

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

March 8, 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: Mozambique

Date submitted: 15 December, 2008

1. General description:

a) Name of submitting person or institution:

1. Marilia Telma Manjate
2. Alima Issufo

Title:

1. Contact person for the Mozambique Designated National Authority
2. Contact person for the National Directorate of Land and Forest (DNTF)

Contact information:

Address:

1. Marilia Telma Manjate
Ministry for the Coordination of Environmental Affairs (MICOA)
Rua de Kassuende, n. 167, P. Box: 2020, Maputo, Mozambique

Telephone: +258 2146 64 95

Fax: +258 21 46 58 49

Email: telmanjate@yahoo.com.br

Website, if any: www.micoa.gov.mz

2. Alima Issufo

National Directorate of Land and Forest (DNTF)
Avenida Josina Machel, nr. 537, P.Box: 288, Maputo, Mozambique

Telephone: +258 21 31 20 72

Fax: +258 21 32 18 04

Email: aissufo@yahoo.com

Website, if any: www.dinageca.gov.mz

Affiliation and contact information of Government focal point for the FCPF (if known)

Alima Issufo

National Directorate of Land and Forest (DNTF) - Ministry of Agriculture (MINAG)

Avenida Josina Machel, nr. 537, P.Box: 288, Maputo, Mozambique

Telephone: +258 21 31 20 72

Fax: +258 21 32 18 04

Website, if any: www.dinageca.gov.mz

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

Marília Telma Manjate Ministry for the Coordination of Environmental Affairs (MICOA)

Alima Issufo National Directorate of Land and Forest (DNTF)

Support:

Marisa Camargo (Indufor Oy)

Ilkka Norjamäki (Indufor Oy)

Rita Jeque (Rural consult)

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

Table 1. Stakeholders consulted

Name	Institution
Alima Issufo	National Directorate of Land and Forest (DNTF), Ministry of Agriculture
Carla Cuambe	National Directorate of Land and Forest (DNTF), Ministry of Agriculture
Teresa Nube	National Directorate of Land and Forest (DNTF), Ministry of Agriculture
Marcelino Foloma	National Directorate of Land and Forest (DNTF), Ministry of Agriculture
Halima Niquice	National Directorate of Land and Forest (DNTF), Ministry of Agriculture
Eugénio Manhiça	National Directorate of Land and Forest (DNTF), Ministry of Agriculture
Osvaldo Manso	National Directorate of Land and Forest (DNTF), Ministry of Agriculture
Joaquim Macuácuá	National Directorate of Land and Forest (DNTF), Ministry of Agriculture
Olavo Manhique	National Directorate of Land and Forest (DNTF), Ministry of Agriculture
Darlindo Pechisso	National Directorate of Land and Forest (DNTF), Ministry of Agriculture
Joao Maholela	National Directorate of Land and Forest (DNTF), Ministry of Agriculture
Telma Manjate	Ministry for the Coordination of Environmental Affairs (MICOA)
Jeremias Mungoi	Ministry for the Coordination of Environmental Affairs (MICOA)
Rosalina Naife	Ministry for the Coordination of Environmental Affairs (MICOA)
Estêvão Buque	Ministry for the Coordination of Environmental Affairs (MICOA)
Anselmina Liphola	Ministry for the Coordination of Environmental Affairs (MICOA)
Laura Nhandumbo	Ministry for the Coordination of Environmental Affairs (MICOA)
Peter Bechtel	WWF
Helena Motta	WWF
Rito Mabunda	WWF
Roberto Zolho	IUCN
Wibke Thies	GTZ
Almeida Siteo	Department of Forestry Engineer, Agronomy and Forestry Engineering
Romana Bandeira	Faculty at Eduardo Mondlane University
Guillaume Le Bris	Agência Francesa de Desenvolvimento
Arlito Cuco	Green Resources
Nilza Puna	Malonda Tree Farms
Francisco Pariela	National Directorate of Conservation Areas, Ministry of Tourism
Joao de Lima	National Directorate of Renewable Energy, Ministry of Energy
João José Maweia	Associação para Transformação Rural
Muchimba Sikumba	Associação para Transformação Rural
Ruth Mkhwanazi	Oxfam GB
Stephen Gudz	CLUSA
Sergio Chitara	Technoserve
Elizabeth Walker	Technoserve
Paulo Massinga	Private sector investor
Marisa Camargo	Indufor Oy
Ilkka Norjamäki	Indufor Oy
Rita Jeque	Rural Consult

2. Which institutions are responsible in your country for:**a) forest monitoring and forest inventories:**

National Directorate of Land and Forest (DNTF) is the institution of the state responsible for the implementation of policies related to forest resources (Attachment 2). Department of Natural Resources Assessments is part of National Directorate of Land and Forest (DNTF¹) under the Ministry of Agriculture (MINAG), it is responsible to elaborate the monitoring and inventories of natural resources at national level, as well as design technical and methodological norms for monitoring, inventories and forest management plans.

Others: Institute for Agricultural Research (IIAM) and Eduardo Mondlane University.

b) forest law enforcement:

Department of Norms and Control under DNTF, MINAG, is responsible for enforcing the laws on the national level related to forestry, lands and fauna. On the provincial level, these functions are attributed to the Provincial Services of Forest and Wildlife (SPFFB²) under Provincial Directorate of Agriculture (DPA³) and District Services and Economic Activities (SDAE⁴) at District level. Law enforcement powers are delegated to District, community-level structures as well as private forest and wildlife guards (fiscais ajuramentados), as defined in the Law nr 8/2003 and its regulation which establish the principles and norms of organization, competences and working between the local state organs and the communities⁵ Within protected areas forest and wildlife enforcement are under the responsibility of National and Provincial Directorates of Conservation Areas, Ministry of Tourism.

c) forestry and forest conservation:

Department of Forests under DNTF, MINAG; is responsible to assure conservation and the rational and sustainable use of native forests and plantations at the national level. At the provincial level, these functions are implemented by SPFFB and SDAE under DPA,

National Directorate of Conservation Areas under Ministry of Tourism.

Enforcement powers are delegated by these to District and community-level structures.

d) coordination across forest and agriculture sectors, and rural development:

Ministry for the Coordination of Environmental Affairs (MICOA) is the key agent in environment management and coordination;

District Administrations coordinate all activities at District level.

¹ DNTF – National Directorate of Land and Forest

² SPFFB – Provincial Services of Forest and Wildlife

³ DPA – Provincial Directorate of Agriculture

⁴ SDAE – District level

⁵ Regulamento da Lei dos Órgãos Locais do Estado, de 05 DE Abril de 2005.

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.)):

Mozambique is one of the few countries in the Southern Africa region with still a considerable area of natural forest. The estimated total forest cover of the country is 40 million hectares (51% of the country), in which 22.5 million (56.2%) are dense forests and 16.4 million (40.9%) are open forests. Mangrove forests and swamp forests occupy 351 thousands (0.9%) and 802 thousands (2.0%), respectively. Niassa, Zambézia and Cabo Delgado are the provinces with the major forest cover.

Deforestation extent, location and land tenure:

Deforestation and forest degradation takes place throughout the country and is closely related to population pressure. According to the recent National Forest Inventory (NFI) (Marzoli 2007) the deforestation rate is 0.58% or 220 000 hectares per annum for the whole country. Deforestation rate ranges from 0.22% in Northern province of Niassa to 1.67% in Southern province of Maputo. Total area of forests and other wooded lands have decreased from 52 million ha to 49 million ha between 1990 and 2002. Current estimate for total forest area is ca. 40 million hectares.

Land Tenure

According to the Mozambican Constitution (2004), the ownership of land is vested in the state; however, use and benefits rights can be acquired based on occupancy/use, custom or by administrative grant of title. Individuals and communities have the right to the land they have traditionally occupied. Individuals and companies can be authorized by the government to use the land, through the DUAT (Direito de Uso e Aproveitamento de Terra) mechanism. There is no private land ownership in Mozambique. Nearly all of Mozambique is comprised of community lands according to current law. Communities are not always aware of their legal land rights, however.

Forest degradation:

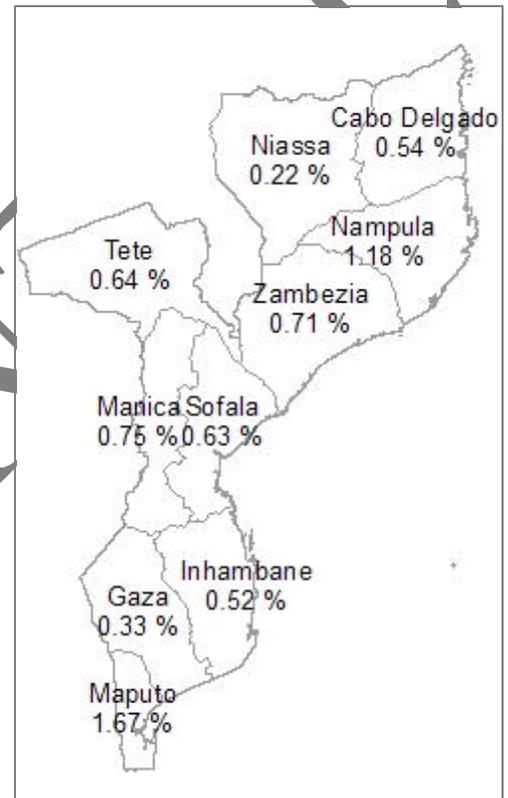
Forest degradation is difficult to distinguish from deforestation and the extent is not well known. A great portion of the land is cleared for shifting cultivation, which does not entirely deforest the area but degrades severely. Deforestation figures above include many of these areas, but it is probable that a lot more areas are in a state of degradation. Also, there is a relation between unsustainable woodfuel (fuelwood and charcoal) production and forest degradation but, it's not easy to prove a direct relation between them, given the lack of clear data in the country.

Deforested ecosystems:

Of total land surface of Mozambique ca. 51% is covered with forest (Land spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of more than 10 percent, or trees able to reach these thresholds in situ) - it does not include land that is predominantly under agricultural or urban land use (FAO definition to FRA 2010) and 19% with other woody vegetation (Land not classified as "Forest", spanning more than 0.5 hectares; with trees higher than 5 meters and a canopy cover of 5-10 percent, or trees able to reach these thresholds in situ; or with a combined cover of shrubs, bushes and trees above 10 percent) – it does not include land that is predominantly under agricultural or urban land use.

Most of the forests are deciduous species dominated Miombo woodlands. Altogether 365 species were identified during latest NFI, out of which different species of *Brachystegia* are by far most frequent. Area wise, most of the deforestation occurs in Miombo woodland dominated areas but other ecologically sensitive forest types, such as mangrove forests are severely threatened to disappear due to their small area and relatively high deforestation rate. The area of mangrove forests has declined 12.5% from 408 tHa to 357 tHa between 1972 and 2004 and the rate of deforestation has increased to 0.7% between 1990 and 2004 from 0.2% between 1972 and 1990 (Marzoli, 2007).

Another important ecosystem called the Mopane forest, which represents 11% of all forests, is in relatively good state of conservation as a result of its limited agriculture potential. However, some transformations have occurred specially on the extreme south in areas of relatively high population density



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

A National greenhouse gases (GHG) inventory was conducted for the year 1994 (MICOA, 2003). The total direct GHG emissions for Mozambique in 1994, was estimated at 9 265 Gg of CO₂, 272 Gg of CH₄, and 3 Gg of N₂O. Land-use change and forestry contributes with a total CO₂ emission estimated at 780 Gg, i.e., 8% of the total. However, given that since the last inventory there were significant changes in the country, it is expected that GHG emissions for land-use change and forestry in the country increased significantly with the rise of the deforestation rate. It has been estimated a deforestation rate of 0.24% for the period between 1972 and 1990 (Saket, 1994) and 0.58% for the period 1990-2004 (Marzoli 2007). A new national greenhouse gas inventory in an annual basis from 1995 up to 2004 is currently ongoing.

In addition, a biomass assessment was recently conducted in Mozambique in 2008 (Drigo, 2008). It was based on the data collected during the national forest inventory (Marzoli 2007). Even though the study was focused on wood energy biomass, data on total biomass stock and annual biomass increment were estimated for each "ecological unit" (land cover + ecological zone).

On top of the initiatives described above, Eduardo Mondlane University has been actively engaged identifying and filling the existing gap of information on emissions data, and was able to produce several studies, namely: (i) equation development of biomass to estimate carbon emissions from different vegetation types, (ii) causes of changes of forest land cover in Beira corridor, (iii) changes in species composition in Beira corridor region, (iv) factors of expansion of forestry biomass in Beira corridor (Sitoe et al. Undated).

On the project level, a community carbon forestry initiative managed by Envirotrade Ltd located in Sofala province, also conducted studies to assess carbon mass of the specific species that were elected to be part of the project⁶. The technical information can be found on the project reports located at the Plan Vivo website⁷.

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.).

Different forest area estimation initiatives in Mozambique provide dissimilar data, misleading discussions on forest changes. Due to the different forest definitions used in subsequent forest inventories, the extent of forest cover has been reported differently in various sources. According to Saket (1994) the extent of forests with timber production capacity cover was estimated of 19 million hectares. However, current estimate of forest cover is 40 million hectares and it includes productive and non productive forests (Marzoli, 2007). Therefore the conversion of 1994 division to current NFI (2007) classification system has been difficult and a clear trend is not observable. Only mangrove forests were continuously assessed by comparing different forest inventories, namely, 1972, 1994 and 2004 (Table 2).

Table 2. Mangrove areas and changes between 1972, 1990 and 2004

Year	Mangrove (000 ha)	Annual change (ha)	Annual change (%)
1972	408		
1990	396	-67	-0.2
2004	357	-217	-0.7

Source: Marzoli 2007.

A study conducted in 1994 estimated a deforestation rate over a period of 18 years (1972-1990) of about 4.21% or 0.21% per year. Each province had a different deforestation rate result, mostly because the war that broke out under that period affected the different regions of the country on different levels. On the 1994 study, deforestation rate was assessed using visual interpretation of two sets of satellite images (Landsat MSS from 1972 and Landsat TM from 1990/91) covering entire country. The mapping was also based on extensive field-work in all provinces for control and validation of interpretation. The forest types/land use classification was kept same (Saket 1994). Forest maps at scale of 1:1,000,000 were produced for the 2 years, 1972 and 1990 (Table 3).

Table 3. Agriculture areas in 1970 and in 1990

Province	Area (ha) 1972	Area (ha) 1990	Change (ha)	Deforestation rate (%)
Maputo	555,550	872,344	316,794	19.86
Gaza	1,012,000	1,067,568	55,568	0.92
Inhambane	1,089,877	1,352,196	262,319	4.94
Sofala	660,000	881,194	221,194	4.47
Manica	305,000	498,311	193,311	4.12
Tete	532,500	838,401	305,901	3.92
Zambézia	1,545,570	2,045,045	499,475	6.55
Nampula	2,042,077	2,573,198	531,121	9.70
Cabo Delgado	962,230	1,167,230	205,000	2.93
Niassa	400,000	548,423	148,423	1.36
Totals	9,104,804	11,843,910	2,739,106	4.27

Source: Saket (1994)

During the Integrated Assessment of Mozambican Forests (including NFI) deforestation was assessed independently in one province of the country (Manica Province). A new approach to land cover change was applied in which land cover recognizes that changes come in two types: (1) conversion from one category to another; and (2) modification within one category.

Digital Landsat 5 TM satellite images of Manica Province were used to produce the 1:250 000 baseline interpretation of 2004; the interpretation for 1990 identifies the changes in boundaries and/or class labels respective to 2004. A multi-temporal sensing approach was used to compare images collected from the two dates, allowing a more accurate estimation of land-cover changes (Jansen et al. 2007). The rate of land-cover change on annual basis in Manica Province was calculated for the period 1990-2004 (Table 4)

Table 4. The rates of land-cover change per year in Manica Province in the period 1990 – 2004 (Jansen et al. 2007)

Lc domain or class	Area in 1990 (ha)	Area in 2004 (ha)	Annual change (%) *)
Tree crops	23,016	20,480	-0.82
Field crops	181,764	332,591	4.41
Shifting cultivation and forests	276,897	349,142	1.66
Forests & closed woody vegetation	1,953,071	1,604,741	-1.41
Woodlands & open woody vegetation	1,871,156	1,786,024	-0.36
Thickets and Shrublands	172,885	155,512	-0.75
Grasslands	736,539	714,054	-0.22
Forested area with shifting cultivation	654,533	904,343	2.33
Aquatic or regularly flooded woodlands	171,494	172,507	0.07
Aquatic or regularly flooded shrub and herbaceous vegetation	114,258	114,634	0.02
Built up areas	10,184	11,769	1.07
Bare areas	44,528	44,528	0.00
Water bodies	18,033	18,033	0.00

*) For the calculation of the annual rate of change in the period 1990-2004 linear growth has been assumed

The above mentioned methodology could not be repeated in an identical way for the entire country due to the coarser scale used (1:1 000 000) (Jansen et al, 2007). Thus, a rough estimate of deforestation rate for the entire country was derived based on a model, using a similar approach of that used in FRA 1990 (Marzoli, 2007). The main assumption of the model is that population pressure is the main factor leading to deforestation. Thus, using the correlation between population pressure and land cover, it was possible to model the deforestation rate.

For the study, population density values were derived from the National population census from the Year 1990 and 2002. The annual deforestation rate for the period was estimated at 0.58% for the entire country (Table 5).

Table 5. Deforestation rate estimates per province

Provinces	Forests and other wooded cover ('000 ha) 1990	Forests and other wooded cover ('000 ha) 2002	Deforestation/year ('000 ha)	Annual rate of deforestation (%)
Cabo Delgado	5,322	4,989	25	0.54
Gaza	5,182	5,027	13	0.33
Inhambane	4,585	4,424	11	0.52
Manica	4,340	4,005	23	0.75
Maputo	1,280	1,078	16	1.67
Nampula	3,958	3,509	33	1.18
Niassa	9,635	9,379	21	0.22
Sofala	4,430	4,161	20	0.63
Tete	7,376	7,025	27	0.64
Zambezia	5,819	5,356	31	0.71
Total	51,926	48,952	219	0.58

Source: Marzoli 2007

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

The miombo ecosystem holds the major productive forest areas and a considerable number of protected wildlife and forest areas in the country, resulting often in conflicts between different land uses options. The major threats to this ecosystem are bush fires, over-exploitation both of wood and fire wood, charcoal production, illegal hunting, conversion of forest land to agriculture and high concentrations of human populations and associated socio-economic activities.

The main cause of deforestation is conversion from forest land into shifting cultivation areas or for permanent agriculture. In Manica province it has been estimated that 7.5% of deforested dense forests were converted to permanent agriculture (mainly tobacco) and the corresponding figure in open forests was 26 % (Marzoli 2007). The rest of the deforestation was caused by forest clearing for shifting cultivation, which often does not deforest the entire area but degrades the forests severely.

Mangrove clearing/degradation results mainly from the intensive use of wood fuel, the conversion of mangroves for salt production ponds, the reduction of natural regime of inundations, and from the conversion of mangroves into agriculture areas. In addition, aquaculture has often a negative impact on the conservation of mangroves. Illegal and uncontrolled harvesting of mangroves occurs in the proximity of urban zones.

In addition to forest clearing for food and other agricultural production, the level of deforestation has increased due to forest fires. Mozambican forests have been systematically damaged by annual bush fires, which leave little or no chance, even to the fire tolerant tree species, to regenerate naturally. Even though the natural vegetation of Mozambique has been affected by these fires for centuries and, to a certain extent, adapted to this reality, the increasing regularity of fires caused by an enlarging population has dramatically affected forests regeneration and soil productivity.

Underlying causes:

- Poverty in agricultural areas combined with the inherently erodible and fragile nature of tropical soils forces farmers to rely on shifting cultivation
- Incomplete land use zoning and titling among different stakeholders and land uses, as well as lack of village level land use plans
- Lack of cheap energy options and insufficient energy network maintains charcoal as the main source of energy for urban areas
- Population growth in agricultural areas increase the pressure towards forest clearing
- Limitations in effective and inter-sectoral coordination and committed partnerships amongst different institutions
- Lack of harmonisation of legal frameworks, the overlap and sometimes conflicting mandates of government institutions and major difficulties in the domestication of biodiversity related conventions and agreements
- Ineffective program planning, prioritisation, and implementation that on its turn often result in duplication of efforts and non-rational use of the existing limited human and financial resources

- Limited human and financial resources to put in practice and reinforce the existing national legislation
- Limited human and financial resources to enforce laws for resources management and policies implementation
- Limited capacity to develop and implement effective land use planning, although new national zoning legislation exists
- Insufficient public awareness on the value of forests and their ecosystem services biodiversity and thus perceived conflict between livelihoods/development and conservation
- Considerable knowledge gaps on the status of forest biodiversity, its stocks, productivity, carrying capacity, services and linkages with other natural resources vital for socio-economic well being such as water, air and soil quality
- Selective harvesting of tree species (forest degradation)
- Unplanned human settlement and little infrastructure
- Uncoordinated action between different government agencies (forestry, rural development, energy, agriculture)
- Lack of community involvement in forest resource management

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.?)

National forest policy and strategy (1997), law (1999) and regulations (2002) form the legal basis of sustainable forest management in Mozambique. The forestry sector is affected also by the land law (1997) and the environmental law (1997). Although the Mozambican legal framework is relatively clear, the country lacks effective implementation of the rules. Law enforcement in forestry has been lacking human capacity and financial resources to allow an improved control of forest management at concession and simple license levels, as well as the detection of illegal logging and hunting activities and implementation of actions to halt illegal activities. In addition, land tenure remains an issue in the country, as the DUATs are still very bureaucratic and time-consuming to be obtained.

In face of that, the government of Mozambique has recently launched several programs and policies to improve forest law enforcement and governance, but recognizes that more needs to be done to effectively reduce deforestation in the country. The major policies, which should be aligned to a REDD strategy, are described below.

Concession policy: All forest (and other) lands are publicly owned and therefore all forestry activities are based on land leasing (concession) or a licensing system. So, called simple licenses can grant annual harvesting quotas of up to 500 m³ in the defined area and license renewal is reviewed annually. Simple licenses are widely criticized as being an unsustainable way to manage native forests. In an attempt to reduce the number of simple licenses, the Government has promoted concession forestry, where the operator receives a relatively large area of land (10 000 to 100 000 hectares) for sustainable management of natural forest or for plantation production. The timber concession system is quite recent, and hence, training and guidance for the implementing authority is still needed. In fact, the number of simple licenses has increased during past years indicating that more time and support are needed to implement the new policy effectively.

20% royalty mechanism: New regulations provide that 20% of the harvesting timber tax revenue will be channelled to local communities. However, the national implementation structure is only partly established and only limited implementation of this law has occurred until now. The government has decided to retain temporarily the 20 percent in most cases because of difficulties in meeting the disbursement requirements. In many areas where the funds have been distributed, villagers have had difficulties to identify proper investments due to inexperience in planning and running money-based projects. Local government offices and NGOs are launching training campaigns in financial, administrative, negotiation and leadership capacity and resources management for the purpose. A potential REDD payment scheme must take into consideration these difficulties.

Afforestation strategy: During last few years, the Mozambican government has put a lot of emphasis in promoting fast-growing tree plantations as part of the rural development and forest investment strategies to shift the pressure from natural forests and also to use deforested areas. National afforestation strategy was drafted in 2005 including considerations on large-scale investors, SMEs and small-scale plantations. All planting is supposed to happen on degraded or cleared forest areas. Recently this strategy, although still not approved, has resulted in investor interest.

The Participative Law Enforcement for Lands and Forests: As support for the implementation of forest and wildlife legislation in Mozambique, a strategy was drafted in 2005 to address the need to develop a participative law enforcement that integrates, strengthen and consolidates law enforcement activities in order to reduce illegal activities in the forestry sector and minimize its social, economic, and environmental impacts. Also, a Law Enforcement project was formulated in 2005. However, this sector still faces problems. The success of implementation is constrained by factors such as, the vast extension of the territory, the scarce human and material resources, the weak training and capacitation of the fiscais, the

lack of coordination and collaboration between the different intervenient appointed as the main causes of failure to control the use of resources in a sustainable way (Bila 2005).

National Forest Program: (under designing and to be approved next year), this program sets as priorities for an effective sustainable forest management (i) the establishment of an effective and efficient institutional and normative structure for the forest and wildlife sector and, (ii) the protection and conservation of forest and wildlife resources in an effective way for the production of goods and services. Climate change and forests issues under the CDM and REDD that were not included in the initial version of the program are now to be included as one of the priority topics of the national forest program (MFA 2008). Mozambique realizes that the country has high potential to develop these mechanisms, but a number of issues have to be un place before hand.

Trans-frontier conservation areas: More recently an innovative concept and approach was introduced in the protected areas, namely the trans-frontier conservation areas (TFCA) that aim at the conservation of state trans-boundary ecosystems, based on the assumption of a joint management of these areas between the countries that share them.

The Policy for the Development of the Forestry and Wildlife Sector (1997): the underlining assumption of the forestry and wildlife policy is that forest resources should be managed so that they contribute to economic development, and therefore poverty alleviation, while ensuring sustainability and the supply of goods and services. It establishes four objectives:

- Economic – promote the engagement of the private sector in sustainable management and generation of income by adding value to forest products
- Social—encourage communities to participate in the sustainable management of forest resources through the adoption of good practices and derivation of tangible benefits
- Ecological—conserve a forest resource rich in biodiversity and provide environmental services such as watershed and soil protection
- Institutional—equip all levels of forest administration with the capacity to formulate policy and ensure its implementation through monitoring.

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.):

The government has not yet identified where to implement REDD activities, but 5 provinces (Cabo Delgado, Niassa, Nampula, Zambézia, and Sofala) have high potential to host projects. The vast majority of the forests in these provinces occur on community lands. Although land ownership technically remains with the state, community usufructs (open-ended) are clear and binding within the Mozambican legal framework (See Land Law of 1997 and population census of 2007). Thus, one constraint for REDD is not the law (which strongly defends community rights), but community members' ability to use their rights and defend their interests.

The communities located on the above mentioned lands follow a subsistence lifestyle, depending on agriculture and forest products for their livelihoods. Almost all practice low or no-input farming. Burning is a common practice for land clearance, leading to a loss in organic matter and in soil minerals. This reality is not different from the rest of the country as it is still predominantly a rural economy. About 70% of the population live in rural areas and depend on natural resources for survival and agriculture alone employs just above 80% of total workforce and about 93% of rural workforce (INE 2004). Forests and woodlands are the most common vegetation type in the country. Thus interest in social development leads to increased focus on people who live in forest and woodlands areas. Forests supply many products and services essential to generate disposable income for the well-being of rural communities. They also provide for service functions, including spiritual and cultural values. As a result, deforestation evokes concern in the effort to create a balance between conservation and socio-economic developmental concerns of rural communities.

Large share of the population of over 20 million depend on one way or other on the forest and wildlife resources (Republica de Moçambique 2006). The annual wood fuel removals are estimated to be around 16,000,000 m³ (DNFFB 2005). Different figures exist on Mozambican energy consumption but all suggest that more than 80% of the nation's energy needs come from renewable sources - a majority of that from the woodlands. More than 90% of the rural energy use comes from firewood or charcoal.

In terms of forest resources use and management, Community Based Natural Resource Management (CBNRM) is a strategy adopted by the government to achieve the social objective outlined in the Policy for the development of forests and wildlife sector. It is formally being implemented since 1995.

After approval of the Ministerial Diploma 93/2005 that regulates the devolution to local communities of the 20% tax, the

number of communities receiving this benefit has increased. However, there is still very many communities that have the right, but do not receive the 20% because they are not well organized enough to apply for it and/or demand the benefit that they are entitled to. However, it is important to note that this is still a new mechanism, so more experience and time is needed.

A sketch of the Community Management Committee structure can be found on the attachments of this document.

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:

There are different strategies/ programs from different institutions addressing the same problem of deforestation and forest degradation in place.

- **National Action Plan for Drought and Desertification:** is a strategy that seeks to identify various interventions related to reduction of vulnerability to food insecurity.
 - **Strategy for Prevention of Fire and Deforestation:** Which aims to (i) contribute to protect and conserve forest resources, (ii) promote the rational use of forests, (iii) regulate the exploitation of forest resources to avoid deforestation and uncontrolled fire.
 - **National Forest Policy and Strategy:** its social objective enforces the need to increase rural population and communities' participation as direct agents on the integrated management, fire protection, utilization and conservation of resources.
 - **National Forest Program:** emphasizes its specific objective of Conservation and management of forest and wildlife resources component as "to protect and conserve forest and wildlife resources in an effective way for the production of goods and services".
 - **Rural Development Strategy:** the objective is to encourage agro forest systems compatibles with the Forest and wildlife law and environment law.
 - **National Afforestation Strategy:** The aim is to fight poverty and build wealth through fast-growing plantations and all planting is supposed to happen on degraded or cleared forest areas.
 - **National Program to Control Fires:** engages all forest sector intervenient including local communities in fire protection and management, as well as campaigns.
 - **National Program of prevention and control of fires in the agrarian sector.** Establishes as objective to establish actions to develop and implement local programs for mitigation and control of fires on the agrarian sector in Mozambique.
 - **The National Program for Agriculture Development (PROAGRI II 2005-2009):** identifies as priority the promotion of private initiatives of industrial and commercial reforestation, including the promotion of community participation in those programs
 - **Action Plan for the Reduction of Absolute Poverty (PARPA):** Establishes the reduction of deforestation related to fuel wood extraction and the promotion of sustainable energy sources as amongst the main energy policy objectives.
- Others:**
- National Program of Prevention of natural disasters
 - Action Plan for fire Prevention and Combat
 - Action Plan for Prevention and control of erosion and soils
 - Land law
 - Environmental Strategy for sustainable development
 - Action Plan for adaptation to climate changes.
 - National Strategy and Action Plan for Diversity Conservation

In terms of effectiveness, results-based management is very important but challenging in multisectoral issues such a deforestation and degradation, where the performance is determined by a number of factors, many of which are beyond control of one sector/ministry. The lack of harmonization, coordination and collaboration between the sectors also turns difficult to measure the effectiveness of all designed programs. However, it can be said that some of the programs are addressing the problems and that have yielded visible results in the ground, while others still lack a balance between process and results. For instance, there is a weak capacity to implement the strategy to control and reduce wildfires,

which are one of the most serious threats to the forest resources in Mozambique (MFA 2008).

a) What government, stakeholder or other process was used to arrive at the current strategy or programs?

The programs and strategies have been developed in a participatory and consultative process involving different stakeholders: Civil society, NGO's, private sector, different government agencies, and communities. However, there are some civil society critics arguing that those programs and strategies were produced without sufficiently debate and consultation, but there signs of improvement.

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

In fact, all the programs or policies are designed at national level in a participatory process; however, their action plans are all implemented at subnational level. In addition to the ones mentioned above, others programs are as follow:

The Government already has some policies to address the causes of deforestation and forest degradation:

- National Program to Control Fires
- Program on New and renewable energy
- Action Plan for fire prevention and combat
- Education and Environmental Communication Plan.
- National Program for Rural Extension.

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 sub national level):

A. Governance

- i. Increase the efficiency of governance institutions and the effectiveness of programs and policies implementation. Specific activities would be;
 - a. In-service training for enforcement agents, supervisors, and the court system.
 - b. Establishment of coordination structures between the various agencies involved.
 - c. Improved implementation of the existing bonus system for captured infractors.
- ii. Improve forest monitoring both at Provincial and National level
- iii. Design a positive compensation scheme on avoided deforestation activities
- iv. Create a permanent REDD secretariat (REDD working group)
- v. Improve law enforcement capacity
- vi. Allocate more resources to implement the national program to combat fires, and develop alternatives such as early management burning

B. Capacity building

- i. Capacity building programs for the government, civil society and communities
- ii. Promote training programs for government representatives

C. Land use planning / zoning

- i. A proper zoning of the country to identify areas for protection, for agricultural practices (food security and bio fuels production) and other land uses
- ii. Promote areas for sustainable production of biomass
- iii. Promote community awareness of their land rights and increased formal registration of community lands

D. Technological solutions

- i. Promote R&D of alternative energy technologies
- ii. Promotion of improved stoves and other alternative energy conservation technologies to reduce pressure on fuel-wood
- iii. Identify alternative technology for charcoal production (e.g. green charcoal)
- iv. Subsidize the acquisition of improved stoves in the first years
- v. Improve existing program on new and renewable energy

E. Promotion of sustainable livelihoods

- i. Limit the number of simple licenses in forest exploitation.
- ii. Support afforestation and reforestation activities
- iii. Promote the use of conservation agriculture techniques in family sector agriculture

- iv. Increase protection for wetlands using existing environmental legislation.
- v. Identify positive incentives for the communities not to utilize fire
- vi. Establish community-based forest management schemes
- vii. Support communities to improve their agricultural production without applying shifting cultivation

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

Note: the numbers on this section are related to the numbers of the previous questions. Please read them together.

A. Governance

- i. There are several existing programs to address deforestation, but enforcement is compromised by the low efficiency of the government
- ii. To contribute to enforcement
- iii. A positive scheme will ensure and encourage communities and farmers not to deforest or degrade the forests
- iv. Assure that REDD policies and programs are developed taking into account the various sectors relevant to the issues
- v. It will guarantee that the laws are effectively implemented. The Ministry of Tourism law enforcers, for instance, have only basic training and do not understand all aspects related to their work, performing their tasks poorly.
- vi. The program is well designed, but is lacking financial support to be effectively implemented

B. Capacity building

- i. Public awareness programs to call for changes in attitude
- ii. There are various aspects of the legislation not yet clear to government representatives, such as timber concession system which is quite recent, and hence, training and guidance for the implementing authority is still needed.

C. Land use planning / zoning

- i. This will assure that the land is optimally used and reduce the conflict between different land uses.
- ii. This measure will reduce significantly the various uncontrolled fires around the country;
- iii. To identify and involve various stakeholders and assure that the rules will be well implemented

D. Technological solutions

- i. Alternative energy will significantly reduce the pressure on forests that are being utilized as source of energy for charcoal production
- ii. This measure will reduce pressure on fuel-wood
- iii. Identifying other sources of energy than charcoal will reduce demand for wood and take away pressure on natural forests
- iv. Subsidies will allow the communities to test the stoves. The stoves are considered expensive for the communities' purchase power, and some believe that the food is not as tasty.
- v. Improving renewable energy will reduce demand for wood and take away pressure on natural forests

E. Promotion of sustainable livelihoods

- i. Simple licenses are very little controlled and are leading to uncontrolled deforestation
- ii. Afforestation and reforestation activities should be promoted simultaneously to REDD: to increase stakeholder awareness of the different roles forestry has on climate change; to reduce pressure on natural forests for the production of wood and charcoal.
- iii. To reduce and eventually eliminate slash and burn agriculture.
- iv. To reduce ecosystems destruction
- v. To actively integrate communities on decision making and transfer them the ownership of natural resources management
- vi. This approach will address food security and prevents that new forest areas are cleared;
- vii. This approach will address food security and prevents that new forest areas are cleared;

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.)?

Given that REDD is not only about forests, cross-sectoral programs and policies between Ministry for the Coordination of Environmental Affairs (MICOA), Ministry of Agriculture (MINAG including National Directorate of Land and Forests, National Directorate of Agrarian Services), Ministry of Energy (National Directorate of New and Renewable Energy), Ministry of Planning and Development (National Directorate of Rural Development), Ministry of Public Works and Housing (National Directorate of Water), Ministry of Tourism (National Directorate of Conservation Areas), and local government entities are crucial as they will cover all aspects related to deforestation and contribute to the development of a more comprehensive REDD strategy.

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 government recognizes that REDD goes beyond forests and must integrate other sectors such as rural development, agriculture, energy and tourism. However, the government does not yet have a strategy on how to do so. Therefore, it is proposing to create the REDD working group to assure that a REDD strategy will also contribute to the development all of all sectors in the country.

In the context of CBD, for instance, Mozambique has prepared a national strategy for biodiversity conservation. This strategy has been adopted by sectorial and transversal national programs in order to make the process operational.

In addition, the Plan for the Reduction of Absolute Poverty (PARPA) is the main instrument built by the government to reduce poverty and sustainable management of biological resources. The program drives the development of a legal and political framework to implement principles leading to biodiversity conservation and economic development of the rural poor communities. This experience shows that the country has the willingness and is well equipped to organize its different departments to compose an integrative REDD strategy.

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):

IIED and CIFOR are conducting a capacity building program under a World Bank PROFOR project, but it is still in an early phase. The goal of the program is to strengthen the capacity of several countries in southern Africa to prepare the different stakeholders to potential upcoming rules on the issue. The project is currently identifying the relevant stakeholders and the policy framework relevant to REDD on the individual countries, including Mozambique. In parallel, Indufor, a Finnish consulting company is conducting a project, also under PROFOR, which aims to describe a managing organization to promote community carbon forestry projects, including REDD, and also design a fair and cost effective payment scheme to distribute the income from carbon credits sales to the community members. The IIED and Indufor studies will be combined to produce a document which aims inform the country on a potential REDD strategy.

In terms of technical assistance received, the Italian Cooperation has provided funds for land-cover mapping (satellite image interpretation and classification system), land cover changes assessment and statistical analysis, forest inventory data processing, etc), which could be leveraged in the future towards a REDD strategy.

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?

The Government of Mozambique would lead a multi-stakeholder participatory process involving public sector agencies, traditional authorities, civil society, private sector, local authorities, NGOs, private sector, academic community, development partners, research institutions and others. This participatory process would be implemented at national, provincial and district levels using existing precedents, organs, and mechanisms.

- National - open stakeholder forums coupled with smaller working groups
- Province- open stakeholder forums coupled with smaller working groups;
- District consulting councils and Community committees;

These types of consultation are already in place at these levels, but they are lacking support and should be done in a more inclusive manner.

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

At DNTF level, the National Forest Forum created in 2002 for stakeholders consultation meets 2 times per year and hosts more than 50 people from NGOs, private sector, Donors, research institutions, and community based organizations, in addition to the government.

At MICOA level the following consultation processes are in place:

- National Council for Sustainable Development (CONDES) is a cabinet consultative body on environmental issues, it is subordinated to the Prime Minister's office and is constituted by Ministers and Vice-ministers from relevant sectors such as Agriculture, Mineral Resources, Energy, Tourism, Planning and Development, Health, etc and is chaired by Minister of Environment. Meets 3 times per year;
- Group reviews, meet 4 times per year;
- NGOs forum, meets when need;
- Journalists forum meets when needs;
- Development Partners Forum

At local level:

- There are local councils across the country created to assure participatory management of natural resources (COGEP). They are constituted by community representatives, private sector, associations and local authorities.

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?:

Workshops on REDD were promoted in November and December, 2008 in order to formulate this R-PIN. Representatives from the government and civil society attended the event. In addition, the civil society has been discussing the matter on a regional level: Indufor and IIED are carrying out a carbon forest/REDD project (see question 6 d). Also, in the last Southern African Technical Committee on Forestry meetings held July 2008 in Windhoek, Namibia, REDD issues were discussed.

Besides these initiatives, there have been several workshops, meeting and seminars promoted in the country to discuss issues related to deforestation, but not directly linked to the REDD framework. In 2006, for instance, in Mocuba, Zambézia an annual meeting about uncontrolled fires was held. Provincial Directorates of Environment, agriculture, community leaders, associations, NGOs were present to discuss problems related to uncontrolled fires and ways and methods to reduce its incidence in the country. One of the major resolutions was that the implementation of the action plans for fires should be at local level, giving power to the local authorities to prosecute all involved.

On the regional level, forestry and carbon have also been a central topic:

- The Southern Africa Fire Network (SAFnet) meets yearly since 1999 in one of the member countries. SAFnet is a regional network that fosters collaborative efforts in fire monitoring and management in southern Africa. The goal is to achieve more effective and appropriate fire management policies and practices in southern Africa through the use of remote sensing and other geospatial technology to enhance the use of information from field observations and remote sensing of fires for natural resource management in southern Africa. Mozambique is represented by DNTF
- In Uganda, November 12-14, 2008 a workshop was held to build a pan-tropical network of collaborators for forest carbon characterization Integrating Remote Sensing with forest field surveys. The principal objective of the workshop was to bring together practitioners in forest biometrics to improve forest designs enabling the integration of forest field measurements and remotely sensed data. Protocols were discussed to produce local as well as national-level maps of carbon stock. The Woods Hole Research Centre (WHRC) Africa Program supported the event. Mozambique was represented by DNTF

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

The government can use the already existing forums in the country described above. In addition, a REDD working group can potentially be created with members from the different departments in the government (MICOA; DNTF, Energy, Rural development, Conservation areas, Agriculture, Water); University, and NGO's (conservation and rural development focus).

d) Across state or other sub-national governments or institutions?

REDD Working Group (or REDD National Committee) will be established at both Provincial and District levels and in districts where REDD will be implemented and used as platform for discussions and implementation actions.

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

Utilize forum and mechanisms described above.

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

Utilize forum and mechanisms described above.

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.):

Challenges	Solutions
Lack of an appropriate carbon monitoring system at National, Provincial and district levels	Establishment of provincial and district carbon monitoring system units with FCPF support and testing pilot projects on the field and identifying the best available technology in the market
Lack of technical capacity	Capacity building at national and district level is priority
Weak law enforcement	Financial support to human resources and equipments
Low awareness on climate change/REDD issues among Government officials, communities, privates sector	Awareness campaigns on climate change/REDD issues and its benefits; REDD consultation and outreach plan
Outdated National Forest Strategy	Review the National Forest taking into account climate change issues; and begin drawing a baseline for the country
Lack of a working payment scheme to distribute the benefits of REDD credits	Support of FCPF to design an appropriate scheme based on already tested experiences worldwide
Lack of coordination between different agencies/institutions	Establishment of a REDD Secretary/Working Group involving stakeholders working in environmental issues
Lack of a REDD Strategy	Develop an initial work plan with high consultation process supporting it

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):

Yes, but the country should conduct a study and pilot projects to identify different strategies, their benefits and loopholes in order to decide the best approach for Mozambique's conditions. Part of these studies and pilot projects could be supported by FCPF.

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.):

In spite of the contribution of the forestry resources to the national economy, the National Directorate of forests and Wildlife (currently DNFFB) has been lacking a specialized unit for monitoring and management of the forests.

A Forest Inventory Unit (FIU) was created in the early nineties, within the DNFFB. Its main duties were to monitor and assess the resources and changes that are taking place in the forest sector. Under the Forestry and Wildlife Resources Management Project, known by GERFFA, in Sofala and in Cabo Delgado provinces, followed by Natural Resources Management Project (PMSR), in Zambezia and Inhambane provinces FIU personnel were trained in interpretation of

aerial photographs and satellite images, classification of forest types and land use, in mapping designing and preparation, in surveying for field data collection and data processing. However, FIU focused simply on forestry assessment, without a concrete role in forest changes monitoring.

In 2006 the National Directorate of Lands and Forests (DNTF) has been created and FIU has developed to constitute the Department of Natural Resources Inventory. Recently, DNTF conducted an Integrated Assessment of Forests. The main objective of this program was to develop the national capacity in order to assess and monitor forest resources and assess the forest changes. The focus of the training was on emphasis on remote sensing and land-cover interpretation process, design of sampling schemes for field validation and subsequently calculation of thematic accuracy of the interpretation and software usages (Jansen et al, 2007). The results of the AIFM were also the Updated land cover map (1:1,000,000), a National Forest inventory, 2 provincial Forest inventories (Manica and Maputo). A new land cover classification was adopted, namely Land Cover Classification System LCCS, since the last forest map used different classification from the previous one and there is a substantial problem in comparing the land cover changes.

It is intended to use LCCS and maintains constant the classification for future monitoring of the vegetation changes. LCCS a comprehensive methodology for classification and comparison of land cover types. The new approach on land cover change used for Manica Province in Mozambique allows a more accurate estimate of land cover change. In addition, a matrix table based on the same methodology will allow the understanding the extent as well as the process of land cover changes, since the approach identifies two types of changes: (1) conversion from one category to another and (2) modification within the same category.

However, most this capacity was built at a national level with few involvement of personal at Provincial and District levels. Personal at province and district levels were mostly involved in the field-work,

In 1998 the National Cartography & Remote Sensing Centre (CENACARTA) produced a National Land-Use/cover Map for the whole country at 1:250,000 scale. The map was produced to the Former National Directorate of Geography and Cadastre (DINAGECA), currently under DNTF.

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.):

The main constraint of the current monitoring system is the cost of its application. As can be seen from the previous section, all forest inventories and monitoring were supported by external funds, mainly due to the extremely high cost involved, namely:

- Satellite images acquisition – Mozambique is a big country and for full coverage it needs 57 Satellite images scenes
- Software – There is a need for software updating. Powerful and constantly updated software's are need for the implementation on such a system
- Computers – Powerful and constantly updated software's are need for the implementation on such a system
- Field data collection – Field work involves cost depending on the intensity needed
- Technical assistance and capacity building – New technologies are fast and further capacity is needed. Methodology on carbon mapping is new for Mozambique

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.)

According to the experts at DNTF, integrated approach of satellite data, Land cover and ancillary information will be the best way to monitor the REDD activities. Biomass/Carbon stock per unit may be estimated on the base of "ecological units" + field data. The current biomass assessment for Mozambique applied same methodology. Compositing satellite data over time will also be needed.

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?**

Yes, REDD is conceived as a strategy to add value to existing efforts, not as a stand alone strategy, for exactly the reason noted above, that benefit flow comes after the forest improvements have been effected and measured and quantified.

- Increased health conditions due to control of fires;
- Increased access to non-timber forest products (honey, thatch, palm leaf) for local communities;
- Improved tourist flow due to better conservation of forests;
- Improved soil fertility due to less burning and more conservation agricultural practices.
- Livelihoods of forest adjacent communities improved,
- Forest conservation improved.
- Improved biodiversity in forest areas
- Better management of land-use conflicts (e.g. human elephant conflict)
- Stabilization of river flows and wetlands
- Improve the process of human settlement in the country, which is often done ineffectively leading to deforestation

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

Currently, there is a National Strategy and Action Plan for Diversity Conservation elaborated by the Unity for National Diversity, MICOA

However, little is known about the status of national biodiversity conservation due to a lack of accurate information and absence of baseline data, concerning trends and processes/activities threatening biodiversity. Nonetheless, biodiversity conservation within conservation/protected areas is generally monitored.

At local level, there are in place local initiatives for biodiversity conservation involving IUCN, Eduardo Mondlane University and communities. Under community management programs there are also some examples of that.

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

Providing that Mozambique recognizes that a REDD strategy must also add value to existing efforts such as biodiversity protection; monitoring its conservation becomes a key element which will allow biodiversity to be measured and quantified. Such approach could even lead to the development of a payment for environmental services (PES) scheme for the protection of biodiversity.

There are already some existing studies on the matter that could be utilized. WWF, for instance, developed a study to estimate the economic value to the goods and services in the Zambezi Delta - i.e. the Marromeu Complex – under the prevailing water management regime. The specific objective for the study was to determine the annual economic value of the Zambezi Delta and as such the study estimated the principal economic values associated with the Zambezi Delta focusing on the Zambezi Delta, including the value of: (i) water supply, (ii) fisheries, (iii) smallholder agriculture, (iv) energy, (v) wildlife, including birds, (v) timber and non-timber products, and (vi) carbon sequestration.

Biodiversity conservation may also be monitored using models to assess past and present biodiversity status. GIS (spatially-explicit) models might be used to support the monitoring process. A series of biodiversity indicators exist and may be used to implement the monitoring process.

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

There is a system in place, where community's beneficiate over the 20% from forests and wildlife exploitation levies are monitored. With a new REDD strategy the government aims at monitoring more portions of the rural population. The role of the CGC is to put into practice the rights and obligations of the community related to the use and conservation of natural resources, such as managing the benefit sharing of the 20% (Regulamento da Lei de Florestas e Fauna Bravia - decreto n.º 12/2002, de 6 de Junho - artigo 102). The aim is to make the CGC a democratic institution taking into account the various interests of the community members using a participatory approach.

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

Through the existing mechanism for canalization of 20% revenue to local communities. Given that there are a number of

NGOs monitoring specific communities routinely, the government could develop more solid partnerships to help on its efforts to effectively examine livelihood benefits under a REDD strategy.

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.
- 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.):

Mozambique recognizes that a REDD strategy must be built with support of various stakeholders from the government (local and national), private sector, rural communities representatives, NGOs (local and international) among other players. Therefore, Mozambique requests support from FCPF to:

1. Prepare a REDD consultation and outreach plan
 - a. Identify the key stakeholders from all relevant sectors, in addition to the ones identified on this R-PIN (see question 7);
 - b. Identify high level stakeholder, positioned on decision making positions, to integrate the process;
 - c. Identify topics to be discussed, taking into account the drivers of deforestation in the country;
 - d. Identify methods to disseminate the information, such as workshops, lectures, publications;
 - e. Draw a schedule of activities and specify budget;
 - f. Identify under which forum the REDD debates will be held (MICOA, DNTF, others);

Note: The terms of reference (ToR) for the consultation and outreach plan can be developed by external consultants following the approach taken by Ghana.

2. Promote initial planning workshops;
3. Develop information material (e.g. pamphlets, booklets) to reach all types of stakeholders including illiterate ones;
4. Promote workshops around the country with the identified stakeholders;
5. Disseminate the information in the different provinces;

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

Mozambique requests support from FCPF to:

1. Prepare a work plan for reference scenario development:
 - a. Reach a working forest definition and parameters for forest class
 - b. Compilation of all the data available
 - c. Identification of current information gaps through the review of the current data
 - d. Estimation of emissions from the different Mozambican ecosystems
 - e. Identification, in more detail, of the drivers of deforestation and forest degradation
 - f. Identification of international players that could aid on this process, in case the country does not have enough capacity
 - g. Identification of other sources of financial support
 - h. Elements necessary for a capacity building programs for locals

- i. Analysis of causes and drivers of deforestation and degradation

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.):

Mozambique aims to develop a REDD strategy with broad participation of stakeholders from sectors other than forestry such as rural development, energy, agriculture, law enforcement and tourism. Therefore, the activities numbered below should be broadly analyzed:

1. Guide the creation of a permanent working group/secretariat on REDD;
2. Identify the components on the current legislation that are necessary to promote a REDD strategy;
3. Identify the key decision makers in the country that should be actively engaged in producing such strategy;
4. Promote capacity of government representatives on the issue to lead the process accordingly;
5. Design a positive incentive payment scheme for the fair and transparent distribution of benefits from REDD;
6. Clarify aspects related to carbon ownership in the country;
7. Identify the loopholes on law enforcement and design a REDD strategy that addresses them;
8. Quantify the benefits from REDD and identify opportunity cost analysis of forest-replacing land uses;
9. Analyze the potential social and environmental impacts of the REDD strategies;
10. Identify how additional benefits from biodiversity and rural livelihoods can be integrated into a REDD strategy;
11. Identify the risks related to implementing the REDD strategies;

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

1. Development of a work plan for reference scenario development including:
 - a. Decision on forest definition and parameters of forest class;
 - b. Most cost effective satellite images to be used;
 - c. Piloting of forest class mapping using satellite images including field verification of correlation between forest class and biomass stock;
 - d. Review and refinement of method including selection of parameters and thresholds;
 - e. Preparation of a work plan for forest carbon monitoring;
 - j. Identification of the best technology to monitor degradation (the second D);
2. Designing a verification and reporting scheme for the data generated;
3. Promotion of local capacity to carry on the activities;

e) Other?:

1. Assessment of the resources required to design and implement a REDD strategy for the country
2. Identification of international donors who would be willing to aid the country on developing and implementing REDD

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?:

The donor agencies located in the country could support the initiative, but the government hasn't yet required financial commitment. The government believes that FCPF support will be certainly attract financial contribution from other international institutions.

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?

The first step will be to promote capacity building programs across the different government sectors to inform public serves about the challenges and opportunities of building a REDD strategy; the government, in addition, aims at informing civil society in general.

The government also wants to start identifying other sources of funding to build a REDD strategy;

14. List any Attachments included

1. Bibliographic References
2. DNTF Structure
3. Vegetation classification system used for forest types/land-use map construction (Table 3)
4. Community Management Committee Structure

(Optional: 15 pages maximum.)

CONFIDENTIAL

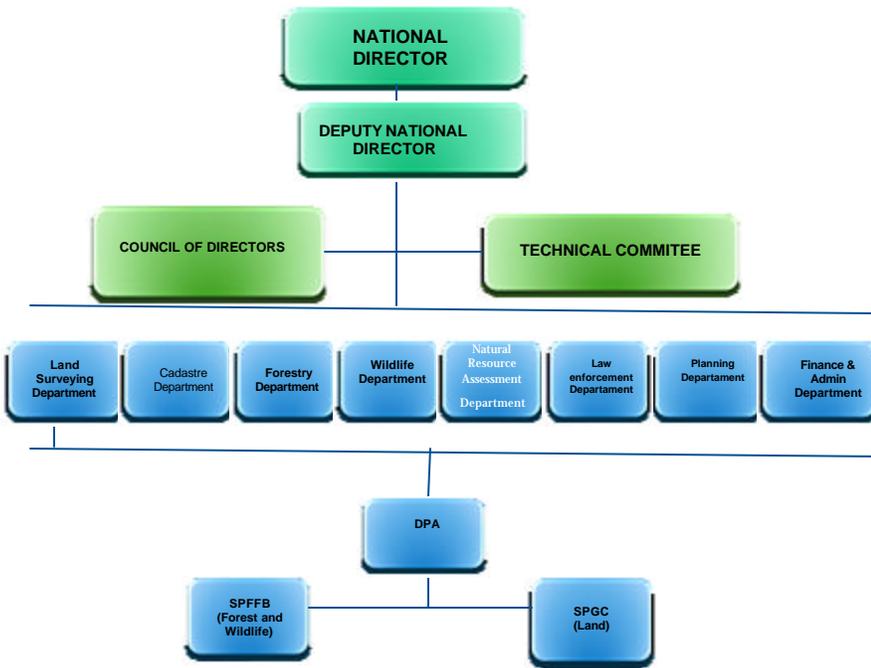
Attachment 1 - Bibliographic References

- Bila, A. 2005. Estratégia para a Fiscalização Participativa de Florestas e Fauna Bravia em Moçambique. TCP/MOZ/2904 (A) Support for the implementation of forest and wildlife legislation in Mozambique. DNFFB/FAO (Draft)
- DNFFB 2005. Programa Nacional de Florestas e Fauna Bravia. Documento para discussão. Maputo. Maputo;
- DNFFB. Undated. O papel do sector florestal ne Segunda fase do Proagri (2005- 2009) em Moçambique; contribuição de DNFFB para formulação do Proagri II.
- Drigo, R. 2008. Consolidation phase_wood energy components. WISDOM Mozambique Final report. AIFM, Maputo, Mozambique. 69p
- INE 2004. Relatório Final do Inquérito aos Agregados Familiares sobre Orçamento Familiar 2002/03. Instituto Nacional de Estatística, Maputo.
- IPCC 1996. Revised guidelines for GHG inventories. Workbook.
- Jansen, L.; Bagnoli, M.; Chimenti, S.; Dell’Agnello, A.; Focacci, M.; Monaco, S.; Sorini, P.; Stoppini, S.; Urbano, F. 2006. Satellite image interpretation of land-cover types in Manica and Maputo Provinces at nominal scale of 1:250,000 and at National level at nominal scale of 1:1,000,000. Integrated Assessment of Mozambique Forests (AIFM) Project. Maputo, Mozambique. 175 p.
- Marzoli, A. 2007. Inventário Florestal Nacional. Avaliação Integrada das Florestas de Moçambique. AIFM. DNTF/MINAG. Maputo, Moçambique. 98p
- MFA 2008. Support to National Forestry Program in Mozambique - Key elements for forest sector development. Final Report.
- MFA 2008. Support to National Forestry Program in Mozambique - Key elements for forest sector development. Final Report. Helsinki.
- MICOA, 2003. Mozambique Initial National Communication to the UNFCCC. Maputo, Mozambique. 135p.
- Republica de Moçambique (2006). Plano de Acção para a Redução da Pobreza Absoluta, 2006-2009. PARPA II. Maputo
- Saket, M. 1994. Report on the Updating of the Exploratory National Forest Inventory. FAO/UNDP, MOZ/92/013, Maputo, Mozambique. 61 p.
- Sitoe, A, Argola, J. and Tchauque, F. Undated. Conditional Assessment of fuel wood/charcoal in the SAfMA-GM Study Site. DEF/FAEF/UEM. Maputo, Mozambique. 20p.
- Tchaúque FDDLJ. 2004. Manuscript. Avaliação da Biomassa Lenhosa Aérea no Corredor da Beira, Maputo, Moçambique, 49pgs

Legislation

- Constituição da República 2004. Assembleia da República, Maputo, Moçambique. 97p.
- Environmental law (1997).
- Land law (1997).
- Ministerial Diploma 93/2005
- National forest policy and strategy (1997), law (1999) and regulations (2002).
- Regulamento da Lei dos Órgãos Locais do Estado, de 05 DE Abril de 2005. (Law nr 8/2003 and its regulation which establish the principles and norms of organization, competences and working between the local state organs and the communities)

Attachment 2 – DNTF Structure



Attachment 3 - Vegetation classification system used for forest types/land-use map construction (Table 3)

- 1.1 High Forest with high density
- 1.2 High Forest with medium density
- 1.3 High Forest with low density
- 2.1 Low Forest with high density
- 2.2 Low Forest with medium density
- 2.3 Low Forest with low density
- 3.1 High Thicket
- 3.2 Medium thicket
- 3.3 Low thicket
- 4.1 Wooded Grasslands
- 4.2 Grasslands
- 5. Mangrove communities
- 6. Vegetation of dunes
- 7. Agriculture

Attachment 4 – Community Management Committee

The structure of the Community Management Committee (CGC in Portuguese) is composed of members elected by the community members and of one more member that represents the local administrative structure (the president, chief or regulo). The figure below shows an example of a CGC composed by 10 community members and the chief of the area.

Figure 1: Structure of the CGC

