The Forest Carbon Partnership Facility (FCPF)
Readiness Plan Idea Note (R-PIN) Template

29 April 2008

Guidelines:

1. The purpose of this document is to: a) request an overview of your country's interest in the FCPF program, and b) provide an overview of land use patterns, causes of deforestation, stakeholder consultation process, and potential institutional arrangements in addressing REDD (Reducing Emissions from Deforestation and Forest degradation). This R-PIN will be used as a basis for the selection of countries into the FCPF by the Participants Committee. Information about the FCPF is available at: www.carbonfinance.org/fcpf
2. Please keep the length of your response under 20 pages. You may consider using the optional Annex 1 Questionnaire (at the end of this template) to help organize some answers or provide other information.
3. You may also attach at most 15 additional pages of technical material (e.g., maps, data tables, etc.), but this is optional. If additional information is required, the FCPF will request it.
4. The text can be prepared in Word or other software and then pasted into this format.
5. For the purpose of this template, "Deforestation" is defined as the change in land cover status from forest to non-forest (i.e., when harvest or the gradual degrading of forest land reduces tree cover per hectare below your country's definition of "forest." "Forest degradation" is the reduction of tree cover and forest biomass per hectare, via selective harvest, fuel wood cutting or other practices, but where the land still meets your country's definition of "forest" land.
6. When complete, please forward the R-PIN to: 1) the Director of World Bank programs in your country; and 2) Werner Kornexl (wkornexl@worldbank.org) and Kenneth Andrasko (kandrasko@worldbank.org) of the FCPF team.

Country submitting the R-PIN: **MADAGASCAR**

Date submitted: **8 March 2008 ; Date of revised version : 30 April 2008**

1. General description:

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b) List authors of and contributors to the R-PIN, and their organizations:

MEEFT (SG and the Climate Change focal point); Office National pour l'Environnement (Government agency); GTZ and Intercooperation's REDD FORECA project ; Conservation International, Madagascar; Wildlife Conservation Society, Madagascar; Green Synergie

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c) Who was consulted in the process of R-PIN preparation, and their affiliation?

Within the Ministry of Waters, Forests and Tourism, the R-PIN was prepared by the Secretary General, who is also the Head of the Designated National Authority for UNFCCC. The Office National de l'Environnement (ONE) took on the lead role for developing the RPIN document and coordinating input from stakeholders and technical partners. To date, three REDD demonstration projects have been developed in Madagascar and staff from these were involved in the R-PIN preparation to bring their experience of REDD project design, challenges related to on-the-ground implementation, and issues that have been raised in stakeholder consultations during the implementation of these three projects (at the national, regional and local scales). This document has been revised following a national workshop organized in April 2008 which provided an opportunity for wider consultation. This workshop involved institutions from other sectors and also regional representatives such as regional directors of the Ministry and Directors from Regional government whom are responsible for coordinating Development activities. The objective of the workshop was to share information on REDD and consult with participants on the principal elements that should be included in the national REDD strategy. As described later in this document, wider consultations aimed at developing a national strategy for REDD are already planned. An inter-ministerial steering committee involving all the sectors concerned by deforestation will also be put in place develop the REDD strategy.

2. Which institutions are responsible in your country for:

a) forest monitoring and forest inventories: *Directorate for Environment, Water and Forests (DGEEF) and the Office National pour l'Environnement (ONE). The Ministry, MEEFT, is responsible for the production of forest inventories and forest statistics. ONE manages the national environmental information system and ensures monitoring and evaluation of the state of the environment through national and regional analyses that are regularly published as " Tableaux de Bord Environnementaux (TBE)". ONE also maintains a monitoring system on the state of large ecosystems (Système de Suivi de l'Etat des grands Ecosystèmes - SSEE).*

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b) forest law enforcement: *The Service for legal affairs within the Secretary General's office of the Ministry of Environment, water and Forests (Service des Affaires juridiques et du Contentieux/ SG) ; ONE is also mandated with the development and application of the legislation concerning Environmental impact Assessments.*

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c) forestry and forest conservation: *Directorate for Environment, Water and Forests (DGEEF)and the National Parks Association (ANGAP)*

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d) coordination across forest and agriculture sectors, and rural development: *The Rural Development Commission, the Environment Committee (Comité conjoint) of the PE3 and the Permanent Steering Team of the Action Plan for Rural Development (EPP PADR);*

3. Current country situation (consider the use of Annex 1 to help answer these questions):

a) Where do forest deforestation and forest degradation occur in your country, and how extensive are they? (i.e., location, type of forest ecosystem and number of hectares deforested per year, differences across land tenure (e.g., national forest land, private land, community forest, etc.)):

Several studies based on analysis of satellite imagery have demonstrated that Madagascar has made significant progress in reducing the national deforestation rate over the last 15 years (IEFN, 2001; Harper et al. 2007; Andriambolantsoa et al. 2007). The latest analysis for the period 2000-2005 shows that this trend continues, with the deforestation rate down to 0.53% per year by comparison to an annual average of 0.83% for the period 1990-2000. This reduction has been achieved through the combined results of the National Environment Program and the analyses demonstrate that protected areas have been a particularly important part in this success.

Deforestation and forest degradation is occurring throughout the remaining natural forests of Madagascar. Andriambolantsoa et al. (2007) analyzed deforestation nationally and considered 3 broad forest ecosystem types based on a classification by Missouri Botanical Gardens (Schatz and Lescot, 2003: Eastern Rainforests, Dry Western forests and Southern Spiny forests). The analysis shows that forest loss measured by area is greatest in the spiny forests in the south with a deforestation rate of over 1% per year. By comparison, for rainforest, the deforestation rate was 0.79% per year between 1990 and 2000, and decreased to 0.35% per year for the 2000-2005 period. The rate of deforestation in the dry deciduous broad-leafed forests of western Madagascar also decreased after 2000, from 0.70% per year in 1990-2000 down to 0.42% per year between 2000 and 2005.

Although the spiny forests have the highest deforestation rates (when calculated by surface area) they also have lower biomass/surface area and so although precise studies have yet to be done, biomass removal/loss leading to emissions is thought to be similar for each of the 3 habitat types considered.

Forests at altitudes of less than 800m are also at highest risk of deforestation, with an average rate of 1.0% per year.

Summary of Deforestation Statistics 1990-2000-2005

Habitat type	*Annual deforestation rate, 1990-2000*	*Annual deforestation rate, 2000-2005*
Rainforest	*0.79%*	*0.35%*
Dry Western Forest	*0.70%*	*0.42%*
Spiny Forest	*1.1%*	*1.1%*
National	*0.83%*	*0.53%*

Source: Andriambolantsoa et al.,2007

Land management regimes also have important impacts on deforestation rates and protected areas have been effective at reducing deforestation rates considerably. Nationally, the deforestation rate within Protected Areas is less than 0.1% as compared to a national rate deforestation of 0.53%. More detailed analysis shows that deforestation rate is much lower than 0.1% for most of the protected areas and that most of the deforestation detected is in a few recently created areas. The planned expansion of protected areas will cover just under 2/3 of the remaining natural forests of the island and this is likely to continue to reduce the country's deforestation rate significantly it adequate resources are available for effective management of the protected area system.

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b) Are there any estimates of greenhouse or carbon dioxide emissions from deforestation and forest degradation in your country? If so, please summarize:

The UNFCCC National Communication provides estimations of carbon dioxide emissions from LULUCF. According to the estimates prepared for the National Communication, LULUCF emissions were estimated at 26546 Gg in 1994 and had risen to 45438 Gg in 2000. It represents about 21% of total emissions in 2001. The major sources of these emissions were the conversion of forests and burning of savanna grasslands. However, estimates for the National Communication are currently being revised.

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c) Please describe what data are available for estimating deforestation and/or forest degradation. Are data published? Describe the major types of data, including by deforestation and forest degradation causes and regions if possible (e.g., area covered, resolution of maps or remote sensing data, date, etc.).

Madagascar is the first country in the world to have completed comparable deforestation rate analyses for three dates (1990, 2000 and 2005) and therefore has an unrivalled dataset to analyze past trends but to also model future projected trends under different scenario.

The most recent national deforestation rate analysis was completed in 2007 and covered the period 1990-2000 and 2000-2005. This national analysis was based on the interpretation of Landsat images from 1990, 2000 and 2005.

Reference for deforestation data:

Andriambolantsoa R., Ramaroson B., Randriamanantsoa P., Ranaivosoa R., Razafindramanga M., Denil M. and Steininger M. 2007. Madagascar : Changement de la couverture des forêts naturelles 1990-2000-2005. A map produced by CI, IRG, ONE, FTM, ESSA-FORETS and published by MINENEVEF and USAID.

Earlier sources of data on national deforestation rate include analysis done by the DGEEF (IEFN, 2001) and FAO data from the 2005 FRA.

More detailed analysis of subnational deforestation rates has been done for many smaller areas throughout the country. ONE is also in the process of using the same satellite image data from 1990, 2000 and 2005 to generate deforestation statistics for different habitat types following the more detailed habitat classification of IEFN. Currently this analysis has been completed for 19 out of the 22 administrative regions.

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d) What are the main causes of deforestation and/or forest degradation?

The main cause of deforestation in Madagascar is slash-and-burn agriculture (known locally as tavy), particularly for rain-fed rice cultivation. This threat accounts for most of the deforestation in the country. The second most important cause is the production of charcoal and this is a particular problem in southern Madagascar where there are insufficient plantations to provide this fuel source.

Other sources of deforestation and degradation are listed below:

***Deforestation:** slash-and burn agriculture, charcoal production, mining, conversion of land for agriculture such as rice or maize production.*

***Degradation:** Legal and illegal logging, charcoal production, fuelwood collection*

Underlying causes: Lack of land tenure, lack of alternative revenue sources, insufficient forestry law enforcement, lack of viable alternative fuel sources, increasing population and demand for land, fuel and timber, Increasing international demand for timber, particularly from Asia, Land use competition with mining and fuel utilization, market failure and price problems.

Among the underlying causes of deforestation and degradation, the effects of cultural changes and the evolution of ways of life and consumption is poorly known although this socio-cultural issue could be a significant driver of the problem and so represents a potential target for REDD activities.

→ The area in the East of Toliara (South-West) is among the regions with higher deforestation rate. The main

driver of deforestation was the conversion of forest for maize cultivation.

→ *The spiny forest of west Plateau Mahafaly (South) experiment high deforestation rate because of agriculture, charcoal production and logging.*

→ *In the North and East, deforestation is especially due to tavy (slash and burn agriculture), other unsustainable land use and logging.*

→ *The West of Madagascar is the region with the best opportunities for oil extraction and mining*

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e) What are the key issues in the area of forest law enforcement and forest sector governance (e.g., concession policies and enforcement, land tenure, forest policies, capacity to enforce laws, etc.?

There are many issues related to forest law enforcement and governance. Some of the most important are:

- *Unclear land tenure which creates insecurity and therefore encourages perverse incentives to cut down forest*
- *Socio-economic constraints of the people living close to forests*
- *The Forestry Department is understaffed and under-resourced.*
- *Lack of effective monitoring and training of forestry agents and local communities/forestry operations.*
- *Lack of a national-wide strategy on reducing deforestation and degradation in spite of various sectoral initiatives*
- *Outdated and inconsistent legislation. Difficulty of applying existing texts*
- *Lack of incentives for the private sector to improve forest management.*
- *Financial constraints of the Ministry to implement good forest governance*
- *Law and national governance rules may be unacceptable for local cultural values, frameworks and organisations*

4) What data are available on forest dwellers in lands potentially targeted for REDD activities (including indigenous peoples and other forest dwellers)? (e.g., number, land tenure or land classification, role in forest management, etc.):

Madagascar has few true forest dwellers. The only group considered indigenous forest dwellers are the Mikea in the south-west of the country. The Mikea forest (325,000 hectares) is currently being established as a protected area following World Bank safeguard procedures for indigenous peoples as well as for social safeguards (OP4.12) .

In other areas potentially targeted for REDD activities, local people tend to live on forest peripheries and to be forest users. In these areas the government anticipates linking REDD to two potential mechanisms for reducing deforestation and degradation: protected area creation (particularly IUCN category V and VI areas) and transfer of forests for community forest management. In both cases, local communities will be actively engaged in forest management activities and will be the principal beneficiaries of improved management through a range of accompanying activities designed to combat the issue of food insecurity and to generate alternative income. Several benefits are identified for those local communities : maintaining environmental services (e.g. water availability for food, sanitation and agriculture) direct employment for producing and planting trees, legal right over their land and natural resources, productive forest around the core conserved area, sale facilitation, capacity building and introduction of improved soil management techniques or more intensive rice agricultural know-how. A wide variety of financial mechanisms to engage communities in protected area stewardship are currently being piloted in Madagascar and most new protected areas will use some combination of these approaches (eg. conservation contracts, participatory ecological monitoring, small grants for community conservation and development initiatives).

The Government of Madagascar is committed to ensuring that social safeguard measures are followed in areas identified for REDD activities. The government has developed its own social safeguard procedures which are in

line with the World Bank's OP4.12 and are applied to all new protected areas whether funded by the World Bank or other entities. A workshop on the application of safeguard procedures to protected areas was organized by the World Bank in April 2008. The workshop included the participation of managers and promoters involved in the creation of new protected areas. The participants, the World Bank and ONE used this opportunity to clarify the methods for collecting the information necessary to apply safeguards procedures and the documents required such as the Bank's safeguard plan and the Social and Environmental Impact assessment and management plan which has to be produced under the national environmental assessment legislation.

5. Summarize key elements of the *current* strategy or programs that your government or other groups have put in place to address deforestation and forest degradation, if any:
a) What government, stakeholder or other process was used to arrive at the current strategy or programs?

Madagascar's strategy and priority programs for addressing deforestation and forest degradation are encapsulated in the country development roadmap document, the Madagascar Action plan (MAP). Commitment 7 of the MAP outlines the government's goals for environmental management. In particular three of the four major challenges outlines are relevant for REDD. Within each of these challenges, priority goals are identified:

Challenge 1. To increase the protected areas for the conservation of land, lake, marine and coastal biodiversity
Goal:
- *To increase the area of protected areas from 1.7 million to 6 million hectares*

Challenge 2. To reduce the natural resource degradation process
Goal:
- *To maintain the remaining 9 million hectares of forest and wetlands for the conservation of its natural resources and the sustainable use of its forest, lake, marine and coastal resources.*

Challenge 3. To develop the environmental reflex at all levels
Goal:
- *To mainstream the environment into all sectoral plans and develop a strong and effective environmental reflex.*

Challenge 4. To Strengthen the effectiveness of forest management
Goal:
- *To strengthen the institutions responsible for environmental management – the ministry and environmental protection agencies – to ensure professional policy making and regulatory framework and to provide technical support to the development and implementation of sector strategies.*

Specific projects and activities have been developed on the basis of these overall goals. The MAP challenges and goals have all been validated at the level of Madagascar's 22 regions and each region has developed specific regional MAP plans to contribute towards the nation's goals.

Discussions on how to implement REDD began in Madagascar in 2001 and since that time three projects have been designed and are currently being implemented: the Makira protected area project (implemented by the Directorate of Environment, Water and Forests and WCS), the Ankeniheny-Zahamena corridor (implemented by the Directorate of Environment, Water and Forests, Conservation International and local partners) and the FORECA project (implemented by GTZ and Intercooperation) that aims to develop a UNFCCC methodology for REDD projects in community-managed forests in anticipation of inclusion of REDD in the post 2012 UNFCCC

framework.

The preserved deforestation project of Makira is launched by the Malagasy government, WCS and various partners in order to reduce deforestation through the local community's involvement in the conservation of a protected forest area of 400.000 ha and the sustainable management of 280.000 ha of buffer forest zone. It experiments different steering development tools for the local communities and sustainable financing means.

The project restoration of biodiversity corridor between Mantadia, Analamazaotra and Maromiza, carried out by the Malagasy government, CI, Bio-Carbon Funds of the World Bank and various partners, presents a REDD component aiming at the preservation of 450.000 ha of forest in a logic social and economical development method of the local communities and enhancement of valuation of avoided carbon emission on the voluntary market.

REDD/FORECA is a pilot project set up for Madagascar supervised by MEEFT joining together efforts from GTZ, Inter Cooperation, ESSA-Forêt and BFH Hamburg. Operations conducted in seven priority sites throughout the country, covering both different forest types and representative ecosystems. This project will be ending in November 2009, after the presentation of its method at the Conference of Parties in Copenhagen. It aims at 3 objectives :

- *testing different approaches for the appropriation of forests in use by the local community*
- *developing and handling the tools for measurement of carbon*
- *supporting the government to implement a method of prevention from deforestation, thus a credit carbon compensation in the framework of further action related to Kyoto.*

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b) What major programs or policies are in place at the national, and the state or other subnational level?

Major elements of the current strategy to address deforestation and degradation are:

- *The creation of new protected areas to achieve 6 million hectares by 2012*
- *Produce clear forest-use zoning plans at the regional level*
- *Creation of Sustainable Forest Management sites (KoloAla sites)*
- *Promotion of the development and use of alternative energy sources*
- *Development of local comities to prevent wildfires and application of the legislation rlated to illegal logging and burning.*
- *Promotion of reforestation and forest restoration*
- *Intensification of agricultural techniques to improve land-use efficiency*
- *Transfer of 1 million hectares of natural resources to communities.*
- *Development and implementation of a Forest Control*
- *The National Land Tenure Program (PNF)*

6. What is the current thinking on what would be needed to reduce deforestation and forest degradation in your country? (e.g., potential programs, policies, capacity building, etc., at national or subnational level):

Further reduction of deforestation and degradation will require additional resources to ensure that the government's ambitious strategy and goals can be achieved. In particular, protected areas have been key in reducing the national deforestation rate and capacity building will be essential as new protected areas are created following IUCN categories which allow local communities a greater stake and participation in management. Training will be required within government services (such as the forestry service) whom have had a limited role in protected area management to date. Similarly, regional authorities and the local communities themselves will require capacity building as they become more involved in the governance of these protected areas.

A clear REDD strategy is also needed, including a detailed analysis of how REDD revenues can be used to cover

priority activities and ensure benefits to the people living closest to forest resources. The REDD strategy will be multi-sectorial and nation-wide. It will address all key land-use drivers that cause deforestation. This strategy will be a national policy to deal with threats to forests.

The REDD strategy will be based on implementing a combination of existing, tried and tested approaches. A conservation program with strong community engagement in governance will be an important cornerstone of this strategy as will community-managed resource management outside of protected areas. Reduction of deforestation will also need to address firewood collection and charcoal production which are major drivers of deforestation, particularly in the south and west of Madagascar. Planting fast-growing species such as Eucalyptus and appropriate native species can provide alternative energy sources to reduce pressure on natural forests.

The REDD strategy will also incorporate better management of production forests. Approximately 1 million hectares of Sustainable Forest Management sites, known as Koloala, have been identified. These areas have been designated for timber production to satisfy the local and national demand. Formal management of these areas will help to reduce deforestation in these sites and degradation can be monitored as part of the management.

These different management regimes for forests will form part of integrated land-use plans at the regional level to ensure sustainability by addressing the drivers of deforestation. Agricultural intensification and promotion of agroforestry techniques in the landscapes surrounding forested areas is an approach that has been commonly used in Madagascar to help reduce the reliance on slash-and-burn cultivation. As part of the REDD strategy, these approaches will be better integrated in regional planning to ensure complementarity. A better understanding of the way toexploit cultural capital to ensure the local empowerment and the success of awareness campaigns, trainings and law enforcement activities could also contribute to the overall success of the REDD strategy.

Promotion of new agriculture techniques is one way to reduce pressure on natural forests. Such sustainable livelihood activities are already promoted around the Ankeniheny-Zahamena Corridor.

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a) How would those programs address the main causes of deforestation?

- *New protected areas will prohibit activities leading to deforestation but will allow low levels of sustainable use by local communities. Nevertheless, protected area management is not limited to the creation of protected areas and their success depends on good land-use planning at a larger scale that involves other sectors, particularly agriculture.*
- *Decentralization of forest management, especially to community management of forest resources will promote more sustainable use of these precious resources. Forest governance in general, including at the community level, will be improved through current institutional reforms within the forest service.*
- *Agriculture alternatives to slash and burn agriculture will reduce the pressure to clear new lands of forest*
- *REDD revenues can be used to improve livelihoods of communities dependent on forest resources*
- *Plantation of fast-growing tree species will provide alternative wood sources for charcoal production and firewood*
- *An appropriate legal framework will be developed to clarify the ownership rights of emissions reductions and to ensure that carbon revenues are invested in activities that will generate the emission reductions.*
- *Participation, particularly that of communities will be at the center of the REDD strategy and optimal benefit sharing options will be studied to maximize this participation.*
- *The REDD strategy will be integrated into land-use planning and energy policy at the macro level*

- *Also at the macro policy level, a strategic environmental assessment of public finance and fiscal policy could be done to ensure its coherence with REDD.*

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b) Would any cross-sectoral programs or policies also play a role in your REDD strategy (e.g., rural development policies, transportation or land use planning programs, etc.)?

Land-use planning at the regional level will be particularly important for the implementation of the REDD strategy and this is the most appropriate level to ensure complementarity between different sectoral programs. Currently the process of developing a national land-use planning approach (schéma national d'aménagement du territoire - SNAT) has been launched. Within this framework, regional land-use planning schema (SRATs) will determine optimal land-use and serve as plans for investments and development within each region. .

Two national programs in particular will be essential to integrate into the REDD strategy:

- *The Rural Development Program*
- *The National Land Tenure Program (PNF) cf. Annexe «* l'importance de la securisation foncière comme partie intégrantee d'une stratégie nationale REDD et son composante de 'Governance' »
- *In support of these policies, the national decentralization policy plays an important role in promoting good governance, responsibility and transparence at all levels of decision of the state.*

All these policies will be used in conjunction so that together they reduce deforestation.

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c) Have you considered the potential relationship between your potential REDD strategies and your country's broader development agenda in the forest and other relevant sectors? (e.g., agriculture, water, energy, transportation). If you have not considered this yet, you may want to identify it as an objective for your REDD planning process.

The Madagascar Action Plan (MAP), its commitments and goals have already been the subject of multiple consultations at the national and regional levels. Of particular importance to cross-sectoral planning was a series of "MAP Presidential Dialogues" in which each of the different sectoral commitments was discussed in detail with other sectors to identify problems in implementation and potential cross sectoral linkages that would help to resolve the issues. At the level of the 22 regions, details of how each region will contribute towards the objectives of the MAP have been determined and form the basis of annual workplans for the regional government services.

The FCPF can further reinforce these efforts of cross-sectoral coordination to achieve a common goal. An inter-ministerial decision-making committee focused on REDD issues is a potential "high level" structure to ensure coordination. However at the operational and regional levels there will also be a need for multidisciplinary teams to develop and implement regional strategies. The REDD strategy will therefore be a comprehensive cross-sectoral policy rather than just a strategy focused on conservation activities.

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d) Has any technical assistance already been received, or is planned on REDD? (e.g., technical consulting, analysis of deforestation or forest degradation in country, etc., and by whom):

At subnational scales, specific technical assistance has been provided at Makira and in the Ankeniheny-Zahamena corridor for 1) quantifying carbon that would be sequestered by REDD project activities, 2) design and initiate carbon monitoring plots, 3) train local staff in monitoring and 4) assist in preparing project design documents. This assistance was initially provided by Winrock International and these activities continue to be supported by WCS, CI and the World Bank (BioCarbon Fund). Madagascar also benefited from CF Assist funding which provided technical training and support to develop the capacity of the National Designated Authority. A GTZ/Intercooperation supported project (FORECA) is also providing technical assistance in the

development of a REDD methodology to use in the context of community managed forests.

At a national level, technical assistance has been provided for deforestation rate analyses by Conservation International as part of a larger USAID-funded forestry reform project run by IRG. As part of this analysis, technicians from national government institutions participated in the analysis (including FTM – the national mapping institute, ONE – the National Environment Office and the Directorate for Environment, Water and Forests). Nevertheless, further support in this and other types of analysis would be needed to fully implement a comprehensive REDD monitoring program.

As part of Phase 3 of the environment program, ONE benefited from programs to improve capacity to manage, analyze and disseminate environmental data. But further support is still necessary to improve the capability to do work such as measurement of forest degradation and management of a national registry of emissions reductions.

FCPF funds will be used to harmonize and to consolidate the methodologies used to date in Madagascar, with the aim of integrating current projects into an overall national approach to REDD. A national approach will be developed based on field experience and experience of best practice around the world. A national policy will be built to reduce emissions over a large scale and establishment of the necessary capacity to implement a REDD strategy (forest cover monitoring, establishment of a national reference scenario and the design and implementation of a REDD strategy) will constitute a large part of the request for funding to FCPF.

Capacity building programs on technical and managerial know-how will also be planned at national and regional levels.

7. What are your thoughts on the type of stakeholder consultation process you would use to: a) create a dialogue with stakeholders about their viewpoints, and b) evaluate the role various stakeholders can play in developing and implementing strategies or programs under FCPF support?

a) How are stakeholders normally consulted and involved in the forest sector about new programs or policies?

Typically the Ministry initiates dialogue on new programs or policies through a national workshop that would provide recommendations for the design of the policy or to improve a policy that is being proposed. In the case of a policy such as REDD, stakeholders at the regional level would also be consulted during the policy design phase.
The action plan for the REDD strategy will provide details on integration with other sectors and the regions. All the actors influencing deforestation or land-use will be stakeholders in the development and implementation of the REDD strategy: The Ministry of Territorial planning (Ministère chargé de l'aménagement du territoire), the Ministry for Decentralization (Ministère chargé de la décentralisation), the Ministry of mines (Ministère chargé des mines), the ministry of energy (Ministère chargé de l'énergie), the Ministry of Finance (Ministère chargé des finances et du budget), the Ministry of Population (Ministère chargé de la population). At both the national and regional levels, stakeholders from the development sector, private sector and civil society, as well as rural communities will be represented.

At the national level, a first phase of forest zoning has been completed. The next step is to refine the national level analysis at the regional level with the participation of the population neighboring forested lands.

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b) Have any stakeholder consultations on REDD or reducing deforestation been held in the past several years? If so, what groups were involved, when and where, and what were the major findings?:

Over the last few years, multiple workshops have been held throughout the country to debate deforestation, its causes and potential solutions. Financing from REDD revenues has repeatedly been one of the main

recommendations for ensuring sustainable financing of the conservation activities needed to halt deforestation at the scale required.

Although stakeholder consultations have not been specifically held on REDD, the subject has been widely discussed in the context of protected area establishment at Makira, the Ankeniheny-Zahamena corridor (CAZ) and at sites where the FORECA project is working. At the new protected areas of Makira and CAZ there has been extensive stakeholder consultation in the actual design of the protected areas, their limits, zoning, planned activities and governance structures.

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c) What stakeholder consultation and implementation role discussion process might be used for discussions across federal government agencies, institutes, etc.?

Discussion were held at a national workshop on REDD in April. The goal was to build consensus between sectoral agencies, institutions, national and regional authorities. This workshop was the starting point for developing a national strategy on REDD. The workshop was also an important opportunity to showcase the success of the three demonstration REDD projects that already exist within Madagascar. The genesis of two of these demonstration projects dates back to 2001 and the concept of RED as an important potential fiancing mechanisms for improved management of forests has been widely discussed on multiple occasions at the national level. At the regional and local scales, the two more advanced projects, Makira and Ankeniheny-Zahamena, have been the driving force around which multidisciplinary, cross-sectorial planning for the landscapes around these areas has taken place. Further REDD projects will enhance this crosssectorial planning at the local scale. However, with the adoption of a national approach as opposed to a project approach for REDD, further consultation and high-level cross sectorial planning will be needed at the national level.

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d) Across state or other subnational governments or institutions?

As a) above, some of the regional authorities and institutions will be involved in national discussions from the start of the process. In particular we will target those regional authorities where REDD projects may potentially be developed. As REDD projects are developed in these areas there will be detailed consultations related to the design of conservation activities and the additional activities required to reduce pressures and drivers of threat.

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e) For other stakeholders on forest and agriculture lands and sectors, (e.g., NGOs, private sector, etc.)?

Madagascar already has clear procedures in place for consultation for the different conservation and forest management options that are likely to be used for implementing REDD projects: ie. Protected areas, and decentralization of forestry management to communities (Management Transfers). Under both of these mechanisms all stakeholders using lands in or adjacent to forests that would be considered in the REDD project area will be involved in consultations.

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f) For forest-dwelling indigenous peoples and other forest dwellers?

As above, for protected areas, there are clear procedures for consultation of People Affected by the Project which are consistent with World Bank operational procedures, OP 4.12. and national legislation on environmental and social impact assessments.

Similarly in the case of community management transfers the communities using forest resources would be the people benefiting from the management transfer and are therefore fully included in the negotiation process.

8. Implementing REDD strategies:

a) What are the potential challenges to introducing effective REDD strategies or programs, and how might they be overcome? (e.g., lack of financing, lack of technical capacity, governance issues like weak law enforcement, lack of consistency between REDD plans and other development plans or programs, etc.):

Based on Madagascar's experience of implementing REDD projects we anticipate several challenges to introducing an effective large-scale REDD strategy:

***Finance**. REDD projects are extremely costly to start up and require significant investments on the part of the project developer before REDD revenues start to contribute to project costs. Identifying resources that can used to cover the start up phases of projects will be a priority.*

***Technical capacity**. There is a good base of the technical capacity necessary for REDD within the country. GIS and remote sensing specialists are available and several organizations have the capacity to implement biomass/carbon measuring and monitoring. However further work will be needed to develop appropriate methodologies and standards to be adhered to and this will require training. Similarly there is already excellent capacity for conservation implementation, however the scale at which the government wants to implement REDD projects will require further capacity building activities.*

***Methodology Issues:** Currently, Madagascar has two REDD projects in place and one more starting. The country will need to design a common methodology for all these three projects and a national methodology to integrate them into a national scheme for REDD. That includes the creation of a national registry to track the Emission Reductions being created by these projects and to avoid double counting. The establishment of the national reference scenario will also need to consider the existence of these projects, which raises complex methodological issues.*

***Governance issues**. Governance at all levels requires assistance with capacity building. A particular focus will need to be improving the local capacity for management of forest resources, whether in the context of protected areas or community managed forests.*

***Organization issues**. Another challenge will be the organization of the REDD strategy within the government. The government will build its national level approach to REDD, integrating the complementary elements needed to reduce deforestation (land tenure policy, good forest and environmental governance, local capacity building, forestry management transfer). The initiatives and activities to improve forest governance are already numerous and are beginning to bear fruit. The National policies on land tenure and on forestry are attached as appendices to this R-PIN. It should be noted that the National Land Tenure project (PNF) can be considered a part of the REDD strategy, and that REDD will create an incentive to accelerate this process of land tenure reform. An example of such synergy is in the vicinity of Moramanga, where the National Land Tenure Project will be working to clarify land titles as a complementary activity to the REDD project at Ankeniheny-Zahamenat.*

Before the REDD strategy can be effective, the mechanisms for ensuring transparent, equitable and viable benefit sharing need to be established. An important tool for improved forest management used to date in Madagascar has been the transfer of forest management to local communities. Linking REDD to these management transfers could be a viable way to transfer revenues to communities and this would help make these transfers more economically viable.

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b) Would performance-based payments though REDD be a major incentive for implementing a more coherent strategy to tackle deforestation? Please, explain why. (i.e., performance-based payments would occur *after* REDD activities reduce deforestation, and monitoring has occurred):

Performance-based payments would certainly provide an incentive for better implementation of activities to reduce deforestation. However, as noted in the previous section, long delays in payments due to the need to generate the emissions benefits and do necessary monitoring will increase the burden of startup costs, thereby reducing the number of actors who are likely to invest in REDD activities. Excessive emphasis on monitoring will be both costly and create disincentives. Since the problem of carbon emission from deforestation is immediate and action is urgently needed, design and monitoring conditions should not be too stringent to

discourage action and mechanisms to provide start-up costs to REDD activities should be provisioned for.

Madagascar will also work with current donors to have a coherence framework for investing in the REDD strategy. The government is currently preparing the program of work for post-Environmental Program 3, and REDD should be an integral part of the project. The government is cognizant of the fact that carbon payments are performance-based and that a substantial amount of upfront investment will be necessary to invest in the REDD strategy. Good coordination with donors will be essential to achieve that goal.

9. REDD strategy monitoring and implementation:

a) How is forest cover and land use change monitored today, and by whom? (e.g., forest inventory, mapping, remote sensing analysis, etc.):

As mentioned above, national level analyses of deforestation have been irregular and often initiated by donor-driven projects. The most regular recent data available has been from Conservation International's analysis of 1990-2000 deforestation rates and a more recent update for the 2000-2005 periods. Other data is available for more irregular periods, for example the IEFN analysis done by the Directorate of Environment, Water and Forests completed in 2001.

The government intends to integrate more regular deforestation analysis into the REDD strategy, so as to provide the data needed for REDD monitoring but also to provide regular updates of existing land-use cover change data for planning purposes. As part of the implantation of the REDD strategy the government intends to formalize this monitoring process within one of the government agencies to ensure that it is a nationally-driven process.

The mission of the Office National pour l'Environnement (ONE) is to manage the environmental information system in Madagascar. ONE will therefore be mandated with the responsibility for monitoring the progress of implementation of the REDD strategy, the forest cover change and national accounting for emissions reductions. These monitoring activities may involve collaboration between ONE and other national or regional institutions and FCPF funds will be used to build capacity for these monitoring roles.

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b) What are the constraints of the current monitoring system? What constraints for its application to reducing deforestation and forest degradation? (e.g., system cannot detect forest degradation of forest stands, too costly, data only available for 2 years, etc.):

An analysis such as the recent deforestation analysis based on satellite images is costly, extremely time consuming and requires highly qualified technicians. In addition it has limitations of scale at which deforestation can be detected. The spatial resolution of the most recent analysis was 28.5m which is insufficient to detect forest degradation. Although costs of satellite images have reduced dramatically in the last few years, the process is still costly and it will require extra funding to repeat it every 2 years at the national level.

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c) How would you envision REDD activities and program performance would be monitored? (e.g., changes in forest cover or deforestation or forest degradation rates resulting from programs, using what approaches, etc.)

The performance of REDD activities would be measured at national scales and subnational/project scales.
At the national scale, we anticipate repeating deforestation analyses every 2 years to measure the progress of national REDD programs (or possibly more frequently for certain areas). Biomass quantifications will be made for different types of habitat type throughout the country and stratified according to physical parameters such as altitude and soil type. The combination of this data will be used for the national scale analysis.

We anticipate that the national strategy will include an overall national level monitoring of REDD activities as well as specific spatially-explicit REDD projects nested within the overall REDD strategy. For these project

areas, more detailed analysis will be required, the frequency of which will be determined by carbon markets. At the project level, forest inventories/monitoring will be required, particularly to measure the "degradation" element of REDD.

A national accounting and registration system for emissions reductions will be established to avoid double counting and to take into account leakage issues. FCPF funding will be solicited to help establish this national accounting system as well as to build a national pool of expertise on climate change and REDD in particular.

10. Additional benefits of potential REDD strategy:

a) Are there other non-carbon benefits that you expect to realize through implementation of the REDD strategy (e.g., social, environmental, economic, biodiversity)? What are they, where, how much?

The overall strategy of reducing deforestation will provide multiple benefits to the country as is recognized in the government's Madagascar Action Plan. At the local level REDD activities will bring social benefits through the creation of jobs and the possibility of using REDD revenues for community development activities. REDD can also offer a good opportunity to make the cultural and traditional ways of living and thinking meet social and economic development in a smooth and balanced manner. Biodiversity benefits will be an important factor within Madagascar which is already famed for the endemism of its biodiversity. The existing demonstration projects have been designed to the standards of various certification schemes, notably the Climate, community, Biodiversity Standards and the government will actively promote high standards of REDD projects within Madagascar.

It is difficult to quantify the additional benefits, but previous results collected for the environmental action plan are relevant. For example, it was estimated that environmental degradation cost the equivalent of 5% of the GNP in the late 1980s and that most of these costs were due to deforestation. FCPF funding can help to built national capacities for evaluating economic benefits of environmental actions.

At the local level REDD activities will bring social benefits through the creation of jobs and the possibility of using REDD revenues for community development activities. REDD can also offer a good opportunity to make the cultural and traditional ways of living and thinking meet social and economic development in a smooth and balanced manner.

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b) Is biodiversity conservation being monitored at present? If so, what kind, where, and how?

Biodiversity conservation is being monitored at both the national level and at individual sites such as protected areas. At the national level, several spatially-explicit databases have been created and are used to monitor the overall representativeness of biodiversity conserved within protected areas. Conservation effectiveness is measured using standard IUCN tools within protected areas and at the site level detailed biodiversity monitoring data is available at many parks.

The " tableaux de bord environnementaux (TBE) », monitoring systems for the state of large ecosystems (SSEE) as well as different clearing house mechanisms (CHM) are all tools that already exist at ONE which serve to monitor the state and the evolution of biodiversity in Madagascar. The country already uses these systems as the basis for it reporting on international conventions such as the CBD and UNFCCC. We anticipate that some FCFP support may be requested to help improve and maintain these systems and adapt them to provide relevant data to supplement REDD carbon monitoring.

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c) Under your early ideas on introducing REDD, would biodiversity conservation also be monitored? How?

One of the potential mechanisms for ensuring that more revenues from biodiversity conservation get to local

communities is by involving them in the monitoring of the biodiversity within protected areas and other locally managed forests. This has already been piloted within Madagascar with promising results and it could be integrated with the REDD financing mechanisms for some sites to ensure an equitable flow of benefits get to local communities.

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d) Are rural livelihood benefits currently monitored? If so, what benefits, where, and how?

Many projects in the country are measuring livelihood benefits but at this stage there is no nationally adopted standard methodology that is being used. This need to measure livelihood benefits has been identified as a need by the ministry and would be an important part of the REDD strategy.

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e) Under your early ideas on introducing REDD, would rural livelihood benefits also be monitored? How?

Monitoring will need to be done using a relatively simple system. We will review different approaches that are currently being used to develop a national standard.

11. What type of assistance are you likely to request from the FCPF Readiness Mechanism?

- **Identify your early ideas on the technical or financial support you would request from FCPF to build capacity for addressing REDD, if you are ready to do so. (Preliminary; this also could be discussed later.)**
- **Include an initial estimate of the amount of support for each category, if you know.**

No estimations have currently been made of the amount to be requested. However, the REDD working group will continue their activities, one of which will be to detail and budget the REDD activities to be undertaken with the support of the FCFP.

- **Please refer to the Information Memorandum and other on-line information about the FCPF for more details on each category:**

a) Setting up a transparent stakeholder consultation on REDD (e.g., outreach, workshops, publications, etc.):

The government already held an initial discussion and information sharing building workshop on REDD in April 2008. This was the start of a process to draft a national strategy. Once drafted, the ministry will need to develop a stakeholder consultation including both national and regional authorities, institutions and civil society groups. The government will be requesting support from the Readiness Mechanism to organize this stakeholder consultation process.

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b) Developing a reference case of deforestation trends: Assessment of historical emissions from deforestation and/or forest degradation, or projections into the future.

National level

Madagascar has experiences with REDD at the project level. The challenge now is how to move to a national approach to REDD. Madagascar will follow the guidance from the FCPF on methodological issues, including the establishment of the reference scenario, and from the UNFCCC.

Deforestation data is available for the country from three time periods which will allow more detailed modeling of deforestation patterns and identification of the variables/causes that predict forest cover change. This work will allow us to build predictive models of forest cover change into the future taking into account nation-wide development options.

Subnational level

As part of the national strategy we will identify specific priority sites that should be developed as REDD project areas. These areas will need more detailed deforestation analysis that can be done to high spatial resolutions. They will also require forest inventory/monitoring work to estimate biomass and to measure degradation. As

with the national level, we will develop models that provide predictions of future forest cover change.

To implement these activities we will require capacity building activities, equipment, appropriate software and the necessary satellite images to do the analyses.

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c) Developing a national REDD Strategy: Identification of programs to reduce deforestation and design of a system for providing targeted financial incentives for REDD to land users and organizations (e.g., delivery of payments, governance issues, etc.):

Development of a National REDD strategy will be a priority and the ministry anticipates that it will include the following elements:

- *Vision for forestry management (Protected Areas, Koloala, Management Transfers, Habitat restoration, Plantations,…)*
- *Proven options available to reduce deforestation and degradation*
- *Institutional capacity for REDD*
- *Sharing of carbon revenues amongst different stakeholders*
- *Marketing of Forest Carbon projects*
- *Capacity building for project implementers*
- *Monitoring*

The government's vision for forestry management(including protection) is a top priority within the environmental goals as described in the national development roadmap document, the Madagascar Action Plan (MAP). Carbon revenues are viewed as one of the financing mechanisms needed to ensure sustainability of this forestry vision. A national REDD strategy is therefore not only consistent with the nation's socio-economic development strategy, but it is essential to support it. The REDD strategy will include the government's policy on sharing of revenues from REDD activities.
Cultural and anthropological dimension will be also considered into the REDD strategy

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d) Design of a system to monitor emissions and emission reductions from deforestation and/or forest degradation:

The request to the readiness mechanism will be to establish the necessary capacity for monitoring activities within national institutions. These will include government agencies but may also include non government research institutions such as universities.

Priority actions for the monitoring system:

- *Establish a government REDD monitoring unit within **ONE***
- *Develop capacity for third party carbon verification in country*
- *Integrate predictive spatial modeling of habitat loss based on existing patterns of loss. Including identification of causes.*
- *National deforestation analysis every 2 years*
- *Develop capacity for more specific and frequent monitoring at the project level (every 2 years)*
- *Measure biomass in different habitat types, altitudes, soil types, management regimes*
- *Establish a national accounting and emissions reductions registration system*
- *Capacity building for analysis and reporting*
- *Capacity building on use of decision support tools*

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e) Other?:

As part of the National Strategy we will also define the institutional and legal structure/framework for

allocating REDD revenues. For this, the ministry will build in the experience of existing REDD projects. These are designed to ensure that funds flow to ensure REDD activities but also to ensure that money is used to benefit local communities.

12. Please state donors and other international partners that are already cooperating with you on the preparation of relevant analytical work on REDD. Do you anticipate these or other donors will cooperate with you on REDD strategies and FCPF, and if so, then how?:

GTZ, Intercooperation Suisse,
Conservation International,
Wildlife Conservation Society,
USAID

Other technical and financial partners (eg. AFD, UNDP, WWF, Japan, Norway,…) are already working on avoiding deforestation, although not specifically in the context of REDD, in the context of the EP3. They will all be invited to contribute to the conception and to the implementation of the REDD strategy.

13. Potential Next Steps and Schedule:
Have you identified your priority first steps to move toward Readiness for REDD activities? Do you have an estimated timeframe for them yet, or not?

An essential first step was the organization of a national REDD workshop in April that started the discussion on the opportunities that REDD presents to Madagascar. Following this national workshop, the REDD working group focused on updating this RPIN document to integrate the new elements from the workshop. Next, we will develop an action plan to detail the work needed to develop the reference scenario, the monitoring mechanisms and the REDD strategy.

14. List any Attachments included
(Optional: 15 pages maximum.)

- Annex 1 : Guideline and Questionnaire
- Deforestation map (also available at http://www.pnae.mg/ForestCoverChange.pdf)
- Summary of the Land Tenure Policy (in French) : Résumé de la Politique Nationale Foncière et plan d'action du Programme National foncier pour la région de Moramanga (région concernée par le projet REDD Corridor Ankeniheny-Zahamena)
- Summary of the forest policy (in French) : Résumé politique forestière (stratégie de contrôle, traçabilité, adjudication, transfert de gestion)
- Summary of the three REDD projects
- The Madagascar Action Plan (MAP) is available in English version at this address : (http://www.snu.mg/new/sites/snu/article.php?article_id=489&lang=fr)

Referenced Documents

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***Harper G.J., Steininger M.K., Tucker C.J. Juhn D. and Hawkins F. 2007*. Fifty years of deforestation and forest fragmentation in Madagascar. Environmental Conservation.**

***IEFN 2001*. Map published by DGEEF**

***Schatz G.E. and Lescot M.* 2003. Gazetteer to Malagasy botanical collecting localities.**