	IUCN Category for each Protected Area					
						I	II	III	IV	V	VI
Menabe-Antimena	N (125,640 ha under temporary PA status; 6 420 ha in defintive status)	219,304	Dry forests; Mangroves; Lakes & marshes	including RAMSAR site, Bedo Lake (1'962 ha); including Important Bird Areas (IBA MG059, Wetlands of the Tsiribihina river delta and upper Tsiribihina river)	Harmonious Protected Landscape			x		x	
Mahavavy-Kinkony	N (278,642 ha in temporary status)	278,642	Dry forests; Mangroves; Lakes & marshes	including Important Bird Areas (IBA MG025, Mahavavy river delta wetlands)	Harmonious Protected Landscape					x	
Loky-Manambato (Daraina)	Y/N (70,619 under temporary PA status)	248,409	Humid, Dry, Mountain, Transition, Littoral forests; Lakes & marshes; Mangroves	including Important Bird Areas (IBA MG008, Sahaka lake former Hunting Reserve)	Harmonious Protected Landscape					x	
Ampasindava Peninsula & Galoka-Kalabenono	Y/N (98,100 ha under temporary PA status)	187,305	Humid, Transition forests; Mangroves; Coastal marshes	including Important Bird Areas (IBA MG012, Ampasindava Bay wetlands)	Harmonious Protected Landscape					x	

Name of Protected Area	Is this a new protected area? (Y / N)	Area,(ha)	Biome type	Global designation or priority lists [1] (E.g., Biosphere Reserve, World Heritage site, Ramsar site, WWF Global 200, etc.)	Local Designation of Protected Area (E.g., indigenous reserve, private reserve, etc.)	IUCN Category for each Protected Area					
						I	II	III	IV	V	VI
Ambohimirahavavy-Marivorahona	Y/N (230,187 ha under temporary PA status)	593,491	Humid, Mountain forests; Ericoid thicket; Lakes; Peat bogs		Managed Resources Protected Area						x

SECTION TWO: MANAGEMENT EFFECTIVENESS TRACKING TOOL FOR PROTECTED AREAS:

Reporting Progress at Protected Area Sites

[1] Menabe-Antimena

Name, affiliation and contact details for person responsible for completing the METT (email etc.)	Serge Nirina RAJAOBELINA, ONG Fanamby, s.rajaobelina@fanamby.org.mg			
Date assessment carried out	**March 21, 2010**			
Name of protected area	**Menabe-Antimena**			
WDPA site code (these codes can be found on www.unep-wcmc.org/wdpa/)	**352251**			
Designations	**Harmonious Protected Landscape**	IUCN Category **V (320 ha in cat. III)**	International (please also complete sheet overleaf) **RAMSAR 1MG006 (Bedo lake, 1,962 ha) incl. IBA MG059 (Wetlands of the Tsiribihina river delta and upper Tsiribihina river)**	
Country	**Madagascar**			
Location of protected area (province and if possible map reference)	**Menabe Region**			
Date of establishment	**March 28, 2006**			
Ownership details (please tick)	State **Y**	Private **Y**	Community **Y**	Other
Management Authority	**DCBSAP**			
Size of protected area (ha)	**219,304 ha (125,640 ha already under protection status; 6,420 in definitive PA status)**			
Number of staff	Permanent **0**	Temporary **0**		
Annual budget (US$) – excluding staff salary costs	Recurrent (operational) funds **0**	Project or other supplementary funds **0**		
What are the main values for which the area is designated	**Dry forests; Mangroves; Lakes & marshes**			
List the two primary protected area management objectives				
Management objective 1	**Conservation of unique habitats and their species.**			
Management objective 2	**Sustainable economic growth based on natural resource use.**			
No. of people involved in completing assessment	**12**			
Including: (tick boxes)	PA manager ☐ **X**	PA staff ☐ **X**	Other PA agency staff ☐ **X**	NGO ☐ **X**
	Local community ☐	Donors ☐	External experts ☐ **X**	Other ☐
Please note if assessment was carried out in association with a particular project, on behalf of an organization or donor.				

[2] Mahavavy-Kinkony

Name, affiliation and contact details for person responsible for completing the METT (email etc.)	Serge Nirina RAJAOBELINA, ONG Fanamby, s.rajaobelina@fanamby.org.mg			
Date assessment carried out	**March 21, 2007**			
Name of protected area	**Mahavavy-Kinkony**			
WDPA site code (these codes can be found on www.unep-wcmc.org/wdpa/)	**352248 (20283 as a Hunting Reserve)**			
Designations	**Harmonious Protected Landscape**	IUCN Category **V**	International (please also complete sheet overleaf) **incl. IBA MG025 Mahavavy river delta wetlands**	
Country	**Madagascar**			
Location of protected area (province and if possible map reference)	**Boeny Region**			
Date of establishment	**January 17, 2007**			
Ownership details (please tick)	State **Y**	Private **Y**	Community **Y**	Other
Management Authority	**DCBSAP**			
Size of protected area (ha)	**278,642 ha (all under temporary protection status)**			
Number of staff	Permanent **0**	Temporary **0**		
Annual budget (US$) – excluding staff salary costs	Recurrent (operational) funds **0**	Project or other supplementary funds **0**		
What are the main values for which the area is designated	**Dry forests; Lakes & marshes; Mangroves**			
List the two primary protected area management objectives				
Management objective 1	**Conservation of unique habitats and their species.**			
Management objective 2	**Sustainable economic growth based on natural resource use.**			

No. of people involved in completing assessment	**12**			
Including: (tick boxes)	PA manager ☐ **X**	PA staff ☐ **X**	Other PA agency staff ☐ **X**	NGO ☐ **X**
	Local community ☐	Donors ☐	External experts ☐ **X**	Other ☐
Please note if assessment was carried out in association with a particular project, on behalf of an organization or donor.				

[3] Loky-Manambato

Name, affiliation and contact details for person responsible for completing the METT (email etc.)	Serge Nirina RAJAOBELINA, ONG Fanamby, s.rajaobelina@fanamby.org.mg			
Date assessment carried out	**March 21, 2010**			
Name of protected area	**Loky-Manambato**			
WDPA site code (these codes can be found on www.unep-wcmc.org/wdpa/)	**352245**			
Designations	**Harmonious Protected Landscape**	IUCN Category **V**	International (please also complete sheet overleaf) **incl. IBA MG008 former Reserve Sahaka lake**	
Country	**Madagascar**			
Location of protected area (province and if possible map reference)	**SAVA Region**			
Date of establishment	**May 31, 2005**			
Ownership details (please tick)	State **Y**	Private **Y**	Community **Y**	Other
Management Authority	**DCBSAP**			
Size of protected area (ha)	**248,409 ha (70,619 ha already under temporary protection status)**			
Number of staff	Permanent **0**	Temporary **0**		
Annual budget (US$) – excluding staff salary costs	Recurrent (operational) funds **0**	Project or other supplementary funds **0**		
What are the main values for which the area is designated	**Humid, Dry, Mountain, Transition, Littoral forests; Lakes & marshes; Mangroves**			
List the two primary protected area management objectives				
Management objective 1	**Conservation of unique habitats and their species.**			
Management objective 2	**Sustainable economic growth based on natural resource use.**			
No. of people involved in completing assessment	**12**			
Including: (tick boxes)	PA manager ☐ **X**	PA staff ☐ **X**	Other PA agency staff ☐ **X**	NGO ☐ **X**
	Local community ☐	Donors ☐	External experts ☐ **X**	Other ☐
Please note if assessment was carried out in association with a particular project, on behalf of an organization or donor.				

[4] Ampasindava Peninsula & Galoka-Kalabenono

Name, affiliation and contact details for person responsible for completing the METT (email etc.)	Serge Nirina RAJAOBELINA, ONG Fanamby, s.rajaobelina@fanamby.org.mg			
Date assessment carried out	March 21, 2010			
Name of protected area	**Ampasindava Peninsula**			
WDPA site code (these codes can be found on www.unep-wcmc.org/wdpa/)				
Designations	**Harmonious Protected Landscape**	IUCN Category **V**	International (please also complete sheet overleaf) **incl. IBA MG012 Ampasindava Bay wetlands**	
Country	**Madagascar**			
Location of protected area (province and if possible map reference)	**DIANA Region**			
Date of establishment	**October 17, 2008**			
Ownership details (please tick)	State **Y**	Private **Y**	Community **Y**	Other
Management Authority	**DCBSAP**			
Size of protected area (ha)	**150,675 ha (89,950 ha already under temporary protection status)**			
Number of staff	Permanent **0**	Temporary **0**		
Annual budget (US$) – excluding staff salary costs	Recurrent (operational) funds **0**	Project or other supplementary funds **0**		
What are the main values for which the area is designated	**Humid, Transition forests; Mangroves; Coastal marshes**			
List the two primary protected area management objectives				
Management objective 1	**Conservation of unique habitats and their species.**			
Management objective 2	**Sustainable economic growth based on natural resource use.**			
No. of people involved in completing assessment	**12**			
Including: (tick boxes)	PA manager ☐ **X**	PA staff ☐ **X**	Other PA agency staff ☐ **X**	NGO ☐ **X**
	Local community ☐	Donors ☐	External experts ☐ **X**	Other ☐
Please note if assessment was carried out in association with a particular project, on behalf of an organization or donor.				

Name, affiliation and contact details for person responsible for completing the METT (email etc.)	Serge Nirina RAJAOBELINA, ONG Fanamby, s.rajaobelina@fanamby.org.mg			
Date assessment carried out	**March 21, 2010**			
Name of protected area	**Galoka-Kalabenono**			
WDPA site code (these codes can be found on www.unep-wcmc.org/wdpa/)				
Designations	**Harmonious Protected Landscape**	IUCN Category **V**	International (please also complete sheet overleaf)	
Country	**Madagascar**			
Location of protected area (province and if possible map reference)	**DIANA Region**			
Date of establishment	**October 17, 2008**			
Ownership details (please tick)	State **Y**	Private **Y**	Community **Y**	Other
Management Authority	**DCBSAP**			
Size of protected area (ha)	**36,630 ha (8,150 ha already under temporary protection status)**			
Number of staff	Permanent **0**	Temporary **0**		
Annual budget (US$) – excluding staff salary costs	Recurrent (operational) funds **0**	Project or other supplementary funds **0**		
What are the main values for which the area is designated	**Humid, Transition forests**			
List the two primary protected area management objectives				
Management objective 1	**Conservation of unique habitats and their species.**			
Management objective 2	**Sustainable economic growth based on natural resource use.**			
No. of people involved in completing assessment	**12**			
Including: (tick boxes)	PA manager ☐ **X**	PA staff ☐ **X**	Other PA agency staff ☐ **X**	NGO ☐ **X**
	Local community ☐	Donors ☐	External experts ☐ **X**	Other ☐
Please note if assessment was carried out in association with a particular project, on behalf of an organization or donor.				

[5] Ambohimirahavavy-Marivorahona

Name, affiliation and contact details for person responsible for completing the METT (email etc.)	Serge Nirina RAJAOBELINA, ONG Fanamby, s.rajaobelina@fanamby.org.mg			
Date assessment carried out	**March 21, 2010**			
Name of protected area	**Ambohimirahavavy-Marivorahona**			
WDPA site code (these codes can be found on www.unep-wcmc.org/wdpa/)				
Designations	**Managed Resources Protected Area**	IUCN Category **I, VI**	International (please also complete sheet overleaf)	
Country	**Madagascar**			
Location of protected area (province and if possible map reference)	**DIANA, SAVA, Sofia Regions**			
Date of establishment	**October 17, 2008**			
Ownership details (please tick)	State **Y**	Private **Y**	Community **Y**	Other
Management Authority	**DCBSAP**			
Size of protected area (ha)	**593,491 ha (230,187 ha already under temporary protection status)**			
Number of staff	Permanent **0**	Temporary **0**		
Annual budget (US$) – excluding staff salary costs	Recurrent (operational) funds **0**	Project or other supplementary funds **0**		
What are the main values for which the area is designated	**Humid, Mountain forests; Ericoid thicket; Lakes; Peat bogs**			
List the two primary protected area management objectives				
Management objective 1	**Conservation of unique habitats and their species.**			
Management objective 2	**Sustainable economic growth based on natural resource use.**			
No. of people involved in completing assessment	**12**			
Including: (tick boxes)	PA manager ☐ **X**	PA staff ☐ **X**	Other PA agency staff ☐ **X**	NGO ☐ **X**
	Local community ☐	Donors ☐	External experts ☐ **X**	Other ☐
Please note if assessment was carried out in association with a particular project, on behalf of an organization or donor.				

[6] Information on International Designations

Information on International Designations			
UNESCO World Heritage site (see: whc.unesco.org/en/list)			
Date listed	Site name	Site area	Geographical co-ordinates
Criteria for designation (i.e. criteria i to x)			
Statement of Outstanding Universal Value			
Ramsar site (see: www.wetlands.org/RSDB/)			
Date listed **May 12, 2007**	Site name **Bedo Lake**	Site area **1,962**	Geographical number **1MG006**
Reason for Designation (see Ramsar Information Sheet)	Criteria's 2, 3, 4, 6 & 7 Wetlands of Bedo. 12/05/07; Toliary; 1,962 ha; 19º57'S 044º36'E. A wetland complex consisting of the shallow, open Lake Bedo; it's surrounding marshes, which are rich in aquatic vegetation; and a permanent river flowing across the forests and feeding the lake and marshes. The Lake Bedo watershed supplies water as runoff during the rainy season and as seepage from hills forming springs, ponds and marshes during the dry season. It hosts at least 34 waterbird species like the endangered Madagascar teal, Madagascar heron, vulnerable Madagascar plover, migratory waterbirds like the greater flamingo and lesser flamingo. It also hosts the endangered Madagascar big-headed turtle and many fish species, some of which breed there.		
UNESCO Man and Biosphere Reserves (see: www.unesco.org/mab/wnbrs.shtml)			
Date listed	Site name	Site area Total: Core: Buffer: Transition:	Geographical co-ordinates
Criteria for designation			
Fulfillment of three functions of MAB (conservation, development and logistic support.)			
Please list other designations (i.e. ASEAN Heritage, Natura 2000) and any supporting information below			
Name: IBA MG008	Detail: Lake Sahaka former Hunting Reserve		
Name: IBA MG012	Detail: Ampasindava Bay wetlands		
Name: IBA MG025	Detail: Mahavavy river Delta wetlands		
Name: IBA MG059	Detail: Wetlands of the Tsiribihina river delta and upper Tsiribihina river		
Name:	Detail:		

Protected Areas Threats Data Sheet

Threats (column below) / METT Target Sites (to the right)	[1] Menabe-Antimena	[2] Mahavavy-Kinkony	[3] Daraina Loky-Manambato	[4] Ampasindava-Galoka-Kalabenono	[5] Ambohimirahavavy-Marivorahona
1. Residential and commercial development within a protected area					
Threats from human settlements or other non-agricultural land uses with a substantial footprint					
1.1 Housing and settlement	M	M	L	M	L
1.2 Commercial and industrial areas	L	L	L	N/A	N/A
1.3 Tourism and recreation infrastructure	L	L	N/A	L	N/A
2. Agriculture and aquaculture within a protected area					
Threats from farming and grazing as a result of agricultural expansion and intensification, including silviculture, mariculture and aquaculture					
2.1 Annual and perennial non-timber crop cultivation	M	M	M	H	L
2.1a Drug cultivation	N/A	N/A	N/A	L	L
2.2 Wood and pulp plantations	N/A	N/A	N/A	N/A	N/A
2.3 Livestock farming and grazing	M	M	L	L	L
2.4 Marine and freshwater aquaculture	L	N/A	L	N/A	N/A
3. Energy production and mining within a protected area					
Threats from production of non-biological resources					
3.1 Oil and gas drilling	L	L	N/A	L	N/A
3.2 Mining and quarrying	N/A	L	L	L	L
3.3 Energy generation, including from hydropower dams	N/A	N/A	N/A	N/A	N/A
4. Transportation and service corridors within a protected area					
Threats from long narrow transport corridors and the vehicles that use them including associated wildlife mortality					
4.1 Roads and railroads (include road-killed animals)	N/A	N/A	N/A	N/A	N/A
4.2 Utility and service lines (e.g. electricity cables, telephone lines,)	N/A	N/A	N/A	N/A	N/A
4.3 Shipping lanes and canals	L	L	N/A	L	N/A
4.4 Flight paths	N/A	N/A	N/A	N7a	N/A
5. Biological resource use and harm within a protected area					
Threats from consumptive use of "wild" biological resources including both deliberate and unintentional harvesting effects; also persecution or control of specific species (note this includes hunting and killing of animals)					
5.1 Hunting, killing and collecting terrestrial animals (including killing of animals as a result of human/wildlife conflict)	M	M	L	H	L
5.2 Gathering terrestrial plants or plant products (non-timber)	M	L	L	M	M
5.3 Logging and wood harvesting	M	M	L	M	L
5.4 Fishing, killing and harvesting aquatic resources	M	M	M	M	L
6. Human intrusions and disturbance within a protected area					
Threats from human activities that alter, destroy or disturb habitats and species associated with non-consumptive uses of biological resources					
6.1 Recreational activities and tourism	L	L	N/A	L	N/A
6.2 War, civil unrest and military exercises	N/A	N/A	N/A	N/A	N/A
6.3 Research, education and other work-related activities in protected areas	L	L	L	L	L
6.4 Activities of protected area managers (e.g. construction or vehicle use, artificial watering points and dams)	N/A	N/A	N/A	N/A	N/A

Threats (column below) / METT Target Sites (to the right)	[1] Menabe-Antimena	[2] Mahavavy-Kinkony	[3] Daraina Loky-Manambato	[4] Ampasindava-Galoka-Kalabenono	[5] Ambohimirahavavy-Marivorahona
6.5 Deliberate vandalism, destructive activities or threats to protected area staff and visitors	L	L	L	N/A	N/A
7. Natural system modifications					
Threats from other actions that convert or degrade habitat or change the way the ecosystem functions					
7.1 Fire and fire suppression (including arson)	H	H	M	H	L
7.2 Dams, hydrological modification and water management/use	L	M	L	L	L
7.3a Increased fragmentation within protected area	L	M	M	H	L
7.3b Isolation from other natural habitat (e.g. deforestation, dams without effective aquatic wildlife passages)	L	M	M	H	L
7.3c Other 'edge effects' on park values	L	M	M	H	L
7.3d Loss of keystone species (e.g. top predators, pollinators etc)	N/A	N/A	N/A	N/A	L
8. Invasive and other problematic species and genes					
Threats from terrestrial and aquatic non-native and native plants, animals, pathogens/microbes or genetic materials that have or are predicted to have harmful effects on biodiversity following introduction, spread and/or increase					
8.1 Invasive non-native/alien plants (weeds)	L	L	M	L	L
8.1a Invasive non-native/alien animals	L	M	M	L	L
8.1b Pathogens (non-native or native but creating new/increased problems)	N/A	N/A	N/A	N/A	N/A
8.2 Introduced genetic material (e.g. genetically modified organisms)	N/A	N/A	N/A	N/A	N/A
9. Pollution entering or generated within protected area					
Threats from introduction of exotic and/or excess materials or energy from point and non-point sources					
9.1 Household sewage and urban waste water	N/A	L	N/A	N/A	N/A
9.1a Sewage and waste water from protected area facilities (e.g. toilets, hotels etc)	L	N/A	L	L	N/A
9.2 Industrial, mining and military effluents and discharges (e.g. poor water quality discharge from dams, e.g. unnatural temperatures, de-oxygenated, other pollution)	N/A	N/A	N/A	N/A	N/A
9.3 Agricultural and forestry effluents (e.g. excess fertilizers or pesticides)	L	M	L	N/A	N/A
9.4 Garbage and solid waste	N/A	N/A	L	N/A	N/A
9.5 Air-borne pollutants	N/A	N/A	N/A	N/A	N/A
9.6 Excess energy (e.g. heat pollution, lights etc)	N/A	N/A	N/A	N/A	N/A
10. Geological events					
Geological events may be part of natural disturbance regimes in many ecosystems. But they can be a threat if a species or habitat is damaged and has lost its resilience and is vulnerable to disturbance. Management capacity to respond to some of these changes may be limited.					
10.1 Volcanoes	N/A	N/A	N/A	N/A	N/A
10.2 Earthquakes/Tsunamis	N/A	N/A	L	N/A	N/A
10.3 Avalanches/ Landslides	N/A	N/A	N/A	N/A	N/A
10.4 Erosion and siltation/ deposition (e.g. shoreline or riverbed changes)	M	L	L	L	L
11. Climate change and severe weather					
Threats from long-term climatic changes which may be linked to global warming and other severe climatic/weather events outside of the natural range of variation					
11.1 Habitat shifting and alteration	L	L	L	L	L
11.2 Droughts	M	L	M	N/A	N/A
11.3 Temperature extremes	L	L	L	N/A	N/A
11.4 Storms and flooding	M	M	M	M	L

Threats (column below) / METT Target Sites (to the right)	[1] Menabe-Antimena	[2] Mahavavy-Kinkony	[3] Daraina Loky-Manambato	[4] Ampasindava-Galoka-Kalabenono	[5] Ambohimirahavavy-Marivorahona
12. Specific cultural and social threats					
12.1 Loss of cultural links, traditional knowledge and/or management practices	L	L	L	L	N/A
12.2 Natural deterioration of important cultural site values	L	N/A	N/A	L	N/A
12.3 Destruction of cultural heritage buildings, gardens, sites etc	N/A	N/A	N/A	N/A	N/A

METT Assessment Form

Class	Issue	Question	Criteria	MAX	%	MRPA sites	[1] Daraina Loky-Manambato	[2] Mahavavy-Kinkony	[3] Menabe-Antimena	[4] Ampasindava-Galoka-Kalabenono	[5] Ambohimirahavavy-Marivorahona
Context	**01. Legal status**	Does the protected area has legal status (or in the case of private reserves is covered by a covenant or similar)?	0: The protected area is not gazetted/covenanted___1: There is agreement that the protected area should be gazetted/covenanted but the process has not yet begun ___2: The protected area is in the process of being gazetted/covenanted but the process is still incomplete (includes sites designated under international conventions, such as Ramsar, or local/traditional law such as community conserved areas, which do not yet ___3: The protected area has been formally gazetted/covenanted	3	**67%**	**2,0**	2	2	2	2	2
Planning	**02. Protected area regulations**	Are appropriate regulations in place to control land use and activities (e.g. hunting)?	0: There are no regulations for controlling land use and activities in the protected area___1: Some regulations for controlling land use and activities in the protected area exist but these are major weaknesses___2: Regulations for controlling land use and activities in the protected area exist but there are some weaknesses or gaps___3: Regulations for controlling inappropriate land use and activities in the protected area exist and provide an excellent basis for management	3	**47%**	**1,4**	2	2	3	0	0
Inputs	**03. Law enforcement**	Can staff (i.e. those with responsibility for managing the site) enforce protected area rules well enough?	0: The staff have no effective capacity/resources to enforce protected area legislation and regulations ___1: There are major deficiencies in staff capacity/resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget, lack of institutional support)___2: The staff have acceptable capacity/resources to enforce protected area legislation and regulations but some deficiencies remain___3: The staff have excellent capacity/resources to enforce protected area legislation and regulations	3	**47%**	**1,4**	2	2	3	0	0
Planning	**04. Protected area objectives**	Is management undertaken according to agreed objectives?	0: No firm objectives have been agreed for the protected area ___1: The protected area has agreed objectives, but is not managed according to these objectives___2: The protected area has agreed objectives, but is only partially managed according to these objectives___3: The protected area has agreed objectives and is managed to meet these objectives	3	**40%**	**1,2**	2	2	2	0	0
Planning	**05. Protected area design**	Is the protected area the right size and shape to protect species, habitats, ecological processes and water catchments of key	0: Inadequacies in protected area design mean achieving the major objectives of the protected area is very difficult___1: Inadequacies in protected area design mean that achievement of major objectives is difficult but some mitigating actions are being taken (e.g. agreements with	3	**40%**	**1,2**	2	2	2	0	0

Class	Issue	Question	Criteria	MAX	%	MRPA sites	[1] Daraina Loky-Manambato	[2] Mahavavy-Kinkony	[3] Menabe-Antimena	[4] Ampasindava-Galoka-Kalabenono	[5] Ambohimirahavavy-Marivorahona
		conservation concern?	adjacent land owners for wildlife corridors or introduction of appropriate catchment management)___2: Protected area design is not significantly constraining achievement of objectives, but could be improved (e.g. with respect to larger scale ecological processes)___3: Protected area design helps achievement of objectives; it is appropriate for species and habitat conservation; and maintains ecological processes such as surface and groundwater flows at a catchment scale, natural disturbance patterns etc								
Process	**06. Protected area boundary demarcation**	Is the boundary known and demarcated?	0: The boundary of the protected area is not known by the management authority or local residents/neighboring land users___1: The boundary of the protected area is known by the management authority but is not known by local residents/neighboring land users ___2: The boundary of the protected area is known by both the management authority and local residents/neighboring land users but is not appropriately demarcated___3: The boundary of the protected area is known by the management authority and local residents/neighboring land users and is appropriately demarcated	3	**40%**	**1,2**	2	2	2	0	0
Planning	**07. Management plan**	Is there a management plan and is it being implemented?	0: There is no management plan for the protected area___1: A management plan is being prepared or has been prepared but is not being implemented___2: A management plan exists but it is only being partially implemented because of funding constraints or other problems___3: A management plan exists and is being implemented	3	**40%**	**1,2**	2	2	2	0	0
Planning	**07. Management plan**	**07a. Management plan - Additional points**	The planning process allows adequate opportunity for key stakeholders to influence the management plan	1	**60%**	**0,6**	1	1	1	0	0
Planning	**07. Management plan**	**07b. Management plan - Additional points**	There is an established schedule and process for periodic review and updating of the management plan	1	**60%**	**0,6**	1	1	1	0	0
Planning	**07. Management plan**	**07c. Management plan - Additional points**	The results of monitoring, research and evaluation are routinely incorporated into planning	1	**60%**	**0,6**	1	1	1	0	0
Planning/ Outputs	**08. Regular work plan**	Is there a regular work plan and is it being implemented	0: No regular work plan exists ___1: A regular work plan exists but few of the activities are implemented___2: A regular work plan exists and many activities are implemented___3: A regular work plan exists and all activities are implemented	3	**27%**	**0,8**	1	1	2	0	0
Inputs	**09. Resource inventory**	Do you have enough information to manage the area?	0: There is little or no information available on the critical habitats, species and cultural values of the protected area ___1: Information on the critical	3	**67%**	**2,0**	2	2	2	2	2

Class	Issue	Question	Criteria	MAX	%	MRPA sites	[1] Daraina Loky-Manambato	[2] Mahavavy-Kinkony	[3] Menabe-Antimena	[4] Ampasindava-Galoka-Kalabenono	[5] Ambohimirahavavy-Marivorahona
			habitats, species, ecological processes and cultural values of the protected area is not sufficient to support planning and decision making___2: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient for most key areas of planning and decision making ___3: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient to support all areas of planning and decision making								
Process/Outcomes	**10. Protection systems**	Are systems in place to control access/resource use in the protected area?	0: Protection systems (patrols, permits etc) do not exist or are not effective in controlling access/resource use___1: Protection systems are only partially effective in controlling access/resource use___2: Protection systems are moderately effective in controlling access/resource use ___3: Protection systems are largely or wholly effective in controlling access/ resource use	3	**27%**	**0,8**	1	1	2	0	0
Process	**11. Research**	Is there a program of management-orientated survey and research work?	0: There is no survey or research work taking place in the protected area___1: There is a small amount of survey and research work but it is not directed towards the needs of protected area management___2: There is considerable survey and research work but it is not directed towards the needs of protected area management ___3: There is a comprehensive, integrated program of survey and research work, which is relevant to management needs	3	**60%**	**1,8**	2	2	2	2	1
Process	**12. Resource management**	Is active resource management being undertaken?	0: Active resource management is not being undertaken ___1: Very few of the requirements for active management of critical habitats, species, ecological processes and cultural values are being implemented___2: Many of the requirements for active management of critical habitats, species, ecological processes and, cultural values are being implemented but some key issues are not being addressed___3: Requirements for active management of critical habitats, species, ecological processes and, cultural values are being substantially or fully implemented	3	**20%**	**0,6**	1	1	1	0	0
Inputs	**13. Staff numbers**	Are there enough people employed to manage the protected area?	0: There are no staff ___1: Staff numbers are inadequate for critical management activities___2: Staff numbers are below optimum level for critical management activities___3: Staff numbers are adequate for the management needs of the protected area	3	**47%**	**1,4**	2	2	3	0	0
Inputs/Process	**14. Staff training**	Are staffs adequately trained to fulfill management objectives?	0: Staff lack the skills needed for protected area management___1: Staff training and skills are low relative to the needs of the protected area___2: Staff training and skills are adequate, but could be	3	**27%**	**0,8**	1	1	2	0	0

Class	Issue	Question	Criteria	MAX	%	MRPA sites	[1] Daraina Loky-Manambato	[2] Mahavavy-Kinkony	[3] Menabe-Antimena	[4] Ampasindava-Galoka-Kalabenono	[5] Ambohimirahavavy-Marivorahona
			further improved to fully achieve the objectives of management___3: Staff training and skills are aligned with the management needs of the protected area								
Inputs	**15. Current budget**	Is the current budget sufficient?	0: There is no budget for management of the protected area___1: The available budget is inadequate for basic management needs and presents a serious constraint to the capacity to manage___2: The available budget is acceptable but could be further improved to fully achieve effective management___3: The available budget is sufficient and meets the full management needs of the protected area	3	**40%**	**1,2**	2	2	2	0	0
Inputs	**16. Security of budget**	Is the budget secure?	0: There is no secure budget for the protected area and management is wholly reliant on outside or highly variable funding ___1: There is very little secure budget and the protected area could not function adequately without outside funding ___2: There is a reasonably secure core budget for regular operation of the protected area but many innovations and initiatives are reliant on outside funding___3: There is a secure budget for the protected area and its management needs	3	**20%**	**0,6**	0	1	2	0	0
Process	**17. Management of budget**	Is the budget managed to meet critical management needs?	0: Budget management is very poor and significantly undermines effectiveness (e.g. late release of budget in financial year)___1: Budget management is poor and constrains effectiveness___2: Budget management is adequate but could be improved___3: Budget management is excellent and meets management needs	3	**40%**	**1,2**	2	2	2	0	0
Inputs	**18. Equipment**	Is equipment sufficient for management needs?	0: There are little or no equipment and facilities for management needs___1: There are some equipment and facilities but these are inadequate for most management needs___2: There are equipment and facilities, but still some gaps that constrain management___3: There are adequate equipment and facilities	3	**40%**	**1,2**	2	2	2	0	0
Process	**19. Maintenance of equipment**	Is equipment adequately maintained?	0: There is little or no maintenance of equipment and facilities___1: There is some ad hoc maintenance of equipment and facilities ___2: There is basic maintenance of equipment and facilities ___3: Equipment and facilities are well maintained	3	**40%**	**1,2**	2	2	2	0	0
Process	**20. Education and awareness**	Is there a planned education program linked to the objectives and needs?	0: There is no education and awareness programme___1: There is a limited and ad hoc education and awareness program ___2: There is an education and awareness program but it only partly meets needs and could be improved___3: There is an appropriate and fully implemented education and awareness program	3	**33%**	**1,0**	1	1	3	0	0

Class	Issue	Question	Criteria	MAX	%	MRPA sites	[1] Daraina Loky-Manambato	[2] Mahavavy-Kinkony	[3] Menabe-Antimena	[4] Ampasindava-Galoka-Kalabenono	[5] Ambohimirahavavy-Marivorahona
Planning	**21. Planning for land and water use**	Does land and water use planning recognize the protected area and aid the achievement of objectives?	0: Adjacent land and water use planning does not take into account the needs of the protected area and activities/policies are detrimental to the survival of the area ___1: Adjacent land and water use planning does not takes into account the long term needs of the protected area, but activities are not detrimental the area ___2: Adjacent land and water use planning partially takes into account the long term needs of the protected area___3: Adjacent land and water use planning fully takes into account the long term needs of the protected area	3	**40%**	**1,2**	2	1	3	0	0
Planning	**21. Planning for land and water use**	**21a: Planning for land and water use - Additional points: Land and water planning for habitat conservation**	Planning and management in the catchment or landscape containing the protected area incorporates provision for adequate environmental conditions (e.g. volume, quality and timing of water flow, air pollution levels etc) to sustain relevant habitats.	1	**60%**	**0,6**	1	1	1	0	0
Planning	**21. Planning for land and water use**	**21b: Planning for land and water use - Additional points: Land and water planning for connectivity**	Management of corridors linking the protected area provides for wildlife passage to key habitats outside the protected area (e.g. to allow migratory fish to travel between freshwater spawning sites and the sea, or to allow animal migration).	1	**20%**	**0,2**	1	0	0	0	0
Planning	**21. Planning for land and water use**	**21c: Planning for land and water use - Additional points: Land and water planning for ecosystem services & species conservation**	"Planning addresses ecosystem-specific needs and/or the needs of particular species of concern at an ecosystem scale (e.g. volume, quality and timing of freshwater flow to sustain particular species, fire management to maintain savannah habitats etc.)"	1	**40%**	**0,4**	0	1	1	0	0
Process	**22. State and commercial neighbors**	Is there co-operation with adjacent land and water users?	0: There is no contact between managers and neighboring official or corporate land and water users___1: There is contact between managers and neighboring official or corporate land and water users but little or no cooperation___2: There is contact between managers and neighboring official or corporate land and water users, but only some co-operation ___3: There is regular contact between managers and neighboring official or corporate land and water users, and substantial co-operation on management	3	**47%**	**1,4**	2	2	3	0	0
Process	**23. Indigenous people**	Do indigenous and traditional peoples resident or regularly	0: Indigenous and traditional peoples have no input into decisions relating to the management of the protected area___1: Indigenous and traditional peoples have some input into discussions relating	3	**53%**	**1,6**	3	2	3	0	0

Class	Issue	Question	Criteria	MAX	%	MRPA sites	[1] Daraina Loky-Manambato	[2] Mahavavy-Kinkony	[3] Menabe-Antimena	[4] Ampasindava-Galoka-Kalabenono	[5] Ambohimirahavavy-Marivorahona
		using the protected area have input to management decisions?	to management but no direct role in management___2: Indigenous and traditional peoples directly contribute to some relevant decisions relating to management but their involvement could be improved___3: Indigenous and traditional peoples directly participate in all relevant decisions relating to management, e.g. co-management								
Process	**24. Local communities**	Do local communities resident or near the protected area have input to management decisions?	0: Local communities have no input into decisions relating to the management of the protected area___1: Local communities have some input into discussions relating to management but no direct role in management___2: Local communities directly contribute to some relevant decisions relating to management but their involvement could be improved___3: Local communities directly participate in all relevant decisions relating to management, e.g. co-management	3	**53%**	**1,6**	3	2	3	0	0
Process	**24. Local communities**	**24a. Local communities - Additional points: Impact on communities/indigenous people**	There is open communication and trust between local and/or indigenous people, stakeholders and protected area managers	1	**40%**	**0,4**	1	0	1	0	0
Process	**24. Local communities**	**24b. Local communities - Additional points: Impact on communities/indigenous people**	Programs to enhance community welfare, while conserving protected area resources, are being implemented	1	**60%**	**0,6**	1	1	1	0	0
Process	**24. Local communities**	**24c. Local communities - Additional points: Impact on communities/indigenous people**	Local and/or indigenous people actively support the protected area	1	**20%**	**0,2**	0	0	1	0	0
Outcomes	**25. Economic benefit**	Is the protected area providing economic benefits to local communities, e.g. income, employment, payment for environmental services?	0: The protected area does not deliver any economic benefits to local communities___1: Potential economic benefits are recognized and plans to realize these are being developed___2: There is some flow of economic benefits to local communities ___3: There is a major flow of economic benefits to local communities from activities associated with the protected area	3	**33%**	**1,0**	2	1	2	0	0

Class	Issue	Question	Criteria	MAX	%	MRPA sites	[1] Daraina Loky-Manambato	[2] Mahavavy-Kinkony	[3] Menabe-Antimena	[4] Ampasindava-Galoka-Kalabenono	[5] Ambohimirahavavy-Marivorahona
Planning/ Process	**26. Monitoring and evaluation**	Are management activities monitored against performance?	0: There is no monitoring and evaluation in the protected area___1: There is some ad hoc monitoring and evaluation, but no overall strategy and/or no regular collection of results___2: There is an agreed and implemented monitoring and evaluation system but results do not feed back into management___3: A good monitoring and evaluation system exists, is well implemented and used in adaptive management	3	**27%**	**0,8**	2	1	1	0	0
Outputs	**27. Visitor facilities**	Are visitor facilities adequate?	0: There are no visitor facilities and services despite an identified need___1: Visitor facilities and services are inappropriate for current levels of visitation ___2: Visitor facilities and services are adequate for current levels of visitation but could be improved___3: Visitor facilities and services are excellent for current levels of visitation	3	**53%**	**1,6**	3	2	3	0	0
Process	**28. Commercial tourism operators**	Do commercial tour operators contribute to protected area management?	0: There is little or no contact between managers and tourism operators using the protected area___1: There is contact between managers and tourism operators but this is largely confined to administrative or regulatory matters___2: There is limited co-operation between managers and tourism operators to enhance visitor experiences and maintain protected area values___3: There is good co-operation between managers and tourism operators to enhance visitor experiences, and maintain protected area values	3	**47%**	**1,4**	3	1	3	0	0
Inputs/Process	**29. Fees**	If fees (i.e. entry fees or fines) are applied, do they help protected area management?	0: Although fees are theoretically applied, they are not collected___1: Fees are collected, but make no contribution to the protected area or its environs___2: Fees are collected, and make some contribution to the protected area and its environs___3: Fees are collected and make a substantial contribution to the protected area and its environs	3	**33%**	**1,0**	3	0	2	0	0
Outcomes	**30. Condition of values**	What is the condition of the important values of the protected area as compared to when it was first designated?	0: Many important biodiversity, ecological or cultural values are being severely degraded ___1: Some biodiversity, ecological or cultural values are being severely degraded ___2: Some biodiversity, ecological and cultural values are being partially degraded but the most important values have not been significantly impacted___3: Biodiversity, ecological and cultural values are predominantly intact	3	**40%**	**1,2**	2	2	2	0	0
Outcomes	**30. Condition of values**	**30a. Condition of values - Additional Points:**	The assessment of the condition of values is based on research and/or monitoring	1	**60%**	**0,6**	1	1	1	0	0
Outcomes	**30. Condition of values**	**30a. Condition of values - Additional**	Specific management programs are being implemented to address threats to biodiversity, ecological and cultural values	1	**20%**	**0,2**	0	1	0	0	0

Class	Issue	Question	Criteria	MAX	%	MRPA sites	[1] Daraina Loky-Manambato	[2] Mahavavy-Kinkony	[3] Menabe-Antimena	[4] Ampasindava-Galoka-Kalabenono	[5] Ambohimirahavavy-Marivorahona
		Points:									
Outcomes	**30. Condition of values**	**30a. Condition of values - Additional Points:**	Activities to maintain key biodiversity, ecological and cultural values are a routine part of park management	1	**40%**	**0,4**	1	0	1	0	0
				102	**42%**	**42,4**	**67**	**56**	**78**	**6**	**5**

SECTION THREE: UNDP'S FINANCIAL SUSTAINABILITY SCORECARD FOR MRPAS

Financial Scorecard - Part I – Overall Financial Status of the Protected Areas System

Basic Protected Area System Information
Describe the PA system and what it includes: The national PA system (SAPM) covers 6.6 million hectares or approx. 11% of the country's surface, including areas under creation. Currently, areas managed by Madagascar National Parks cover an area of 2.2 million hectares with 51 PAs of categories I, II and III. Of these, 1.8 million hectares or 46 sites are gazetted and the remainder in the process of being created. In addition, 3.5 million hectares are PAs co-managed by NGOs (MRPAs or categories V and VI) amounting to 67, of which none have achieved definite gazettal status. The project will target 1,527,151 ha of MRPAs that are under temporary status or to be created. This corresponds to 2.6% of the country's land surface This PA finance analysis focuses on the costs and revenues of the MRPA subset of SAPM.

PA system		**Definitive Status**	**Temporary status**	**Under creation**	**Total hectares**
Manager	Data				
Madagascar National Park	Area (ha)	1,778,028	209,458	131,000	2,118,486
	# of sites	46	3	2	51
National protected areas co-managed by NGOs	Area (ha)		2,764,409	691,742	3,456,151
	# of sites		27	40	67
No manager defined yet	Area (ha)			1,083,351	1,083,351
	# of sites			8	8
TOTAL	**Area (ha)**	**1,778,028**	**2,973,867**	**1,906,093**	**6,657,988**
	# of sites	**46**	**30**	50	126

Financial Analysis of National Protected Area System			Baseline year[48] (US$)[49]	Year X[50] (US$)[51]	Year X+5[52] (forecasting) (US$)[53]	Comments
Available Finances						
(1) Total annual central government budget allocated to SEPA management (excluding donor funds and revenues generated (4) and retained within the PA system)	**2005**	**2006**	**2007**	**2008**		
- national protected areas	375000	335000	250000	185000		Difficult to mobilize government budget
- national areas co-managed by NGOs			0	0		
- state/municipal protected areas			0	0		
- others			0	0		
(2) Total annual government budget provided for PA management (including donor funds, loans, debt-for nature swaps)	**2005**	**2006**	**2007**	**2008**		
- national protected areas	3,140,000	2,800,000	2,000,000	1,500,000		Amounts are approximate
- national areas co-managed by NGOs			0	0		
- state/municipal protected areas			0	0		
- others			0	0		

[48] The baseline year refers to the year the Scorecard was completed for the first time and remains fixed. Insert year e.g. 2007.
[49] Average conversion rate for 2007 is 1.22
[50] X refers to the year the Scorecard is completed and should be inserted (e.g. 2008). For the first time the Scorecard is completed X will be the same as the baseline year. For subsequent years insert an additional column to present the data for each year the Scorecard is completed.
[51] Conversion rate of 1.22 as of 9 Sept.2008
[52] Year X+5 refer to forecasting annual data for five years in the future from the year the Scorecard is being completed. The data should be for one year (e.g. is year X is 2008 then the data should be presented for year 2013). The data would be based on long-term financial plans. If no financial planning has been done then this column can be left blank.
[53] Insert in footnote the local currency and exchange rate to US$ and date of rate [1.22 as of 9 September 2008]

Financial Analysis of National Protected Area System			**Baseline year[48] (US$)[49]**	**Year X[50] (US$)[51]**	**Year X+5[52] (forecasting) (US$)[53]**	**Comments**
(3) Total annual revenue generation from PAs, broken down by source	**2005**	**2006**	**2007**	**2008**		
a. Tourism - total			118,000 visitors	135,000 visitors	170,000 visitors	
- Tourism taxes			500,000	575,000	680,000	
- Entrance fees			170,000	190,000	160,000	
- Additional user fees			0	0	0	
- Concessions			0	0	0	
b. Payments for ecosystem services (PES)			0	0	0	
c. Other (specify each type of revenue generation mechanism)						
(4) Total annual revenues by PA type[54]	**2005**	**2006**	**2007**	**2008**		
- national protected areas			670,000	765,000	840,000	
- national areas co-managed by NGOs			0	0	0	
- state/municipal protected areas			0	0	0	
- others			0	0	0	
(5) Percentage of PA generated revenues retained in the PA system for re-investment[55]	**2005**	**2006**	**2007**	**2008**		
			200,000	230,000	250,000	

[54] This total will be the same as for (3) but broken down by PA type instead of by revenue type
[55] This includes funds to be shared by PAs with local stakeholders

Financial Analysis of National Protected Area System			**Baseline year[48] (US$)[49]**	**Year X[50] (US$)[51]**	**Year X+5[52] (forecasting) (US$)[53]**	**Comments**
(6) Total finances available to the PA system [government budget plus donor support etc (2)] plus [total annual revenues (4) multiplied by percentage of PA generated revenues retained in the PA system for re-investment (5)]			2, 200, 000	1, 730, 000		
Costs and Financing Needs						
(7) Total annual expenditure for PAs (operating and investment costs)[56]	**2005**	**2006**	**2007**	**2008**		
- national protected areas						
- national protected areas co-managed by NGOs			0	0	0	
- state/municipal protected areas			0	0	0	
- others			0	0	0	
(8) Estimation of financing needs				2,950,000 /year		
A. Estimated financing needs for *basic* management costs and investments to be covered				800,000		
B. Estimated financing needs for *optimal* management costs and investments to be covered			Na	2,150,000		

[56] In some countries actual expenditure differs from planned expenditure due to disbursement difficulties. In this case actual expenditure should be presented and a note on disbursement rates and planned expenditures can be made in the Comments column.

Financial Analysis of National Protected Area System			**Baseline year[48] (US$)[49]**	**Year X[50] (US$)[51]**	**Year X+5[52] (forecasting) (US$)[53]**	**Comments**
(9) Annual financing gap (financial needs – available finances)[57]						
A. Net actual annual surplus/deficit[58]			0	0	0	
B. Annual financing gap for basic expenditure scenarios			0	0	0	
C. Annual financing gap for optimal expenditure scenarios			Na	Na	Na	

[57] Financing needs as calculated in (8) minus available financing total in (6)
[58] This will be more relevant to parastatal and PA agencies with autonomous budgets

Financial Scorecard – Part II – Assessing Elements of the Financing System

Component 1 – Legal, regulatory & institutional frameworks					
Element 1 – Legal, policy & regulatory support for revenue generation by PAs	None -> 0	Some -> 1	A few -> 2	Fully -> 3	
(i) Laws are in place that facilitate PA revenue mechanisms	0				
(ii) Fiscal instruments such as taxes on tourism & water or tax breaks exist to promote PA financing		1			
Element 2 - Legal, policy & regulatory support for revenue retention & sharing within the PA system	No -> 0	Under development -> 1	Yes, but needs improvement -> 2	Yes, satisfactory -> 3	
(i) Laws, policies & procedures are in place for PA revenues to be retained by the PA system		1			
(ii) Laws, policies & procedures are in place for PA revenues to be retained, in part, at the PA site level		1			
(iii) Laws, policies & procedures are in place for revenue sharing at the PA site level with local stakeholders		1			
Element 3 - Legal & regulatory conditions for establishing Funds (trust funds, sinking funds or revolving funds)	No -> 0	Established -> 1	Established with limited capital -> 2	Established with adequate capital -> 3	
(i) A Fund have been established & capitalized to finance the PA system		1			
(ii) Funds have been created to finance specific PAs			2		
(iii) Funds are integrated into the national PA financing systems	0				
Element 4 - Legal, policy & regulatory support for alternative institutional arrangements for PA management to reduce cost burden to government	None -> 0	Under development -> 1	Yes, but needs improvement -> 2	Yes, Satisfactory -> 3	
(i) There are laws which allow & regulate delegation of PA management & associated financial management for concessions			2		
(ii) There are laws which allow & regulate delegation of PA management & associated financial management for co-management		1			
(ii) There are laws which allow & regulate delegation of PA management & associated financial management to local government			2		
(iv) There are laws which allow private reserves			2		
Element 5 - National PA financing strategies	Not begun -> 0	In progress -> 1	Completed -> 2	Under implementation -> 5	
(i) Degree of formulation, adoption & implementation of a national financing strategy	0				
(ii) The inclusion within the national PA financing strategy of key policies:	No -> 0	Yes -> 2			
- Revenue generation & fee levels across PAs		2			
- Criteria for allocation of PA budgets to PA sites (business plans, performance etc)	0				
- Safeguards to ensure that revenue generation does not adversely affect conservation objectives of Pas		2			
- Requirements for PA management plans to include financial sections or associated business plans		2			
Element 6 - Economic valuation of protected area systems (ecosystem services, tourism based employment etc)	None -> 0	Partial -> 1	Satisfactory -> 2	Full -> 3	
(i) Economic data on the contribution of protected areas to local & national development			2		
(ii) PA economic values are recognized across government		1			
Element 7 - Improved government budgeting for PA systems	No -> 0	Yes -> 2			
(i) Policy of the Treasury towards budgeting for the PA system provides for increased medium to long term financial resources in accordance with demonstrated needs of the system.	0				
(ii) Policy promotes budgeting for PAs based on financial need as determined by PA management plans.	0				
(iii) There are policies that PA budgets should include funds for the livelihoods of communities living in & around		2			

Component 1 – Legal, regulatory & institutional frameworks					
the PA as part of threat reduction strategies					
Element 8 - Clearly defined institutional responsibilities for PA management & financing	None -> 0	Partial -> 1	Improving -> 2	Full -> 3	
(i) Mandates of institutions regarding PA finances are clear & agreed		1			
Element 9 - Well-defined staffing requirements, profiles & incentives at site & system level	None -> 0	Partial -> 1	Almost there -> 2	Full -> 3	
(i) There are sufficient number of positions for economists & financial planners & analysts in the PA authorities to properly manage the finances of the PA system			2		
(ii) Terms of Reference (TORs) for PA staff include responsibilities for revenue generation, financial management & cost-effectiveness		1			
(iii) Laws & regulations motivate PA managers to promote site level financial sustainability (e.g. a portion of site generated revenues are allowed to be maintained for on-site re-investment & that such finances are additional to government budgets & not substitution)	0				
(iv) Performance assessment of PA site managers includes assessment of sound financial planning, revenue generation & cost-effective management		1			
(v) PA managers have the possibility to budget & plan for the long-term (e.g. over 5 years)		1			
Total Score for Component 1					

Component 2 – Business planning & tools for cost-effective management					
Element 1 – PA site-level business planning	Not begun -> 0	Early stages -> 1	Near complete -> 2	Completed -> 3	
(i) PA management plans showing objectives, needs & costs are prepared across the PA system			2		
(ii) Business plans, based on standard formats & linked to PA management plans & conservation objectives, are developed for pilot sites			2		
(iii) Business plans are implemented at the pilot sites (degree of implementation measured by achievement of objectives)			2		
(iv) Business plans are developed for all appropriate PA sites (business plans will not be useful for PAs with no potential to generate revenues)			2		
(v) Financing gaps identified by business plans for PAs contribute to system level planning & budgeting				3	
(vi) Costs of implementing business plans are monitored & contributes to cost-effective guidance & financial performance reporting			2		
Element 2 - Operational, transparent & useful accounting & auditing systems	None -> 0	Partial -> 1	Near complete -> 2	Fully completed -> 3	
(i) Policy & regulations require comprehensive, coordinated cost accounting systems to be in place (for both input & activity based accounting)		1			
(ii) There is a transparent & coordinated cost & investment accounting system operational for the PA system			2		
(iii) Revenue tracking systems for each PA in place & operational			2		
(iv) There is a system so that the accounting data contributes to national reporting			2		
Element 3 - Systems for monitoring & reporting on financial management performance	None -> 0	Partial -> 1	Near completed -> 2	Complete and operational -> 3	
(i) All PA revenues & expenditures are fully & accurately reported by government & are made transparent			2		
(ii) Financial returns on investments from capital improvements measured & reported, where possible (e.g. track increase in visitor revenues before & after establishment of a visitor centre)			2		

Component 2 – Business planning & tools for cost-effective management					
(iii) A monitoring & reporting system in place to show how & why funds are allocated across PA sites & the central PA authority				3	
(iv) Financial performance of PAs is evaluated & reported (linked to cost-effectiveness)		1			
Element 4 - Methods for allocating funds across individual PA sites	No -> 0	Yes -> 2			
(i) National PA budget is appropriately allocated to sites based on criteria agreed in national financing strategy		2			
(ii) Policy & criteria for allocating funds to co-managed PAs complement site based fundraising efforts	0				
Element 5 - Training & support networks to enable PA managers to operate more cost-effectively	Absent -> 0	Partially done -> 1	Almost done -> 2	Fully -> 3	
(i) Guidance on cost-effective management developed & being used by PA managers			2		
(ii) Operational & investment cost comparisons between PA sites complete, available & being used to track PA manager performance		1			
(iii) Monitoring & learning systems of cost-effectiveness are in place & feed into management policy & planning		1			
(iv) PA site managers are trained in financial management & cost-effective management			2		.
(v) PA site managers share costs of common practices with each other & with PA headquarters			2		
Total Score for Component 2					

Component 3 – Tools for revenue generation					
Element 1 - Number & variety of revenue sources used across the PA system	None -> 0	Partially -> 1	A fair amount -> 2	Optimal -> 3	
(i) An up-to-date analysis of all revenue options for the country complete & available including feasibility studies;		1			
(ii) There is a diverse set of sources & mechanisms generating funds for the PA system			2		
(iii) PAs are operating revenue mechanisms that generate positive net revenues (greater than annual operating costs & over long-term payback initial investment cost)		1			
Element 2 - Setting & establishment of user fees across the PA system	No -> 0	Partially -> 1	Satisfactory -> 2	Fully -> 3	
(i) A system wide strategy & implementation plan for user fees is complete & adopted by government			2		
(ii) The national tourism industry & Ministry are supportive & are partners in the PA user fee system & programs			2		
(iii) Tourism related infrastructure investment is proposed & is made for PA sites across the network based on revenue potential, return on investment & level of entrance fees [3]			2		
(iv) Where tourism is promoted PA managers can demonstrate maximum revenue whilst still meeting PA conservation objectives			2		
(v) Non tourism user fees are applied & generate additional revenue			2		
Element 3 - Effective fee collection systems	None -> 0	Partially -> 1	Completed -> 2	Operational -> 3	
(i) A system wide strategy & implementation plan for fee collection is complete & adopted by PA authorities (including co-managers)		1			
Element 4 - Marketing & communication strategies for revenue generation mechanisms	None -> 0	Partially -> 1	Satisfactory -> 2	Fully -> 3	
(i) Communication campaigns & marketing for the public about the tourism fees, new conservation taxes etc are widespread & high profile			2		
Element 5 - Operational PES schemes for PAs[4]	None -> 0	Partially -> 1	Progressing -> 2	Fully -> 3	

Component 3 – Tools for revenue generation					
(i) A system wide strategy & implementation plan for PES is complete & adopted by government		1			
(ii) Pilot PES schemes at select sites developed		1			
(iii) Operational performance of pilots is evaluated & reported		1			
(iv) Scale up of PES across the PA system is underway		1			
Element 6 - Operational concessions within PAs	None -> 0	Partially -> 1	Progressing -> 2	Fully -> 3	
(i) A system wide strategy & implementation plan complete & adopted by government for concessions			2		
(ii) Concession opportunities are identified at appropriate PA sites across the PA system			2		
(iii) Concession opportunities are operational at pilot sites			2		
(iv) Operational performance of pilots is evaluated, reported & acted upon		1			
Element 7 - PA training programs on revenue generation mechanisms	None -> 0	Limited -> 1	Satisfactory -> 2	Extensive -> 3	
(i) Training courses run by the government & other competent organizations for PA managers on revenue mechanisms & financial administration		1			
Total Score for Component 3					

Summary Scores for Elements of the MRPA Financing System

Financial Scorecard – Part II Summarized – Assessing Elements Of The Financing System See GEF4 Tracking Tools for Part II in full	**Score for Madagascar PA System**	**Total Possible Score**	**%**
Element 1 – Legal, policy and regulatory support for revenue generation by Pas	1	6	17%
Element 2 - Legal, policy and regulatory support for revenue retention and sharing within the PA system	3	9	33%
Element 3 - Legal and regulatory conditions for establishing Funds (trust funds, sinking funds or revolving funds)	3	9	33%
Element 4 - Legal, policy and reg. supp for altern.e institutional arrangements for PA mgt to reduce cost burden to gvt	7	12	58%
Element 5 - National PA financing strategies	6	13	46%
Element 6 - Economic valuation of protected area systems (ecosystem services, tourism based employment etc)	3	6	50%
Element 7 - Improved government budgeting for PA systems	2	6	33%
Element 8 - Clearly defined institutional responsibilities for PA management and financing	1	3	33%
Element 9 - Well-defined staffing requirements, profiles and incentives at site and system level	5	15	33%
Component 1 – Legal, regulatory and institutional frameworks	**31**	**79**	**39%**
Element 1 – PA site-level business planning	13	18	72%
Element 2 - Operational, transparent and useful accounting and auditing systems	7	12	58%
Element 3 - Systems for monitoring and reporting on financial management performance	8	12	67%
Element 4 - Methods for allocating funds across individual PA sites	2	4	50%
Element 5 - Training and support networks to enable PA managers to operate more cost-effectively	8	15	53%
Component 2 – Business planning and tools for cost-effective management	**38**	**61**	**62%**
Element 1 - Number and variety of revenue sources used across the PA system	4	9	44%
Element 2 - Setting and establishment of user fees across the PA system	10	15	67%
Element 3 - Effective fee collection systems	1	3	33%
Element 4 - Marketing and communication strategies for revenue generation mechanisms	2	3	67%
Element 5 - Operational PES schemes for PAs[4]	4	12	33%
Element 6 - Operational concessions within PAs	7	12	58%
Element 7 - PA training programs on revenue generation mechanisms	1	3	33%
Component 3 – Tools for revenue generation	**29**	**57**	**51%**
Total Score	**98**	**197**	**50%**

Total Score for PA System	98
Total Possible Score	197
Actual score as a percentage of the total possible score	50%
Percentage scored in previous year[1]	N/A

SECTION FOUR: UNDP'S CAPACITY DEVELOPMENT SCORECARD FOR MRPAS MANAGEMENT:

Table 18. Summary Results of the UNDP Capacity Development Scorecard for MRPAs Management:

Strategic Areas of Support	Systemic			Institutional			Individual			Average %
	Project Scores	Total possible score	%	Project Scores	Total possible score	%	Project Scores	Total possible score	%	
(1) Capacity to conceptualize and develop sectoral and cross-sectoral policy and regulatory frameworks	3	6	50%	2	3	67%	N/A	NA	NA	58%
(2) Capacity to formulate, operationalise and implement sectoral and cross-sectoral programs and projects	5	9	56%	11	27	41%	6	12	50%	49%
(3) Capacity to mobilize and manage partnerships, including with the civil society and the private sector	2	6	33%	4	6	67%	2	3	67%	56%
(4) Technical skills related specifically to the requirements of the SPs and associated Conventions	1	3	33%	2	3	67%	2	3	67%	56%
(5) Capacity to monitor, evaluate and report at the sector and project levels	3	6	50%	2	6	33%	1	3	33%	39%
TOTAL Score **and average for %'s**	**14**	**30**	**44%**	**21**	**45**	**55%**	**11**	**21**	**54%**	**51%**

Table 19. Detailed Results from the Capacity Development Scorecard :

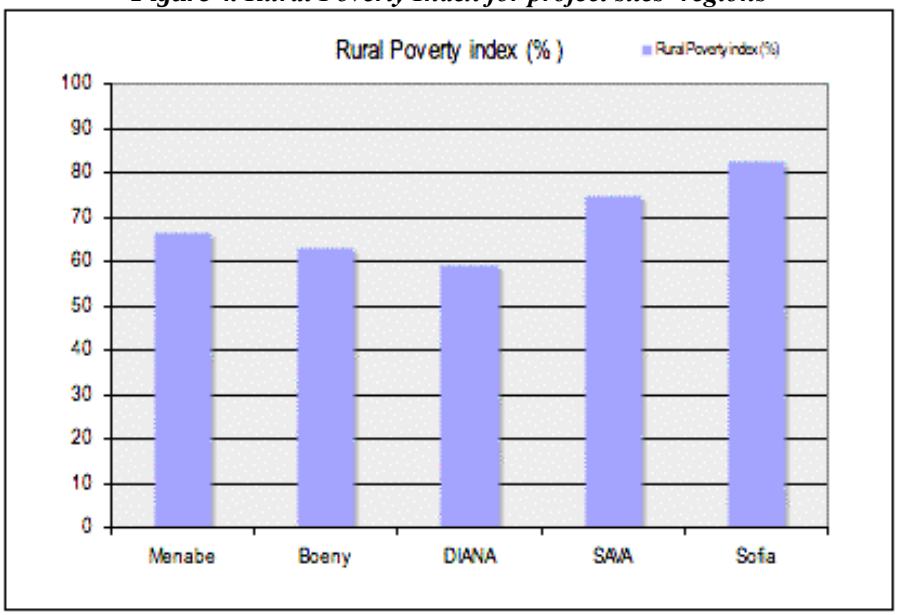
Strategic Area of Support	Capacity Level	Outcome	Numeric Indicator Score	Outcome Indicator
1. Capacity to conceptualize and formulate policies, legislations, strategies and programs	*Systemic*	The protected area agenda is being effectively championed / driven forward	**1**	There are some persons or institutions actively pursuing a protected area agenda but they have little effect or influence
		There is a strong and clear legal mandate for the establishment and management of protected areas	**2**	There is a reasonable legal framework for protected areas but it has a few weaknesses and gaps
	Institutional	There is an institution responsible for protected areas able to strategize and plan	**2**	Protected area institutions have some sort of mechanism to update their strategies and plans, but this is irregular or is done in a largely top-down fashion without proper consultation
2. Capacity to implement policies, legislation, strategies and programs	*Systemic*	There are adequate skills for protected area planning and management	**2**	Necessary skills for effective protected area management and planning do exist but are stretched and not easily available
		There are protected area systems	**2**	Protected area system is covering a reasonably representative sample of the major habitats and ecosystems, but still presents some gaps and not all elements are of viable size
		There is a fully transparent oversight authority for the protected areas institutions	**1**	There is some oversight, but only indirectly and in an untransparent manner
	Institutional	Protected area institutions are effectively led	**1**	Protected area institutions exist but leadership is weak and provides little guidance
		Protected areas have regularly updated, participatorially prepared, comprehensive management plans	**1**	Some protected areas have up-to-date management plans but they are typically not comprehensive and were not participatorially prepared
		Human resources are well qualified and motivated	**2**	HR in general reasonably qualified, but many lack in motivation, or those that are motivated are not sufficiently qualified.
		Management plans are implemented in a timely manner effectively achieving their objectives	**2**	Management plans are usually implemented in a timely manner, though delays typically occur and some objectives are not met
		Protected area institutions are able to adequately mobilize sufficient quantity of funding, human and material resources to effectively implement their mandate	**1**	Protected area institutions have some funding and are able to mobilize some human and material resources but not enough to effectively implement their mandate
		Protected area institutions are effectively managed, efficiently deploying their human, financial and other resources to the best effect	**2**	The institution is reasonably managed, but not always in a fully effective manner and at times does not deploy its resources in the most efficient way
		Protected area institutions are highly transparent, fully audited, and publicly accountable	**1**	Protected area institutions are not transparent but are occasionally audited without being held publicly accountable
		There are legally designated protected area institutions with the authority to carry out their mandate	**1**	There are one or more institutions or agencies dealing with protected areas but roles and responsibilities are unclear and there are gaps and overlaps in the arrangements

Strategic Area of Support	Capacity Level	Outcome	Numeric Indicator Score	Outcome Indicator
		Protected areas are effectively protected	**0**	No enforcement of regulations is taking place
	Individual	Individuals are able to advance and develop professionally	**1**	Career tracks are weak and training possibilities are few and not managed transparently
		Individuals are appropriately skilled for their jobs	**2**	Individuals are reasonably skilled but could further improve for optimum match with job requirement
		Individuals are highly motivated	**1**	Motivation uneven, some are but most are not
		There are appropriate systems of training, mentoring, and learning in place to maintain a continuous flow of new staff	**2**	Mechanisms generally exist to develop skilled professionals, but either not enough of them or unable to cover the full range of skills required
3. Capacity to engage and build consensus among all stakeholders	*Systemic*	Protected areas have the political commitment they require	**1**	Some political will exists, but is not strong enough to make a difference
		Protected areas have the public support they require	**1**	There is limited support for protected areas
	Institutional	Protected area institutions are mission oriented	**2**	Institutional mission well defined and internalized but not fully embraced
		Protected area institutions can establish the partnerships needed to achieve their objectives	**2**	Many partnerships in place with a wide range of agencies, NGOs etc, but there are some gaps, partnerships are not always effective and do not always enable efficient achievement of objectives
	Individual	Individuals carry appropriate values, integrity and attitudes	**2**	Many individuals carry appropriate values and integrity, but not all
4. Capacity to mobilize information and knowledge	*Systemic*	Protected area institutions have the information they need to develop and monitor strategies and action plans for the management of the protected area system	**1**	Some information exists, but is of poor quality, is of limited usefulness, or is very difficult to access
	Institutional	Protected area institutions have the information needed to do their work	**2**	Much information is readily available, mostly of good quality, but there remain some gaps both in quality and quantity
	Individual	Individuals working with protected areas work effectively together as a team	**2**	Individuals interact regularly and form teams, but this is not always fully effective or functional
5. Capacity to monitor, evaluate, report and learn	*Systemic*	Protected area policy is continually reviewed and updated	**2**	Policy is reviewed regularly but not annually
		Society monitors the state of protected areas	**1**	There is some dialogue going on, but not in the wider public and restricted to specialized circles
	Institutional	Institutions are highly adaptive, responding effectively and immediately to change	**0**	Institutions resist change
		Institutions have effective internal mechanisms for monitoring, evaluation, reporting and learning	**2**	Reasonable mechanisms for monitoring, evaluation, reporting and learning are in place but are not as strong or comprehensive as they could be
	Individual	Individuals are adaptive and continue to learn	**1**	Performance is irregularly and poorly measured and there is little use of feedback

Annex 4. MRPAs Profiles and Poverty Index

Sites	Regions	Rural Poverty index (%)
Menabe-Antimena	Menabe	66.3
Mahavavy-Kinkony	Boeny	62.9
Loky-Manambato	SAVA	74.5
Ampasindava-Galoka	DIANA	59.2
Ambohimirahavavy-Marivorahona	Sofia	82.2
	SAVA	74.5
	DIANA	59.2

Figure 4. Rural Poverty Index for project sites' regions



MENABE-ANTIMENA

Reason of the PA

The protected Area of Menabe Antimena has an important role in term of biodiversity. In fact, the existing various type of ecologic habitat (dry forests, mangroves, lakes etc.) is favorable to multiple species that exist nowhere else. These natural resources are often subject to human pressure such as slash and burn activities, illicit logging and illicit hunting of fauna species. The sustainable conservation of these natural resources are justify by, first, the richness of the Site in biodiversity, and second, by the existing pressures threatening the degradation, the fragmentation or even the disappearance of these species and/or habitats.

Besides, the conservation and sustainability of biodiversity ensure sustainable ecologic functions*. These biodiversity wealth are a different kind of fund as they attract tourists; the Region of Menabe is one of the traditional places to visit in Madagascar. The interaction between local communities and biodiversity has also to be taken into account. In fact, local communities are still practicing rituals within Protected Areas to ask for ancestors blessings.

Importance of biodiversity

The surface area of the Protected Area of Menabe- Antimena with 213 500 hectares is made out of 3 types of natural habitats: 84 500 hectares of dry forests, 23 000 hectares of mangroves and 1 000 hectares of wetlands including the Bedo Lake, recently classified as a Ram SAR Site. Different endemic species are present in different zones:

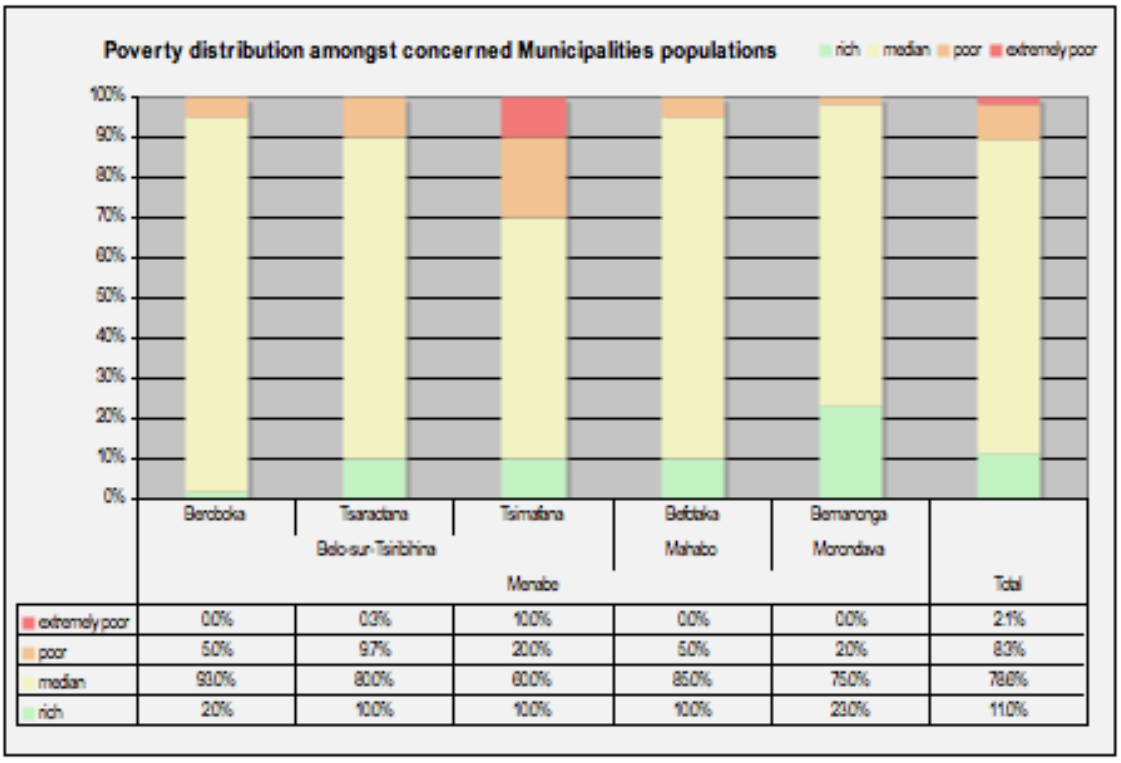
- 8 lemur species including 2 diurnal and 6 nocturnal,
- The Fosa (*Cryptoprocta ferox*), the greatest carnivore in Madagascar
- 3 of the 7species of baobabs existing in Madagascar including the Renala (*Adansonia grandidieri*)

The 4 headlight species of the site are the black striped mongoose (*Mungotictis decemlineata*), the giant jumping rat (*Hypogeomys antimena*), the flat tail turtle (*Pyxis planicauda*) and the microcèbe of Madam Berthe (*Microcebus berthae*). The humid zone is a specific habitat for the avifauna including the pink flamant and the Bernier's teal.

Poverty, local demography and cultures

Rural poverty index (Menabe region): 66,3 %

Districts	Municipalities	rich	median	poor	extremely poor
Belo-sur-Tsiribihina	Beroboka	2%	93%	5%	0%
	Tsaraotana	10%	80%	9.7%	0.3%
	Tsimafana	10%	60%	20%	10%
Mahabo	Befotaka	10%	85%	5%	0%
Morondava	Bemanonga	23%	75%	2%	0%
Menabe-Antimena	**100%**	**11.0%**	**78.6%**	**8.3%**	**2.1%**



The community living in and surrounding the protected area is mainly made up of Sakalava and Antandroy. The Sakalava are farmers by nature. On the other side, the Antandroy are farmers and nomads. Emigrant from the Southern part of Madagascar for the cultivation of sisal in North of Beroboka North, the latter practices slash and burn for cultivation. Other (minority) ethnic groups made up of Betsileo, Merina, Korao live there too. They are

generally farmers and traders. Like all the villages in Madagascar, each ethnic group is regrouped in a hamlet. Apart from the traditional rituals such as worship for the ancestor's blessings, each ethnic group depends on the forest for the daily needs: for firewood, wood for construction, for traditional medicine and secondary products (tubers, honey etc.) among others. These communities are spread within the 4 communes, including 61 *fokontany* with an average density of 16 kilometers

Administration, infrastructure and services

The Protected Area of Menabe-antimena lies in the region Menabe, spread between the town of Bemanonga, Ankilizato, Tsimafàna and Tsarahotàna. Crossed by the National Highway Number 8 that connect Morondava to Belo on Tsiribihina, from North to South, this protected area benefits from its proximity to Morondava; the capital of the region with the existing public and private technical services. As a priority area for various development projects, the Menabe Region is endowed with various structures and frameworks such as the PRD and the PCD, the Dianan'i Menabe, the platform of exchange between organizations active in the region (Regional Development committee...)

Despite the fact that each commune of the Protected Area is equipped with a public elementary school and a College of General Education, school enrollment and educational attainment in this area remains relatively low. Even in the case of health service, access remains low either because of the lack of proper infrastructure or the lack of staff.

Economic activities

Rice remains the principal activity of the local population, especially the riverside resident of Dabaraha (Bemanonga and Ankilizato), those of Tandil (Bemanonga) and Lake Kimanomby (Tsarahotana). Besides rice, the population also practices the culture of X (cap peas, peanuts, lentils) and cattle farming and other auxiliary activities related to forestry (production of charcoal) and tourism (gardening, sculpture, etc.).

Potential Industrial Development

The protected area is close to three companies: Grand Saline of Menabe, Sugar company SUCOMA and the aquaculture Aquamen. Surveys of oil had been made in the region in the 80s, as the layons locally called "American layons" shows. These exploration activities have been resumed in 2005.

COMPLEX MAHAVAVY KINKONY

Reason of the PA

The Complex of Wetlands Mahavavy-Kinkony » is unique for holding in one site all the habitats under represented (wetlands and freshwaters, mangroves, riparian forests and occidental deciduous forest) in the national network of protected areas. With a total surface area of 258 900 ha, it includes the delta river of Mahavavy (27 328 ha), the Kinkony lake connected with numerous lakes satellites (44 836 ha), the Marambitsy bay (37 386 ha) and Boeny (25 145 ha), dry forests including the forest of Tsiombikibo surrounding the site of Mahavavy-Kinkony (29 686 ha). This site hold also an exceptional biodiversity, 147 floral species and 185 fauna species, seriously threatened by an excessive exploitation by local communities :

- Chemical pollution generated by the sugar producer unit COMPLANT and its machines that take source in Matsakabanja and affecting the mangroves of the delta of Mahavavy
- Massive Exploitation of mangroves: use of branches and samples of trees for charcoal activities
- Tavy, charcoal activities, use of fire for honey collection, selective cut, slash and burn of dry forests.
- Transformation of marshes to rice field destroying habitats of multiple species including the endemic turtle *Erymnochelys madagascariensis*
- Overexploitation of aquatic plants such as *Nymphea lotus, Scirpus juncoides* (CYPERACEAE) and *Typha angustifolia* (TYPHACEAE) that lower the food of endemic Cichlidés *Pareroplus petiti and Paretroplus kieneri* destroying as well the habitats of the *Glareola ocularis*, a bird specie.
- Trap for bats, destruction of niche and commercial birds hunt.
- Introduction of exotic species that compete, invade and destroy other aquatic habitats in brief, the possibility to extend the size of habitats under-represented in the actual network of Protected Areas and the importance of biodiversity, despite the threats of abusive exploitation, allowed this complex to be chosen as one of the MRPA's sites for the Protected Areas extension of Madagascar.

Importance of biodiversity

The complex Mahavavy-Kinkony is situated within the occidental region, in the West domain, following the *Dalbergia-Commiphora-Hildegardia* (Humbert, 1955 et1965).
It is included within the eco-floral zones of the low altitude of 0 to 800m (Rajeriarison et Faramalala, 1999).
However, it is necessary to refine the boundaries for the region is vast and the local conditions so different that it affects the composition and the aspect of the vegetation that gives a landscape to the overall vegetation. Unfortunately, human activities contributed to the modification of this vegetation landscape most often:

- Deciduous dense and dry forests
- Semi-deciduous forest of the alluvia and on the edge of the Mahavavy
- Forests-gallery along watercourses
- The Savanna
- The swamp vegetation
- The lake vegetation
- The Mangrove

The complex Mahavavy-Kinkony was defined as an Important Zone for Birds Conservation or ZICO. The complex Mahavavy-Kinkony includes 144 birds' species. It is the only site in the West of Madagascar where 100% of the waterbirds specific to the occidental region are found. *Haliaetus vociferoides, Ardea humbloti, Ardeolla idea,* Amaurornis olivieri *or Vorofaly* are some of the critically endangered species.
The complex is also shelter for 13 species of lemurs. Two newly described lepilemurs are exclusive to the complex Mahavavy-Kinkony:

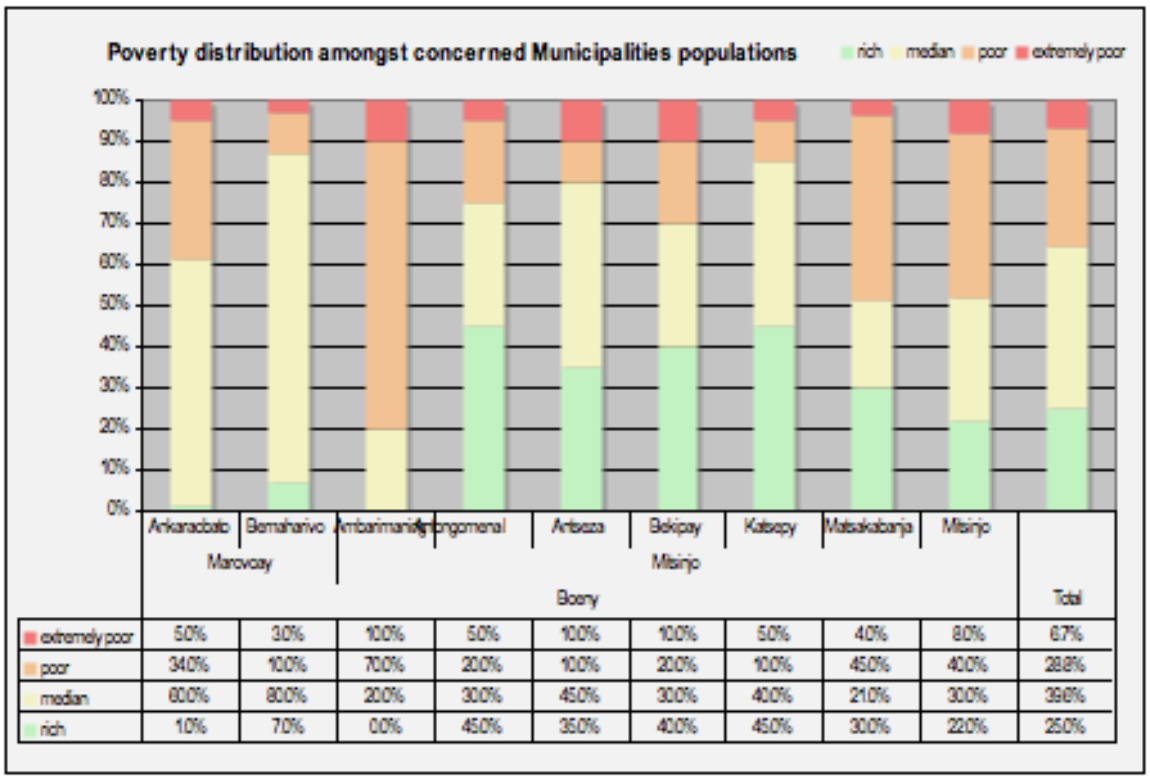
- The *Lepilemur aeeclis* present in almost all the East part of Mitsinjo, within the forests between the right bank of Mahavavy and the Betsiboka, and
- The *Lepilemur ahmansoni*, unique and confined between the left bank of the Mahavavy and the surrounding of Soalala (and maybe within the Tsingy of Namoroka).

10 species of bats are listed within the complex. Two rest sites for the bats are located during the terrestrial inventory in 2006, one in Ambatomaraha, near Ambinany on the right bank of Mahavavy and the other one on the sacred small island of Marandravy by the Kinkony.
29 herpetofauna species were identified within the complex. The most important herpetofauna fact is the presence of the extremely rare freshwater turtle *Erymnochelys madagascariensis* (highly endangered) within the swamp of Makary, of Maroakora by the Makary and the Sandama / Antongomena-Betsina.
The ecologic monitoring of Birdlife international Madagascar Program gave a total of 31 species of fishes including 6 endemic species:

- *Arius madagascariensis* (ARIIDAE),
- *Pellonulops madagascariensis* (ATHERINIDAE),
- Paratilapia polleni only present in the lake of Tsiambarabe between Antongomena Bevary and Boeny Aranta, status: vulnerable
- *Paretroplus petiti or Kotso* (CICHLIDAE) is highly endangered,
- *Paretroplus kieneri* or Kotsovato (CICHLIDAE), status: vulnerable
- *Pachypanchax omalonotus* (APLOCHELIDAE).

Poverty, local demography and cultures
Rural poverty index (Boeny region): 62,9 %

Districts	Municipalities	rich	median	poor	extremely poor
Marovoay	Ankaraobato	1%	60%	34%	5%
	Bemaharivo	7%	80%	10%	3%
Mitsinjo	Ambarimaninga	0%	20%	70%	10%
	Antongomena Bevary	45%	30%	20%	5%
	Antseza	35%	45%	10%	10%
	Bekipay	40%	30%	20%	10%
	Katsepy	45%	40%	10%	5%
	Matsakabanja	30%	21%	45%	4%
	Mitsinjo	22%	30%	40%	8%
Mahavavy-Kinkony	**100%**	**25.0%**	**39.6%**	**28.8%**	**6.7%**



	Ankaradabo	Bemaharivo	Ambarimanidy	Ambongomena	Antseza	Bekipay	Katsepy	Matsakabanja	Mtsinjo	Total
extremely poor	5.0%	3.0%	10.0%	5.0%	10.0%	10.0%	5.0%	4.0%	8.0%	6.7%
poor	34.0%	10.0%	70.0%	20.0%	10.0%	20.0%	10.0%	45.0%	40.0%	28.8%
median	60.0%	80.0%	20.0%	30.0%	45.0%	30.0%	40.0%	21.0%	30.0%	39.6%
rich	1.0%	7.0%	0.0%	45.0%	35.0%	40.0%	45.0%	30.0%	22.0%	25.0%

The population of the complex Mahavavy-Kinkony is made out of 19% natives (Sakalava) and the migrants that are divided into two categories. On one site, the category of the definitive migrants (Bestirebaka, Tsimihety), with 32 %, whom arrived 20 or 30 years ago. On the other sites, the category of seasonal migrants (Betsileo, Merina, Antandroy) makes 32 % of the population.

- The Sakalava are no longer the majority (19% of the local population) but keep and sustain their culture and lifestyle that are based on agropastoral activities (rice culture and cattle breeding ;
- The Betsirebaka came mainly from the Antemoro region; they represent the majority and the most representative of this zone (32%). Their main activity is fishing, both maritime and continental, especially within the lake Kinkony ;
- The Tandroy who made a name for them to be so greedy that they practice various activities, especially resale of charcoal, cattle and tobacco trade as well as the culture said « sur tanety » that includes maize. They are the second majority after the Betsirebaka with 26%
- The Tsimihety originating from the region of Mandritsara, Mampikony and Port Berger, are less important in number (12%). However, they integrate the society very well because they are close to the Sakalava for their culture and production system based on agriculture and cattle breeding. Their activities depend on the environment where they are settled and the material, financial and technical opportunities that are offered to them.
- The Merina (9%) and the Betsileo (2%) are the seasonal migrants and are the minority in the region. They are the « do it all » population. They are into fishing (marine and lake), rice culture and marketing.

Administration, infrastructures and services

Technical services within the study area are characterized by the lack of staff and materials, and by their centralization at the level of the chef lieu du District. We also notice the monitoring and support rarity for the villages following the lack of infrastructures and transportation.

Almost all basic social services are present in the zone, but the majority is centralized in the chef lieu of District and communes.

In the domain of education, the main issues of the local education are: the lack of teacher, the insufficiency in term of materials and furniture.

Health wise, the zone has five health structures managed by doctors, nurses, midwives and auxiliary nurses. The remoteness of this health center encourages traditional medicine, especially in isolated zones. Besides, the population goes to these centers only in case of an extreme illness.

Economic Activities

Farming activities

The majority of active population (75, 25%) within the zone of study works in the agropastoral sector. The farming activity lays on collective work organized within familial framework and uses rudimentary techniques.

This region is known for two systems of rice culture, a traditional activity, the vary jeby that is used during dry season in the alluvial valleys and the vary asara during the rainy season.

The rice culture concerns the majority of the population with respectfully 75, 25 % of households for the pluvial rice and 62, 13 % for the irrigated rice. The average yield for the pluvial rice (1, 90 T/ha) as well as the irrigated rice (2, 30 T/ha) is clearly higher than the national average (1, 80 T/ha). The climate as well as the alluvial soil provides a high agriculture potentiality for this region.

Concerning food-producing cultures; maize has an important place, in volume and nature, in the livelihood of the population. The development of this field is supported by the company PROBO or Produit de Boina de Mahajanga. However, this culture, situated in the Baiboho and other cleared zones depends highly on water availability.

Livestock farming activities

The bovine breeding, especially the semi-extensive type, has a considerable effective. A cattle of zebu said « civil » (as in opposition of the zebu used for cart) symbolizes wealth and identifies the status of their owner. The population often appeals to migrants from the South East to guard their cattle.

Fishing

Fishing, with a dugout canoe or on foot, remains the main activity of the coastal population. Towards the end of April, fishermen begin to leave the village and camp along the coast to find fishes and shrimps. Kinkony Lake, the Delta region Mahavavy and the sea shore are the most frequented places of villagers.

LOKY-MANAMBATO (DARAINA)

Reason of the PA

With a surface area of 240,000 ha, the protected Area of Loky-Manambato (Daraina) brings altogether a diversity of lake, forests and coastal ecosystems. Located at the North East transition zone (National Network of the PA, 2003), the region of Daraina is special because of the phenomenal biodiversity of numerous plant and animal species micro-endemic in it, including the emblematic golden crowned lemur (*Propithecus tattersalli*).

The landscape is marked by an important fragmentation of natural forests blocks dispersed in a fallow-savannas matrix in places subject to erosion. The mangroves in the Bay of Lokia, the islets of Nosy Ankaho and the Sahaka Lake are areas of worldwide importance for waterbirds. The Sahaka Lake is highly threatened by recession rice cultivation, by hunting and by fishing practiced by immigrants; Sahaka forests is a remnant coastal forest of the East.

The direct human pressures on biodiversity are illicit logging of precious wood, the poaching of endangered species; habitats are particularly affected by uncontrolled slash and burn and/or agricultural conversion. The traditional gold mining impacts locally and sporadically through alluvial gold deposits in the forests. Other than localized seaweed farming, fishing remains the predominant activity on the coast (yc.c mangroves). The tourism is virtually nonexistent because of the isolation of the site. The seasonal inaccessibility of the site also limits the management and conservation measures by relevant departments.

The fragmented landscape reflects the ancient practice of slash and burn and the persistence of cattle farming. Despite the development of irrigated or flooded rice culture and the vaniliculture, the management of non-forests area is mainly claimed for livestock farming raising conflict between users and farmers. Due to the low rate of deforestation and the low tendency to recover forests margins, the main constraints to a general improvement of the environment is caused by bushfires. Climate change is an important challenge to manage this bioclimatic transition space.

Importance of biodiversity

Of the 42,000 ha natural habitats of Loky-Manambato, we find the following types:

- Dry forests (15,700 ha, with 11,700 in the main blocks)
- Semi-deciduous forests (8,700 ha with 6,500 ha in the main blocks)
- Dense evergreen forests (5,200 ha, with 3,900 ha in the main blocks)
- Dense evergreen forests in the altitude (270 ha, Binara & Antsahabe)
- Coastal forests (2,600 ha, with 2,020 ha of the Sahaka forest)
- Dry and dense forest (1,800 ha only Antsaharaingy & Solanampialana)
- Wetlands (3,600 ha: lakes, swamps, phragmitaies)
- mangroves (1,950 ha), corals (1,150 ha) and coral islands (400 ha)

The flagship species are numerous:

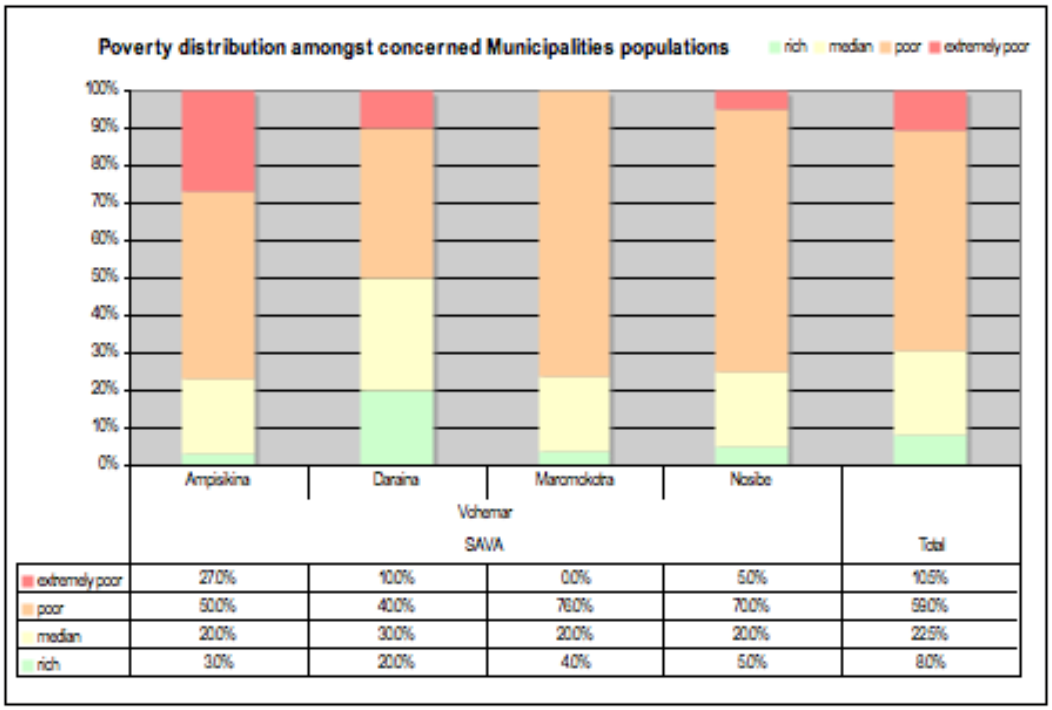
- 9 species of diurnal and nocturnal species with 2 endemics: Golden crowned lemur (*Propithecus tattersalli*) and *Lepilemur milanoi*
- *Heteroscoprion magnus*, the largest scorpion in Madagascar
- 127 species of birds, with 44 species from the lake Sahaka and 13 from the coast.
- 75 reptiles and 36 amphibian species, with 2 species of marine turtles
- 8 species of Afrosoricida + 5 species of Rodentia
- The fosa (*Cryptoprocta ferox*), the biggest carnivore of Madagascar
- 1,517 species of plants, of which 4 new gender and 50 new species, including the endemic Baobab of Perrier (*Adansonia perrieri*) in the North.

Among the flagship species, we can include the golden crowned lemur (*Propithecus tattersallii*), the largest black scorpion (Heteroscoprion magnus), the Baobab of Perrier (*Adansonia perrieri*). The lake Sahaka and the coast of Loky-Manambato host also many species of migratory waterbirds including the Bernier's Teal (*Anas bernieri*), the Madagascar Heron (*Ardea humbloti*) and the Madagascar sacred Ibis (*Threskiornis bernieri*). The islands Leven (Nosy Ankao) are housing a colony of several Terns (*Sterna fuscata*) and other species.

Poverty, local demography and cultures

Rural poverty index (SAVA region): 74,5 %

Districts	Municipalities	rich	median	poor	extremely poor
Vohemar	Ampisikina	3%	20%	50%	27%
	Daraina	20%	30%	40%	10%
	Maromokotra	4%	20%	76%	0%
	Nosibe	5%	20%	70%	5%
Loky-Manambato	**100%**	**8.0%**	**22.5%**	**59.0%**	**10.5%**



	Ampisikina	Daraina	Maromokotra	Nosibe	Total
extremely poor	27.0%	10.0%	0.0%	5.0%	10.5%
poor	50.0%	40.0%	76.0%	70.0%	59.0%
median	20.0%	30.0%	20.0%	20.0%	22.5%
rich	3.0%	20.0%	4.0%	5.0%	8.0%

Initially, the communities of Loky Manambato are mainly Sakalava Anjoaty and Antankarana. The Sakalava are farmers by nature and practice subsistence rice culture. The Betsimisaraka, moved to the region as labor for road construction years ago, were established and consolidated in few villages; they practice irrigated and slash and burn rice culture. Other minority ethnic group (Betsileo, Merina, Tsimihety) have mainly commercial activities. In 2000, the rush for gold (attracting more than 2,000 persons) added the number of immigrants to the island. Recently, the Sahaka Lake attracts many Betsimisaraka for rice cultivation and fishing.

With 24,000 inhabitants on 250,000 ha (4 rural communes, 24 fokontany), the density is low but the birth rate is high. Other than ritual practices and traditional worship as the ancestors blessing, each ethnic group depend on natural resources (forest, water) for its daily need (fuel wood, construction, pharmacopeia, …).

Administration, infrastructures and services

The PA is isolated because of the lack of infrastructure, including the national road N°5 linking Sambava to Ambilobe. The regional technical services are mainly in Sambava (main department of SAVA region), but some services are present in Vohemar, 75km from Sambava. Because of its inaccessibility, especially during rain season, this zone is forgotten by development programs. The PA spans 4 rural communes: Daraina, Maromokotra, Ampisikinana and Nosibe, each owning its Communal Development Plan (PCD). Created in 2004, the public body of Intercommunal Cooperation (OPCI) Loky-Manambato Miray (=together) gathers the 4 communes surrounding the shared projects of territorial development (improvement of deserted road, construction of a 2nd CEG) and recognizes the PA as an important driver. Health and Education services remain low despite adequate ownership of the local communities. The lack of teachers and doctors becomes problematic. The other services (farming, fishing, forestry) occur sporadically but increasingly since the creation of the OPCI LMM.

Economic activities

The main activity of the local population, rice culture, is practiced along the rivers of the lowlands and the banks of the Sahaka. Farming is also really important in this zone. Fishing is practiced in the lakes and mangroves along the coast. The culture of vanilla recently developed in the wet part of the region especially due to the promotion of organic and fair trade certification.

Potential industrial development

The protected area is covered by mining permits, with a considerable portion owned by International companies, especially gold. The large scale seaweed farming conducted by the company Floribis on the Leven Islands is short in space and is on its way to expand (toward Antsiranana).

AMPASINDAVA PENINSULA & GALOKO-KALABENONO CHAIN

Reason for the PA

The peninsula Ampasindava is mainly made out of mangrove forests, including Kakambana, Ambahakata, and the block of Ambohimirahavavy or Bongomirahavavy and Andranomatavy. In fact, the site covers a vast area (30% of the surface area of the Sambirano, meaning 140 000ha) and the forests therein play an important role in the biological, ecological as well a socio – economy plan. The forests contain an important wealth in biodiversity, including the *Mimusops sambiranensis* characterizing the endemic flora of the Sambirano, the *Lepilemur dorsalis* and the *Eulemur macaco*. These forests are also important the habitats of many fauna species. They also serve as water reservoirs for local communities as the major rivers of the surrounding areas take their sources in the forests of Ambohomirahavavy (Vavan'ny Ambaliha, Birondro, Antsohabe, Andranomena, Vavan'ny AMBATOBE, Vavan'ny Behapongy, etc...) and Andranomatavy. On the Socio-economic part, the communities in the territory of Ampasindava advantageously benefit from the use of local natural resources in order to meet their daily needs, thanks to the regeneration of areas of cultivation, harvesting, fishing, etc.

However, this healthy relationship Man-Natural resource is currently endangered by human activities that often precipitate the depletion of natural resources and promote the imbalance of the natural system. The forests of Ampasindava are characterized by a tragic fragmentation, partly due to shifting cultivation practices and slash and burn (rice). The remaining forest blocks are still under increasing human pressure. According to an estimate based on a satellite image (taken from the Atlas of vegetation Kew published in 2007), there are more than 40 000ha of forest remaining, or 29%. This situation shows at first the need of management sustainability of the local natural resources. The illicit logging for commercial use (strong demand on the markets of Ambanja and Nosy Be) are also a serious threat to the remaining forests block. In addition, the mangroves are important habitats for birds, marine species are seriously threatened by the use of charcoal, illegal logging, fishing.

The presence of oil exploration (offshore) and the mining blocks on the peninsula could threaten natural marine and inland resources if the promoters fail to meet their environmental commitments. Therefore, the establishment of a permanent structure of natural resource management as a PA is an effective way to address current and potential threats to the sustainability of natural resources.

Being a peninsula, Ampasindava has diverse tourism activities (Nosy Iranjakely resort cruises...). While tourism is an important sector in the socio-economic and sustainable management of natural resources, it can be dangerous for the conservation and the fragile coastal and marine ecosystems.

In brief, all of this attests once more the need and necessity of the implementation of a structure of sustainable natural resources management of the peninsula.

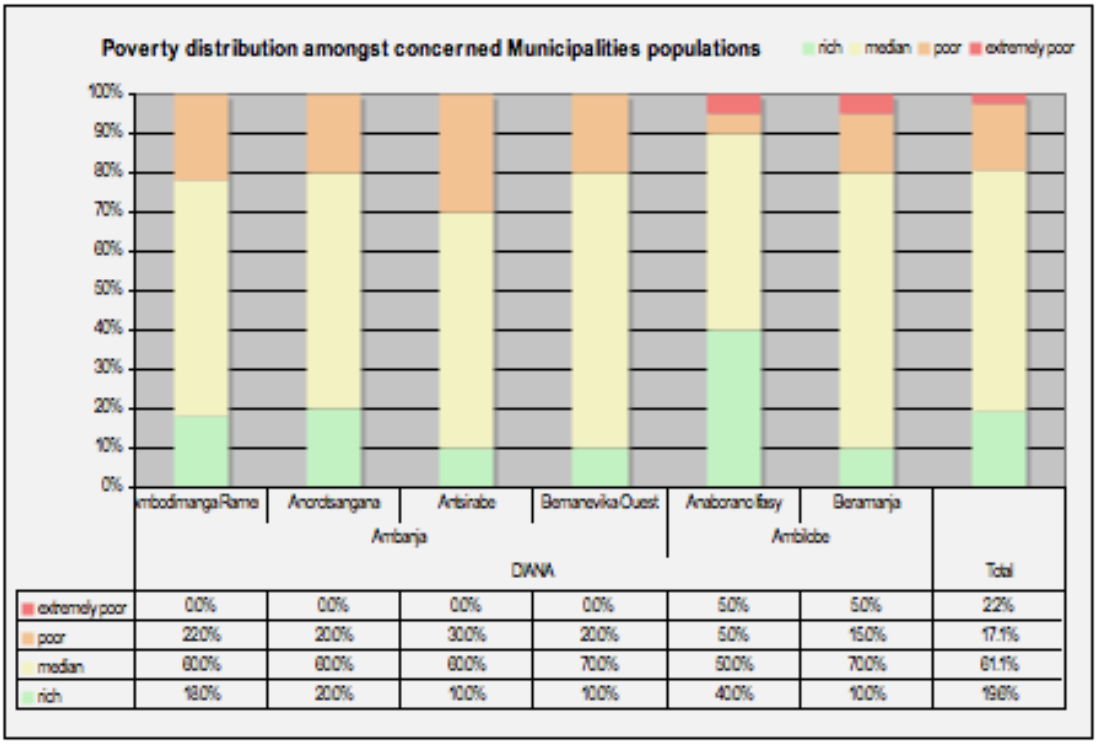
Importance of biodiversity

Despite the heavy deforestation undergone by the forests of Ampasindava, within the remaining 40 000ha are hosted a large wealth of fauna and flora of Madagascar and Sambirano. Among the potential biodiversity, we can include the unicolor Avahi, Phan Parienti, Lepilemur dorsalis, Eulemur macaco, Threskiornis bernieri, Haliaetus vociferoides, and Pteropus rufus. For the flora, the Mimusops sambiranensis is endemic to Sambirano.

Poverty, local demography and cultures

Rural poverty index (DIANA region): 59,2 %

Districts	Municipalities	rich	median	poor	extremely poor
Ambanja	Ambodimanga Ramena	18%	60%	22%	0%
	Anorotsangana	20%	60%	20%	0%
	Antsirabe	10%	60%	30%	0%
	Bemanevika Ouest	10%	70%	20%	0%
Ambilobe	Anaborano Ifasy	40%	50%	5%	5%
	Beramanja	10%	70%	15%	5%
Ampasindava-Galoka	**100%**	**19.6%**	**61.1%**	**17.1%**	**2.2%**



	Ambodimanga Ramo	Anorotsangana	Antsirabe	Bemaneviky Ouest	Analorano Ifasy	Beramanja	Total
extremely poor	0.0%	0.0%	0.0%	0.0%	5.0%	5.0%	2.2%
poor	22.0%	20.0%	30.0%	20.0%	5.0%	15.0%	17.1%
median	60.0%	60.0%	60.0%	70.0%	50.0%	70.0%	61.1%
rich	18.0%	20.0%	10.0%	10.0%	40.0%	10.0%	19.6%

Training of local population was part of a dynamic migration of Sakalava dynasties to the early 17th century. From Menabe, running along the west coast of Madagascar to form the population from Boeny to Sambirano. However, prior to the arrival of the *Sakalava*, Muslims-Africans came during the 15th century (era of Mahilaka), known locally as *Makoa* settled with the Sakalava the population of Sambirano.

The peninsula of Ampasindava is rich in historical and cultural heritage. In fact, also known as Mahilaka, it was the first city in Madagascar, built in the 15th century by traders from different ethnic groups (Arabs, Africans, and Chinese) who visited the counter of Mahilaka.

Ampasindava has 13 674 inhabitants (at the commune level, INSTAT, 2003) across the 4 communes (Ambaliha, Bemaneviky-west Anorontsangana, Antsirabe) and 39 Fokontany, composing the region, with a density varying between 0, 8 to 13.8. In fact, the average density of the whole country seems less important, but the practice of *Tetiky or Tavy* accelerates the forests disappearance.

Despite the opening of the local society and the tribal composition of communities of the peninsula, the historical, cultural and traditional practices of the Sakalava of Sambirano, based on the worship of ancestors and Tromba, remain the center of social bonds. In fact, the local population is mainly made out of 3 tribes: Sakalava, the majority, followed by the Tsimihety and finally the Makoa.

Administrative, infrastructures and services

The peninsula of Ampasindanva remains a rural communes overlooked by administrative bodies such as the district of Ambanja. During the 80s, the then Government had initiated a program of intensive agricultural extension with an improvement of production infrastructure (irrigation canals, roads, track...), but the commune did not benefit from this program. Nowadays, Ampasindava does not figure among the concern.

The peninsula may be accessible only by sea. This can largely restrict the circulation of goods and Man. There are no roads connecting the communes between them. The agricultural infrastructures such as plains for rice cultivation, irrigation systems are virtually absent. In brief, the lack of infrastructure greatly affects productivity and local development.

The lack of infrastructures impacts also the health centers and schools. Indeed, there area 43 public primary schools for 4 communes, 3 health centers with 2 of them in Antsirabe and 1 that is not functional in West-Bemaneviky.

Economic activities
Local economic activities revolve around the upland rice in the mountains, the illicit marketing of wood, these of charcoal from mangroves timber. Fishing is an important source of income for people and it is mostly common in the bay, the mangroves, and along the coastline.

The vanilla culture has recently development in the late 90's.

Industry potential
Several mining permits (for research) have been issued to individuals and large national and international company, including Summit Resources (lead, zinc), COPAX resources (molybdenum, silver, copper), Tantalum Rare Earth (pyrochlore, tin). These large industrial projects could create new sources of income for people and communities by creating local employment, collecting fees.

Major oil exploration projects currently cover the terrestrial land (onshore) of the peninsula and the bay as well as the surrounding sea.

AMBOHIMIRAHAVAVY-MARIVORAHONA

Reason for the PA
The PA covers a large area of 593 491ha and straddles several regions, districts, communes and fokontany. The corridor Marivorahona-Ambohimirahavavy conceals various wealth that is without doubt the biological, ecological, cultural, natural and socio-economic uniqueness of the area and Madagascar. Different type of forests, ecoregions and human societies are part of the PA. This corridor generally refers to about 100 000 inhabitants within 03 regions (DIANA, SAVA and SOFIA), 06 districts (Ambilobe, Ambanja, Andapa, Sambava, Bealanana, Befandriana North), 08 communes (Bevonota, Doany, Manambato, Marotolana, Analila, Ambovonomby, Mangindrano, Matsondakana) and 102 Fokontany. The adherence to several ecoregions including the area of Sambirano certificies the richness in biodiversity that characterizes this PA.

However, the human pressure is currently threatening the integrity of the forests corridor. The cultural and socio-economic practices such as Tavy, illegal logging, voluntary slash and burn are threats that cause the daily loss of natural balance, of natural habitats and forests. Some species (Propithecus candidus Plethodontohyla guentherpeters) living within this corridor are already critically endangered according to IUCN and are, actually, more and more exposed to anthropogenic pressures. With these growing threats, the establishment of a new protected area would be beneficial, for both balanced and sustainable management of natural resources and for local communities. The blocks of Ambohimirahavavy and Marivorahona are always a natural part of high importance in the daily life of local population, especially because of the water they provide.

The presence of oil exploration (onshore) and mining blocks on site could be a catastrophic threat to natural resources if the mining companies do not meet their environmental commitments. Therefore, the establishment of a permanent structure of natural resource management as a PA is, once again, an effective way to address the current and potential threats to the sustainability of natural resources.

Importance of biodiversity
Among the remarkable species on site, we can include the following:

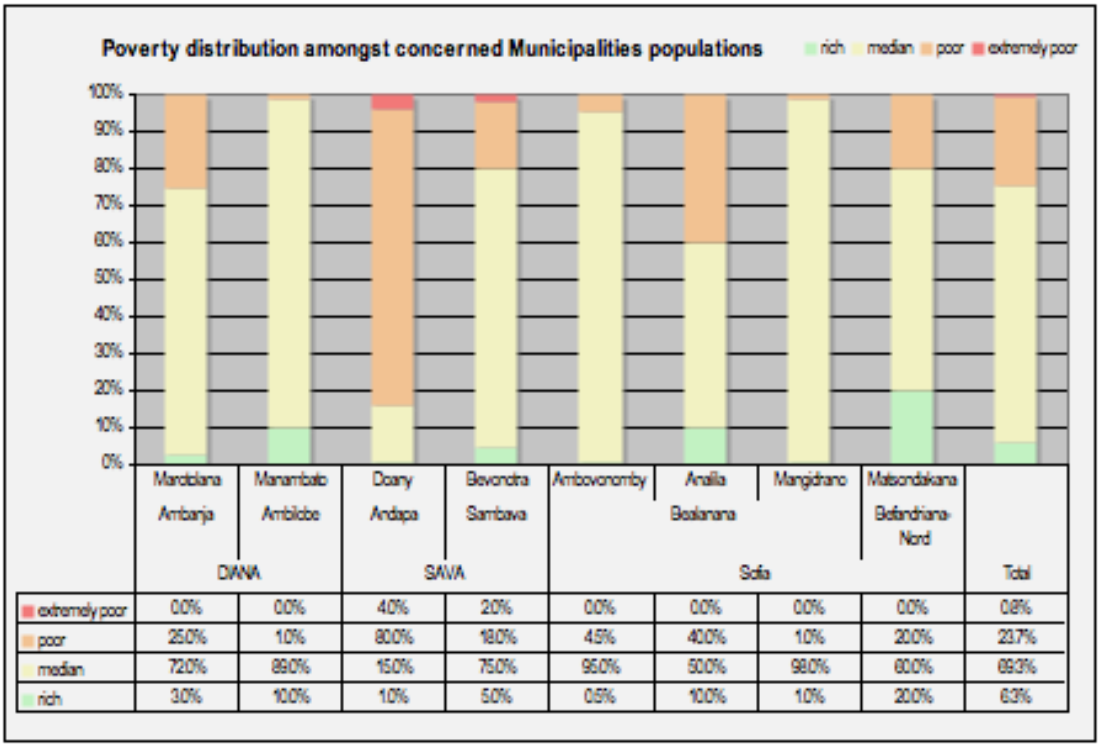
- Lemurs: *Propithecus candidus* (CR), *Eulemur rubriventer* ;
- Other mammals: *Brachytarsomys villosa, Voalavo gymnocaudus,Microgale cowani, Nesomys rufus, Microgale monticola*
- Amphibians*: Plethodontohyla guentherpeters, Plethodontohyla serratopalpebr, Platypelis mavomavo, Platypelis tetra, Platypelis tsaratananaensis, Platypelis alticola, Platypelis milloti, Boophis blommersae, Mantidactylus massi, Mantidactylus ambohitra, Mantidactylus salegy*
- Birds: *Sarothrura watersi* (EN)

Poverty, local demography and cultures

Rural poverty index

Sofia region: 82,2 %
DIANA region: 59,2 %
SAVA region: 74,5 %

Regions	Districts	Municipalities	rich	median	poor	extremely poor
DIANA	Ambanja	Marotolana	3%	72%	25%	0%
	Ambilobe	Manambato	10%	89%	1%	0%
SAVA	Andapa	Doany	1%	15%	80%	4%
	Sambava	Bevonotra	5%	75%	18%	2%
Sofia	Bealanana	Ambovonomby	0.5%	95%	4.5%	0%
		Analila	10%	50%	40%	0%
		Mangidrano	1%	98%	1%	0%
	Befandriana-Nord	Matsondakana	20%	60%	20%	0%
Ambohimirahavavy-Marivorahona		**100%**	**6.3%**	**69.3%**	**23.7%**	**0.8%**



The formation of communities surrounding the corridor demonstrates the cultural wealth in the PA. From cultural and demographic point of view, the PA can be divided in three areas:

1. North-West and Central area, mainly formed by the Sakalava tribe (Ambilobe, Ambanja) ;
2. North- East area, there are mainly the Betsimisaraka (Sambava, Andapa) ;
3. South and South-East area, the Tsimihety tribes.

Overall, the PA has over 100 000 inhabitants spread across the three cultural areas. In fact, these three cultural groups adhere each to cultural practices, traditional specific in terms of use and management of natural resources. However, the three tribes have traditionally swidden rice cultivation, except the tribe of Betsimisaraka from Andapa, which for some geographical reason (within the basin of Andapa), develops more rice cultivation on field. In brief,

the structure established within the PA will seek to strike a balance between these practices and the sustainable management of natural resources.

Administration, infrastructures and services

Registered in several administrative districts, the PA accuses necessarily a multitude of features, both at public administration level and at the economic infrastructure and social basis level. The overall crop yields (rice) certify the lack of economic facilities (cultivated lands), as demonstrated by the low productivity of communes: on average 1.5 t / ha (inventory at the commune level, INSTAT, 2003).

In terms of social infrastructure, the riverside communes are poorly equipped (inventory at the commune level, INSTAT, 2003): 80 primary schools and two communes (Doany and Marotolana) with no infrastructures, 04 basic health centers level 2 with 3 communes devoided of infrastructures (Doany, Manambato, Marotolana).

Economic Activities

The economic activities are mainly rice cultivation, coffee, cloves, vanilla, bean and cocoa. Other than rice culture, each commune is specialized in one of more specific products depending on agro-ecologic conditions:

Region	District	Commune	Main Activities	Secondary Activities
SAVA	Sambava	Bevohotra	coffee	Rice, maize
	Andapa	Doany	coffee	Rice, clove
DIANA	Ambilobe	Manambato	rice	Vanilla, banana
	Ambanja	Marotolana	rice	Coffee, cocoa
SOFIA	Bealanana	Analila	rice	Bean, sugar cane
		Ambovonomby	rice	Bean, banana
		Mangindrano	rice	Bean, cassava root
		Matsondakana	rice	vanilla, coffee

Products	Average revenue(t/ha)
Rice	1,5
Coffee	1,4
Vanilla	1,9
Bean	2,6
Clove	0,5
Cocoa	2,5
Banana	10
maize	4

Source: inventory at communes level, Instat, 2003

Industrial potential

Several mining permits (research) have been issued to individuals and large national and international companies, including Ampanihy resources (gold, diamond, platinum, copper, nickel, chlorine, columbite, ilmenite, quartz), Madagascar mining development (gold, crystal), Red Island Resources (gold, tin, copper, white quartz, lead, zinc). These large industrial projects could create alternative sources of income for people and communities by creating local employment.

Annex 5. Stakeholder analysis

STAKEHOLDER	BRIEF SUMMARY	EXPECTATIONS	RELEVANCE TO PRODOC
Central Government Level			
MEF – Ministry or Environment and Forests	1. Responsible for all environment and forest policies and legislation, presenting these to GOM. 2. Reconciles artisanal and commercial forestry goals with those of SAPM. 3. Responsible for negotiating agreements with other ministries. The GEF Focal Point is a MEF appointee.	1. Responsible for developing SAPM to include at least 10% of national territory. 2. MEF aims to have coherence between the COAP and the Mining and Petroleum Codes regarding extractive industries and PAs.	1. GEF Focal Point participation in PSC in order to provide oversight. 2. Endorsement and support of MRPA policies and legislation with respect to GOM approval. 3. Presents MRPA gazettement to GOM.
DCBSAP – Direction for the Madagascar Protected Areas System	1. Responsible for coordinating SAPM in its entirety, although Madagascar National Parks effectively manages Category I, II and IV PAs. 2. Responsible for developing PA policy and legislation. 3. Develops mandatory activities for PA establishment and management. 4. Develops guidelines for PA management. 5. Coordinates the SAPM Commission and all sub-commissions. 6. Negotiates with departments in other ministries regarding coherence between sectors, such as mining and petroleum.	1. The GOM, through DCBSAP has strong expectations regarding MRPAs as a means to conserve biodiversity and to drive economic growth. 2. Capacity strengthening for DCBSAP and the DREFs is a major priority. 3. Successful MRPA sustainability strategies for MRPAs constitute a major objective. 4. MRPA protection against mining and petroleum interests is a key issue, and harmonious coexistence is a GOM goal.	1. DCBSAP is a key player in the present project and will be responsible for all policy and legislation aspects of the project. 2. DCBSAP is responsible for guidelines concerning MRPA creation and management. 3. It will coordinate the establishment of the MRPA network. 4. DCBSAP will be a member of the PSC and represent GOM interests.
DPPSE – Director of Coordination, Programming, Monitoring and Evaluation	1. Participation in PSC for project oversight. 2. Reports to MEF on project progress and achievements.	1. Project conforms to MEF policy, legislation and goals.	1. Ensures project conformity with GOM policy and strategies.
MEM – Ministry of Energy and Mines	1. Negotiations with MEF regarding mining and petroleum activities in MRPAs.	1. Conflict avoidance regarding MRPAs. 2. Acceptable coexistence between extractive industries and MRPAs.	1. Essential partner in seeking solutions to potential or real MRPA-extractive industry conflicts.
DDAT – Decentralisation and Land Use Management	1. Participates in PSC in order to ensure that MRPAs conform to GOM policy on decentralization and regional development and land use planning.	1. Effective land use planning at national and regional levels. 2. MRPA land use planning into regional plans.	1. MRPA land use planning integration into regional plans is critical to Outcome 2.

STAKEHOLDER	BRIEF SUMMARY	EXPECTATIONS	RELEVANCE TO PRODOC
	2. Supports integration of MRPA land use planning into regional planning process.		
ONE – National Environment Office	1. Responsible for community safeguards plans for new MRPAs. 2. Certification for new MRPAs. 3. MECIE application for extractive industries, including EIAs and SEAs.	1. Effective cohabitation between MRPAs and extractive industry ventures. 2. Negative impact avoidance in MRPAs.	1. ONE will be important in assessing extractive industry risks to MRPAs.
Madagascar National Parks	1. Partner in Menabe-Antimena and Northern Highlands. 2. Participation at regional and local levels in the above areas. 3. Collaboration on sustainable tourism development at the site level.	1. Development of sustainable tourism in Andranomena Special Reserve integrated into broader regional circuits. 2. An effective PA system for the Northern Highlands including Madagascar National Parks sites and MRPAs.	1. Ensures coherence between Madagascar National Parks goals and those of the MRPA network. 2. Could lead to improved rural development activities around Madagascar National Parks PAs.
OMNIS – National Mines and Strategic Industries Office	1. Responsible for Petroleum Code and enabling laws development. 2. Oversees petroleum and strategic mining ventures.	1. Development of petroleum and strategic mining projects.	. 1. Important negotiator regarding petroleum and mines.
Development Partners and larger NGOs			
French Development Cooperation (AFD and FFEM)	1. Finances similar MRPA approaches elsewhere in Madagascar. 2. Seeking to integrate effective biodiversity conservation and rural economic growth. 3. Supports the FAPBM.	1. Sharing and promoting effective approaches to MRPA management.	1. Will support the MRPA network development. 2. May support MRPA donor commitments to MRPAs through the FAPBM.
World Bank	1. Supports good governance within GOM in the mining sector. 2. Major supporter of the FAPBM. 3. Long-time supporter of Madagascar National Parks. 4. Requires all PAs it supports to have a community safeguards plan.	1. Mainstreaming biodiversity into extractive industries. 2. PAs enhance local livelihoods.	1. Will support GOM efforts to integrate biodiversity and PA interests into extractive industries. 2. May support FAPBM fund-raising for MRPAs.
USAID	1. Strong supporter of MRPAs. 2. Financed MRPA management tools development. 3. Promotes health-development-environment approaches for PAs.	1. Effective MRPA network that effectively conserves biodiversity while improving local livelihoods through innovative approaches.	1. Will support MRPA network development. 2. Will help to disseminate lessons learned and propagate them.
Norwegian Aid	1. Supports NGOs in MRPA development. 2. Supports climate change adaptation in	1. Effective MRPA network that effectively conserves biodiversity while	1. Will provide expertise to DCBSAP and NGOs regarding biodiversity and petroleum.

STAKEHOLDER	BRIEF SUMMARY	EXPECTATIONS	RELEVANCE TO PRODOC
	sensitive ecological areas including MRPAs. 3. Has a bilateral agreement with GOM to improve governance in the petroleum sector. 4. Supports civil society constructive engagement in oil development through WWF. 5. REDD development.	improving local livelihoods through innovative approaches. 2. Climate change resilience in ecological sensitive areas. 3. Mainstreaming biodiversity into petroleum development.	2. Lessons learned from climate change adaptation will be made available to partners. 3. Support for REDD.
German Development (KfW and GTZ)	1. Supports WWF MRPA development efforts. 2. Supports Madagascar National Parks Head Office and PAs in the Menabe Region.	1. 1. Effective MRPA network that effectively conserves biodiversity while improving local livelihoods through innovative approaches. 2. Collaboration between MRPA network and Madagascar National Parks at site level.	1. Will encourage collaboration between MRPA network and Madagascar National Parks. 2. Will promote lessons sharing between MRPAs.
FAPBM	1. Initially Proposed implementing partner for the project, a role that was later assumed by UPCE. 2. Supports PAs including MRPAs. 3. Fund-raising for sustainable PA system.	1. Sustainable PA system. 2. Successful MRPA establishment.	1. Project finance management. 2. Fund-raising for MRPAs.
MacArthur Foundation	1. Supports MRPA creation and development. 2. Supports efforts to develop national climate change adaptation policy and strategies. 3. Supports climate change adaptation in the field through WWF.	1. Effective MRPA network that effectively conserves biodiversity while improving local livelihoods through innovative approaches. 3. Credible national climate change impact analyses and responses. 2. Sustained climate change resilience within MRPAs.	1. Climate change adaptation approaches made available through WWF.
Asity (affiliated with Birdlife International)	1. Manages Mahavavy-Kinkony MRPA. 2. Provides information on important Bird Areas (IBAs).	1. MRPA effectiveness and sustainability. 2. Conservation of IBAs.	1. Critical MRPA implementation partner.
CI – Conservation International	1. Financial and technical support to MRPA development. 2. Priority support to Menabe, Mahavavy-Kinkony MRPAs. 3. Likely to finance Northern Highlands MRPA Complex. 4. National forest cover analyses. 5. Carbon offsets expertise. 6. Extractive industries and MRPA conflict resolution.	1. Sustainable MRPA network. 2. Target MRPAs effective and sustainable. 3. FAPBM supports MRPAs. 4. Carbon credits developed through REDD. 5. Selected MRPAs eventually integrated into World Heritage Sites list.	1. Finance and technical support to MRPAs. 2. Support to FAPBM. 3. REDD development. 4. Support to extractive industry-MRPA negotiations and agreements. 4. World Heritage Site nominations.

STAKEHOLDER	BRIEF SUMMARY	EXPECTATIONS	RELEVANCE TO PRODOC
	7. Supports UNESCO World Heritage Site initiatives.		
DWCT – Durrell Wildlife Conservation Trust	1. Active partner in Menabe-Antimena and Northern Highlands MRPAs. 2. Expertise in species conservation. 3. Expertise in payments for conservation. 4. Expertise in ecological monitoring.	1. Effective and sustainable MRPAs where flagship species are well-conserved. 2. Communities benefit significantly from MRPAs. 3. Extractive industries contribute to MRPA development.	1. Key project implementation partner. 2. Monitoring experience and skills can be propagated. 3. Species management skills. 4. Lessons from payments for conservation.
Fanamby	1. Key project manager. 2. Innovative approaches to MRPAs and economic growth. 3. Partnerships with private sector. 4. Manages *Sahanala*, an enterprise for promotion and marketing of organic and fair trade products.	1. Effective and sustainable MRPAs. 2. Effective new approaches to ensure MRPA network sustainability. 3. Effective private sector partnerships for MRPA development.	1. Key project coordinator and implementation partner. 2. Excellent links with the private sector.
MBG – Missouri Botanical Garden	1. National expertise in plant conservation priorities. 2. Community participation in MRPA development. 3. Partnership in the Northern Highlands MRPAs. 4. Biodiversity inventories.	1. Effective and sustainable MRPAs where critical habitats and flagship genera/species are well-conserved.	1. Key project implementation partner. 2. Floristic inventories for prioritizing actions.
WCS – Wildlife Conservation Society	1. Supported the establishment of the Makira MRPA near the Northern Highlands and aims to contribute to effective conservation of this larger area. 2. Experience in carbon offsets. 3. Supports several marine PAs ecologically linked to project MRPAs. 4. Climate change adaptation expertise. 5. Supports national biodiversity data base.	1. Effective and sustainable MRPAs. 2. Integrated climate change adaptation.	1. Key supporting NGO. 2. Key member of MRPA network. 3. National biodiversity database support.
WWF	1. Key project implementor. 2. Climate change expertise. 3. Extractive industries expertise. 4. Major innovator for SAPM policy and legislation. 5. Strong interest in developing livelihoods through MRPAs.	1. Effective and sustainable MRPAs. 2. Integrated climate change adaptation, including targeted MRPA influences on key marine and coastal ecosystems. 3. REDD development. 4. Private sector partnerships. 5. Effective MRPA network that adopts	1. Key partner NGO. 2. Shares MRPA experience. 3. Shares REDD and climate change adaptation experiences. 4. Provides extractive industries relations support.

STAKEHOLDER	BRIEF SUMMARY	EXPECTATIONS	RELEVANCE TO PRODOC
	6. REDD implementation. 7. Manages many MRPA development projects.	and implements IUCN and CBD standards. 6. Significant and durable livelihoods improvements.	
Voahary Gasy (platform for Malagasy environmental NGOs and associations.	1. Lobbies government on environmental issues. 2. Provides a forum for support for members.	1. Biodiversity and natural resources mainstreaming into GOM policy and strategies. 2. Capacity strengthening among Malagasy NGOs.	1. Effective lobbying partner.
Higher Education and Research Organizations			
Various	1. Biological, cultural, social and economic inventories/survey. 2. Biodiversity modeling. 3. Support to training capacity development.	1. Professional capacity strengthening. 2. Improved conservation and development planning. 3. Thematic databases for conservation and development.	1. Management planning and monitoring databases.
Regional Government Level			
Regional administration	1. Responsible for decentralized governance. 2. Responsible for regional development and land use management plans. 3. May propose new MRPAs in line with regional development plans. 4. May propose regional legislation.	1. Sustainable regional economic growth. 2. Protection and management of critical environmental goods and services.	1. Key project partner. 2. Integration of MRPA interests into regional planning. 3. Coordination or regional activities regarding MRPAs.
DREF – Regional Environment and Forest Director	1. Responsible for MEF policy application. 2. Coordinator of regional MRPA activities. 3. Supports MRPA development and protection.	1. Effective and sustainable MRPAs adhering to MEF policy and strategies.	1. Key project implementation partner. 2. Represents MEF/DAP interests.
DRAT – Regional Land Use Management Director	1. Responsible for Ministry of Decentralization and Land Use Management Ministry. 2. Supports regional land use management planning.	1. Effective decentralization and land use management planning within the region.	1. Key project implementation partner.
Regional Tourism Director	1. Regional tourism development and promotion.	1. Regional tourism development	1. Supports sustainable tourism development initiatives in MRPAs.
Local Government Level			
Village administrations	1. Responsible for managing local affairs. 2. Smallest and most localized institution recognized by the GOM.	1. Local sustainable development and natural resource management.	1. Helps to organize village-level MRPA participation. 2. Vehicle for MRPA communications.

STAKEHOLDER	BRIEF SUMMARY	EXPECTATIONS	RELEVANCE TO PRODOC
Communes	1. Responsible for commune-level planning and development, integrating environmental issues.	1. Commune-level sustainable development and environmental management.	1. Involved in commune planning. 2. Mobilizes and coordinates commune participation in MRPA development and management.
OPCIs – Inter-Communal Organizations	1. Platform for MRPA-related development and land use planning.	1. Development and environment interests shared between neighboring communes.	1. Key project implementor at site level.
Local Interest Groups			
Community associations	1. Associations can form for general or specific community interests related to development, environmental management or others. 2. Can lobby for, or defend, particular community interests. 3. Provides support to members.	1. Local development, environmental management and other interests.	1. Key project partners. 2. Ensure dialogue between MRPA managers and local interest groups. 3. Mobilize and motivate members. 4. Facilitate communications. 4. Participate in MRPA surveillance and management. 5. Manage areas of MRPA transferred to communities.
Local economic interest groups (cooperatives)	1. Created to develop specific entrepreneurial ventures. 2. Catalyzes production/services standards and quotas. 3. Agrees to profit sharing to contribute to MRPA recurrent costs.	1. Sustainable enterprise development. 1. MRPA sustainability.	1. Key project implementation partners. 2. Contribute to local economic growth. 3. Contribute to MRPA recurrent costs. 4. Facilitate local capacity building. 5. Develop private sector partnerships and encourage local investments.
Local MRPA management groups	1. Hired by MRPAs or work voluntarily in support. 2. Future professional MRPA management cadres.	1. Effective and sustainable MRPAs.	1. Key members of MRPA management structure. 2. Ensure local participation and buy-in.
Private Sector			
Professional tourism operators	1. Invest in lodges and circuits. 2. Share profits with local community groups. 3. Market and organize clients. 4. Maintain operating standards with respect to international norms.	1. Business opportunities offered by MRPAs.	1. Key project partner. 2. MRPA sustainable development.
Mining and petroleum companies	1. Negotiate agreements to avoid negative impacts on MRPAs. 2. Direct financial payments for MRPA conservation management. 3. Contribute to MRPA economic development through CSR programs.	1. Avoidance of conflict with conservation interests. 2. Corporate social and environmental policy effectiveness. 3. Investor confidence.	1. Key project partner. 2. Potential revenue source for MRPAs. 3. Conflict/negative impact avoidance.

STAKEHOLDER	BRIEF SUMMARY	EXPECTATIONS	RELEVANCE TO PRODOC
	4. Potential funding for MRPAs through FAPBM.		
Organic and fair trade marketing/ promotion entities.	1. Create market opportunities for MRPA-related economic activities. 2. Provide support for local economic groups.	1. Business opportunities from MRPAs.	1. Revenue generation and capacity building for local MRPA economic interest groups. 2. Cooperation extended to additional MRPA network members.
Other corporations.	1. Develop organic/fair trade agreements. 2. Support REDD initiatives.	1. Improved image through support to conservation initiatives. 2. Carbon credits.	1. Revenues for local economic interest groups. 2. Financial support to REDD initiatives.

Annex 6. Additional Background Information

KEY LAND USE MANAGEMENT QUESTIONS

Landscape management (aménagement du territoire) and questions

While doing a politic of volunteer decentralization and land tenure, the Malagasy government elaborated tools planning and land settlement/management at different geographic and decisional level: national, regional and communal. But the legislative texts that are supposed to follow these changes are not ready yet and the measures to engage decentralization are not fully met.

Land and Protected areas

In October 2006 the parliament (National Assembly and Senate) adopted a new law fixing the legislation system of private untitled land properties.

The management of the untitled land properties requests the competency of the Basis of Decentralized Collectivity. From there were born the communal land counter services. However, this new legislation system is neither applicable in public nor private domain of the State or a decentralized collectivity, nor in a zone referring to a particular status, such as the protected areas.

One of the issues in term of legislation consists at making all the land laws in consistency with the COAP, created in Dec 2008. In fact, in its article 3, COAP distinguishes the Protected Areas according to the applicable land system:

a) Public protected areas situated in public and private domain of the States and the decentralized territorial collectivity ;
b) Mix Protected Areas, combination of public and private property ;
c) Registered and instituted protected areas on one or more private properties.

The application of the decrees of the said COAP is not out yet, therefore the questions about private property at mix protected areas level (category V and VI) are on hold:

d) Are those private properties titled??
e) or are they untitled: case of the farming perimeters, housing, … inside the protected areas

The creation of sustainable management rules on territories concerned by a protected area and/or the support of the local communities, land of untitled owner inside a protected area of cat V et VI, should be followed by a land tenure, guarantee for the communities' adhesion and acquisition of the approaches.

Furthermore, decentralized collectivities, especially the communes, that are partners of the development and sustainable management of natural resources of the protected area MRPA, should contribute through a tax system to the sustainable financing of management activities. The land taxation should be treated at the level of the lands out of natural resources, within the limits of the PAs.

Landscape management and its application

The State, through the Minister in charge of landscape management, is elaborating the National Scheme of Landscape Management- or Schema National d'Aménagement du territoire SNAT (in three phases) and the Regional schemes of landscape Management or Schémas Régionaux d'Aménagement du Territoire (SRAT).

The first phase of the SNAT consist in elaborating a national scheme of the sectorial and transversal orientations for the next 10 years that is finished. In general, the orientations result in:

f) Elements structuring the landscape management: protected surfaces, energy...
g) urbanization and urban system
h) Poles and growth areas

However, the growth areas and their associated urban poles respond to a major strategic orientation of the landscape management politic but do not constitute the unique and exclusive modality to realize the landscape management.

The Scheme of sectoral and transversal orientation within the next 10 years does not concern the objectives of the landscape management for a limited time.

The refining of the SNAT should take in account the SRAT at a regional level.

The SRAT is one of the tools that should lead and guide the development actions at a regional level. It should take in account the national objectives and integrate the communal objectives

Actually, 4 SRAT over 22 are elaborated (Itasy, Alaotra Mangoro, Haute Matsiatra and Ihorombe) but, until now, there are no regulatory procedures of approval or legislative text of the SRATs showing the legal value of these schemes.

Constraints and Risks:

- There is a small difference between landscape management as a space to organize and the state-owned land: « guarantee of the soil occupation and prescription of its use ». The perpetual change of the Government composition in Madagascar constitute one of the blocking factor in the realization of the landscape management, especially if the two department are separated (domain and landscape management),
- The legal appropriation of lands/land grabbing by their « civil » owners leads the public power to use legal means (which do not exist yet) to modify this acquisition and to pretend owning lands good, for the best of everyone,
- In a point of view of the constitution and the government, the Ministry in charge of the landscape management has no right to coordinate the actions, nor refereeing between the other ministries' projects. It does not have the specific financial means either allowing them to weigh, facilitate, lead or optimize its actions and programs.

Territory users and management's actors

It is should be distinguished that the people, public and private, who are in position of territory users, whose daily actions « build » the territory, and the public persons who take position to think and manage it. We cannot require from a resident or an ordinary farmer to modify his/her behavior without going through laws just because this behavior harm the organization of the territory. However, we can obtain industrial, big farm exploitation or a mining firm to follow the discipline of landscape management by persuading them that a smart conception in their medium and long term should be considerate, to be integrating in the constraints of land management. This characteristic between passive users (individual and modest economic agents) and active users (that could be management landscapes' actors) is not easy.

This characteristic becomes complicated when it comes to leveling dispositions of landscape management. The scheme of national and/or regional management, aiming to define the general use of the surface area, the principle of great infrastructures traced out... will have interlocutors other than the public power or its dismemberment that are far from being homogenous, represented by services, technical representative and institutions having the tendency to follow their own sectoral tradition.

The schemes of management of the PA in the project MRPA, approaching the vast territories with a population less than within regional territory, will be confronted with « real » users and actors who did not appear at the scale of the national and/or regional scheme of land management.

Each scale requires a specific stakeholder, excepting the State that is present at any level as a user and actor. This does not mean that the landscape management is completely limited to a State dialogue, actor of management and users of the territory if it was the case, the landscape management will come to an internal governmental document to be diffused to all the ministries services « for execution ». On the opposite, the State is not only a prescriber of the landscape management: it is also an actor, therefore: the documents of management reaching to prescriptions are imposed to different public services, central and decentralized such as the territorial collectivities and the other.

The scales of management and the diversity- as well as the part- of the interlocutors are therefore important.

KEY RESULTS FROM TOURISM ANALYSIS

Mainstreaming biodiversity: sustainable tourism[59]

[59] Note that ecotourism is not is not used here as it carries implications that so far are difficult to justify in Madagascar. Ecotourism is a form of sustainable tourism.

Notwithstanding periodic dips linked to global economic downturns and political instability. Madagascar's tourism sector has enjoyed a progressive rise over the last three decades. In 2008 revenues reached US$400,000 and showed signs of continued increase.

The most popular venues are Nosy-Be in the northwest and the National Road 7 linking the capital to Toliara in the southwest. On average, visitors include at least one PA in their itinerary and typically prefer staying in hotels rather than other overnight options.

Madagascar has long been chosen as a nature tourism destination. There may be a general interest in seeing traditional wildlife attractions, notably lemurs in forest habitats, but there is an increasing niche opening for specialist interest groups, primarily birds but also herpetofauna and flora. These groups will certainly visit the main park venues but their itineraries are broadened to visit lesser known sites where their special interests are most marked. In addition, many visitors appreciate mixed nature and culture visits where local customs and daily life can be included.

The PA network managed by Madagascar National Parks has long offered a diversity of venues that meets the expectations of generalist wildlife visitors although some of these sites are increasingly favored by specialists. However, these parks and reserves do not include some of the attractions that are offered by the emerging MRPAs. Perhaps most notable among the latter are Menabe-Antimena where Western Ecoregion wildlife is arguably at its most spectacular and accessible, and Mahavavy-Kinkony where the highest concentrations of aquatic birds occur in spectacular coastal environments.

The Durban Vision undoubtedly boosted visitor interest in Madagascar's spectacular biodiversity. Subsequently, the nomination of six national parks as a World Heritage Site cluster representing the eastern humid forests led to a marked increase in visits to some of these sites. While all existing Malagasy natural World Heritage Sites are managed by Madagascar National Parks, UNESCO has recommended the future addition of MRPAs to the eastern humid forest cluster and a new indicative list for the western forests includes Daraina and Menabe-Antimena. Given these conditions, national tourism policy and strategy highlights the role of PAs in attracting at least 500,000 visitors by 2012.[60]

Given this background, there has been some policy developments aimed at capitalizing opportunities offered by PAs in attracting tourism income. In the late 1990s, Madagascar National Parks cooperated with the ministry responsible for tourism to establish reserved areas for hotel and lodge development as a means to attract professional investors and to control poorly planned developments. This program failed for several reasons but forced decision-makers to rethink more effective approaches. Thus, Madagascar National Parks has chosen to have concessions within the parks and reserves as a means to encourage private sector investments and to professionalize infrastructures and services. Few concessions have been defined and are operational. Similarly, a small number of community-based ventures in private conservation set-aside areas were developed and have had some success, albeit relatively small with respect to income for local people. More recently, Fanamby brokered a partnership with a hotel group based in the capital to establish a forest lodge in the Anjozorobe MRPA where rent, employment and local purchase agreements have guaranteed significant revenues for local communities while also providing a profitable business opportunity for the private investor. The model is further strengthened by an agreement to return part of the profits to MRPA management costs. This type of 'win-win' venture is in the process of being replicated in Menabe-Antimena but it should be noted that to date few private tour operators have seriously considered similar approaches, preferring to maintain their focus on tried and tested packages based on known PAs and hotels. When tourism demand picks up in the future, there may be a more open attitude as the absorptive capacity of traditional PA sites becomes saturated.

There has been relatively little debate among MRPA promoters but one of the main issues pertains to the desire to immediately establish 'full-service' products entirely managed by local communities in order to maximize benefits for the latter. However, in reality this is somewhat utopic as local communities currently lack the professional experience and investment know-how required for a successful lodge. It is however desirable to consider this as a future option as capacity strengthens.

[60] This target was set before the current political crisis and will be delayed.

Finally, our recent analyses of future markets indicate that MRPA success in establishing community-private sector partnerships will depend on two factors. First, they are more likely to succeed if they can integrate into existing or emerging nature/culture circuits where a range of complementary products are offered. Secondly, the MRPAs must be able to provide unique attractions relative to other sites on the same circuit.

Threats and risks

Tourism is one of the most vulnerable sectors despite the fact that it is an important economic tool and main source of foreign currency. Many factors threaten the tourism sector we could list its dependency to other areas such as transport, environment, energy, finance, public services…etc. Therefore, the Ministry in charge of Tourism was and is always attached to other sectors. The tourisms transversality* and dependency caused its loss of autonomy as well as its strategic place within the government. It also contributed to a perpetual threat to its stability. In fact, the failure of one of these sectors weakens the tourism sector. Natural catastrophes including cyclones and tropical storms are also risks factors; the need to fully reconstruct hotels, roads and even the whole town, weaken the sector.

The lack of a clear national policy for tourism should also be taken in account because tourism development is neither monitored nor measured. At the level of MRPA, this gap consist a real threat for the conservation and the harmony with the communities knowing for instance that each member of the communities can create his or her own touristic activity and implement it anytime. Such case could create negative impacts at a social and environmental level.

There are no clear or planned strategies in term of tourism investment in general. For the MRPA in particular, the investment in term of renewable energy is really expensive. The objectives of tourism structures within MRPA are to develop sustainable activities benefiting the communities while protecting natural resources. In other countries, pioneers of renewable energy are supported by the government.

Political instability is also a major threat. Madagascar, like other countries in Africa, is facing successive coup. Tourism industry relies highly on political climate to secure investments and give a good image of the country at the international scale. It is one of the means to attract tourists. The MRPA, that are usually isolated, are especially dependent on the stability of the main cities near them. On the other side, MRPAs are implemented to stabilize income sources and provide jobs for the communities. A loss of trust as well as a failure of the system (the staff comes back to faming activities) is noticed during political crisis.

The lack of cohesion between neighboring activities consist also a limit to tourism development. For instance, in the MRPAs, a clear work relationship and partnerships with the Ministry in charge of Environment and Forests, as well as the Ministry in charge of Tourism should be hatched. It is not usually the case in reality because of the absence of clarity concerning different laws. For example; the tourism code stipulates that each lodging structures should not open unless they fulfill specific environmental criteria. In real life, only rural and forests lodges are subjects to monitoring and supervision, the urban structures are spared.

The financial sustainability, goal of tourism projects at MRPA's level, should benefit the communities in long term period but takes too long to be achieved. The impatience of the communities being eager to get rich in a short time is also a risk for the continuity of the project. The benefic impacts on the communities through tourism with shared interest (projet d'interet communs) projects take time before benefits can be felt. It takes multiple phases (appropriation of the approach, conceptualization of the benefits in the long term, test phase of "short opening" for the structure…) before it can be palpable.

Barriers

The first barrier is situated within the type of relationship with the partners. In the approach of sustainable tourism, the main beneficiaries are the communities; their appropriation is the first important step. This latest is usually a long and slow process that becomes a barrier for a rapid and sustainable development. Within the zones of implantation of MRPA, tourism is usually something new. Most of the local population are new to tourism and have rarely seen foreigners visiting their villages. Therefore, the absorption capacity will be minimum and the process delicate.

A culture shock created by the incursion of tourism could be a danger for its implementation and development. Farmers and livestock farmers could leave their traditional activities for something considered « for recreation » that

create a disruption of their daily life. In general, the tourism sector is associated with « youth » and « feminine », it is noticed that young adults and women are the most interested in the reconversion (for guiding, cooking, hosting…). These parameters could create important social issues with considerable impacts: women could be too busy working and neglect their home; the well paid young adult could be disrespectful and make the relationship with older generation difficult…without mentioning the culture shock between North and South in their way of work.

Culture differences can also be a barrier, often neglected, but not less important. The different taboo concerning the land (agriculture and livestock farming), the "fady" days where work is forbidden, the place of each and everyone within society (i.e., men should be served before women). These different cultures can create awkward situations for the capitalistic character of tourism and create social conflicts.

There is also a low understanding capacity of the economic, social and environmental stakes linked to tourism development because of the lack of education of the communities. As an industry, tourism will get them to compete with other structures managed by private sector that have more advantages in term of expansion (access to finance, educated and professional staff etc).

At the level of MRPA, the numerous stakeholders especially in the category V being a major brake and the management plan implementation being concerted, it requires the adhesion of all the stakeholders: the institutions acting within the zone (NGO, public and governmental entities), the private sector (hotel structures already in place …). Most often, this element is causing diverse issues because of the lack of adhesion in the sustainable tourism approach implemented by Fanamby. There is a misunderstanding that Fanamby's goal is to create a system that benefits directly the communities, the misunderstanding that Fanamby uses its notoriety to allow the communities to improve their daily life and own a capital.

The weaknesses of the governmental and political frameworks and the legal dispositions at the category V, especially in term of tourism development, consists a barrier. Fanamby had to develop its own strategy and create its own framework with respect to the men and women activities in the communities. The code of tourism does not provide additional environmental arrangements for the implementations within or surrounding the protected areas, which could create conflicts with the other institutions such as the regional directions of the Environment and Forests (case of the PA in Menabe Antimena).

Other factors such as the high cost of Madagascar plane tickets and the problem of accessibility due to the lack of infrastructures are playing against the development. Touristic structures of MRPAs are essentially characterized by their isolation, even if tourists are well rewarded by the beautiful landscape at the end; it limits the visitors to a certain category even if they could generally be targeted.

NGO INTERVENTIONS

Framework

The NGO FANAMBY, identified natural parks are sustainable development platforms by creating tourism projects to benefit communities as well as biodiversity conservation. FANAMBY focuses on share and exchange, with respect to the communities and their own and unique wealth: natural resources.

Succeeding its first experience in « sustainable tourism development » within the Protected Area of Anjozorobe Angavo, the Saha Forest Camp, FANAMBY aims to replicate this model for all the intervention sites by implementing « sustainable eco-lodge » under the label « Friendly Camp ».

The goal of the label Friendly Camp is to offer a network of eco-friendly camps to concerned and aware, with respect to natural environment. A network that will also benefit local communities.

Global Strategy

The global strategy lies on the basis of the MRPA and sustainable tourism approach with and in favor of men and women.

This strategy is based on:

- The implementation of a management model respectful of the social and environmental charter specified by the engagement of Friendly Camp.
- The implementation of tourism activities as a tool for sustainable development of the communities as well as a conservation tool for a sustainable economy and for the Protected Area in general.
- Raising awareness within communities on the importance of conservation of natural resources that is one of their own and unique wealth.

The implementation of this strategy requires different approach depending on their particularity.

BIODIVERSITY, MRPAS, MINES AND PETROLEUM: BACKGROUND

These two sectors are managed by the Ministry of Energy and Mines (MEM). The most pertinent departments and agencies are the following:

- General Direction of Mines (Direction Générale des Mines (DGM). The DGM is in charge of policy development and compliance and oversees the mining sector. It has the following supporting agencies:
    - Madagascar Mines Registry Office (Bureau du Cadastre Minier de Madagascar, BCMM). The mission of the BCMM is the efficient, transparent and reliable management of mining titles, for the benefit of the administration, miners, investors, as well as the greater public. The BCMM covers all transactions in the lifetime of a mineral title in a comprehensive and reliable manner. The "first come, first served" principle for the award of titles is implemented throughout the country.
    - Mining Resources Management Project (Projet de Gouvernance des Ressources Minérales, PGRM). This World Bank project was created to assist MEM in professionalizing policy development and coordination of the industry. It has collaborated with WWF to resolve conflicts between the mining and environmental sectors.
    - Gold Agency (Agence de l'Or, AO). This agency was established in 2006. There are 12 offices throughout the country, attached to the BCMM. Its mandate is to grant professional identification cards to artisan/small scale gold miners and gold collectors. The AO is also in charge of Gold Exchanges. Its current activities focus mainly on assisting the administration's decentralized entities and collecting information concerning Gold mining activities in order to enable the administration to design more efficient strategies, and inform stakeholders.
- Direction of Petroleum (Direction des Hydrocarbures, Dhydro).
    - This direction is responsible for petroleum policy, legislation and institutional frameworks.
- National Strategic Industries Office (Office des Mines Nationales et des Industries Stratégiques, OMNIS). This state-owned agency was created in 1976 and mandated to identify, manage, develop, and promote Madagascar's petroleum and strategic mineral resources. The Government of Norway has been assisting OMNIS is establishing a new Petroleum Code, and has helped to develop model contracts and strengthen technical capacity. Support has been suspended since the current political crisis began.

Evolution of the mining sector

Until about a decade ago, most mining was artisanal, focusing on semi-precious gemstones and gold, although two large-scale industrial mining projects were in development. However, interest has since increased dramatically following the establishment of a favorable investment climate, active overseas lobbying by the GOM, and a surge in the international prices for industrial minerals and oil. Permits covering some of the most promising areas were obtained by a range of junior exploration companies and majors, while smaller-scale Malagasy investors also purchased rights to smaller concessions.

Madagascar's geology is very promising with respect to metals and minerals, and numerous deposits were either confirmed or newly discovered. However, many are either small or low-grade, or require extensive additional investment in infrastructures. Thus, a number of companies began to doubt their commercial viability. At the same time, some questionable permits were issued and some of the more responsible companies began to doubt that they were operating on a level playing field. When the political crisis began, many decided to withdraw entirely or follow a 'wait-and-see' strategy.

At the beginning of the investment boom, the majority of companies had home offices in countries with strict mining laws and standards. They were also dependent of their respective stock markets where investors can be expected to

be wary of risks emanating from environmental or social conflicts. However, Asian companies have become progressively more dominant. They are less subjected to high standards or investor pressure, although they must of course adhere to Madagascar's legal requirements. The political crisis does not appear to have deterred their interest.

Globally, the mining industry is evolving due to numerous and regular takeovers and buy-outs. This is paralleled in Madagascar where it appears that a consolidation process is occurring as the more committed companies are vying to consolidate their access to metals and minerals vital to their economies. Consolidation should make it easier to address mining issues related to PAs. However, there is some general concern regarding mining and conservation conflict. Indeed, most metal and mineral deposits overlap or juxtapose the country's remaining forest ecosystems and other natural habitats. Concessions were secured by operators before the MEM and MEF had a chance to draw up an agreement for a four-year moratorium on mining in the most promising sites for future PA creation, potentially leading to future conflict. More specific to the projects MRPAs, we may note the following:

- Menabe-Antimena. Rare earth elements are believed to occur in the mangroves in the Tsiribihina River delta. Commercial viability remains to be conformed but a Chinese company (Industrie Minière Sino-Africaine) has purchased exploration rights. Another China based company, Gold Sands Sarl, has secured three large research permits to explore for magnetite (Iron ore), gold, copper, and ilmenite.

- Mahavavy-Kinkony. There appear to be no major risks of mining in the MRPA although some speculation is apparent. The main concern is a significant iron ore deposit to the southwest, abutting the reserve, for which rights have been purchased by two separate China-based companies apparently linked to the same primary investor(s). In fact, analysis of permits in the zone appears to show that the multitude of smaller permits secured by various national and international outfits is undergoing a consolidation process. The main substances declared by the permit holders are iron ore, columbite, malachite, gold, and other metals as well as construction minerals. Of note are two very large research permits for sandstone belonging to Dynatec, a serious Canadian company, initiator of the original Ambatovy Nickel/Cobalt project which has since grown into a world-class mining project run by Sherritt. It appears that the sandstone will in fact be used in connection with the Sherritt project.

- Daraina, Loky-Manambato. Artisanal gold extraction has long coexisted with conservation interests at Daraina. However, there are indications of commercially viable quantities for large-scale industrial extraction. Most of the deposits are under the most important natural forest blocks prioritized for conservation. In terms of potentially large scale mining, this zone is characterized by two dozen larger research permits, belonging to half a dozen companies, most of which are looking for gold and associated minerals. Of note is the presence of Pan African Mining (PAM), one of the more aggressive companies that began its permit gathering campaign early in 2000. We note that this company has already changed hands two times, a confirmation of the speculative nature of mineral research in general, and in Madagascar in particular. Today, PAM belongs to a Thai group, but is in negotiations with yet another Chinese company. Contacts with PAM have proven to be rather satisfactory, and while future activities of the group are not yet well defined, it has so far proven to be one of the more cooperative outfits. To date, three larger concession holders have engaged in active discussions with Fanamby, the MRPA promoter, in order to seeks ways in which to avoid conflict.

- Ampasindava Peninsula, Galoka-Kalabenono chain. Several mining concessions are held on the peninsula but the most likely project to develop is held by Tantalus Rare Earths AG which seeks rare earth elements. This sophisticated German company secured a 10 year research permit and has performed enough in-depth surveys to be able to launch a fund-raising effort on the Frankfurt stock exchange through the floating of shares of a purpose vehicle company. These efforts have paid off as the company's shares soared from the beginning of the float. Other smaller concessions belonging to half a dozen companies would not be of significant interest were they not in their majority indirectly related to the same Chinese interests we have encountered in several other potential MRPA sites.

- Northern Highlands Complex. There is relatively little mining activity in this area.

The COAP does not interdict mining in MRPAs if conflicts with its conservation goals can be avoided. MRPAs promoters have differing attitudes to mining, with some fearful of biotic destruction, degradation or disturbance while others view mines as a potential source of much needed revenue if well negotiated.

The two largest mining operations managed respectively by Rio Tinto's QIT Madagascar Minerals (QMM) and Sherritt[61] have involved extensive biodiversity and social assessments. QMM has been showcased in the ICMM/IUCN dialogue process on responsible mining, and both are committed to adherence to Business and Biodiversity Offsets Program (BBOP) standards and practices. Both have Corporate Social Responsibility (CSR) policies, and QMM has entered into a voluntary joint venture with USAID, Missouri Botanical Garden (MBG) and Birdlife International to create new MRPAs over and above their contractual obligations to the GOM.

Petroleum industry developments

Sporadic oil and gas exploration has occurred in Madagascar since the early 1900s, and a test well was brought into production in 1947. More intensive exploration occurred during the 1970s and 1980s, providing positive indications but at extraction costs too high for the price of oil at that time. The recent steep increase in global demand and its commensurate higher prices refocused investor interest in Madagascar, and the GOM solicited assistance from the Government of Norway to develop the good governance of the industry. The country was divided into a series of exploration blocks. Many of blocks in the Morondava and Mahajanga sedimentary basins overlap with MRPAs and other as yet geographically ill-defined high-value biodiversity marine areas, notably where there are extensive and diverse coral reef systems. Outside of these basins, there are also overlaps in the northeast and east where offshore biodiversity interests are high.

All of the active blocks are still in their exploration or pre-assessment stages and have presented little or no risk to MRPAs. The majority of oil companies have taken care to consult with knowledgeable NGOs to avoid biodiversity conflicts, and have carried out legally required public consultations at the local level. Exploration companies have also tended to adopt low-impact seismic exploration techniques in ecologically sensitive areas such as forests, lakes and mangroves.

Improved seismic techniques have yielded promising signs of commercial oil deposits. Surface shale oil deposits (Bemolanga) and heavy oil reservoirs (Tsimororo) in the northwest appear to be significant and are likely to go into production in the foreseeable future. More recently in 2009, exploration carried out by SUNPEC (Chinese major oil company) indicated the presence of lighter oil in the southwest (Sakaraha) but its commercial viability awaits assessment by additional test drilling. None of these sites pose direct geographical conflict with MRPAs but they do suggest that there exists a reasonable likelihood of further discoveries commercial oil or gas deposits elsewhere in the sedimentary basins where MRPAs are to be found. Indeed, exchanges with exploration companies would indicate that the probability is significant. The most likely project MRPAs to be affected are: Menabe-Antimena, Mahavavy-Kinkony, Loky-Manambato, Galoka-Kalabenono and the Ampasindava Peninsula, although the potential seems to be largely offshore in the latter.

While exploration presents little risk to MRPAs, potential threats rise dramatically when production occurs. In summary these include:

- Compared to mining, oil and gas has and even more consistent, even rising, market demand, and is a source of high revenues. Dutch disease is a likely outcome and the most severely impacted are usually the poorest in society. Inflation can be rampant, pricing basic commodities out of the range of local people (this has happened already on a local level in association with mining development). In addition, traditional economic activities may be abandoned, thereby reducing local food security in the short term and loss of economic diversity in the mid- to long term.
- Oil spills and associated pollution may occur at the wellhead, along pipelines, road transport corridors and at sea. OLEP has a well-organized response strategy and reasonable capacity but a recent small-scale maritime spill exceeded this organization's budget and non-governmental agencies were required to respond.
- Persistent 'stealthy' toxic bi-products may enter the environment and have negative impacts on people and biodiversity. The risk is significantly elevated when heavy oils, particularly shale oil and tar sands are

[61] Joint venture involving Sherritt, Sumitomo, Korea Resources and SNC Lavalin.

involved (at present the most likely oil development option in Madagascar), as evaluations in Alberta indicate both long- and short risks for biodiversity and long term health impacts among neighboring communities.[62] Toxic waste pollution may be persistent and, if it enters rivers and groundwater, can spread over large areas.

- During the second half of the 20th Century, many oil exploration companies used bulldozers to open seismic sampling lines for vibrator trucks. This method was applied uniformly regardless of whether natural forest cover was present or not. The few environmental NGOs present in the latter part of this period pointed out secondary colonization by migrants, illegal logging facilitated by the newly opened seismic lines, and the establishment of alien invasive plant species. This situation changed during the late 1980s with oil companies began to consult with the ministry responsible for the environment as well as NGOs in order to identify ecologically sensitive areas. The latter were explored seismically but by small teams on foot. Companies also adopted voluntary rules such as no cutting of tree trunks or branches more that 10 cm in diameter. Today most seismic exploration companies employ similar or, in several cases, even adopt no-go zones where seismic is voluntarily prohibited. However, these policies are not mandatory (although they should be reviewed during pre-seismic EIAs) and there is no guarantee that more harmful seismic practices may be adopted by less aware companies.
- Although the current MRPA sub-network does not include offshore areas, several sites do include mangroves and/or abut marine areas of particular importance with respect to biodiversity or environmental services such as fisheries stocks regulation. It is therefore useful to consider risks involved with offshore seismic exploration. Seismic boats trail cables with hydrophones to record results. If the cable is cut through collision or snagging, the hydrophone may release kerosene into the sea. The seismic vessels use an instrument to generate noise blasts on the seafloor. These blasts have been linked to disturbance and even death through mass stranding, and several cases have been well-documented for cetaceans (whales, dolphins and porpoises) in several parts of the world. 'Soft-start' techniques coupled with marine mammal on-board spotters and avoidance of seasonal migration periods can reduce the risks considerably. However, it is of interest that more than 100 Mellon-headed whales were stranded and dies during one offshore seismic operation occurring at the same time in northwestern Madagascar. Unfortunately, not official report has been produced to confirm the link. The noise blasts from seismic air-guns may also have negative impacts on other sensitive marine life, but more data are required to establish the links. Shallow sea areas such as estuaries, mangroves and coral reefs are believed to be particularly sensitive, as are fish spawning and nursery grounds.
- No exploration or production drilling has yet occurred in ecologically sensitive areas or PAs. However, there is no legal reason to prevent drilling in Category V or VI MRPAs, although proposals would presumably be subject to strict EIAs and consultations with local stakeholders. Some promoters of some of the MRPAs have even informally observed that they are not averse to drilling in low-value biodiversity sectors within MRPAs as long as disturbance to core areas is strictly avoided. The underlying rationale is that oil discovery and production should lead to tangible financial benefits for the MRPA thus contributing to its long-term sustainability.
- Oil development invariably leads to major infrastructure development, including wellheads, storage facilities, pipelines, roads and housing. It is not yet possible to evaluate potential threats associated with these activities but MRPA promoters hope that companies are sufficiently environmentally aware to avoid or minimize negative impacts.

Petroleum sector governance and legislation

Oil & Gas Law

The legislation governing exploration, exploitation and transportation of liquid, solid and gaseous hydrocarbons in Madagascar is relatively recent: the law is dated September 23, 1996[63] (Petroleum Code), completed by a decree on June 23, 1997[64]. Such activities are placed under the authority of an *organisme technique* (technical body) and a *société nationale* or national company (NOC), which is awarded the necessary hydrocarbons permits and enters into

62 See The WWF/Cooperative Bank Insurance Investors (2009). *Unconventional oil: Scraping the bottom of the barrel* and references cited therein.

63 Loi 96-018 portant Code Pétrolier

64 Décret 97-740 relatif aux titres miniers d'exploration, exploitation, et transport d'hydrocarbures

a partnership with IOCs for the purpose of hydrocarbons exploration, exploitation and transportation activities in Madagascar.

Regulatory framework

Designated the technical body by decree on November 7, 1994[65], OMNIS is in charge of hydrocarbons in Madagascar. OMNIS is a state-owned entity under the authority of the Prime Minister and the technical supervision of the Minister of Energy & Mines. It is managed by a general manager, who is appointed by the government on the proposal of the Minister of Energy & Mines, and supervised by a board consisting of representatives of various ministries.

The exploration, exploitation and transportation of liquid, solid and gaseous hydrocarbons in Madagascar may only be entrusted to the NOC. Therefore, an IOC may only carry out the aforesaid activities through a partnership with the NOC. However, the NOC has not been established yet and, pursuant to the Petroleum Code, the technical body is authorized to act for and in the name of the NOC until it is actually established.

We understand that the government intends to proceed with the creation of the NOC as soon as a hydrocarbons discovery is proven to be commercially viable. In the meantime, OMNIS is therefore the keystone of the hydrocarbons regime in Madagascar and acts in the capacity of both the technical body representing the state and the representative of the NOC. This may cause potential legal confusion in the management of hydrocarbons activities in Madagascar and particularly with regard to the relationship between OMNIS, the NOC and the IOCs.

The hydrocarbons permits

There are three kinds of hydrocarbons permits in Madagascar: the exploration permit, the exploitation permit and the transportation permit. Hydrocarbons transformation is subject to the Petroleum Code; however no provision of the Petroleum Code specifically deals with this activity.

The exploration permit is granted for an initial period not exceeding eight years. It may be extended several times, each time for a maximum period of two years. There is no compulsory acreage relinquishment obligations set forth in the Petroleum Code.

An exploitation permit is 'automatically' granted in the case of a commercially viable discovery within the area covered by the exploration permit. The exploitation permit is granted for an initial 25-year period (35 years in respect of gas production). It may be extended in five-year periods.

Transportation through pipelines from an oil field to storage, loading, or transformation facilities, located in Madagascar, requires a permit, which is granted for an initial 25-year period (35-year in respect of gas production). It may also be extended in five-year periods.

Hydrocarbons permits are awarded by a presidential decree on the proposal of the general manager of OMNIS. For the reasons explained above, the hydrocarbons permits, which may only be granted to the NOC[66], are currently issued in the name of OMNIS in its capacity as a representative of the NOC. However, it should be emphasized that the Petroleum Code does not provide for the transition between OMNIS and the NOC upon the establishment of the NOC, and hydrocarbons permits do not include any reference to the NOC. However, we assume that the said hydrocarbons permits will be transferred to, or re-issued in the name of the NOC once it is established.

Madagascar is a rich and fragile ecosystem and the protection of the environment constitutes a real concern for the Malagasy authorities. Pursuant to the *Charte de l'Environnement* (environment charter) and its implementing regulations, each stage of the hydrocarbons activities is subject to the prior delivery of an environmental permit by *Office National de l'Environnement* (national environmental agency). It should be emphasized that the procedure pertaining to the delivery of the relevant permit is relatively sophisticated and demonstrates the extended interest of the Malagasy authorities in the protection of the environment.

Contracts with the NOC

65 Décret 96-1133 portant désignation de l'OMNIS comme organisme technique chargé de la gestion du domaine minier des hydrocarbures à titre transitoire

66 In the case of a joint venture, the permit may be granted jointly to the NOC and IOC

The Petroleum Code is very flexible on the type of partnerships that may be entered into by the NOC and the IOC for the purpose of hydrocarbons exploration, exploitation and transportation activities in Madagascar.

Indeed, the Petroleum Code refers to any kind of contract usually entered into in the international petroleum industry and in particular *Contrat de partage de production* (production sharing contracts, or PSCs) and *association en joint-venture* (joint venture contracts).

The most common type of contract in Madagascar is the PSC, although all other types of petroleum contracts would be valid. Indeed, according to the information disclosed by OMNIS, all contracts signed by OMNIS after the adoption of the Petroleum Code but one are PSCs.

Article 15 of the Petroleum Code provides a list of issues to be addressed in the PSC. The most relevant issues are the following:

Management of the operations
As a common practice, the IOC is entrusted with exploration and exploitation operations under the supervision of a Management Committee consisting of members appointed by the NOC and IOC. The appointment of the operator shall be approved by OMNIS.

Exploration period
The IOC must procure a bank guarantee (standby letter of credit) issued by a bank of a good standing in Madagascar. The amount of the bank guarantee should reflect the minimum work commitments set forth in the PSC. The Petroleum Code does not provide for a penalty mechanism in case of breach by the IOC of its minimum work commitments.

Costs sharing
The Petroleum Law does not provide any particular requirement or rule governing the share of exploration, development and exploitation costs between the NOC and the IOC. To our knowledge, some PSCs provide for the full responsibility by the IOC of all exploration, development and exploitation costs on behalf of the NOC.

Production sharing
The Petroleum Law does not provide any particular requirement or rule governing the allocation of the production between the parties to the PSC, neither as cost oil, nor as profit oil. However, the Petroleum Code indicates that the IOC share in the production is determined taking into account: "*the ratio between the cumulative gross revenues and the cumulative petroleum costs*".

Arbitration
The parties may agree to submit any dispute in relation to the PSC to an international arbitration institution according to the "*terms and conditions set forth in the contract*". However, the Petroleum Code contains quite detailed provisions with respect to conciliation and arbitration proceedings. It could be argued that these provisions are mandatory in the event that the parties to a PSC have agreed to resolve disputes through arbitration proceedings.

Governing law
PSCs are subject to and must be governed by the laws in force in Madagascar. The parties may agree on any other additional provisions that they consider relevant for the purpose of hydrocarbons exploration, exploitation and transportation activities in Madagascar. However, the parties to the PSC (including the NOC) have no authority to decide on matters that are governed by laws and regulations, including, but not limited to, the Petroleum Code. For instance, the tax regime applicable to the IOC does not fall within the scope of the PSC.

The PSC is signed by the NOC and must be 'ratified' by a presidential decree. For the reasons explained above, the PSC is currently signed by OMNIS in its capacity as a representative of the NOC. However, the Petroleum Code does not provide for the transition between OMNIS and the NOC upon the establishment of the NOC and it is anticipated that this may raise some issues.

In the meantime, it should be noted that the PSC provisions must be interpreted in the light of the dual capacity of OMNIS, as technical body representing the state on the one hand, and as the NOC representative on the other. Therefore, the assignment of a participating interest in a PSC, for example, will be approved by OMNIS as representative of the NOC on the one hand and by OMNIS in its technical body capacity on the other hand.

Fiscal regime

Pursuant to the Petroleum Code, hydrocarbons exploration, exploitation and transportation activities in Madagascar are subject to the following taxes:

Redevance - a royalty, which is based on the value of the production calculated on the basis of international market prices and after deduction of the transportation costs from the well head to the export loading facilities. The royalty rate is set forth by tax laws in force in Madagascar and range from 8% (25,000- bopd) up to 20% (130,000+ bopd).

Impôt direct sur les hydrocarbures IDH - a specific direct hydrocarbons income tax, which is considered inclusive of *impôt sur les bénéfices des sociétés IBS* (corporate tax), *impôt sur les revenues de capitaux mobiliers IRCM* (dividend tax) and *taxes forfaitaires sur les transferts TFT* (money transfer tax), and which is calculated on the basis of net profits at the rate of 30%. The rules for the determination of the taxable income and deductible expenses are set forth by tax laws in force in Madagascar. It is interesting that losses incurred during the exploration period may be carried forward without any time limit while losses incurred during the exploitation period may only be carried forward during seven years.

All other taxes generally applicable in Madagascar - The Petroleum Code does not provide any tax stabilization mechanism. In addition, for the reasons explained above, it is not possible to provide for such a mechanism in the PSC. Therefore, the tax regime governing hydrocarbons exploration, exploitation and transportation activities in Madagascar is not stabilized, which is regrettable from an investor's perspective.

However, Madagascar has adopted a mining code dated July 30, 1996, providing for a clear and detailed stabilization mechanism pursuant to which no modification of the "*legal, fiscal and custom regime as well as the exchange control regulations would be applicable*" during the stabilization period.

Conclusion

Taking into account the strategic importance of hydrocarbons activities in Madagascar, as demonstrated by the recent increasing interest in this area, it is apparent that the laws governing hydrocarbons exploration, exploitation and transportation activities in Madagascar need to be more comprehensive and sophisticated, such as those governing mining activities. Indeed, the Petroleum Code should provide more detailed legal, contractual and tax regimes, including *inter alia* provisions pertaining to each form of contract, an integrated tax regime, a legal and tax stabilization mechanism and a procedure for the transfer of the hydrocarbons permits and the PSCs from OMNIS back to the NOC.

In response to the above concerns, the GoM has sought assistance and cooperation from the World Bank, and especially, Norway, through its Oil for Development Program. Unfortunately, since the onset of the current political crisis, all activities initiated by these partners have been suspended.

AGRICULTURE, ORGANIC AND FAIR TRADE OBSERVATIONS

Lessons learned

Where conditions are favorable, large-scale crop production has been developed through massive investment in infrastructures, technical service support and land tenure. Thus, well-organized large-scale irrigated rice production has been developed around Antananarivo, Lake Alaotra, Mahavoay and Andapa. Large-scale cotton production exists in places where soil conditions are favorable in some western regions, and irrigated sugar cane plantations are found at Ambilobe, Brickaville, Menabe and Mahavavy-Kinkony.

Vital as these agro-industry projects are to the national economy, they do not represent the state of agriculture throughout the vast majority of the country where subsistence agriculture and livestock production are the mainstay of the rural population. Furthermore, these projects bring almost no opportunities or benefits for farmers living in or around MRPAs, even where the projects are within or adjacent to these protected areas, such as Mahavavy-Kinkony and Menabe-Antimena.

Traditional agricultural practices and markets

Madagascar's population is largely rural with 70% dependent on extensive and low-productivity agriculture. Agricultural activities are primarily orientated towards supplying two principal markets:

- Providing crop and livestock products to meet the country's internal markets. These markets are far from being fully satisfied in part because production is close to stagnation levels whereas demographic growth is estimated at 2.5%. Effectively, most farmers and pastoralists are tied to subsistence production, a situation difficult to break free from. A further difficulty is that most farmers cash-strapped and often forced to sell their produce when process are at their lowest: for example, at the same time other farmers in a similar situation are bringing the same crops onto the market. Furthermore, the same producers are obliged to buy crops for their own family food needs during the pre-harvest period when prices are highest. It may be noted that few subsistence farmers have know about or have opportunities for increasing the price of their produce through organic/fair trade certification. Such a market opportunity would likely to relatively limited for the coming few years (for example, hotels, the national airline, major supermarket outlets) but new markets conceivably could be found abroad, perhaps in neighboring SADC countries where basic crops are not produced locally but potential clients exist.
- Selling cash crops such as coffee, cocoa, spices and essential oils for export markets. Malagasy products are well-known for their intrinsic qualities due in particular to favorable soil and climatic conditions, as well as non-intensive production practices that are perceived to enhance their value in terms of flavor and aroma. Once again, cultivation practices remain highly traditional and volume is rather low.

Rural development programs

Once completed, the national Poverty Reduction Strategy Document (DSRP) was integrated into the Madagascar Action Plan. Financing for development social infrastructures was provided by the Development Intervention Fund (FID) and special funding was allocated for rural development assistance through the Rural Development Support Project (PSDR). Several donors also focused funds on specific rural development sectors. These include: relatively large-scale funding from the World Bank, UNDP and GEF for extensive Sustainable Land Management (SLM) as part of a wider Sub-Saharan program; USAID sustainable livelihoods programs in support of targeted PAs; French Government support to sustainable development around selected PAs, notably in the arid south; German Government funds for forest management; and Swiss support for forestry and rural agriculture. All such projects are required by the Madagascar Government and the funding nations to have a clear environmental focus, and, as can be seen from the above summary, several had an additional clear supporting role for selected PAs.

Most, if not all, environmental NGOs have initiated rural development programs around their targeted PAs, most notably in an around Category V and VI MRPAs. Much of the funding base comes from the larger multi-and bilateral donors noted above, but some NGOs have been able to mobilize internal institutional funding or have been supported by private foundations. In general, NGO-mobilized funding for rural development is relatively limited with a consequent impact on geographical scale of interventions and the likelihood of durable positive impacts.

Some of these rural development projects have achieved measurable success with respect to improved livelihoods and environmental/biodiversity benefits. Success appears to be linked to the long-term commitment of the donors and implementing partners, but it is also clear that political support for the national and regional government, including local representatives from technical support ministries is an important factor. Some rural development programs, however, appear to have had less durable positive effects on rural livelihoods and the environment. It is useful to examine some of the keys to success.

An interesting case concerns the complementary actions of the FID and the PSDR. While it is an oversimplification of their programs, the process essentially involves a diagnosis of local needs and aspirations by each entity, followed by feasibility/impact assessments and implementation. The FID assesses social development needs in each commune and, as may be anticipated from its mandate, the assessments generally include a list of infrastructures as a priority for financing. Expert assessments prior to PSDR interventions are more orientated towards local development project potential and opportunities as perceived by the assessment experts and local communities but there appears to be little in the way of continuous support once rural communities and their farmers and/or pastoralists have been provided once-off assistance. This is perhaps not surprising given the vast geographical scale of the PSDR's mandate and its rather limited resources. While the good intentions of the FID and PSDR are not in question, there must be some doubts regarding sustainability of many of the interventions. In addition, when

individual commune-level action priorities are examined one cannot but help to note a disparity between the apparent real development priorities of the community as expressed indirectly by its poverty index and the types of social development projects proposed or implemented. Thus, a quick appraisal of the proportion of the people living below the poverty line in any given rural area would indicate that their highest priorities are to break free from this condition. In contrast, the commune development plan prioritizes social infrastructures such as schools (often with nor clear guarantee that teachers can be found and paid for), hospital and clinics.

Large-scale rural projects implemented by well-funded by professional development agencies have had measurable impacts on livelihoods and have built upon existing economic sectors and even introduced new options. Many have linked infrastructure development to improve access to isolated communities and to open up markets. However, successful as these have been, many such projects appear to be working on improving subsistence conditions rather than encouraging aspirations to move above this socio-economic barrier.

Most environmental NGOs supporting new MRPAs openly admit a need to develop their internal capacity or find partners to vastly improve their effectiveness in biodiversity-conserving rural development initiatives. While the effectiveness of many NGO-led rural development projects is doubtful at the present time, it is nonetheless encouraging to observe that the need to improve is rapidly growing.

Subsistence farming: locked into poverty and low productivity

Subsistence farming locks Malagasy farmers into perpetual insecurity and poverty and contributes little to the country's economic growth. It is therefore becoming increasing apparent that there is an urgent need to create and implement a realistic agricultural policy that addresses the following issues:

- Meeting the current internal food security and market demand together with those of the future.
- Increasing revenues for farming households in order to break free from subsistence and its inherent effects of continuing poverty and seasonal cash flow crises.
- The sustainability of substantially intensifying agriculture too rapidly, with a commensurate dependence on costly inputs and practices that could put farmers at risk.

The need for such a policy shift is quite widely appreciated for some time but does not appear to have attracted the attention or support of political decision-makers. The ministries responsible for agriculture and pastoralism all too often prefer to focus on implementing time- and area-constrained 'projects' proposed by NGOs and/or donors rather than proposing more holistic and coherent approaches that would encourage slow but steady progress in the sector.
Part of the reason for this is the historical lack of seeking successful synergy between ministries and development agencies to develop integrated land use planning approaches pulling together agriculture, livestock, rural infrastructures and conservation in harmony with other economic initiatives such as oil and mining. The latest attempts to do so were very promising but are not on hold due to the current political crisis (see below). Other weaknesses hindering improvement of the agriculture and livestock sectors include:

- An absence of policy regarding voluntary vocational training.
- Insufficient and poorly adapted extension services.
- An absence of policy covering and promoting organic/fair trade agriculture.
- The near absence of producer associations that can promote and market products while also producing mutual support, together with a dearth of support to local communities regarding labeling such as 'Product of Madagascar.'
- A lack of knowledge among local stakeholders regarding high-value products.

Developing promissing new markets: certified products

The turn of the century saw the creation of Madagascar's first organic/fair trade initiative. The *Association pour le Développement de l'Agriculture et du Paysannat du Sambirano* (Association for the Development of Agriculture and Farmers in the Sambirano, ADAPS) was created by some 15-20 local farmers but now has over 1,000 members. The Sambirano ecological region has tremendous potential for cash crops, especially cocoa, vanilla, market gardening, vanilla and coffee but at the time when ADAPS came into being, farmers had long realized that this potential was far from being achieved. During its early stages, ADAPS faced a range of difficulties including a lack of technical support, poor access to fertilizers and credit, a lack of information on potential markets and over-maturity of plantations. Various external farming associations offered assistance and most of the major difficulties have been

overcome. Organic/fair trade buyers have also been attracted and the members of ADAPS are currently benefitting from solid markets and higher prices.

At about the same time as ADAPS was created, the Madagascar-based NGO L'Homme et l'Environnement (Man and Environment) supported farmer associations to produce essential oils in three areas of high biodiversity interest. Farming in these areas largely centered on traditional subsistence practices and revenues were commensurately low. The NGO provided training in essential oil production and facilitated links with national and international buyers, marketing the products under the 'Wildlife Friendly' label that meets European, American and Japanese organic/fair trade standards. Farmer revenues have increased significantly as a result.

In 2004, Fanamby began to explore opportunities in organic/fair trade in the Daraina, Anjozorobe and Menabe-Antimena MRPAs to test whether it would meet the twin goals of substantially improving rural livelihoods (even breaking out of the subsistence farming cycle) and generating revenues for the protected areas themselves as a contribution to financial sustainability. Early results were very encouraging and the product range now includes vanilla, cloves, palmarosa, cinnamon, pepper, rice, peanuts and essential oils derived from ginger, cloves and ravintsara. Production reached sufficient volumes that Fanamby created a new label, *Sahanala* (field in the forest), to market the products conforming to Fairtrade Labeling Organizations International (FLO) standards. The potential role of *Sahanala* in significantly improving local livelihoods while also contributing to MRPA sustainability is described more fully below.

While organic/fair trade crops are favorable perceived abroad, few potential external markets have been explored and exploited. Indeed, the vast majority of farmers simply sell the raw crops to local middlemen and thus gain hardly any added value.

Notwithstanding the current production and marketing practices, Madagascar's farmers are potentially well-placed to modify their existing approaches by capitalizing on the growing international and, indeed, internal demand for bio-certified products coupled with Madagascar's reputation for quality. To some extent, this has been occurring over the last decade. A small number of Madagascar-based organizations and external distributers have begun to work with local producers, and fair trade certification has blossomed. However, the pace of progress does not come close to global market demand which is 12-15%/year. It is also worth noting that certification is still almost entirely focused on high-added-value crops such as cocoa and essential oils, whereas the proportion of basic staples including rice and groundnuts is still hugely insignificant. The rising demand abroad and increasing interest in country mean that there are significant opportunities for local farmers to add value to their products through quality guarantees, traceability and certification. However, for the time being the highest profits accrued from farming through the process of selection, classification, transformation, conditioning, packaging and marketing go largely to operators based in larger towns and cities, rather than the farmers themselves.

Fair trade marketing are new to Madagascar, having only appeared in any significant way since 2005. The main product targeted has been vanilla, although a few additional products are slowly creeping into fair trading systems. The market is, however, driving an annual growth rate of 18-25% as local farmers are encouraged to convert to fair trade practices and the international market grows.

The potential for fair trade markets and their consequent added incomes for farmers clearly constitutes a major economic opportunity. International perceptions that the country's products are authentic or unique are complemented strongly by the appeal of contributing to conserving Madagascar's unique biodiversity through fair deals for farmers. This potentially creates a very attractive label for overseas buyers. For example, no major European enterprise marketing vanilla or essential oils omits the label 'Madagascar' on its products.

Perhaps some of the greatest opportunities for fair trade labeling could come from associating certified products with the protected area system. The direct links between fair trade for producers and contributing more or less directly to biodiversity conservations are quite obvious and could be a very effective marketing strategy.

<u>New approaches to MRPA sustainability and livelihoods development: Organic/Fair trade certification</u>

Organic/fair trade certification is clearly a means to help ensure MRPA sustainability
and significantly enhanced financial security for farmers living in and around these sites.

Experience from the Sahanala, ADAPS and l'Homme et l'Environnement indicates that it several key factors are critical to success.

Firstly, developing consistent and coherent sustainable rural development that complements the conservation objectives of MRPAs requires support to producer associations and/or agricultural cooperatives so that they may:

- Understand options regarding potential economic opportunities related to different products and their respective markets, either for export of for in-country consumption.
- Select and develop the most interesting product options adapted to local conditions and likely to generate the highest financial added value.
- Define priorities for technical, financial and marketing support and capacity building that will help to maintain consistent quality and develop sustainable income streams.

Current knowledge of producer associations and cooperatives indicate that the biggest challenge to develop high-value products is the ability to commercialize these products. Translating this into real terms, producers currently lack adequate knowledge regarding options, they are often far from road infrastructures and communications often poor, and they lack experience regarding negotiating with potential buyers. These difficulties may be overcome when producers create a shared interest platform within their local area (this may include several communes in larger MRPAs) that facilitates communications and negotiations with buyers. Individual local area platforms may then become members of a national entity such as *Sahanala* which brokers trade agreements on their behalf.

Today, *Sahanala* has become a label guaranteeing organic/fair trade practices and is steadily establishing or expanding markets. The label also assures an above-market price for producers. Given its success to date, *Sahanala* should become a private enterprise with the following goals:

- Support the creation and efficient management of partner artisanal agricultural associations and cooperatives.
- Identify production options and potential within associated groups.
- Seek national and export markets for member associations and cooperatives.
- Provide support to associations through certification and other means to establish sustainable markets and to help ensure that production quotas are met.
- Develop branding guaranteeing fair trade for member associations and environmental respect.
- Help ensure equitable sharing of profit and other benefits among member rural associations in order to maintain effectiveness and to promote self-sustainability.
- Develop an off-take agreed upon by member associations that can be redirected to conservation activities of MRPAs. Initially this is likely to focus on MRPAs in the present proposal but should be extended to others as *Sahanala* gains capacity.

Market demand, especially for exports, for organic/fair trade products correspond entirely to guidelines and criteria governing best agricultural, social and environmental practices as defined by the Fairtrade Labeling Organizations International (FLO). Adherence to these conditions should open up Madagascar to growing commercial opportunities as global and national demands rise.

GOVERNANCE AND LAWS

Governance Frameworks for Biodiversity Mainstreaming: Policy and Laws

The overrarching policy governing Madagascar's development is *Madagascar Naturally* and its implementation strategy is the Madagascar Action Plan. These documents highlight the importance of the country's biodiversity with respect to development and appear to rank it on par with petroleum, mining and agribusiness as means to reduce poverty and stimulate rapid economic growth. Both documents were drawn up under the previous political regime and it is not clear whether they will be retained in the future.

Environmental Charter

Madagascar created an national Environmental Charter and updated it in 1997 and 2004. This instrument sets out the countr'y policy regarding the environment and is the base law for sectorally specific laws including the Protected Areas Code (COAP) and the Compatibility Law for Industry with respect to environment (MECIE) as well as

providing a framework for the environmental articles in the Minining Code and soon to be published Petroleum Code (see below).

Protected areas code (COAP)

The COAP came into law in 2001. It set out the principles for the existence of the network, notably the need to represent Madagascar's diverse ecosystems through a mosaic of territories in order to represent and conserve the national natural heritage. Madagascar National Parks was mandated to manage the national network comprising parks and reserves in IUCN categories I, II and IV, but was also called upon to encourage and support the creation and consolidation of privately owned and managed reserves known as volunatary protected areas.

With the onset of the Durban Vision, it became apparent that the COAP needed a thorough revision to accommodate the inclusion of IUCN categories III, V and VI as well as to allow for new governance systems and management authorities. These new elements were developed by a multi-stakeholder sub-commission within SAPM with advice from IUCN experts. Subsequently, as the new Petroleum Code was being prepared, the Ministry of Environment and Forests engaged legal and environmental experts to revise the COAP once more and the revised code was passed into law in 2008.

The new COAP allows for privately owned land to be included in category III, V and VI PAs, most of which is traditionally owned and untitled. However, considerable ambiguity remains regarding the COAP and the national land tenure policy that awaits future inter-ministerial meetings to resolve these issues. This does not prevent natural resource management transfers to communities from being integrated into new PAs but there are persistent concerns that the owners of these agreements could shift their priorities and thus potentially impact the goals of these PAs.

The COAP specifically requires just compensation for any damage caused in PAs, including private lands that may occur within. The compensation focuses on restoring or other wise financially compensating biodiversity loss or degradation but is unclear on how this is to be achieved and how biodiversity is to be evaluated. Notwithstanding these ambiguities, the majority of mining and oil companies appear to be exercising a precautionary approach to date and seek to avoid risk of negative impacts on biodiversity. However, most mining and oil projects are still in their early phases of development and it is not clear if approaches will change as they become more operational. The two biggest and most active mining ventures (oil exploration began later and exploitation is still some years off) have clear internal environmental and social policies and are subjected to investor scrutiny. Some newer players are not as well advanced or have less investor pressure.

Enabling laws derived from the COAP require that protected areas promoters conduct SEIAs and population safeguard assessments in order to obtain certification from the National Environment Office (ONE). The assessments must be accompanied by a safeguards management plan. The underlying principles are to ensure that communities have sufficient awareness of the potential impacts of the new PAs and that they have accepted the creation of the latter voluntarily, as well as the need to ensure that any negative impacts are compensated adequately. Put another way, the new PAs must not cause harm to communities and should contribute to their sustainable development.

COAP enabling laws stipulate mandatory guidelines covering creation and establishment, governance, management and business planning including monitoring, and management effectiveness assessment. The guidelines were developed and tested in the field by SAPM commission members and subsequently reviewd and finalized by MEF and its SAPM commission. Development of the guidelines was urged and supported by IUCN's World Protected Areas Commission as a means to test and validate thrir own recommendations. Many of them are viewed as stat of the art and have been showcased theough the CBD's Program of Work on Protected Areas (PoWPA) within the African region.

To summarize, while several abiguities between COAP and other national laws remain unresolved, and while legal offenders are rarely prosecuted successfully, the conservation community is generally satified with the quality of this code.

Annex 7. Calculation basis for the incremental cost analysis

Project/Program/Initiative	Start	End	Implementing Agent	Financier	Amount in $	In $ Million	Project Component
New PAs created under IUCN Categories V and VI as a foundation for a functional and effective sub-network of Managed Resources Protected Areas based upon a common vision and management principles.							
GEF-UNDP							
KfW	04.06.09		MNP	KfW	9,300,000	9.3	Support the MNP in the conservation and valorization of ecosystems of Madagascar at the level of Protected Areas and conservation sites with the cooperation of the concerned population.
CI							
RPI							
WWF	2010	2012	WWF-MDG	WWF-US	150,000		Ankodida (statut definitif) Ifotaka (statut definitif)
	2010	2012	WWF-MDG	WWF-SWEDEN	414,651.08		Ranobe-PK32 (statut definitif) Amoron'Onilahy (statut definitif)
	2008	2011	WWF-MDG	Good Planet Foundation	808,541.16		Vohindefo ; Angavo ; COFAV (Unités de gestion de Ivohibe, Vondrozo) ; Marojejy-Tsaratanana
Institutional capacity among key stakeholder groups provides the enabling framework for decentralized MRPA governance assuring biodiversity conservation and sustainable natural source-based economic growth							
World Bank (IDA)							
CI							
DCBSAP							
WWF	2008	2011	Norad		342,747.31		Promoting Environmental CBOs in Madagascar
	2008	2011	Sida		USD		Sustaining Life: Linking Poverty Alleviation, Civil Society and the Environment
	2010	2011	Norad		83,363.05		Climate Change adaptation capacity building in Madagascar
Financial sustainability of MRPAs is strengthened through innovative entrepreneurial public-private partnerships and mobilization of public funding.							
FAPBM							
CI							
KfW	pending		FAPBM	KfW	6,600,000	6.6	Contribute to the sustainable management of natural resources of Madagascar, to ensure the sustainability of National Parks managed by MNP
	13.12.07		MNP/BPI	KfW	2,600,000	2.6	Support the private investments in the sustainable tourism sector.
WWF		June 2010	WWF International		40,425.90		Support watershed based Payments for Ecosystem Services in the Moist Forest Ecoregion
IPPTE							
AFD							

Annex 8. Overview of the PPG studies

1	Martin Nicoll. (2010). *Evolution and trends within Madagascar's National Protected Areas System, SAPM.*	The report summarizes the recent developments in PA expansion in Madagascar, focusing particularly on SAPM. It also includes a summary of the Protected Areas Code and proposed enabling laws, together with policy and its application. It also covers stakeholders with particular interests in MRPAs. The report presents a knowledge gap analysis aimed at orienting project start-up activities.
2	Fanamby (2010). *Cultural, social and economic profiles of targeted MRPAs.*	This study provided cultural, social and economic analyses for each targeted MRPA. Information was obtained from GOM statistical offices and ministries and from interviews with communes, villages and local administrations. The report summarizes cultural and social organization, settlement and communications/ transport infrastructures, traditional land use and economic activities, and industrial initiatives at a landscape scale extending beyond the MRPA.
3	Missouri Botanical Garden (2010). *Floristic profiles of targeted MRPAs with respect to national conservation priorities.*	This report profiles targeted MRPAs and summarizes their importance of with respect to national conservation priorities. It also identifies within-site conservation priorities. Where MBG has adequate site-knowledge, additional information was provided on culture, society and economic activities.
4	Asity (2010). *Ornithological profiles of targeted MRPAs with respect to national conservation priorities.*	This report profiles bird communities in each of the MRPAs, highlighting priorities. It also assesses the importance of each site with respect to national conservation priorities.
5	Asity (2010). *Mahavavy-Kinkony MRPA Management and Land Use Plan.*	The plan (locally known as the PAG) summarizes conservation and sustainable development priorities for this MRPA. It also sets out a zoning plan, objectives, indicators and strategies.
6	Fanamby (2010). *Analysis of decentralization processes in Madagascar*.	This report summarizes recent trends in decentralization policy development, legislation and implementation. It also analyzes barriers to decentralization as they may affect MRPA establishment and development. The report analyzes potential conflict or disagreement between laws affecting MRPAs, especially those concerning land tenure.
7	Jean-Louis Rabeharisoa, Fanirisoa Sandrina Rasamiharison and	This report summarizes the policy and legislation frameworks for these extractive industries. It also provides a general overview of industry

	Fanamby (2010). *Policy, legislation and trends in the mining and petroleum sectors.*	development in recent years, together with an analysis of MRPA-specific issues. The report includes potential agreements between MRPAs and industry.
8	Fanamby (2010). *Analysis of the tourism sector in Madagascar.*	The report summarizes government policy and legislation. It also summarizes recent tourism trends, markets and opportunities. A special section of the report examines tourism developments in Pas.
9	Fanamby (2010). *Brief analysis of freshwater fisheries in Madagascar.*	This report briefly summarizes policy and trends in freshwater fisheries, with special reference to MRPAs.
10	Fanamby (2010). *Opportunities for sustainable economic growth in MRPAs.*	This report summarizes recent and current trends in rural development and how they relate to MRPAs. Particular attention is given to approaches that appear to favor rapid local economic growth and can contribute to MRPA sustainability.
11	Fanamby (2010). *A brief* overview of *carbon credits options for MRPAs.*	This brief report summarizes carbon policy in Madagascar and examines lessons learned and potential opportunities.
12	Fanamby (2010). *Rapid assessment of MRPA-related capacity and future priorities.*	This report was compiled from those listed above. While many of the capacity strengthening priorities during project intervention have been identified, a more thorough analysis will be needed at project start-up.

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