



SECRETARIAT DU FONDS FRANÇAIS  
POUR L'ENVIRONNEMENT MONDIAL

## **NOTE D'ENGAGEMENT DE PROJET (NEP)**

*Final version 12-15-2011*

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**“Reducing deforestation and degradation in the Miombo forests of the National Reserve of Gilé and its periphery” pilot project.**

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<u>PROJECT TITLE</u>	Reducing deforestation and degradation in the Miombo forests of the National Reserve of Gilé and its periphery pilot project.
<u>COUNTRY / RÉGION</u>	Mozambique, Province of Zambezia
<u>MEMBER INSTITUTION</u>	AFD
<u>IDENTIFICATION DATE</u>	03-31-2011
<u>APPLICATION SECTOR</u>	Climate change (REDD+)
<u>PROJECT AMOUNT</u>	5 M€
<u>CO-FINANCING ENTITIES</u>	Italian NGO COSV, ADRA, private sector (hunting, tourism, carbon credits), Ministère du Tourisme, KPMG.
<u>FFEM CONTRIBUTION</u>	2 M€
<u>BENEFICIARIES</u>	Republic of Mozambique
<u>FINAL BENEFICIARY</u>	Gilé National Reserve and communities living at its periphery
<u>PROJECT START</u>	January 2012
<u>PROJECT DURATION</u>	3 years

**Proposition de résolution**

**FONDS FRANÇAIS POUR L'ENVIRONNEMENT MONDIAL**  
**COMITE DE PILOTAGE DU FFEM**  
**RESOLUTION N° ..... du 25 novembre 2011**

**Mozambique**  
**République du Mozambique**

Le Comité de pilotage du FFEM autorise le Secrétaire général du Fonds Français pour l'Environnement Mondial, agissant par délégation du Directeur général de l'Agence Française de Développement, à consentir à la République du Mozambique une subvention aux conditions suivantes :

Bénéficiaire :	République du Mozambique														
Objet (intitulé du projet) :	Projet pilote de lutte contre la déforestation et la dégradation de la forêt de Miombo dans la Réserve Nationale de Gilé et sa périphérie														
Domaine d'application :	Changement climatique (REDD+)														
Pays :	Mozambique														
Institution partenaire :	Agence Française de Développement														
Fiche d'identification acceptée le :	31 mars 2011														
Montant total (en €)	5 M€														
Montant de la subvention FFEM (en €)	2 M€														
Co-financiers (organisme + montant en €)	<table border="0" style="width: 100%;"> <tr> <td>ONG italienne COSV :</td> <td style="text-align: right;">1,00 M€</td> </tr> <tr> <td>GoM :</td> <td style="text-align: right;">0,15 M€</td> </tr> <tr> <td>ADRA :</td> <td style="text-align: right;">0,53 M€</td> </tr> <tr> <td>KPMG :</td> <td style="text-align: right;">0,08 M€</td> </tr> <tr> <td>Partenaires :</td> <td style="text-align: right;">0,79 M€</td> </tr> <tr> <td>Crédits carbone :</td> <td style="text-align: right;">0,45 M€</td> </tr> <tr> <td><b>Total :</b></td> <td style="text-align: right;"><b>3,00 M€</b></td> </tr> </table>	ONG italienne COSV :	1,00 M€	GoM :	0,15 M€	ADRA :	0,53 M€	KPMG :	0,08 M€	Partenaires :	0,79 M€	Crédits carbone :	0,45 M€	<b>Total :</b>	<b>3,00 M€</b>
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Partenaires :	0,79 M€														
Crédits carbone :	0,45 M€														
<b>Total :</b>	<b>3,00 M€</b>														
Durée prévisionnelle du projet :	3 ans														
Date prévisionnelle de démarrage du projet :	Janvier 2012														
Principales conditions suspensives de décaissement :	<p>Condition à l'engagement d'une première tranche FFEM de 1 M€ et au premier décaissement :</p> <ul style="list-style-type: none"> <li>• Parmi les cofinanciers identifiés, remise des lettres d'engagement correspondant à un premier lot de cofinancement à hauteur de 1,275 M€ (soit 50% des cofinancements hors crédits carbone).</li> </ul> <p>Condition à l'engagement de la seconde tranche FFEM de 1 M€</p> <ul style="list-style-type: none"> <li>• Remise par les cofinanciers des lettres d'engagement correspondant à la confirmation de l'ensemble des cofinancements (hors crédits carbone).</li> </ul>														

PMA/PFR/PRITI/PRITS

Numéro du Concours : CMZ 1107.01 G

Numéro du Bénéficiaire : 25

Subvention

Déclarable en APD : OUI

Vu et certifié conforme

**RÉSUMÉ EXÉCUTIF :**

Le Mozambique est un pays encore riche de biodiversité végétale et animale. Ce capital naturel est cependant en danger si l'on considère notamment les risques liés à la déforestation, de l'ordre de 0,58% par an entre 1990 et 2004, soit une perte annuelle de 220 000 ha.

La province de Zambezia est l'une des plus boisées du pays. C'est également les plus exposées à la déforestation (agriculture, mines, exploitation forestière illégale). La province compte une seule aire protégée : la Réserve nationale de Gile, qui fait face à une forte pression anthropique dans sa périphérie.

Le Mozambique est l'un des 37 pays sélectionnés pour bénéficier du soutien du Forest Carbon Partnership Facility (FCPF). Le processus REDD+ est coordonné aujourd'hui au Mozambique par le ministère en charge de l'environnement (MICOA) et le ministère en charge de l'Agriculture (MINAG). Il se traduit par l'élaboration d'un R-PP (Readiness Preparation Proposal) et d'une stratégie nationale REDD+. La stratégie est en cours d'élaboration et une R-PP devrait être finalisée d'ici début 2012.

A l'issue de consultations au niveau local et nationale, la RNG et sa périphérie sont identifiées par la stratégie nationale REDD+ et la R-PP comme potentiel site pilote REDD+.

**Finalité :** Le projet a pour finalité de lutter contre la déforestation et la dégradation de la forêt de *Miombo* de la RNG et de sa périphérie, en atténuant les pressions qui sont exercées sur l'écosystème.

**Objectif principal :** Le projet a pour objectif de préparer la Réserve et sa périphérie au mécanisme REDD+ afin de pérenniser leur gestion.

Les activités existantes seront intégrées dans un cadre de valorisation REDD+ et de nouvelles activités seront développées pour réduire la pression qui s'exerce sur la RNG et sa périphérie tout en générant des externalités environnementales économiquement valorisables, et ce afin d'initier la transition vers l'autonomie financière durable de la RNG.

Le projet s'articulera autour de quatre composantes, dont deux dédiées aux études préliminaires menant à une certification REDD+ et deux dédiées à la mise en place d'activités pilotes et à la gestion de la Réserve.

► **Composante 1 : Estimer ex-ante le potentiel de REDD+ de la RNG et de sa périphérie**

<b>Résultat global attendu :</b>	Le potentiel d'abattement des émissions dues à la déforestation et à la dégradation forestière est connu.
<b>Résultats attendus des actions :</b>	1.1 La quantité de carbone séquestrée dans les forêts de la RNG et de sa périphérie est évaluée ; 1.2 La déforestation future de la RNG et de sa périphérie est estimée de manière ex-ante.

► **Composante 2 : Valoriser les réductions d'émission de GES et autres aménités**

<b>Résultat global attendu :</b>	Les objectifs de réductions d'émission du projet sont définis et font l'objet d'une valorisation carbone REDD+.
<b>Résultats attendus des actions :</b>	2.1 Une stratégie REDD+ de la RNG et de sa périphérie est élaborée ; 2.2 Le processus de valorisation carbone REDD+ est engagé.

► **Composante 3 : Développer des activités pilotes**

<b>Résultat global attendu :</b>	Les revenus des communautés de la périphérie de la RNG sont améliorés par la mise en place d'activités d'intensification agricole, de chasse sportive, d'écotourisme ainsi que par l'appui à la structuration des communautés et au développement des groupements d'intérêts économiques.
<b>Résultats attendus des actions :</b>	3.1 Structurer les communautés en Comités de Gestion Participatifs (COGEP) avec le statut d'association ; 3.2 Développer l'agriculture de conservation dans la périphérie de la RNG ; 3.3 Développer la chasse sportive dans la périphérie de la RNG ; 3.4 Développer l'écotourisme dans la RNG et sa périphérie ;

	3.5 Développer des groupements d'intérêts économiques : petit élevage, pisciculture, menuiserie, récolte et vente de PFNL (miel, champignons, etc.) ; 3.6 Évaluer l'efficacité des activités pilotes.
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► **Composante 4 : Gestion de la Réserve**

<u>Résultat global attendu :</u>	La Réserve est bien gérée et son autonomie financière est assurée.
<u>Résultats attendus des actions :</u>	4.1 Un système de contrôle et de surveillance efficace est mis en place ; 4.2 Le plan de gestion de la Réserve est appliqué et des mesures complémentaires sont adoptées ; 4.3 Le potentiel scientifique de la RNG est exploité et génère de la connaissance ; 4.4 Des infrastructures supplémentaires sont réalisées au sein de la Réserve.

► **Composante 5 : Gestion du projet**

<u>Résultat global attendu :</u>	Le pilotage, la mise en œuvre du projet, son suivi et son évaluation par des auditeurs externes sont réalisés de façon adéquate, via notamment le soutien à une cellule de gestion de la RNG.
<u>Résultats attendus des actions :</u>	5.1 Le projet est géré de manière concertée par l'ensemble des parties-prenantes 5.2 Le calendrier d'exécution des activités est respecté par l'équipe de projet qui s'adapte aux imprévus. 5.3 Des audits externes des comptes du projet permettent au projet d'améliorer son fonctionnement 5.4 Une équipe de projet est constituée pour permettre au projet d'être complètement opérationnel

La maîtrise d'ouvrage du projet sera assurée par le MITUR. Des consultations régulières seront menées avec le MICOA et le MINAG au niveau national et provincial avec l'objectif d'assurer la pleine intégration du projet pilote avec la stratégie nationale REDD+.

Le projet sera mis en œuvre par la Fondation IGF et l'ONG italienne COSV en s'appuyant sur les institutions locales, notamment les Directions provinciales du MITUR et du MINAG, ainsi que sur les organisations paysannes - COGEP. La fondation IGF fera également appel aux consultants nationaux et internationaux, partenaires et prestataires, notamment pour les questions relatives au REDD+.

Le projet, prévu pour une durée de 3 ans, commencera début 2012 et s'élèvera à cinq millions d'euros dont environ 20% pour la préparation et la mise en œuvre du processus REDD+, et 80% pour la mise en place des activités opérationnelles de la RNG et de sa périphérie. Une contribution de 2 M€ est demandée au FFEM.

## **EXECUTIVE SUMMARY**

*Le résumé version anglaise ne doit pas dépasser 1.500 mots (environ 1 page recto/verso).*

Mozambique is a still rich country in terms of vegetal and animal biodiversity. This natural capital is nevertheless endangered. The annual deforestation rate amounts to 0,58% between 1990 and 2004, equivalent to a net loss of 220 000 ha of forests every year.

The Zambezia province is one of the most wooded province of the country. It is also one of the most threatened by deforestation due to shifting agriculture, illegal logging, mining... The National Reserve of Gilé (RNG) is the only protected area of the province and is facing serious pressures in its periphery.

Mozambique is also one of the 37 countries eligible to Forest Carbon Partnership Facility (FCPF) support. The national REDD+ process is coordinated jointly by the ministry in charge of environment (MICOA) and the ministry in charge of agriculture (MINAG). Currently, a national REDD+ strategy as well as a R-PP (Readiness Preparation Proposal) are under elaboration. Both documents identify the RNG as a potential REDD+ pilot project site.

***Finality:*** The project aims to fight against deforestation and degradation of the Miombo forests of the RNG and its periphery by reducing the pressure exerted on the ecosystem.

***Principal objective:*** The project aims to prepare RNG and its periphery to REDD+ with a view to secure their long term management.

On-going activities will be integrated into a REDD+ framework and new activities will be developed in order to reduce the pressure exerted on the RNG and its buffer zone. This will generate environmental externalities which are economically valuable and will help to initiate the transition towards the RNG's sustainable financial autonomy.

The project has four components. Two are dedicated to the preliminary studies conducing to REDD+ certification. Two are dedicated to the implementation of pilot activities and the Reserve's management.

### **► Component 1: Estimating the REDD+ ex-ante potential for the RNG and its periphery**

***Expected global result:*** The potential reduction of emissions due to deforestation and forest degradation is known.

***Expected results by action:***

- 1.1 The quantity of carbon sequestrated in the forests of the RNG and its periphery is evaluated;
- 1.2 Future deforestation of the RNG and its periphery's forests is estimated ex-ante.

### **► Component 2: Valuing the GHG emissions reductions and other amenities**

***Expected global result*** The project's objectives in terms of GHG emissions reductions are defined and are valued as REDD+ carbon offsets.

***Expected results by action:***

- 2.1. A REDD+ strategy for the RNG and its periphery is elaborated;
- 2.2 The REDD+ carbon offsets valuation process is engaged.

### **► Component 3 : Development of pilot activities**

***Expected global result:*** Incomes of the communities living in the RNG's periphery will improve through the implementation of activities such as agricultural intensification, development of sportive hunting and ecotourism, as well as through activities linked to the organization of local communities and economical interests groups.

***Expected results by action:***

- 3.1 Organizing the communities in COGEPs with an associative status;
- 3.2 Developing conservation agriculture in the RNG's periphery;
- 3.3 Developing sportive hunting in the RNG's periphery;
- 3.4 Developing ecotourism in the RNG and its periphery;
- 3.5 Developing economical interests groups: small-scale livestock farms, fisheries,

- joineries, non-timber forest products (honey, mushrooms) harvesting and selling groups;
- 3.6 Estimating the pilot activities effectiveness.

► **Component 4 : Management of the National Reserve of Gilé**

<u>Expected global result:</u>	The Reserve is well-managed and its long-term financial autonomy is secured.
<u>Expected results by action:</u>	<ul style="list-style-type: none"> <li>4.1 An effective control and watching system is implemented;</li> <li>4.2 The Reserve’s management plan is implemented and complementary measures are developed;</li> <li>4.3 The RNG’s scientific potential is exploited and generates knowledge;</li> <li>4.4 Additional infrastructures are realized inside the RNG.</li> </ul>

► **Component 5: Management of the project**

<u>Expected global result:</u>	The responsibility of the project, its implementation, its monitoring and evaluation by external auditors are adequately realized, <i>via</i> the direct support from the RNG’s management team.
<u>Expected results by action:</u>	<ul style="list-style-type: none"> <li>5.1 Dialog between all stakeholders drives the project’s management;</li> <li>5.2 The schedule of activities is respected by the project’s team who adapts itself to unforeseen events;</li> <li>5.3 External audits of the project’s accounts allow the project to perform its functioning;</li> <li>5.4 A project team is constituted so that the project remains fully operational.</li> </ul>

The project will be placed under the supervision of MITUR. Regular consultation will be organized with MICOA and MINAG to ensure that the pilot project stays in line with the national strategy.

The project activities will be implemented by the IGF foundation, who signed a co-management agreement of RNG with MITUR, and COSV, an Italian NGO active in RNG buffer zone. The support of local institutions, particularly the Provincial Directions of MITUR and MINAG, but also the local smallholders associations (called COGEPs) will be sought. The IGF foundation will also mobilize national and international experts, as partners or service providers, particularly for issues linked to REDD+.

The project will last three years (2012-2014), with the objective to search long term viability for the proposed activities. The project global cost is five millions Euros, where 20% will be used to prepare and implement the REDD+ process and 80% for the implementation of operational activities in the RNG and its periphery. A contribution of 2 M€ is requested to FFEM.

**ABREVIATIONS**

ACR	American Carbon Registry
AAP	Annual activities program
ANAC	Administração nacional das areas de conservação
CAR	Climate Action Reserve
CCB	Climate, Community and Biodiversity Project Design (standards)
CCBA	Climate, Community and Biodiversity Alliance
CCX	Chicago Climate Exchange
CDM	Clean Development Mechanism
CGAC	Comité de gestão da area de conservação
COGEP	Comité de gestão participativo
COMGIL	Comité de desenvolvimento da Reserva Nacional de Gilé
CONDES	Conselho nacional de desenvolvimento sustentável
COSV	Comitato di Coordinamento delle Organizzazioni per il Servizio Volontario
CPLP	Comunidade dos países de lingua portuguesa
DNAC	Direcção nacional das areas de conservação
DNTF	Direcção nacional de terras e florestas
DPAZ	Direcção provincial da agricultura de Zambézia
DPTURZ	Direcção provincial do turismo de Zambézia
DUAT	Certificate of Land Use and Improvement Rights
EIU	Unidade de Inteligencia Económica
EU	European Union
FAS	Fundação Amazonas Sustentavel
FCPF	Forest carbon partnership facility
FFI	Fauna and Flora International
FRELIMO	Liberation front of Mozambique
GHG	Greenhous gases
GIS	Geographic information system
HFLD	High forest cover, low deforestation rate
INAM	Instituto nacional de Meteorologia
INE	Instituto nacional de estadísticas
INGC	Instituto nacional de gestão de catastrofes
MAZA	Madeiras da Zambézia
MICOA	Ministerio da coordenação ambiental
MINAG	Ministerio da Agricultura e desenvolvimento rural
MITUR	Ministerio do Turismo
MRV	Monitoring, Reporting, Verification
NEPAD	Nouveau partenariat pour le développement de l'Afrique
NTFP	Non timber forest products
OCI	Islamic conference organization
OIF	Organisation internationale de la francophonie
ONG	Organisation non gouvernementale
PNQ	Quirimbas National Park
PPCR	Pilot Program for Climate Resilience
PRSC	Projet de support en crédit à la réduction de la pauvreté
REDD+	Reducing Emissions from Deforestation and Forest Degradation, forest conservation, sustainable forest management and the enhancement of carbon stocks
RENAMO	Resistencia nacional do Moçambique
RNG	Reserva nacional de Gilé
RNN	Reserva nacional de Niassa
R-PIN	REDD+ - Plan idea note



R-PP	REDD+ - Preparation Plan
SDAE	Serviço districtal das atividades economicas
SGDRN	Sociedade de gestão da Reserva de Niassa
SPFFBZ	Serviço provincial de florestas e fauna bravia de Zambezia
SUNAFOP	Sustainable national forest program
teCO2	Ton equivalent CO2
TNC	The Nature Conservancy
USD	Dollar americain
VCS	Voluntary carbon standard
ZCV	Community hunting area
ZDET	Ecotouristic development area
ZPT	Total protection area
ZUM	Multiple-uses area
ZUR	Restricted uses area

**SUMMARY**

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### ***1.1.2. Key events and political facts***

As a former Portuguese colony, the country won its independence on the 25th of June 1975.

After 16 years (1977-92) of civil war between the Front for the Liberation of Mozambique (FRELIMO) at power since independence and the Mozambique National Resistance (RENAMO) supported by the apartheid regime of South Africa, the Rome agreements (October 1992) have opened an era of stability and economic growth.

The first multi-party elections of October 1994 (parliamentary and presidential), won by President Joaquim CHISSANO (53,3% of votes) and his party (129 seats out of 250), showed that the government wanted more democracy.

However, the situation has not been accepted by the opposition. The RENAMO boycotted the election of June 1998, and then disputed the regularity of the results of the second multi-party general elections (again won by FRELIMO) in December 1999, this situation led to a series of protests throughout the country.

During the November 2003 local elections, then during the December 2004 general and presidential elections, international observers again stated a lack of transparency and deficiencies in the electoral system, which however did not change the results of the ballots.

After these third multi-level elections (in December 2004), and after the fourth ones (in November 2009), Mr. Armando GUEBUZA, General Secretary of the FRELIMO, was elected President of the Republic with respectively 60% and 75% of the votes. These presidential victories confirmed the increasing FRELIMO power, thus during the elections of 2003 they won all the municipalities (except Beira).

In terms of foreign policy, it is necessary to underline the fact that Mozambique went out of the isolation in which had confined it 16 years of civil war. Mozambique was in charge of the presidency of the African Union between July 2003 and July 2004 and contributed to set up this organization with the Pan-African Parliament, African Commission, "Paix et Sécurité" council.

The United States (mine clearance, agriculture, fight against AIDS) and the countries of the European Union are involved in cooperation (among which Portugal as a former colony occupies a predominant political role and even if the United Kingdom is the first bilateral financial partner with 115 million USD in 2007).

Mozambique develops its business connections with Brazil and China. China, which had tied strong relations with FRELIMO throughout the period of the civil war, is increasing investment in numerous sectors (energy, transport, agriculture, fishing, forestry, building and civil engineering works, mining and oil exploitation).

Finally, Mozambique is member of: the Movement of the not aligned, the Organization of the Islamic Conference - OCI - (1994), the Commonwealth (1995), the Community of Portuguese Language Countries-CPLP-(1996), the New Partnership for the Development of Africa - NEPAD ( 2004 ) and is member observer of the International Organization of the Francophony - OIF ( 2006 ).

### ***1.1.3. Ecosystems and forests: resources and conservation***

The main part of the territory is situated at low altitude, with the exception of the Northeast, along the Rift valley where peaks reach 2 419m high. The Zambeze low valley and its delta are predominant in the center of the country. The South of the country is mainly made of wave-like lands, among which more than 85% is under 200m of height.

22 main types of vegetation have been observed in the country. The dominant ones are the woody savannas of "Miombo" in the North part of the country and the alluvial grasslands in two thirds South of the country. The forest ecosystem called "Miombo ", typical from the Zambezia province, in which is situated the RNG, is described in more details in paragraph 1.2.2.

Approximately 5 500 botanical species (among which 250 are likely to be endemic), 222 mammals species, 680 species of birds, 167 species of reptilians and 39 species of amphibians were observed in the country (the inventory of the last two categories being far from being exhaustive).

Comparing the variety of the species with the nearby countries indicates that Mozambique offers a very important variety of botanical species, whereas the variety of mammals and birds is moderately high

(however, it has to be taken into account that the efforts of inventory are not equivalent from a country to the other).

There are 8 ecoregions (territories made of lands and aquatic zones sheltering specific species, natural areas and ecological processes) in Mozambique. The RNG is located in the ecoregion called "the woody zone of Eastern Miombo" (BURGESS and al., 2004):

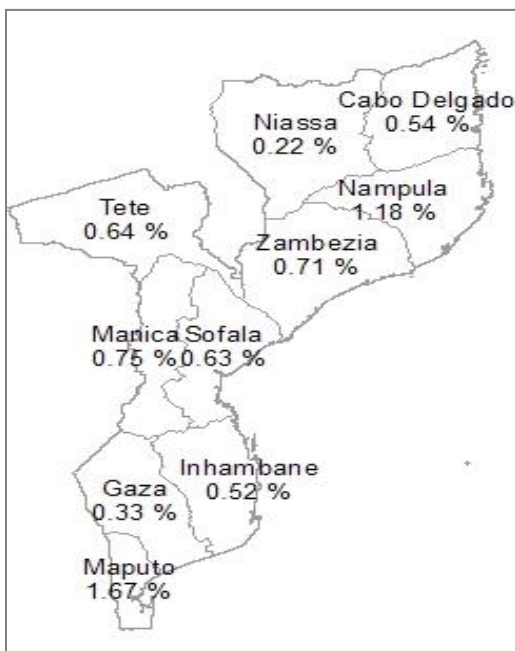
- the biological specificity index of this ecoregion is 1 (it is the highest level, the notation going from 1 to 4 in ascending order). This index is calculated on the base of two criteria: value of the species (endemism and quantity) and biological value not linked to species (exceptional ecological or evolutionary process, rare type of environment, unique superior species and untouched wide ecosystem);
- the conservation index of this ecoregion is considered as "relatively stable". This index is calculated on the base of five criteria: loss of housing environment, remaining blocks, level of fragmentation, level of protection, threats to come.

**Mozambique is one of the rare countries in southern Africa to own a wide area of natural forests:** approximately 40 million hectares (51% of the country), distribute between dense forests (22,5 million hectares - 56,2% of the whole forest surface), opened forests (16,4 million hectares - 40,9%), flooded forests (0,8 million hectares - 2,0%) and mangrove swamps (0,35 million hectares - 0,9%).

In 1994, the analysis of 1972 to 1990 satellite images allowed to assess at 0.21% the annual average rate of deforestation during this period. The incompatibility of the levels of quality between images did not allow to renew such a calculation for the next years.

A simple calculation was thus made, correlating the rate of deforestation to demographic increase: this allowed to assess at **0,58% the annual average rate of deforestation between 1990 and 2004** (MARZOLI, 2007), that is **60% more than the average world rate of rain forests deforestation**.

The forest surface would thus have gone from 52 million hectares in 1990 to 49 million in 2004 and was assessed in 2008 on the Mozambique R-PIN at 40 million. So approximately 220 000 hectares of forest would have disappeared every year during the last decade. It is necessary to note that this rate changes a lot from a province to the other one, as the figure below shows:



**Figure 2: Annual deforestation average rate (1990-2004) for each province of the country**

We can also point out on the figure below that the rate of deforestation of the Zambezia province (0.71%) is higher to the national average (0.58%), and almost twice superior to the annual world average rate of tropical deforestation (0.36%).

#### ***1.1.4. Institutional framework regarding forest and climate***

The three following ministries will be involved in the project : the MICOA (Ministry of environmental coordination), the MINAG (Ministry of Agriculture) and MITUR (Ministry of Tourism).

- The **MITUR** has been created in 2000 to “promote wildlife conservation has a key-component to develop tourist activities”. National parks and Reserves are under its administrative authority.

The National Direction for Conservation Areas (DNAC in Portuguese) will be the principal public partner in the project. Its objectives are to develop ecotourism, coordinate the protected areas exploitation and validate their management plans, to propose the creation of new conservation areas and to manage sportive hunting activities.

More than 620 officers compose DNAC's staff (of which 24 at least in Maputo and 594 on the field).

The Provincial Direction of Tourism in Zambezia (DPTURZ) represents MITUR at provincial level. It aims to develop ecotourism in Zambezia, particularly in the RNG according to its management plan. DPTURZ's mandate should include technical support (communities training, technical studies support, links with COGEPs – Natural resources participative committees) and institutional support (links with other Ministries: MINAG, Ministry of Mines and Energy, etc.).

- Created in 1994, the **MICOA** is a coordination ministry working at central level. Its objectives are to elaborate and implement the sustainable development policies, laws and regulations.

MICOA is in charge, with MINAG, to coordinate the national REDD+ process. It co-pilots the national REDD+ strategy and the R-PP (FCPF) elaboration. It also presides over the REDD+ national working group.

MICOA and MINAG will be central actors to ensure that the pilot project interacts with the national REDD+ developments.

- The **MINAG** has been created in February 2005, following the former Ministry of agriculture and rural development. Its principal objectives are 1) to ensure the supervision of agricultural services such as early alert systems, reproductive material procurement, food security system, etc., 2) to manage wildlife in the areas out of MITUR's jurisdiction (out of protected areas and tourist concessions), and 3) to manage human-wildlife conflicts.

As indicated above, MINAG also coordinates the national REDD+ process with MICOA.

The MINAG is divided into three departments, respectively in charge of 1) agricultural services, 2) agricultural extension and 3) forests and land issues. The last one (DNTF – National department of Lands and Forests) ensure the management of productive forests, multiple-use forests and protected areas forests (forest reserves and wildlife out of conservation areas, wildlife within buffer zones). DNTF will be the principal technical public entity to step in the national MRV-REDD+ system implementation.

The Provincial Direction of Agriculture in Zambezia (DPAZ) represents MINAG at provincial level. It has the mandate to implement the governmental agricultural policies, particularly in terms of livestock farming (transport clearances, animal vaccination and healthcare...), forest management, agricultural services and extension services (notably regarding cash-crops: cashew seedlings production, production monitoring and control). The DPAZ is also in charge of part of the cadastre. Services to the population are a key-issue: the DPAZ counts on its agricultural extension department to link the local producers with the relevant institutions (raising awareness).

The new **National Administration for Conservation Areas (ANAC)** will also contribute, when operational, to pilot the project and supervise its activities. ANAC is administratively, patrimonially and financially autonomous. It has its own juridical personality. ANAC is under MITUR's authority, currently in charge of the conservation areas. Its main objective is to administrate the conservation areas, with the following goals:

- to conserve biodiversity, landscapes and the related natural patrimony through the conservation areas system;
- to define priorities for the administration and sustainable use of the conservation areas;



- to establish infrastructures within the conservation areas in order to manage their biodiversity and develop economical activities helping to achieve their economical autonomy;
- to establish partnerships for the management and development of the conservation areas;
- create, orientate and support the CGAC<sup>1</sup> (Conservation area management committees) which administrate and manage each conservation area;

The ANAC should be fully operational in 2012.

The others national institutions or public entities that are likely to step in the project are the following:

- the National agronomic research institute of Mozambique : the institute has a worldwide visibility and implements field initiatives in order to develop new agricultural systems and to diffuse new practices.
- the REDD+ working group, presided over by the MICOA : the group coordinates the national REDD+ strategy development, facilitates demonstration activities and watch over Mozambique's preparation to REDD+.
- the CONDES (Sustainable development national council) is a consultative institution linked to the Council of Ministries and an observation forum for public opinion's on environmental issues. It is particularly asked to give its advice regarding the creation of new conservation areas (more than 10 000 ha). The CONDES is composed by ministerial representatives, which gives him also the role of interministerial facilitator. The MICOA takes on CONDES's secretary.

### **1.1.5. International REDD+ process**

#### **→ Progress so far on REDD+, at international and national levels**

The Rio earth summit in 1992 and the Kyoto Protocol on climate in 1997 were two missed opportunities for the tropical forests: no incentive was created to reward countries acting to preserve their forests.

In 2005, at the 11th Climate Conference in Montréal, Costa Rica and Papua New Guinea highlighted the enormous impact of deforestation on global climate (roughly 20% of global greenhouse gases – GHG - emissions) and jointly requested to the Conference of the Parties to the Climate Convention the creation of a mechanism to reward GHG emission reductions due to deforestation: the “RED” concept was born.

Two years later, the countries with « High forest cover, low deforestation rate » (HFLD), Congo basin countries in first line, insisted for having not only the « bad pupils » included, but also those countries that were able to conserve their forest so far. At the 13th climate Conference in Bali, in 2007, they were able to transform “RED” into “REDD+”, the second “D” symbolizing degradation and the “+” including preservation and increase of forest carbon stocks.

After five years of discussions in the frame of the climate Convention and various other forums (Major economies forum, G8, G20) and a last session of negotiations at the 16th Climate Conference in Cancun, the international community gave a reality to the REDD+ concept, thus allowing financial pledges and to initiate pilot actions.

Since the launching of the race against the clock, in Bali, to set up the future post-2012 climate regime, no any other sector of the climate negotiations had been so fast, would it be in the frame of binding commitments to be made by developed countries or nationally appropriate mitigation actions (NAMAs) to be made by developing countries.

After a 1st REDD+ Decision « of intention » (2/CP.13) made in Bali (2007) and a 2<sup>nd</sup> REDD+ Decision « on methodologies » (4/CP.15) made in Copenhagen (2009), a 3<sup>rd</sup> REDD+ Decision « on policies » (1/CP.16) has been made in Cancun (December 2010).

This REDD+ Decision anchors the REDD+ mechanism into a future post-2012 climate regime. Six aspects are of particular interest:

- a general objective: « *Affirming that, with adequate support, all the Parties share collectively the goal to reduce, stop, and reverse the loss of forest area and forest carbon, in coherence with the ultimate*

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<sup>1</sup> For the Gilé national Reserve, the CGAC is called « COMGIL ».

*goal of the Convention* ». This objective is neither quantified, nor dated as would have wished the European Union, but the reference to the ultimate goal of the Convention, associated to the +2°C target mentioned in the Copenhagen Accord, as well as the national commitments that would be annexed to this Accord, will offer the possibility to deduce implicitly a target in terms of avoided deforestation;

- a list of 19 principles and guarantees. The most binding ones for countries willing to enter into the REDD+ mechanism are the following: (1) Need to prove that the forest governance is fine, (2) Need to respect the rights of indigenous peoples and the members of local communities with a reference to the United Nations Declaration on the rights of indigenous peoples, (3) Need to protect biodiversity and environmental services, notably to avoid the conversion of natural forests;
- a REDD+ perimeter extended to avoided degradation, conservation and increase of forest carbon stocks;
- a set of three elements to prepare countries willing to participate: (1) A strategy or a national plan of actions taking into account the drivers of deforestation, land tenure issues, governance, with full participation of the stakeholders, (2) A national reference level or, if need be, infra-national reference levels (project-based approach, requested by Colombia, Indonesia and the United States), (3) A robust and transparent national system to monitor, report and verify activities;
- a phased-approach for the implementation of REDD+: (1) Phase 1 (« *readiness* »): elaboration of strategies / plan of actions / policies and measures, with setting up of the ad hoc institutional arrangements and demonstration activities, (2) Phase 2: starting of implementation, with capacity-building, technology transfer and result-based incentives, using « *proxies* », (3) Phase 3: full implementation of strategies and result-based payments after monitoring, reporting and verification;
- a general understanding for the REDD+ payments: most of the countries accept the idea to use international public funds for phases 1 and 2, and a mix of international public funds and carbon markets for phase 3. The ambiguity remains on the nature of incentives for phase 2. The current Decision allows for different result-based payments: GHG emissions reductions at national scale with simplified estimation (Brazil), GHG emissions reductions at local/regional scale (United States) or incentives measured with variables such as areas of managed forests or carbon stocks in protected areas (India). The debate will go on in the frame of the negotiations on the financing of the post-2012 climate regime, with the objective to make a Decision at the 17<sup>th</sup> climate Conference in Durban (December 2011).

In Mozambique, it is worth noting that deforestation is an important issue: the rate of deforestation at national scale is two times higher than the global average. The country loses 0,58% of its forest cover every year, i.e. 200 000 ha per annum.

### ➔ Last progress on the financing of the post-2012 climate regime

The general fear, after the failure of Copenhagen, was that the process would die in Cancun. Hopefully, it did not happen. The process is still alive and is even strengthened: 139 countries (upon 192) representing 88% of the global GHG emissions committed to reduce their GHG emissions.

Of course, we are far from what would be needed to reduce the global warming. To have 50% of chance to keep below the +2°C of global warming by 2100, developed countries would need to reduce collectively their GHG emissions from -25% to -40% by 2020, compared to their levels in 1990.

But, the willingness to reduce GHG emissions is there. For the first time the concept of « shared vision » is mentioned in a UNO text: this shared vision is quantified, on the basis of the two last IPCC reports. Two global objectives are mentioned: to keep below the +2°C (EU position) and to keep below the +1.5°C (positions of African group and AOSIS).

Other positive aspect, in relation to the financing: the Decision to set up a Green fund – expected to channel more than 100 billions of US\$ per annum by 2020 – and to prepare the operational modalities (with the nomination of the World bank as an interim manager) demonstrates the strengthening of the North-South solidarity on climate change.

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<sup>2</sup> Presently, depending on the assumptions made (LULUCF rules, use of carbon credits, impact of the hot air in the post-2012 regime), the global objective would vary from -2% to -10% by 2020 compared to 1990 level!

### ***1.1.6. The REDD+ process in Mozambique***

#### **→ R-PP and national strategy development– identification of pilot areas**

MICOA and MINAG copilot the Mozambican REDD+ process.

The country has already submitted its preliminary report on REDD+ (R-PIN), on March 8, 2008 and will submit a Readiness preparation proposal (R-PP). A R-PP (**Readiness Preparation Proposal**) is since under development under the national REDD+ working group supervision. A draft has been presented in September 2011 at the last FCPF meeting. A final version should be elaborated before the end of 2012 to be formally submitted to the FCPF. The FCPF should release additional funds (200 000 USD) to support the finalization work.

In parallel, the MICOA elaborates a national REDD+ strategy, both works supporting each other.

The national REDD+ strategy and the R-PP identify pilot areas to « test » the implementation of REDD+. The rates of deforestation in these sites are the highest in the country. For the province of Zambezia, the RNG and its periphery have been retained.

These pilot areas have been identified through public consultations held at province level (May 2010 for Zambezia). Supported by the Norwegian cooperation, the DNTF realized complementary trainings of local authorities next to these consultations in Zambezia.

The elaboration of these R-PP and national strategy was supported by the Norwegian cooperation, which allowed to:

- implement IIED technical assistance to the MICOA ;
- develop a South-South cooperation with Brazil : experience sharing with FAS (Foundation Amazonia Sustainable) ;

The R-PP approval should allow the FCPF to release 3,6 million USD for Mozambique. This budget will be focused on the effective implementation of the whole organization and of the tools necessary to implement the strategy: technical coordination REDD+ unit, MRV system, benefits-sharing mechanisms. This work still need a period of one to two years of efforts, during which pilot projects like Gile will play an important role of feedbacks from the field regarding the implementation of national mechanisms.

#### **→ First step towards a MRV system**

The DNTF, also responsible of the national inventory system, is in charge of:

- implementing the MRV system that will outfit the provincial and district services ;
- establishing the reference scenario ;

The DNTF is supported by the Japanese cooperation (JICA), namely through a project dedicated to the implementation of an information platform about forest resources in Mozambique (7 million USD). The project is structured around four main actions:

- the creation, within DNTF's GIS unit, of a database gathering a national forest resources mapping and the integration of any existing information related to it ;
- the elaboration of forest cover maps and land-use maps based on satellite images and field measures in the provinces of Tete and Gaza ;
- to train the DNTF to use observation tools to follow the forest cover evolution (radar imagery) ;
- to establish a field monitoring system, starting with the implementation of pilot areas in two districts for each of the ten provinces.

The RNG is one of these pilot areas in the province of Zambezia. First measurements campaigns have already been done in the RNG and its periphery with the University Eduardo Mondlane (which is working on Miombo forests carbon inventory methodologies).

## → Mapping the project-relevant funding agencies actions in the area of climate change and conservation

### REDD+ and forest at national level

- **Phase II of the Environmental Sector Program** (2011-2015). This program is supported by Denmark (22 million USD). The institutional partner is the MICOA. Currently, the program is defining the activities of coordination between the funders. The activities to be financed will be proposed to the Danish Cooperation by the MICOA and provincial authorities in July 2011. These activities are linked with the national REDD+ strategy and capacity-building of the MICOA.
- **Norway** : as indicated above, Norway strongly supported Mozambique's preparation to REDD+. A new support is planned for 2012.
- **FCPF** : the FPFC reserved a 3.6 million USD envelope to accompany the development of REDD+ in Mozambique. These funds should be available early 2012.
- **JICA** : JICA supports the implementation of a MRV system (7 million USD).
- **SUNAFOP** (2009-2014) or Sustainable national forest program (11.45 million EUR financed by Finland). Activities focus on the development and application of the forest national legislation (notably through the implementation of a forest control unit), institutional capacity building, supporting industrial forest management and the development of community forestry (concept of community concessions: demarcation aspects, management plans, traceability, etc.). The program takes place in the following provinces: Cabo Delgado, Nampula, Niassa and Zambezia.

### REDD+ pilot projects

- **Niassa National Reserve REDD+ pilot project** : The Niassa National Reserve (RNN) covers 42 000 square kilometers and is managed by the SGDRN<sup>3</sup>, a private-public management entity created in 2000. The RNN management plan has been approved, making the decisional process more flexible. Fauna and Flora International (FFI, a worldwide known environmental NGO) provides technical support to the SGDRN. A Memorandum of understanding has been signed between the MICOA and a private investor (Carbonex capital) in order to gather more relevant data on carbon stocks evaluation prior to determine the exact project's content and actions plan. Uncertainties linked to REDD+ effectiveness, and in particular the exposition towards carbon credits markets, incites the MICOA to be cautious.
- **Quirimbas National Park REDD+ project** : The Quirimbas National Park (PNQ) is located in the province of Cabo Delgado and covers 7 506 square kilometres. The "Climate change adaptation in the Quirimbas National Park in Mozambique" aims to maintain the PNQ natural resources integrity for the local population's benefits, in a climate change context. One of its main components aims to develop a REDD+ project, to support the national REDD+ process, to implement a close collaboration with the private sector for the commercialization of carbon credits and to elaborate carbon revenues and benefits sharing mechanisms within the PNQ. This project is co-financed by the FFEM, the French development agency (AFD), WWF Mozambique, the Mozambican Government and the PNQ (8,4 M € between 2011 and 2015). The MITUR is responsible of the project, whereas WWF and the PNQ are the implementing organizations.
- **The « Sofala community carbon project »** : The "Sofala Community Carbon project" implements rural development and sustainable land use activities in order to enhance local livelihoods, restore natural habitats, improve management and biodiversity conservation practices. The project involves communities living around and inside the buffer zones of the Gorongosa and Marrromeu National Park (Sofala Province). The project is therefore located on two sites: Gorongosa and the Zambezi delta. Local smallholders individually chose to adopt mitigation activities within a pool of nine land-use systems (seven agroforestry systems, one agricultural system and one forestry system). The REDD component of this project is developed in Gorongosa on 9559 ha. The project has been registered under the Plan Vivo standard in February 2007 and is under validation by the Plan Vivo

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<sup>3</sup> Sociedade de gestão e desenvolvimento da reserva do Niassa.

and the Climate, Community and Biodiversity Project Design standards (CCB standards) of the Climate, Community and Biodiversity Alliance (CCBA).

### Conservation

- **GEF5** : The GEF focal point is in MICOA. The list of financial priorities for the GEF5 envelope has not yet been published by the focal point in Mozambique. Some REDD+ activities might be financed through biodiversity projects, as biodiversity is a priority sector.
- **Pilot program for climate resilience (PPCR)**: forest is not the main entry. The Government of Mozambique insists to obtain funds in order to develop initiatives with the private sector. As an example, the program could co-finance the Niassa Reserve REDD+ project.
- **Biofund**: a fiduciary national fund is under development in order to contribute to the sustainable financing of Mozambican protected areas. The Biofund will be able to support some protected areas like Gile REDD+ pilot areas. The AFD plans to contribute 4 million EUR in this fund.
- **Sustainable financing of the Protected Area System in Mozambique** : this 5 million USD project will contribute 1) to strengthen the Mozambican protected areas network at national level (support to the MITUR and Biofund) and 2) to support protected areas, namely the Gorongosa national park.

donor	project title	impl. agency	amount(USD)	type	duration	location
MITIGATION - on-going at national level						
Norway	South-South REDD	IIED with various institutions	645 934	grant	2009-2010	
Germany-Norway-Austria	Programme for Biomass Energy Conservation (ProBEC), cooking stoves, biomass policy and biofuels <sup>a</sup>	GTZ			2005-2010	Manica, Sofala, Maputo
Norway	Building capacity for CDM projects in Mozambique	Pöyry AS/Dr. AJ Tsamba of UEM	271 972	?	2010-2011	
MITIGATION - on-going at regional level						
Finland/Spain/Sweden	Regional clean development mechanism capacity building project for Sub-Saharan Africa - phase 1&2	UNDP-UNEP MICOA/MINERG/MIN AG	region = 1 530 000 Moz = 223 000	grant	2007-2010	national
GTZ	Technical Assistance on Sustainable Use and Production of Biofuels (SADC wide) <sup>a</sup>	GTZ-ProBEC (SADC level)			2008-2010	GTZ
MITIGATION - on-going with private investments						
Green Resources A/S Norway	Lurio forestry plantation and carbon sequestration project	Green Resources?	2 billion	Investment	15 years	Nampula province along the Nacala corridor
MITIGATION -Pipeline of financing at national level						
Danida	Danida's II Environment Sector Programme Support - Climate Change Component	MICOA and MAE (INGC)	22 697 875	grant	2011-2015	National/local
MITIGATION -Pipeline of financing at regional level						
Finland	Energy and environment partnership programme in Southern and East Africa	Development bank of Southern Africa DBSA	n/a	grant	2010-12	National
EC	Global Climate Change Alliance (GCCA)	EC	6 900 000			?

Figure 3 : Actions of funders related to climate change mitigation

donor	project title	impl. agency	amount (USD)	type	duration	location
<b>CONSERVATION - on-going financing at national level</b>						
AFD	Development of the Limpopo national park	Mitur/DNAC and PN Limpopo	14 300 000	grant	2008-2012	Gaza
KfW	Development of the Limpopo national park	Mitur/DNAC, PPF and PN Limpopo	13 000 000	grant	2011-2014	Gaza
AFD	Technical Assistance on Wildlife and Hunting	Mitur/DNAC	1 040 000	grant	2009-2011	National
AFD	Development of the Quirimbas National Park	Mitur/DNAC and PN Quirimbas	5 200 000	grant	2010-2015	Cabo Delgado
AFD (French GEF)	Adaptation to Climate Change in Quirimbas national park	Mitur/DNAC and PN Quirimbas	1 300 000	grant	2011-2015	Cabo Delgado
AFD/ KfW/ WWF	Preparation of a trust fund for conservation areas	Mitur/DNAC and WWF	700 000	grant	2010-2011	National
AFD (French GEF)	Co-management of Gile national reserve and its periphery	Mitur/DNAC and IGF	1 300 000	grant	2009-2012	Zambezia
IGF Foundation and private partners	Co-management of Gile national reserve and its periphery	Mitur/DNAC and IGF	1 632 930	grant	2009-2012	Zambezia
World Bank/GEF/Japan/PPF	TFCAs (Banhine NP, Chimanimani, Limpopo NP, Maputo SR, Zinave NP)		35 920 000		2006-2013	National
Sasol	Bazaruto Conservation support Program		1 500 000	grant	2010-2015	Inhambane
Carr Foundation	Gorongosa restoration Project		24 000 000	grant	2008-2028	Sofala
USAID	Gorongosa restoration Project		4 500 000	grant	2008-2012	Sofala
USAID	Creation of Lake Niassa Reserve		1 700 000	grant	2006-2012	Niassa
<b>CONSERVATION - Pipeline of financing at national level</b>						
AFD	Support to the Trust fund for conservation areas (BioFund)	Mitur/DNAC	5 200 000	grant	2011-2014	National
AFD	Technical assistance on Wildlife and Hunting and ANAC	Mitur/DNAC	780 000	grant	2012-2014	National
AFD ( French GEF)	Reduction of GHG emissions through preservation of forest in Gilé National Reserve and its periphery (REDD+)	Mitur/DNAC and MICOA	2 600 000	grant	2012-2014	Zambezia

**Figure 4 : Actions of funders related to conservation of protected areas**

## **I.2. Local conditions**

### ***I.2.1. Socio-economic analysis***

The creation of the RNG, in 1932, led to the end of the commercial hunting development. In 2000, right after the new legislation on protected areas approval, it has been declared “National Reserve”. It now covers 2800 km<sup>2</sup>.

	<b>Surface (ha)</b>
National Reserve of Gile	283 549
Buffer zone (proposed in the 2011 management plan).	315 135
<b>Total</b>	<b>598 684</b>

**Table 1 : RNG and buffer zone areas (2011) (Source : IGF)**

The main events in the RNG’s lifetime are as follows:

- during the Portuguese colonization, some infrastructures are installed in the RNG (rangers camps);
- 1975 : Independence. The following civil war doesn’t allow the reserve to remain managed. The local population used the RNG to feed themselves and to survive.
- 1999-2004 : An agreement between the European Union and the Government of Mozambique results in the rehabilitation of the reserve, implemented by the italian NGO Movimondo.
- 2007 : Co-management agreement of the RNG and its periphery between the MITUR and the IGF foundation. In the same time, a community project developed in the periphery and implemented by the Italian NGO COSV on both Gilé and Pebane districts.
- 2011: the Ministries Council approves the buffer zone around the RNG ; MITUR and MINAG will be jointly responsible for the zone.

The RNG is located on both the district of Pebane in the south (population: 186 000) and the district of Gilé in the north (population: 160 000). 32 000 people, living in the periphery (20km radius) have to be added to this calculation, the important villages being in the South, East and North of the RNG.

The area in the West of the Reserve is almost completely free of inhabitants. Most of the people are from the Lomwé ethnic group. The social services (schools, care infrastructures, others) of these districts are not developed enough, as is the road network which mainly consist in tertiary roads.

The unemployment of the two districts is high and most of the inhabitants are small-scale farmers, traditional agriculture being the main economic activity. The main subsistence crops are based on cassava, corn, banana and to a lesser extent, sweet potato and groundnut. Cashew plantation is the main cash crop but the production is weak.

As the ground contains an important proportion of sand, it does not provide the right conditions to develop agriculture and cassava remains the basic food supply. As fertilizer globally miss, the production yields are low and people are forced to clear new culture areas (*machambas*), making slash-and-burn activity the main form of agriculture. The provincial authorities may also implement a cashew development plan.

Because of trypanosomiasis, breeding is not really developed. Nevertheless, goat breeding is quite usual in the villages, as well as chickens and ducks.

The main protein sources are fishes, bush-meat and some others non-timber forest products (NTFP). Sea fishes and the other sea products are transported by bike from Pebane to the local markets. These products, as well as river fishes, are quite abundant on the regional markets. Around 90% of the families fish in rivers and sell their surplus on the village market.

Even if very few bush meat can be found on the markets, different techniques are used during the whole year for hunting purposes: typical weapons of the region, nets, traps, fires. The other NTFP that are used are snails, insects honey, mushrooms, roots and medicinal plants. Timber, firewood and fibres are also important components of rural livelihoods.

It is estimated that more than a half of the families annual revenues are generated from natural resources, mainly during the transition period (from January to March). Because of the scarcity of the natural resources, which have almost disappeared around the RNG, the population is increasingly depending on the resources located inside the Reserve. Thus, the RNG is currently under heavy anthropogenic pressures and has already lost some key components of its biodiversity.

During the third semester of 2008, a sociological study, financed by IGF, and conducted in the periphery of the Reserve (Pebane and Gilé districts), underlined the following points:

- the Reserve's rangers are seen as improperly repressive by some of the interrogated people. This attitude should be considered with caution, as it may hide some underlying behaviours : because of the proximity of the sea in the south, the dependence upon bush meat is stronger in the North). It is worth noting that there are some community rangers who, unlike ecoguards, are not part of public officials but are under the COGEP's responsibility. They support the ecoguards in different tasks related to surveillance and information gathering in the buffer zone;
- the population declare not to know the geographical limits of the RNG;
- the local population is poorly structured in associations, the individual behaviour are predominant.
- because of the absence of markets, transport infrastructures and a lack of development in the general sector, the link between the agricultural production and its potential consumers is a recurrent issue.
- the traditional leaders (*regulos*), their "ministries" (*samassoas* or *indunas*) and their assistants (*sangrias*) are still considered as respected authorities with an important political power. Nevertheless, some elders from the community may have more political power of more influence than the *regulo*, especially if the *regulo* is young.
- judges and juries, that arbitrate the local litigation, are also part of the traditional and functional power.

Open-air exploitations, logging or mining, can also be found in the region. Some intense logging operations take place in the Zambezia province (3 380 867 ha of forestry concession of which 22% are located in the Gilé and Pebane districts). Several forestry concessions have a direct frontier with the RNG in the East and West of the buffer zone. Two concessions are partly in North West of the buffer zone: Madeiras de Zambezia (MAZA) and J.Domingos Marques (see below).

<b>Name of the forestry company</b>	<b>Status of the concession</b>	<b>Area in hectares</b>
OCEANIC	Operational	76 358
MADEIRAS DA ZAMBEZIA	Operational	52 043
GREEN TIMBER	Operational	41 882
MADEIRAS ALMAN	Operational	33 371
XUE B HUANG	Attribution in progress	32 982
BALBINA FENIOSSE MASSINGA	Attribution in progress	32 584
ASSOC. COM. LUTA CONTRA POBREZA	Attribution in progress	31 441
GREEN TIMBER	Operational	25 674
J DOMINGOS MARQUES	Operational	24 703
HUSSEIN MULOGA HUSSEIN	Attribution in progress	24 357
LUISA CHIN GAN CHIAN SAN	Operational	20 623
	<b>Total (Ha)</b>	<b>396 017</b>

**Table 2 : Concessions with a direct frontier with the buffer zone of the RNG (Source : IGF et SPFFBZ)**

In addition to the concessions, simple annual exploitation licences are delivered on a provincial scale. Even if little data is available, it has been estimated that there are around 149 of these licences for the Zambezia province. Around 30% of them concern an area close to the buffer zone.

In the Gilé district and, in a lesser extent, the Pebane district, mining is also pretty intense. 323 372 ha of concessions and simple licences have been delivered since 1999 (70% in the Gilé district and 30% in the Pebane district). Unfortunately the Provincial direction of the Ministry of Energy and Mines does not currently have a proper geographic information system. It is forced to work with the geographic cadastre service, which hardly provides its maps.

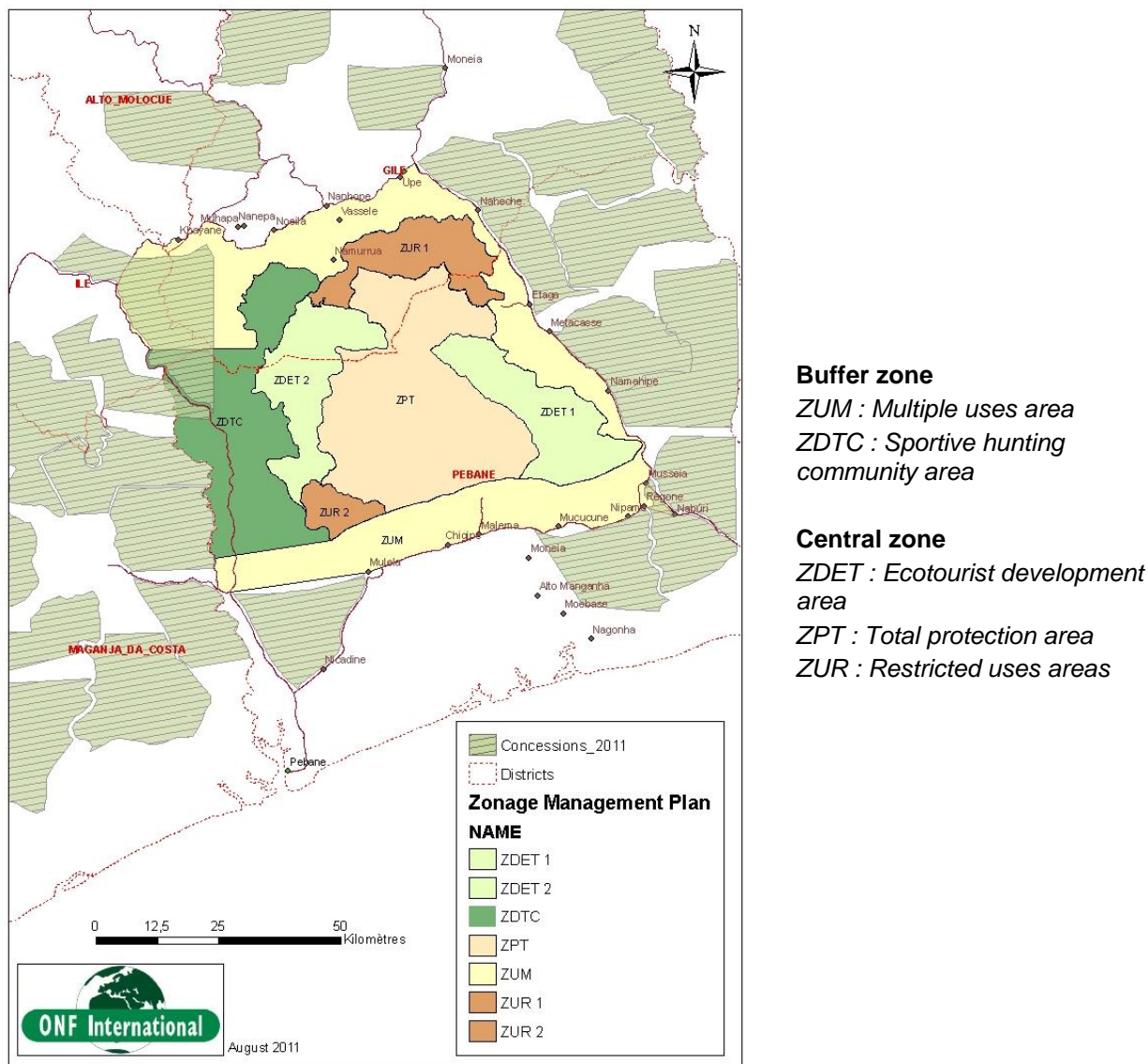
In the Gilé district, 228 340 ha of concessions and simple mining licences, that allow operations for a duration of 5 to 30 years, have been delivered between 1999 and 2010. The main exploited minerals are: tantalite, beryl, emerald, quartz, feldspar, nickel, topaz, copper, lithium, amongst others. The sizes of the concessions range from 120 for the smallest one, to 14 000 ha for the biggest one. 37 concession and around 91% of the exploitation rights delivered for a length of five years are currently exploited for the period 2012-2035. A total of 36 concessions have been delivered to companies (69% of the concerned surface) and 19 to individuals.

In Pebane district, 95 032 ha of concessions and simple exploitation licences have been delivered between 2000 and 2010 for a duration of 5 to 25 years. The size of the concessions range from 500ha for the smallest oneto 19 440ha for the largest one, with an average size of 7 310 ha. A total of 9 concessions have been delivered for a length of 5 years and 9 concessions will be exploited for the period 2012-2029.

The periphery zone of the RNG forms a heterogeneous mosaic. The northern periphery area is an agricultural land with a tight mesh constituted by a mix of food production fields and half a dozen of temporary logging licence concerning surfaces around 10 000 ha. In the deeper north are emerald mines. In the East, the main road linking Gilé to the ocean goes through the whole length of the periphery and has many small villages on its side. At the East of the road, almost every concession in the periphery is a long term concession.

In the south, an other main road is linked to Pebane and goes through the periphery. Small cities have also been built on its side. An area between the road and the RNG, that is 5 km wide, is almost free of houses and fields .Two long term concessions, like the ones in the East, occupy the area in the South of the road.





**Figure 5 : Wood exploitation close to the RNG (Source : IGF, SPFFBZ)**

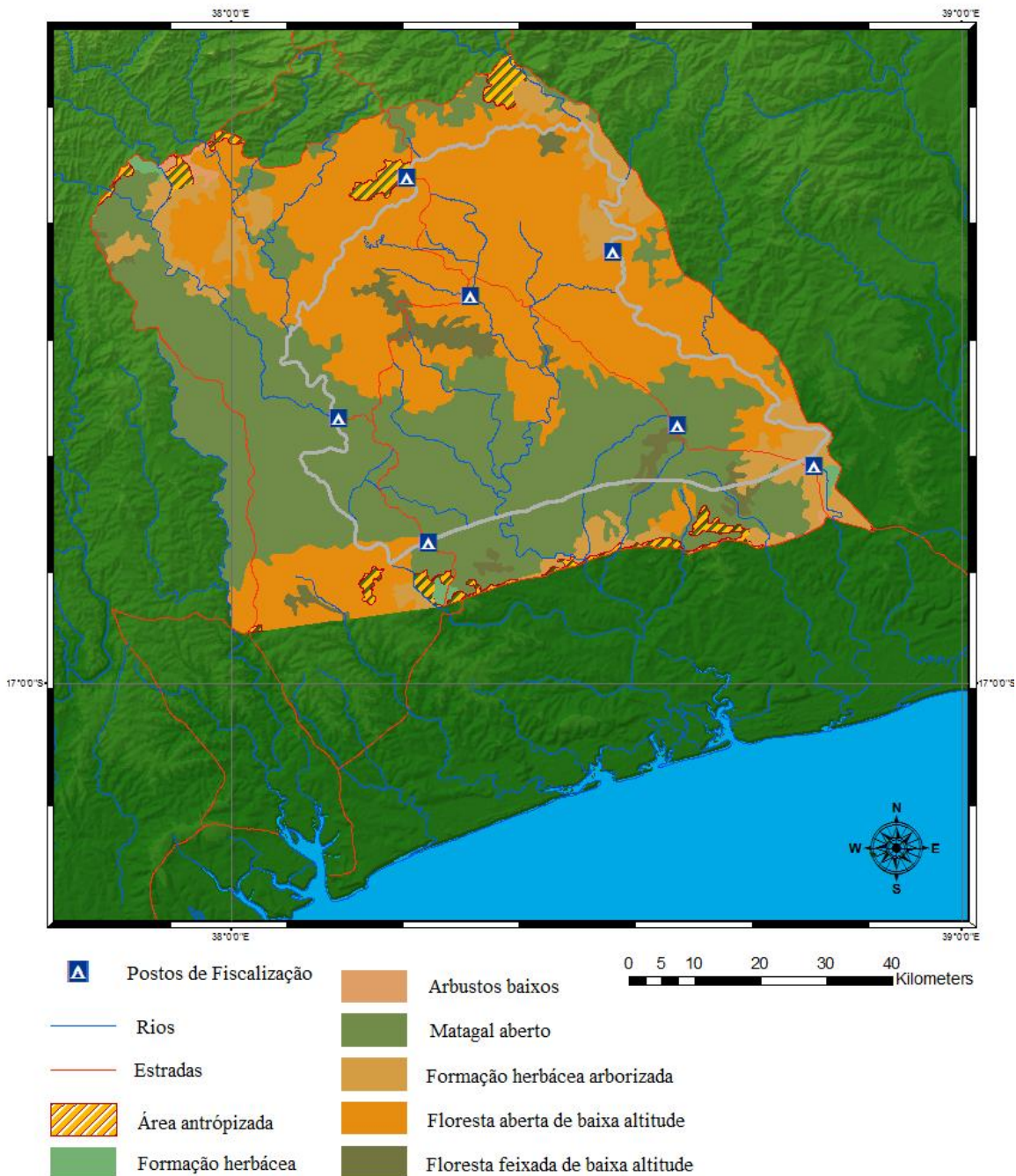
In the west (a little area deep south excepted), the periphery consists of quasi-undisturbed natural formations and is homogeneous, free of villages, and almost free of concessions (only one little temporary concession in the south), what makes it an area with a strong potential for biodiversity conservation. The logging concessions in the West are outside of the buffer zone. Tourism is under developed in the Zambezia province, even if several projects of seaside resorts exist, especially in the Primeiras and Segundas archipelagos. These islands are the object of a program initiated by the Mozambique Government, the IFC (International Finance Corporation), and the Anchor program (anchoring the investment linked to tourism in Mozambique).

The objective of the Anchor program is to develop the investments linked to tourism in Mozambique. Pilot sites have been on their advantages in term of natural assets, their localisation, ease of access, and potential for development.

Four pilot sites have this way been selected in Mozambique. Among them is the site of Gilé which includes the islands of Casuarina and Epidendron (respectively 30 and 40ha) and which is expected to develop the *Beach&Bush* ecotourism concept. Currently, the private investors' proposals are under assessment.

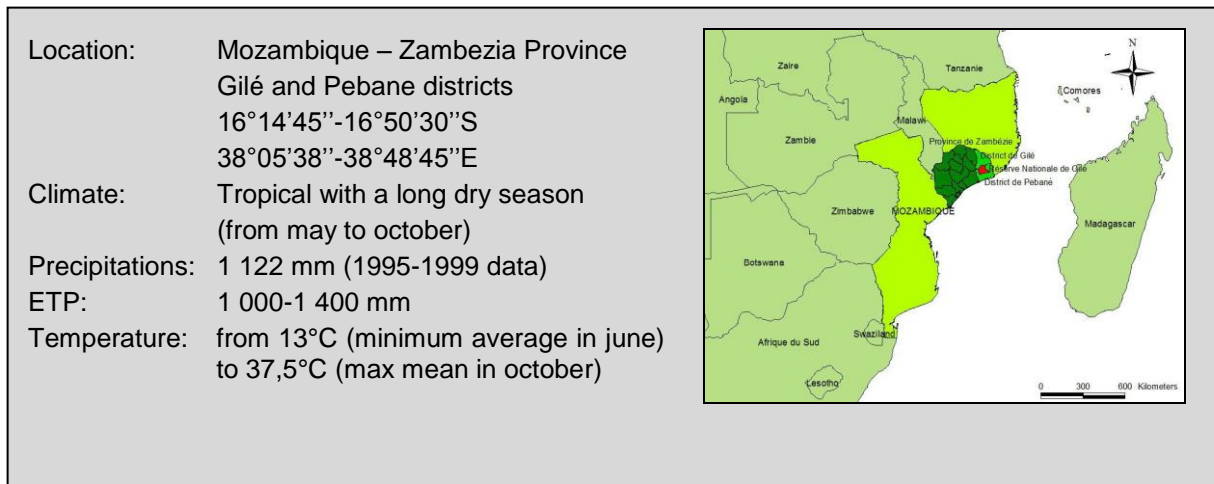
A group of investors has already manifested an interest for the development of an offer of up-market tourism inside and around the Reserve (5 stars “lodges”) in association with the investments on the two islands. The group announced that it would be ready to support the development of the Reserve’s infrastructure and the equipment of the field staff working in the Reserve.

On the Primeiras and Segundas Islands archipelago, the WWF-Care Alliance initiated, in the Moma and Angoche districts, the « Primeiras and Segundas Livelihoods Project » in 2008. The project is financed by the EU, TNC, the Sall Family foundation and Michael Philips. The ecotourist component of this project is in progress and aims at the community development (fishermen associations, business plans, etc.) and to provide support to the adoption of conservation agriculture and marine biodiversity management techniques.



**Figure 6 : Land use in the project area (Source : RNG management plan, 2010)**

### 1.2.2. Environmental analysis



**Figure 7 : General environmental information about the RNG**

The RNG is a part of the floral region in the so-called "Zambeian endemism regional centre". Its vegetation unit is "Miombo-type of Zambeian opened forests" (cartographic type n°26). The soil that can be seen as specific to *Miombo* are leached and acid. (WHITE, 1983)

According to a study lead by CIRAD (BAUDRON, 2009), the project area presents three kinds of soils, dambos acid soils excepted : the dominant type is a sandy soil, derived from granit. Then come alluvial soils along watercourses, and red clay soils that are more fertile in the northern part of the RNG.

The landscape of the RNG is composed of a mosaic of opened forests of the Miombo type, and grasslands of the dambo type. The dambos are edaphic grasslands often flooded during the rainy season and whose soils tend to be acid (CHIDUMAYO, 1997).

The Miombo is the most important type of vegetation in the Zambeian endemism regional centre. Within the Miombo type, several sub-type can be identified, according to the structure and composition of its vegetative strata (SADC, IUCN, SARDC, 2000 ; WHITE 1983).

It is dominated by deciduous trees from the Leguminous family, especially the genders *Brachystegia*, *Julbernardia* and/or *Isoberlinia* (CAMPBELL, 1996 ; CHIDUMAYO, 1997 ; POILECOT, 2007).

Several studies based on field inventories and Landsat or Aster satellite images analysis (DNFBB,1995 ; MICOA, 1999 ; PRIN 2008) have allowed to stratify the Miombo forest of the RNG and its periphery in subtypes based on several criteria (dominant species, surface of the canopy, number of trees per hectare, average height, ...).

The data proposed by these different studies may allow an estimation of the biomass quantity in each stratum. Nevertheless, to achieve this objective, an harmonization of the different stratum of soils and forests will be needed.

One should keep in mind that the RNG is the only protected area in Mozambique that is free of permanent houses. Thus, the forest and the adjacent areas (especially in the West) are intact and are one the biggest undisrupted forest unit in Northern Mozambique





### **1.2.3. Management-plan of the RNG : objectives and progress**

Following the protocol between the IGF Foundation and the MITUR signed in 2007 for the co-management of the RNG, the project "Co-management of the Gilé National Reserve and its periphery" has been initiated for a 4 years length.

This project associates operations realised in RNG by the IGF Foundation with development activities operated in the periphery in partnership with the Italian NGO COSV. The objective is to rehabilitate the RNG through the sustainable use of its natural resources. It includes five components

#### **→ 1/ Improvement of the Reserve's management**

- Creation of the buffer zone;
- Elaboration of a management plan;
- Employment and training of rangers to reduce pressure on the RNG's natural resources;
- Setting up of infrastructures and equipment acquisition;
- Tourism development

At an institutional scale, the geographic limits of the buffer zone and the management plan of the RNG have been submitted to the concerned institution and the official validation is awaited.

The setting up of the Reserve management teams is in progress. To make them effective on the field, they have been trained and equipped (GPS, camps, trails and restored bridges). However, to obtain the expected results, some more funds are necessary, especially for the rehabilitation of the existing camps, their maintenance as for others infrastructures, and to reinforce the ecoguards team.

#### **→ 2/ Restoration of the biodiversity et ecological monitoring**

- Set up of a database;
- Reintroduction of some animal species;
- Monitoring of the fauna;
- Feasibility study of the black rhinoceros reintroduction;

The set up of a database on the RNG fauna and flora is currently in progress. Studies based on inventories have been realized but have to be completed on the fauna topic. The organization and analysis of the first information collected are in progress and should lead to a more accurate knowledge of the fauna and its distribution. Once the ecoguards trained, it will be possible to monitor on a regular basis the identified fauna.

The first step, collection and organization of the data, allowed the identification of some species. The monitoring process, based on radio collaring, are still to elaborate.

#### **→ 3/ Community development and governance structure**

- Data consultation and collection processes;
- Governance;
- Natural resources management techniques and sector development;
- Development of some economically sustainable alternatives;
- Payments for environmental services;

Social and economical diagnoses have been made but have not yet led to the complete creation of committees in charge of the management of the activities in the RNG and its periphery. These committees will have to coordinate with the NGO COSV currently in charge of these activities development.

If the targeted households and the activities that could be developed have already been identified, they still have to be trained to the identified activities, with techniques that remain to describe in technical guides.

Some scenarios of sustainable agricultural activities, based on the conclusions of the socio-economic diagnosis have been elaborated. They still have to be implemented. The payments for environmental services still have to be the subject of a feasibility study.

#### **→ 4/ Valorisation of the buffer zone**

The valorisation of the buffer zone mainly consists in the creation of a Community hunting area (ZCV). Currently, the feasibility studies have clearly identified the area where the ZCV will be implemented. It is also integrated in the management plan under validation at a central level. The communities have been associated to the elaboration of this ZCV, but a management structure must still be set up with an eventual support of partners from the private sectors that have not yet been identified. (process in progress).

At the request of the Council of Ministries, the MITUR proposed to reduce the buffer zone but it will not have an impact on the zone containing the ZCV.

#### → 5/ Implementation, monitoring and evaluation

- Promotion of the project activities
- Technical monitoring of the project
- Quality control

The tools to promote the project activities are : a website, newspaper articles and others (flyers, t-shirts, posters ...). At the present time, only a few newspaper articles and some internal reports have been published.

Since 2008, a permanent technical assistance from the IGF Foundation is operational, as well as one-time supports. However, it must be controlled that this assistance is sustainable. Some FFEM missions have been realized to control the project's quality. Annual financial audits are also planned.

### **1.3. Issues and problems to solve**

The RNG is in a progressive rehabilitation phase. Since 2008, the human resources have been strengthened, as well as the equipment. It led to an improvement of the RNG infrastructures and a control strengthening. Infrastructures have been partly restored and are now able to welcome the employees working for the RNG. Furthermore, a touristic camp has been set-up (in Lice, in the West). Some technical support and sensibilization actions have been done, more or less successfully depending on the cases. However, alarming pressures on natural resources remains, especially in the periphery.

To keep up with the conservation of the RNG and the development of the communities in the periphery, and to limit the deforestation and degradation in the same time in the area, it is necessary to work with external partners and use innovative financing mechanism.

**The main issue of the project can be concentrated in one question : how to support the sustainable conservation of the *Miombo* forest in the RNG and its periphery through REDD+ ?**

To answer this question, it is necessary to detail the factors threatening the RNG :

#### **Pressures on natural resources:**

- commercial overexploitation and non renewal of the forest resources in the periphery of the RNG;
- overexploitation, for commercial and subsisting ends, of the fauna resources, in the periphery of the RNG and poaching in the RNG;
- slash and burn agriculture which is the main conversion factor of the forest into agricultural lands, technical weakness of agricultural farms, poor soils leading to poor yields, rich soils located on riversides (which are the physical limits of the RNG, leading to a pressure in the limits of the RNG);
- spreading of uncontrolled fires coming from the outside of the RNG (opening of new machambas<sup>4</sup> and hunting) or from the inside of the RNG (poaching);
- consensus between the provincial and central institutions has not been reached about the Land use planification (notably the current redefinition of the limits of the buffer zone excluding some communities);
- lack of economic alternatives to ensure a sustainable development of the buffer zone, associated to the difficult access to the market for many communities;
- the decentralized services of the Government (Provincial Directions) lack resources for their technical support missions (technical support, raising awareness) to the rural communities and control of the illegal activities;

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<sup>4</sup> local name for "fields"

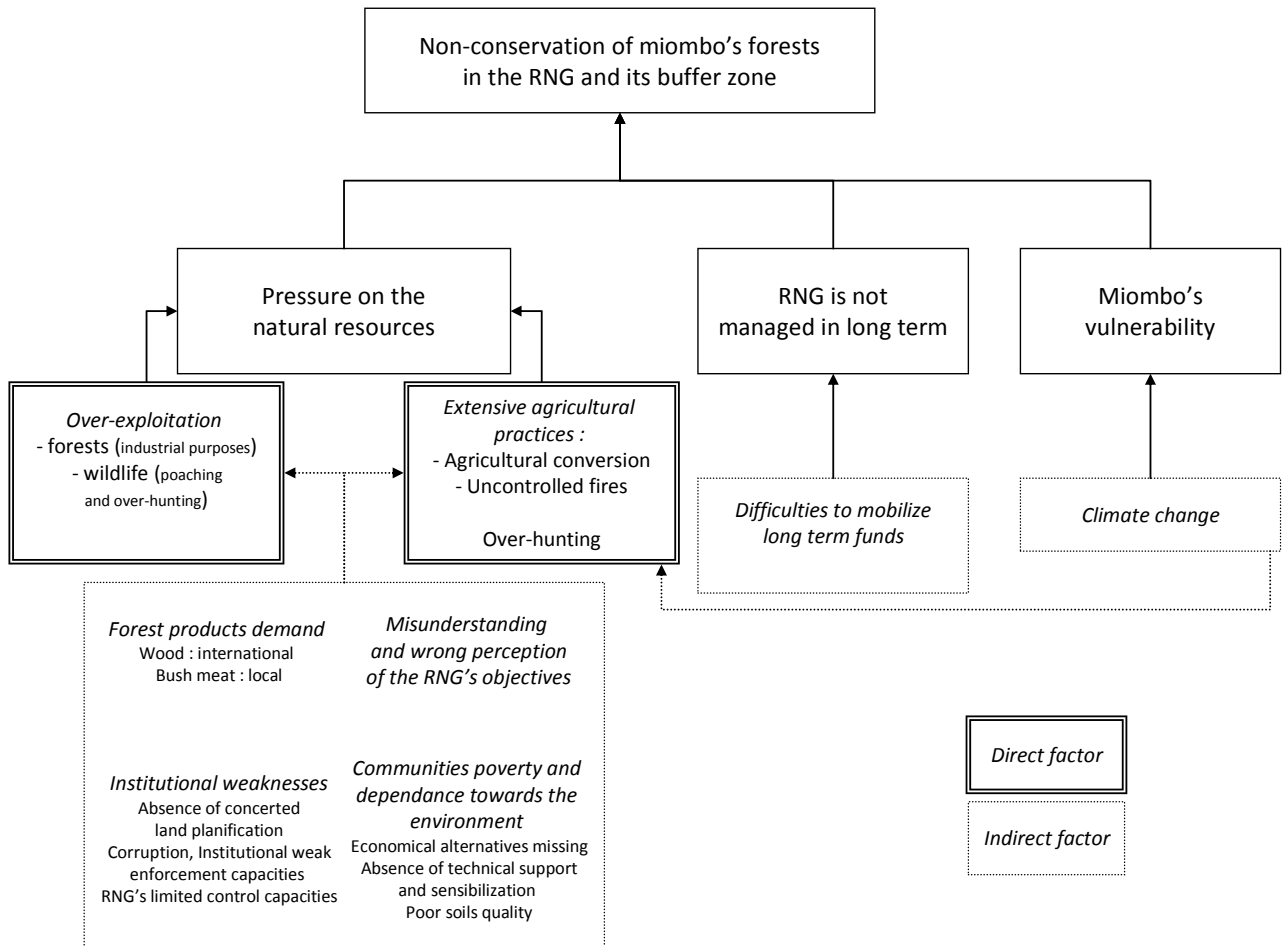
- lack of raising awareness and coordination of concrete development actions to the communities living around the RNG, leading to misunderstanding and bad perception of the objectives of the RNG by these communities.

**Vulnerability facing climate change**

- under the hypothesis of a temperature increase, the Miombo would be exposed to increased bush fires.

**Uncertainties regarding the RNG's long term management**

- difficulties to mobilize long term funds in order to manage the Reserve.



**Figure 8 : Problems, causes and stakes in the RNG and its buffer zone (Source : ONF International)**

## II. PROJECT'S OBJECTIVES

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### II.1. Project's finality

The project aims to reduce deforestation and degradation of the Miombo forests of the RNG and its buffer zone by reducing the pressure exerted on the ecosystem.

### II.2. Specific objectives

The project aims to prepare the Reserve and its periphery to the REDD+ mechanism, in order to operationalize their management on long term. The existing activities will be integrated into a REDD+ framework and new activities will be developed in order to reduce the pressure exerted on the RNG and its buffer zone. This will generate environmental externalities which are economically valuable and will help to initiate the transition towards the RNG's sustainable financial autonomy.

### II.3. Expected results

The project is divided into five components structured as follows :

#### **Component 1: Estimating the REDD+ ex-ante potential for the RNG and its periphery**

Expected global result: The potential reduction of emissions due to deforestation and forest degradation is known.

##### Expected results by action :

1.1 The quantity of carbon sequestered in the forests of the RNG and its periphery is evaluated :

- The stratification of forests and non-forests zones is complete
- Carbon stocks are attributed to each stratum

1.2 Future deforestation of the RNG and its periphery's forests is estimated *ex-ante*

- The historical deforestation trend is known
- An econometrical model and a spatial model quantify and localize the future deforestation

#### **Component 2: Valuing the GHG emissions reductions and other amenities**

Expected global result : The project's objectives in terms of GHG emissions reductions are defined and are valued as REDD+ carbon offsets

##### Expected results by action :

2.1 A REDD+ strategy for the RNG and its periphery is elaborated

- The on-going activities effectiveness is assessed
- Complementary activities are identified and organized into a coherent action plan (strategy)

2.2 The REDD+ carbon offsets valuation process is engaged

- A PDD is produced and validated ; the stakeholders are consulted and the carbon credits beneficiaries are identified
- A redistributive system is established to deal with the benefits
- Carbon credits verification, preparation and commercialization got prepared

#### **Component 3 : Development of pilot activities**

Expected global result : Incomes of the communities living in the RNG's periphery will improve through the implementation of activities such as agricultural intensification, development of sportive hunting and ecotourism, as well as through activities linked to the organization of local communities and economical interests groups.



### Expected results by action :

#### 3.1 Organizing the communities in COGEPs with an associative status:

- Communities awareness is raised on the « Association principle », which is legally recognized, and are in full knowledge of their rights and duties towards the use of local natural resources;
- Communities awareness is raised on the « Payments for environmental services mechanism » and in particular on carbon offsets, initiating the public consultation process ;
- New COGEPs are created and obtain the status of associations the same year ;
- A participatory cartography of the communities natural resources is established before the project's end ;
- Communities land demarcation is realized before the project's end.

#### 3.2 Developing conservation agriculture in the RNG's periphery:

- The communities awareness on conservation agriculture is raised, and technical support is provided with the COGEP's implication ;
- Demonstration areas and community nurseries are implemented as capacity building and training tools ;
- A rigorous scientific support accompanies the development of conservation agriculture ;
- Communities benefit from inputs and production material against some good management warranties ;
- Production storehouse and small-scale drying units are established before the project's end ;
- Smallholders receive support to organize the transport and commercialization of cash-crops ;
- Communities receive support to manage human-wildlife conflicts ;

#### 3.3 Developing sportive hunting in the RNG's periphery

- The communities awareness on Community hunting area (ZCV) is raised ; they understand the ins and outs of this concept ;
- The ZCV's limits are clearly materialized on the field, maps are produced and diffused to the project's stakeholders ;
- The ZCV's management plan is elaborated and implemented ;
- The ZCV's management unit is identified and operational before the project's end ;
- The ZCV's staff is trained ;
- A benefits-sharing plan is elaborated, implemented and verified ;

#### 3.4 Developing ecotourism in the RNG and its periphery

- Rehabilitation of access to and infrastructures of one or two touristic sites in the RNG and build eco-lodges in each one ;
- Identify ecotourist trails and tracks and draw-up their opening;
- Private investors are identified and co-invest in the exploitation of the local ecotourist potential;
- The projects contribute to the development of a regional ecotourist strategy and its local declension;
- Raising awareness of and inform communities on ecotourism opportunities ; participatory cartography of potential tourist sites;
- Communities are prepared to face the development of local ecotourism;

#### 3.5 Developing economical interests groups : small-scale livestock farms, fisheries, joineries, non-timber forest products<sup>5</sup> (honey, mushrooms) harvesting and saling groups...

- Communities awareness is raised on their rights and duties to use NTFP in the RNG's periphery;
- A "NTFP use accompaniment program" is established and implemented;
- A "small-scale livestock accompaniment program" is established and implemented;
- A "small-scale fisheries accompaniment program" is established and implemented;

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<sup>5</sup> also known as NLFP

### 3.6 Estimating the pilot activities effectiveness :

- Implementation of a « Agricultural prices and production local observatory » ;
- Mid-term evaluation of the pilot activities' socio-economical impacts ;

## **Component 4 : Management of the National Reserve of Gilé**

Expected global result : The Reserve is well-managed and its long-term financial autonomy is assured.

Expected results by action :

### 4.1 An effective control and watching system is implemented

- The stakeholders awareness is raised on law enforcement issues ;
- The coordination between the governmental services when treating fines is enhanced ;
- Information signs are installed in the community centres ;
- The training of rangers and community guards is pursued ;
- Internal rules and regulations are set for the RNG ;
- Control and watching system is strengthened in the RNG and its periphery;
- The communication and alert system is strengthened ;
- Customary hunting practices are supervised.

### 4.2 The Reserve's management plan is implemented and complementary measures are developed

- A prevention and management plan for fire risks is elaborated and operational ;
- A wildlife reintroduction and repopulation plan is established and operational ;
- The objectives of the RNG's management plan are assessed and updated.

### 4.3 The RNG's scientific potential is exploited and generates knowledge

- A scientific program is elaborated, integrating the RNG's management plan objectives and the studies to be conducted in component 1;
- The program is implemented : studies are conducted and their results diffused or published ;

### 4.4 Additional infrastructures are realized inside the RNG

- The tracks network is open and maintained as such ;
- A scientific camp (eco-lodge format) is installed ;
- The RNG boundaries are clearly materialized ;
- The vehicles fleet is adapted to the project ;

## **Component 5 : Management of the project**

Expected global result : The responsibility of the project, its implementation, its monitoring and evaluation by external auditors are adequately realized, *via* the direct support from the RNG's management team.

Expected results by action :

### 5.1 Consultation of all the stakeholders drives the project's management;

### 5.2 The schedule of activities is respected by the project's team who adapts itself to unforeseen events:

- Project's activities are known and reports on activities are transmitted every semester;
- The steering committee's meetings take place twice a year

5.3 External audits of the project's accounts allow the project to perform its functioning

5.4 A project team is constituted so that the project remains fully operational

### **III. PROJECT'S CONTENTS**

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To conserve the Miombo forests of the RNG and of its periphery on a sustainable way, it is necessary to diversify the RNG's financial resources and to insert the Reserve's management modalities into a broader financial autonomy program. The FFEM funds will enable to initiate this effort, building on a carbon offsets valuation mechanism, REDD+.

This REDD+ project will allow to :

- Prepare the RNG to the REDD+ mechanism by estimating the ex-ante potential reduction of GHG emissions due to deforestation and forest degradation of the Miombo forests (component 1);
- Develop a strategy for the implementation of activities and for the valuation of REDD+ carbon offsets adapted to the potential of GHG emissions reduction, as well as to the monitoring requirements (component 2);
- Develop pilot activities in order to reduce the pressure exerted on the Miombo forests, in close collaboration with the local communities and aiming to reduce poverty and dependence towards forest natural resources (component 3);
- Continue and strengthen the Reserve's management efforts, in accordance and continuity with the FFEM project implemented since 2008 by the MITUR and the IGF foundation (component 4)

#### **III.1. Component 1 : Estimate ex-ante the REDD+ potential of the GNR and its surrounding**

##### **Context**

Estimate the potential of REDD+ project requires (i) to assess carbon sequestration in the forest at project start and (ii) to estimate future deforestation. These two data will allow determining the net loss of biomass from which the GHG emission reductions attributable to the project will be calculated.

In the framework of REDD+, it is required to estimate accurately the carbon sequestered. Some data already exist and should be used. However, they will have to be completed and improved in order to reach the required level of accuracy (with best cost-accuracy ratio).

Between 1970 and 1990, the agriculture area of Zambezia province increased by 1,41% (499,475 ha on 20 years, SAKET, 1994). Between 1990 and 2002, because of demography, the mean annual deforestation rate was estimated at -0.71% (463,000 ha lost on 12 years, MARZOLI, 2007).

Until now, the RNG – which is the unique protected area in Mozambique without permanent habited area – remained relatively intact (especially on its western side) and represent today one of the larger uninterrupted forest of northern Mozambique.

However, natural resource of the RNG start to be under pressure: (i) surrounding population depends more and more on natural resource localized within the RNG, the surrounding being under degradation process ; (ii) the region is subject to large scale exploitation (various forest concession are contiguous to the RNG on its eastern and northern sides and the provincial government wish to develop cashew).

In theory, in accordance with its legal status, the RNG should be preserved of a massive deforestation. A management plan was elaborated for the Reserve for the period 2003-2007. It was accepted by the Government of Mozambique and aims to distinguish between a central area, an area for restricted exploitation within the Reserve, and a buffer area.

Without implementing a long-term financial financing mechanism for the RNG and its periphery, the current pressure will increase and boost deforestation inside and outside the Reserve.

##### **Expected Results**

The estimate of carbon sequestered requires crossing data on forest cover and land use with data on carbon density. For each type of land use, an average carbon stock will be estimated. This information will be then used in order to estimate emission factors representing carbon losses of land-use change.

The stratification of the project allows, thanks to the distinction of various land uses, to limit the number of measurements to be realized, for a given uncertainty and thus to minimize the cost of the project.

The stratification will be determined for the Reserve and its periphery, and for the "reference area" in the framework of the component 2. It will be carried out for the date of project start, and will then be deferred over the other years of the reference period (see component 2) in order to identify land-use change annually during the reference period.

The forest carbon is stored in several different compartments. According to the working paper of the UNFCCC of May 2009 on the REDD+ mechanism, the compartments to be considered are: aboveground biomass, belowground biomass, dead wood, litter and soil organic carbon.

According to the selected methodology and the ecological type of the Reserve - but also in a preoccupation of conservativeness (which compartment is significant and does not induce over-estimate of carbon stocks ?) and of cost reduction (which are the existing data and which are the costs for collecting data ?), some compartments could, or will have to, be considered.

One of the challenges of the REDD+ mechanism is to predict the level of emissions which would have taken place in the absence of the project. This ex-ante estimate makes it possible to establish a "reference scenario" that will be the basis for estimating the effective GHG emissions reductions of the proposed project activities. On the basis of the estimate of the historical deforestation of the RNG and its periphery, future deforestation will be quantified and located.

### **Actions to implement**

1.1 Assess the amount of carbon stored in the forests of the RNG and its periphery

1.1.1 Stratify the area in « forest » and « not forest »

- |   |
|---|
| <ul style="list-style-type: none"><li>• Analysis of existing forest stratifications and ground survey to determine a typology ;</li></ul> |
|---|

As far as possible, the stratification will be based on existing data, especially to ensure compatibility and capitalization at the national level.

Some data already exist. They will be studied and the methods of data collection analyzed in order to identify those which could possibly be used.

At the national level, it can be mentioned:

- A study led in 1994 (SAKET, 1994) during which satellite images of 1972 (Landsat ms) and 1990/1991 (Landsat TM) were interpreted for the whole country. This cartographic work was supported by a heavy ground survey to control and validate interpretation. (R-PIN, Appendix 3, initial source SAKET 1994);
- A national forest inventory was carried out between 2005 and 2007 (R-PIN, 2009).

These two studies present different forest typologies which do not allow a comparison, but they give indications on vegetal typology to consider for the RNG.

- At the level of the Reserve, it can be mentioned:  
National maps of vegetation produced in 1995 on the basis of the work of SAKET and which made it possible to identify six various types of vegetation in the Reserve;
- The first forest inventory of the Reserve, carried out by the MICOA in 1999. Four great forest types were identified at the time of this inventory;
- A typology of the vegetation was carried out in 2008 by interpretation of an Aster VNIR image (15m) and by a ground survey carried out on 39 circular plots of 804 m<sup>2</sup>. This study there made it possible to identify also four types of vegetation.

- Identification and acquisition of satellite images to cover the area of the RNG, of its buffer zone and the reference area, for a few years representative of the reference period (usually three to five dates out of the 10 to 15 last years);

- Forest stratification for 2012 and elaboration of final typology ;

The work of stratification requires to review the whole existing data and to establish for 2012 the most accurate stratification of the forest land-use and non forest land-uses, in accordance with the requirements of the methodology and the chosen carbon standard in the framework of the component 2, and on the basis of the satellite images lately acquired for this purpose.

- Cartographic validation through a ground survey ;

Once the stratification established, a ground survey will be necessary to validate the cartographic work. A sampling will be determined for each stratum.

The analysis of the results may lead to the validation of the stratification or a new stratification.

#### 1.1.2 Assign a carbon stock to each stratum

- Data analysis on existing biomass in the area or similar ecological area ;

As for the work of stratification, some data already exist. They will initially be analyzed in order to determine if they can be applied to the stratification of the RNG and its periphery.

A priori, the data that will have to be analyzed are:

- The IPCC default values for the forest types identified;
- The values used by other Mozambican REDD+ projects which target similar Miombo forests (for example the Sofala project developed by Envirotrade);
- Possible scientific data (especially the data of the University Eduardo MONDLANE, leader on the subject in Mozambique);
- The data collected nationally (DRIGO, 2008) and which, although they were collected for a study on the bioenergy, provide stocks of total biomass per ecological unit.

- Elaboration of a protocol for data collection and data analysis ;

By analyzing data mentioned above, according to the compartments and the methodology which will have been selected, a data collection will be organized on the Reserve in order to refine the estimate of carbon stocks and to reduce the level of uncertainty.

Some dendrology measurements were already collected on the Reserve (PRIN, 2008). They will be supplemented and used as a pre-inventory which will make it possible to calculate, by stratum, a coefficient of variability. This one will be used in order to determine the sampling of the biomass inventory. Lastly, data will be collected according to a sampling protocol accurate and adapted to the ecological zone.

- Elaboration of a guidebook for GHG inventories ;

A handy guidebook for GHG inventories will be produced at the beginning of the project. It will make it possible to translate the technical protocols into field toolkits. The guidebook will be produced in collaboration with the SPFFBZ and the DNTF, in charge of the methodological issues related to inventories in the framework of the implementation of the "MRV" system. The objective is to harmonize to the techniques at the national level.

- Training sessions related to GHG inventories ;

In order to be sure of the quality of the inventories and to be certain to be able to exploit the data, some training courses will be organized. The workshops will present the whole ecological approach of stratification

and compartments before approaching the practical and concrete aspects related to GHG measurements (measuring instruments, precision, organization of work, etc).

• GHG inventories

Some entities, as universities, will be engaged to carry on the inventories, including measurements related to soil organic carbon.

• Additional data collection ;

In parallel of the data collection, a review of the scientific literature and exchanges with scientists and other project developers which work on the Miombo forests will have to be carried out in order to identify allometric equations for the calculation of aboveground biomass from the dendrologic data (in particular the diameter at breast height). A thesis on the carbon of the Miombo is currently in progress (Envirotrade).

If no allometric equation is satisfactory, some destructive samples will be realized in order to elaborate new ones, specific to the species identified at the time of the inventory.

• Data analysis ;

The collected data will be analyzed and will allow obtaining a mean carbon stock per hectare for each forest and non-forest class.

1.2 Estimate ex-ante the future deforestation in the RNG and its periphery

1.2.2 Identify the historic trend of deforestation

• Identify the drivers, direct and indirect causes of deforestation (past, current, future) ;

The history of deforestation, or “reference scenario”, will have to be estimated for a “reference period” which will have been identified beforehand. The reference scenario testifies to the dynamics of deforestation that the project tries to stop. The reference scenario must take account of the specific context of the RNG and its buffer zone, the drivers and the causes of current and future deforestation, as well as their probable evolution in the future.

In Mozambique, the Miombo ecosystem contains the majority of productive forests of the country but also a considerable biodiversity and protected forests, which often result in land-use conflicts (R-PIN, 2009). The principal threats undergone by this ecosystem are the bush fires, the overexploitation of wood energy and timber, the coal production, the illegal hunting, the conversion of forest zones into agricultural lands and the strong concentration of human population.

The RNG was classified National Reserve in 2000. Since then and for lack of sufficient governmental financial resources, the protection of the ecosystem was more or less effective. Generally, the habitat was quite preserved within the Reserve. However, natural resources of the buffer zone are more and more exploited, and the populations - which depend on forest resources and slash-and-burn agriculture – increase pressure on the Reserve.

The forest concessions, localized on the eastern side of the Reserve are an additional cause of deforestation which tends to tighten the vice on the Reserve. Poverty, governance, and the lack of financial resources from the government are subjacent causes which encourage deforestation.

• Localize and delimitate a reference area ;

This reference area is not limited to the RNG and the buffer zone. It will allow:

- To refine and make more robust the statistical prediction model of the deforestation by increasing the number of data;
- To integrate causes and agents of deforestation which are not yet present in the RNG but which could arrive there without the proposed project activities.

According to the selected methodology, the reference area will have to be 200 000 ha to 2.5 million hectares. It will have to be similar to the project area from the point of view of the agents and causes of deforestation, the geophysics conditions, and the administrative and institutional conditions.

- Delimitate a reference period and identify three to five reference dates ;

By following the specific recommendations of the methodology which will have been selected, a reference period from three to 15 years will be defined. Within this period, a minimum of three dates will be identified, for which land-use maps will be produced by applying the stratification established for the year of project start (2012).

These dates will be selected by taking account of events and policies which could have induced a rupture in the last process of deforestation. The availability and the quality of the satellite images will be also considered.

- Application of the stratification to the reference period.

Once validated, the stratification will be applied to the satellite images acquired for the reference period. The land-use maps will not be limited to the RNG and its buffer zone, but will be produced for the reference area.

- Produce maps of land-use change, for positive (reforestation) or negative (deforestation) changes ;

The comparison of land-use maps will allow determining the land-use changes by period (for example 2000-2005 and 2005-2010). Emission factors will be applied to these activity data. The emission factors will be deduced from the mean carbon stocks of the initial and final land use.

- Deduce the annual amount of historic deforestation and the mean annual deforestation rates for each period.

The analysis of land-use change will lead to estimate the mean annual deforestation on the reference period.

#### 1.2.2 Quantify and spatialize the future deforestation of the RNG and its periphery.

- Analyze qualitatively and quantitatively the drivers, the direct and indirect causes of deforestation, and their probable evolution in the future ;

To predict the future deforestation of the RNG, of the buffer zone and the reference area, two elements will be estimated ex-ante:

- The quantity of future deforestation (expressed in hectares per year during project lifetime);
- The localization of this future deforestation in the reference area.

This work will be based initially on a qualitative and prospective analysis of the evolution of the causes and agents of deforestation in the future. This expected trend will be compared with the historical tendency obtained thanks to the comparison of the land-use maps produced for the reference period.

- Identify the most suitable method to estimate accurately and conservatively the quantity of future deforestation ;

According to the tendency which will have been identified for the past and the expected evolution of the causes and agents of deforestation in the future, and according to the pre-identified methodology, one of the three methodological options available will be retained (CALMEL et al, 2010):

- The average of the historic rate of deforestation;
- The continuation of the historical tendency (linear regression or not according to time);
- The modeling.

- Quantify the future deforestation



According to the adopted method, it will be a question of applying the historic rates, continuing the tendency, or developing an econometric model to model the evolution of the explanatory variables of deforestation;

- Localize future deforestation by using a spatial modeling software;

Once the results obtained, a number of hectares of deforestation per year will have been estimated. This quantity will be localized in order to translate this area into emissions (expressed in tons of carbon). A map of risk of deforestation will be produced for this purpose, on the basis of the characteristic of the zone (accessibility, altitude, quality of soils, etc). To do this work, spatial modeling software will be used (Land Change Modeler).

- Elaborate a monitoring and readjusting plan for the reference scenario ;

The reference scenario that will be obtained after quantification and localization of future deforestation will be valid only for a given period. After ten years, carbon methodologies advise to readjust the reference scenario by taking account of what really occurred in the reference area during the past years.

For the monitoring and update of the reference scenario, it will be necessary to build ex-ante a monitoring plan to follow-up the forest cover changes and variables used to establish the reference scenario. Eventually the carbon stocks will be also monitored in order to monitor forest degradation if the proposed project activities aim to valorize avoided degradation.

- Train the management team of the Reserve to control and readjust the reference scenario ;

For this purpose, the development of the reference scenario will be the opportunity to develop a capacity-building program making it possible to the management team of the RNG to follow-up and revalue the reference scenario.

- Organize consultation and restitution workshops with the team in charge of the elaboration of the national reference scenario (MINAG and MICOA).

In addition, the reference scenario of the project will have to be coherent with the reference scenario that will be adopted at the national level. For this purpose, workshops of consultation and restitution will have to be organized to:

- Anticipate the results of the national scenario by identifying the methods, the postulates and the variables retained at the national level;
- Feed the national debate with the experience feedback cumulated during the development of the reference scenario of the project.

#### **Actors and partners:**

- Foundation IGF : implementation – direct beneficiary ;
- National consultants or research departments (including universities, etc.) solved by contract through tender process. Execution of the services/work with possibility of sub-contracting tasks (inventories, biostatistics, etc);
- 1 International voluntary worker – REDD+ Technical Assistant: preparation of the terms of reference, contracting, control of the services/work, checking of the results (through tender process for international REDD+ expertise);
- 1 Mozambican REDD+ Junior Expert (1 to 3 years of experience);
- MINAG (DNTF + SPFFBZ), MICOA, Mondlane University, etc: will be consulted and kept informed.

### **III.2. Component 2 : Valorize the GHG emission reductions and other amenities**

#### **Context:**

Following the creation of the management plan signed in 2007 by the MITUR and the adoption of the principle of co-management MITUR/IGF of the RNG, the “Co-management” project of the RNG and its periphery” was adopted for four years (financed by FFEM until end of 2012). In the framework of this project, some activities were implemented and are still in progress. It is necessary to capitalize on these activities and develop new ones, then to analyze their relevance in terms of reduction of deforestation. These activities will be registered in the framework of the strategy of REDD+ activities.

To be perennial, the strategy of REDD+ activities has to be based on a durable strategy of financing itself. Thanks to the creation of carbon credits, the REDD+ mechanism reinforces the feasibility and the profitability of activities that will be able to generate other types of credits additionally (non timber forest products, wood products managed sustainably, agriculture and agroforestry products, ecotourism activities, etc.).

The diversity of incomes will be of course a plus for the permanence of the management activities of the Reserve, but also for the reinforcement of the participation of the various actors (in particular of local communities who will be able to benefit directly from the generated products) and consequently, for the perpetuation of conservation activities.

To date, only the standards of the voluntary carbon markets allow generating and exchanging REDD+ carbon credits. They offer practical and methodological frameworks to guarantee the environmental integrity of the activities, and avoid certain risks (non additionality, non permanence, and non-observance of the local populations).

Two categories of standards, nonexclusive (CALMEL et al, 2010) are distinguished:

- Those which allow generating carbon credits (expressed in tCO<sub>2</sub>-e avoided or removed), in accordance with rules and criteria preset. Among the most known, one will mention the VCS (Verified Carbon Standard), the CCX (Chicago Climate Exchange), the CAR (Climate Action Reserve), Plan Vivo and ACR (American Carbon Registry);
- Those which guarantee the quality of the whole project, without allowing generating carbon credits. They focus usually on various issues (biodiversity, communities, etc.) additionally to GHG. The standards of the CCBA and those of Social Carbon are the two most known examples.

Within a same category, the standards differ by their eligibility conditions and their approach. The tools they provide, their transaction costs and their average sale price also differ and will have to be taken into account during the selection of the most suitable standard to valorize the GHG emission reductions sought by the project.

#### **Expected results :**

A specific strategy REDD+ will be conceived to stop the dynamics of local deforestation. It will take account of the effectiveness and costs of the activities, of the requirements related to the monitoring of activities, of the GHG emission reductions, and of the objective of financial durability of the RNG.

Considering the potential of GHG emission reductions of the project, some objectives of emission reductions will be defined. The most efficient current activities will have to be maintained to continue and develop the efforts of emissions reductions due to avoidance of deforestation and forest degradation, the efforts of conservation and enhancement of carbon stocks (REDD+). The difference between the project scenario – i.e. the emissions due to remaining deforestation and degradation and to the project activities – and the reference scenario (component 1), allow estimating the net GHG emissions reductions of the project.

But the financial sustainability of the project will not be satisfied with the valorization of carbon credits only. Indeed, in first estimate, the Miombo ecosystem stores a relatively small quantity of carbon.

All the information collected in components 1 and 2 will be integrated into the PDD of the project (Project Design Document) that will be finalized and validated before the end of the project (within two years after project start).

## **Actions to implement**

### 2.1 Elaborate the REDD+ strategy of the RNG and its periphery

#### 2.1.1 Estimate the efficiency of the current activities

- Identification of activities targeting at least one of the drivers of deforestation and at least one of its causes (direct or indirect) ;

Each activity in progress a study of drivers and causes of deforestation will be carried on. For each one of them, will be identified the target groups, the destroying activities that it must stop, the lever used to stop it: incentive (increase of the value of the standing forest, increase of the value of existing deforested areas) or coercive measures.

This part is distinguished from the feasibility study because it is based on an analysis of the activities in the course of execution.

- Assessment of effectiveness indicators of activities

The effectiveness of the activities, thus classified, will be assessed and quantified as far as possible. For this purpose, several tools will be used, in particular tools proposed by the REDD methodology developed by Terra Global Capital and validated by the VCS. The carbon effectiveness of the activities will be estimated by crossing information on:

- Effectiveness of the activity itself in terms of reduction of deforestation (analysis of effectiveness indicators, different from one activity to another). A grid of criterion will be elaborated to identify clearly the activities considering: their relevance in accordance with community development (development of sustainable economic alternatives, payments for environmental services, etc); their relevance in terms of valorization of the buffer zone; their relevance to secure land tenure (delimitation or regulated areas); their support to the management of the park, in particular for forest controls (éco-guards).
- Risks of leakage (displacement of the activity outside project area);
- GHG emissions caused by the development of the activity itself (for example: emissions due to the use of fertilizers in the case of agricultural activities).

- Cost-benefit analysis for each activity.

The carbon effectiveness of the activities will be studied with regards to financial and economic costs.

A priori, additionally to the activities aiming to keep in place the management team, the activities to be privileged need to have an impact (i) immediate and (ii) which may undergo beneficiation on avoided deforestation, but to also take part in the reduction objectives of the poverty and reinforcement of the local communities.

#### 2.1.2 COMPLETE ACTIVITIES AND ELABORATE THE GENERAL REDD+ STRATEGY

- Selection of complementary activities ;

The diversity of the drivers and causes of deforestation requires diversifying the activities consequently. To be effective, a REDD+ project must propose an optimal combination of inciting and constraining activities while playing on the three levers (increase in the value of the standing forest, increase in the value of the already deforested, and constraints). However, none of these levers is sufficient and satisfactory at 100% on the long term (CALMEL et al, 2010).

In comparison with the effectiveness of the existing activities already in progress, and with qualitative and quantitative analysis of the drivers and causes of deforestation, new activities could be necessary to reinforce and sustain the effectiveness of the Reserve. Several ways could be studied. As far as possible and according to the existing experience feedback, they will be analyzed according to the same method used to study existing activities. This could concern new activities of extension/improvement of existing

activities, in partnership with local actors who already developed these activities (for example COSV, Envirotrade).

A priori, the activities to be developed will be:

- Development of alternative activities generating incomes for local communities: plantation and conservation of indigenous species of trees (nurseries, reforestation of degraded and marginal lands), small cattle breedings, etc;
- Sustainable agricultural development, agro-ecology, agro-forestry;
- Development of community-based eco-tourism projects;
- Sustainable forest management, etc.

The activities which will be privileged will be those which allow:

- To generate incomes additionally to carbon income, and thus to diversify incomes;
- To involve local communities who will benefit directly of project activities (participative development).

• Structuring and grading of activities in a coherent program of activities.

## 2.2. Engage the process of REDD+ carbon valorization

• Selection of the most suitable carbon standard and REDD+ methodology ;

Beyond the standard itself, the REDD+ project will have to identify and use the most suitable methodology to its context in order to estimate ex-ante the net GHG emissions reductions. For information, 14 methodologies were submitted to the VCSA, among which five could fit the REDD+ project of the RNG and its periphery. Only three of these five methodologies have been validated.

- The table below presents the methodologies classified according to three reading levels:
- Planned deforestation and degradation vs. unplanned ;
- Frontier deforestation and degradation vs. mosaic ;
- Deforestation vs. Deforestation and degradation.

If another standard is selected, other methodological approaches will be possible. The methodology and the standard will be selected thanks to an analysis of the eligibility conditions, to which will have to be added a cost-benefit analysis (costs of implementation of the methodology and transaction costs to validate and certify the carbon credits versus sale price of the carbon credits).

Eligible REDD activities	Available methodologies ( <i>status</i> )	
Avoiding planned degradation	(Refer to IFM methodologies)	
Avoiding planned deforestation	<ul style="list-style-type: none"> <li>- VM0004 - Methodology for conservation projects that avoid planned land use conversion in Peat Swamp Forest (Infinity Earth Ltd) (<i>approved</i>)</li> <li>- VM0007 - REDD Methodology Modules, ADP (<i>approved</i>)</li> </ul>	
	<b>Mosaic</b>	<b>Frontier</b>
Unplanned deforestation and forest degradation	<ul style="list-style-type: none"> <li>- VM0006 - Methodology for Carbon Accounting in Project Activities that Reduce Emissions from Mosaic Deforestation and Degradation (Terra Global Capital LLC) (<i>approved</i>)</li> <li>- RED-NM-001. Version 01, Methodology for Estimating Reductions of GHG Emissions from Mosaic Deforestation (BioCF, CDI) (<i>first assessment</i>)</li> <li>- VM0009 - Methodology for Avoided Mosaic Deforestation of Tropical Semi-Arid Forests (Wildlife Works Carbon LLC) (<i>approved</i>)</li> </ul>	<ul style="list-style-type: none"> <li>- RED-NM-002 - Methodology for Estimating Reductions of GHG Emissions from Frontier Deforestation (IDESAM, FAS, CDI) (<i>second assessment</i>)</li> </ul>

- Methodology for Carbon Accounting of Grouped Mosaic and Landscape-scale REDD Projects ( <i>first assessment</i> )
- VM0007 - REDD Methodology Modules (ADP) ( <i>approved</i> )

**Figure 9 : REDD Methodologies submitted to the VCS and possibly suitable for the REDD+ project of the RNG (Source : CALMEL et al.2010)**

The selected methodology will give indications and criteria to determine the reference scenario, like monitoring carbon stocks and GHG emissions on the long term.

It will have thus to be selected before the work of preparation of the component one, and to be used as a framework for the development of monitoring plans for biomass, forest cover, activities (especially the GHG emissions they could generate) and for potential socio-economic benefits.

- Elaboration and implementation of monitoring systems for biomass / land cover / activities / socio-economic benefits ;

The monitoring of biomass, land cover and activities is necessary for the certification of carbon credits. Indeed, if the project can be registered, it is only after the monitoring of ex-post emission reductions that carbon credits will be issued.

The monitoring system will have to allow controlling on the long term the evolution of deforestation. Based on elements and methods established during component 1, the forest cover will be controlled regularly, at a frequency that will be determined in accordance with the selected standard and monitoring costs.

- Finalization and validation of the PDD ;

Other elements will have to be collected and integrated to the PDD in order to finalize it. The PDD will then be submitted for certification under the selected carbon standard, in accordance with the certification procedures of the standard.

- Preparation to verification, issuance of carbon credits and sale of VER.

The PDD of the *Sofala Community Carbon Project* validated in September 2010 under the standards of the CCBA and Plan Vivo, announces a mean value of 26 tC/ha (approximately 95 tCO<sub>2</sub>-e/ha) for the aboveground biomass of the Miombo forests.

Considering that the RNG and its periphery undergo a deforestation rate of 0.71% (rate estimated by MARZOLI, 2001 for the province of Zambezia, which appears high compared to the historical deforestation of the RNG and its periphery) and that the project allows limiting this deforestation of 60%, the number of hectares of avoided deforestation will be approximately 2500 ha/year and the avoided emissions 240 000 tCO<sub>2</sub>-e every year, which is average.

The preliminary components must allow refining this coarse estimate with precise local data, in particular on areas really forested and on the rate of deforestation to be applied.

During this new estimate, the risks of non permanence of emission reductions will be also evaluated, as recommend by the voluntary carbon standards.

The permanence of the emission reductions depends on anthropogenic factors (related to the host country, to the organizational scheme of the project, to the biophysics risks with anthropogenic origin) and on non anthropogenic factors (biophysics risks linked to drought, cyclones, plagues, etc).

Based on this risk analysis, the project will have to put in reserve a part of the carbon credits generated (more or less important according to the level of risk and the standard) in a reserve fund (buffer). For a REDD+ project, the risk level varies from 10% to 40%. (CALMEL et al, 2010).

Considering that 20% of the carbon credits will have to be put in reserve, the REDD+ project of the RNG and its periphery could thus generate around 194,000 carbon credits per year.

In their report of 2009, *Ecosystem Marketplace* and *New Carbon Finance* announce average sale price of 6.3 US\$ per REDD+ carbon credit. In 2009, it remained constant at 2.9 US\$ according to *State and Trends of the Voluntary Markets 2010* of the World Bank. By supposing that a credit would be sold at 5US\$, the incomes from carbon of the REDD+ project of the RNG could reach 970,000 US\$ per year.

These estimates require being refined. Then, they will have to be integrated in a detailed financial analysis which will have to take into account all incomes (carbon and non carbon) generated by the project. It is indeed the diversity of benefits generated by the project that will make the REDD+ project of the RNG financially profitable and sustainable.

**Actors and partners :**

- Foundation IGF : implementation ;
- 1 REDD+ Technical Assistant contracted through tender process, and a Mozambican REDD+ Junior Expert (same than component 1);
- MINAG (DNTF + SPFFBZ), MICOA, Mondlane University, etc. : will be consulted and kept informed.
- Communities : beneficiaries of carbon credits (discussed in COMGIL) ;

### **III.3. Component 3: Development of pilot activities**

Several community development activities in the buffer zone have been identified in Component II.1. The activities, which have *a priori* the best interest for the Reserve (in terms of reducing GHG emissions, reducing poverty and from a financial point of view), will be developed as pilot sites.

These sites will be selected based on the current work done by the Reserve's co-management project and on the feedbacks from local NGOs experience, but also taking into account results of the stakeholder consultation. They will be integrated into the management plan.

Several set of activities should be explored in component II.1. They will help generate incomes for local communities, ensure sustainable agricultural development in the area, develop initiatives managed by local communities who will be reinforced locally and will be directly involved in the management plan of the Reserve.

With regard to deforestation agents and causes, and continuing the efforts already initiated, possible activities are:

- Agroforestry and agricultural intensification project to reduce pressures on *Miombo* forest, protect the Reserve by giving security and diversifying incomes of communities, who will be less dependent on the Reserve's resources;
- Community hunting area operationalization in the Reserve periphery for, among other things, reduce the fire risk in the Reserve;
- Development of an ecotourism project managed by the communities to provide an alternative source of incomes and strengthen the link between communities and natural ecosystems and their participation in the ecosystems conservation.

#### **Background**

Deforestation threat due to agricultural activities is still relatively low because there is no permanent population in the RNG, apart from a few farms on the northern boundary, near the village of Namurrua.

Even if this problem is marginal on the reserve, it is already threatening the buffer zone. With several thousand people living in the area, the clearing of lands for agriculture is increasingly important, particularly because of the forestry activities surrounding the area and which make communities look to the reserve to find lands.

For information, between 1972 and 1990, the agriculture area increased by 32% in Zambezia province, principally in the districts of Pebane and Gilé (SACKET, 1994).

The proposed agricultural development activities will include, mainly in some cases, binding levers (eg, obligation contract to stop their old activities for the local communities involved). Indeed, the introduction of new agricultural techniques may make deforestation activity even more profitable because the value of agricultural land is increased. In addition, they can give off workforce and be a focus for new populations to settle in the area, increasing the pressure.

As part of the RNG co-management project, a ZCV project has been adopted for the Reserve's periphery. Various studies have been completed or are in progress (preliminary inventory of large mammals, institutional, ecological and sociological feasibility study). The ZCV must be still implemented. This will include notably:

- Identify and define precisely the hunting area;
- Develop a management plan for the area;
- Develop a plan for profits sharing;
- Develop an operational plan;
- Develop tourism infrastructures for sport hunting.

From the perspective of reducing deforestation, practices within the ZCV will be regulated, contributing to reduce the fire risks and therefore deforestation risks. It will allow local communities to get a new income source while being directly involved in the maintenance of animal populations and their habitats.

The Reserve and periphery host emblematic species of large mammals (lion, leopard, elephant, sable antelope, etc.). Its landscape and vegetation are intact and home to many species of birds, reptiles and amphibians. Finally, its proximity to the coast and islands, make a privileged area for the development of ecotourism.

The proposed development of ecotourism aims to create an alternative source of incomes for the RNG and the local communities. To ensure its effectiveness in reducing deforestation and poverty, the ecotourism development project should be done in close collaboration with these communities, who must be involved and profit directly from the activity.

To do this, a project to support community is essential. The project must allow create the community management structure and training the local inhabitants in tourism services (guide, food and hotel business service).

### **Actions to be taken**

#### 3.1 Structuring local communities:

- Awareness, capacity building, communities training on the principle of association:
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The communities will profit from training on the legal framework of associations (statutes, rights and duties), the application of the principle of retrocession of the operating profits of community resources by a third person and on the management of community micro-enterprises. The implication of the district services (Gilé or Pebane, according to the communities concerned) in the capacity building sessions, as representatives of the Government and the populations, will ensure an “official” support of the local Governo. Indeed, structuring population in associations, forms integral part of the Government policy. The Government can contribute to sensitize populations on the objectives of associations creation.

- Sensitizing on payments for environmental services and “carbon revenues”:
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The project must prepare the communities as future beneficiaries of a part of carbon revenues. Training courses and information exchanges (public consultations) will be carried out in order to discuss the principle of payments for environmental services, the need to be structured in associations to profit, the rights and duties for all associations wishing to begin in this step, collect communities reactions, etc.

- Creation of COGEP and Community associations:
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Priority, this work will consist in supporting the creation of the first 12 COGEP (work initiated in phase 1) by taking care that they reach 10 people at least until their official recognition as associations. Additional COGEP could be created in agreement with the communities who wish, their basic infrastructure (community centre) being financed by the project.

- Cartography of communal natural resources:
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A participative evaluation of the communal resources existing in the RNG periphery will be carried out. It will make it possible to establish a first map of the community lands and will give indications on the level of control and the uses of land. It will also allow initiate delimitation work of the community lands. Corresponding maps must be produced and posted in the community centres. Data SIG have to be communicated to the district services of Pebane and Gilé together with the DPTURZ, the DPAZ and the Provincial Direction of the Ministry of Mines and Energy.

- Demarcation of the communal lands:
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Community lands demarcation is an essential official work which follows the establishment of the community land maps. Each community terrain must be delimited with precision to minimize the land conflicts *a posteriori*. This will make it possible to precisely evaluate the evolution of the land uses for each community. This process in addition implies the cadastral service of the district, the DPTURZ, the Government of the district and the DPAZ.



This work can begin near the communities having already a COGEP created or in creation. This work can be carried out from the year one and continued the following years, in order to follow the annual evolution of the process.

### 3.2 Development of conservation agriculture in the RNG periphery:

#### - Sensitizing and conservation agriculture advice:

Varied training courses will be organized around the following sets of themes: information on environmental impacts of slash-and-burn agriculture, information on the soils capacities and their agronomic potentialities, cultures to be emphasized (cash crops, varieties best adapted, etc.) and the alternative techniques of agricultural production (tillage, alternatives to uncontrolled fires and felling, etc), market perspective (with the concerned provincial services of MINAG) and cost-benefit analyses for the conservation agriculture in comparison with traditional agriculture (simplified business plans);

#### - Implementation of training and capacity building tools:

Installation of demonstration areas and community nurseries will make it possible to constitute and diffuse a local know-how. Training courses will be organized in the presence of the DPAZ technicians to open and facilitate the dialogue with the Government services charged of the agricultural extension. "Extensionists" will be charged to disseminate information and techniques to communities.

#### - Scientific monitoring of demonstration areas:

Practices implemented in the demonstration areas (residues management and soil cover, zero-ploughing or reduced ploughing, use of improved varieties of rice, introduction of the sugar cane in the riversides and use of foliar biomass to spread on corn crop to keep soil humidity in dry season, associations of perennial cultures with fixing nitrogen trees (leguminous plants), introduction of sorghum or sesame on poor soils, maintenance of herbaceous stratum, phytosanitary measures, etc) will be compared with pilot *machambas*. However, it is possible that the effects of the soils practices changes were observed after a few years (that is after the end of this project).

#### - Inputs and material diffusion for the interest groupings:

Several lines of agricultural equipment and inputs distribution could be implemented successively:

- Project financing/acquisition, which lends/rents to the communities: this system of loan/renting can be based on a system of micro credits (exchange of foodstuff against material, to define according to the orientations of desired productions). These loan/renting are conditional: the material cannot be used to open new *machambas*. Others conditions can be imposed.
- Material/inputs exchange against hunting traps: objective would be to get back traps in exchange of light inputs or seedlings.
- Community financing/acquisition: it should not take place before several years; considering the very limited investment capacities of the communities, technologies could not be acquired by themselves without showing their utility (=increase of outputs and incomes). The micro credits system introduced will constitute an agricultural development fund managed by the project, making possible the communities were self financing eventually.

#### - Implementation of production granaries and small units of drying

In accordance with the interested communities, granaries and storage units will be implemented. This will allow to increase the storage and drying capacities (in particular of cashew nuts - which improves quality and limit losses) and to pool related costs.

#### - Support populations for the cash products transport and marketing

Most of the purchasers move in the zone to buy the foodstuff. Farm-gate prices are very low and the practically no margins of negotiation exists. Bring the farmers together in associations and to group productions together (granaries) make it possible to reinforce communities' negotiation power when

purchasers come to stock up. In addition, the project will support to get regional markets (Quélimane/Nampula).

- Support communities in the integrated management of man-animals conflicts:

Project will allow continuing the current activities of man-wildlife conflicts management: sensitizing with distance techniques (*afujentamentos*), flares supply, community guard's formation with the rangers. The project will make it possible to develop new integrated management methods of these conflicts: for example, the creation of hedges in *piri-piri* (pepper, functions like natural repulsive) around the *machambas*, the most exposed to man-elephant conflicts, etc

3.3 Development of sporting hunting in the RNG periphery:

- Identify and operationalize ZCV management structure

The ZCV management structure will be supported with the communities of the zone, bring together in one or more associations and in one or more private investors, in order to guarantee the durability of the activity once the project is nearing completion. Identification of a private partner must be a priority for this part of the project. After that, a public consultation will be carried out to identify the retained option (number of associations, type of partnership, etc). Local authorities will be also consulted to collect their opinion.

- ZCV staff training

ZCV personnel (community guard, hunting guides, etc.) might be formed for the implementation of sportive hunting activities.

- Develop of a benefits sharing plan:

This benefits sharing plan must clearly identify ZCV recipients (communities through associations, local Government, ZCV management structure, etc) and propose a mode of sharing of benefits equitable and fair.

3.4 Development of the ecotourism in the RNG and its periphery:

Ecotourism development in the RNG is a big challenge: the site is distant from principal tourist transportation route in the area (towards the Coast) and the interior access poses problems, although infrastructures are under development. Moreover, there are relatively few animals in the RNG compared with other sites in East Africa, because of strong trees density and of the relatively low abundance of large mammals.

On the other hand, specialized tourism potential (scientific, botanical, ornithological...) exist all very well. RNG *Miombo* forests constitute a very wide massif, only stopped by the *dambos* and the inselbergs. These ecosystems are only disturbed by fire. There are many Orchids as well as sclerophyllous formations (on the inselbergs). Inselbergs are also the refuge of certain species of birds. Finally, there are several sites to establish eco-lodges (especially in Lice). In the long term, the reintroduction of animals must make it possible to see more large mammals.

The purpose of this under-component is to consolidate the assets in local ecotourism, to exploit the current possibilities and to take advantage of the ecotourist assets, to reinforce the position of the private sector in this field, to include local ecotourist development in regional development, to inform the communities and to prepare them for the development of this new activity.

- Rehabilitation of one or two sites in the RNG and eco-lodges installation :

Lice tourist camp must be completely rehabilitated and another site could be identify (if its tourist potential is recognized).

- Identification of tracks and reception paths and opening planning:

Tracks must be identified in order to reveal the biodiversity of the RNG, its landscapes, its cultural sites, and to join the tourist camps. Guides chalets (huts in cob) will be carried out along these paths and could also be used for the ecoguard's patrols.

- Private sector: organization of sites visit

Once these first infrastructures are identified or implemented, a visit of the site must be organized for the sector professionals (national/international tours operators). It will make it possible to establish a concrete bond with the private sector and will give clear indications of the future partnerships possibilities.

- Support for the development of a ecotourism regional strategy and its local declension

The DPTURZ supports the tourism sector to organize its development and to lay down the strategic directions of the sector. Regional strategy aims to implement the rules and standards for the development of tourist activities (currently it does not exist concerted development, in particular with respect to communities benefit). The RNG site must be integrated into this strategy with the support of DPTURZ. Districts authorities must be a stakeholder for the development of a local ecotourism strategy, aiming at emphasizing RNG sites and periphery. This strategy must also specify how communities will profit from these activities (in particular via associations). It will be created brochures presenting tourist sites of the zone as well as panels indicating the remarkable sites and species.

- Sensitizing, communities information, participative cartography of the tourist sites

Public consultations will be organized in order to present ecotourism activities to be developed and the implementation steps of these activities, collect the observations on behalf of the communities, etc. Ecotourism sites of interest, like the old colonial infrastructures and the sacred sites could be identified (and mapped) apart from the RNG with the communities support

Training courses will be organized in order to recruit potential tourist guides in the RNG among the population, and to train the local staff managing the tourist activities outside the Reserve.

- Prepare periphery communities to ecotourism development

As for the ZCV creation, a study will be led to identify the feasibility of community tourist concessions in the RNG's periphery, the targets association, with the DPTURZ support. This work must begin at the end of the ZCV implementation, which has a role of pilot. Synergies must be looked for with WWF-Care Alliance, present on the of Primeiras and Segundas archipelago, confronted with the same issues.

3.5 Develop of economic interest groupings: small-scale livestock, fish farming, joinery, NTFP (honey, mushrooms)

- Sensitize and inform the communities in RNG periphery in NTFP harvest

Training courses will be organized in each COGEP and beside the District Administrations with an aim of clarifying population's rights and duties concerning NTFP exploitation in RNG periphery. Prospects of developing the community associations for products marketing will be also tackled at these information meetings.

- Development and implementation of a NTFP exploitation accompanying program

RNG Management Plan envisages authorizing communities, under certain conditions, to exploit certain NTFP in certain zones of the Reserve. In order to make this exploitation sustainable, it must be accompanied by sensitizing and animation, at the COGEP level, on the following sets of themes: explanation of RNG opening to the exploitation of NTFP, exploitation regulation (which? when? what? how? etc). Accompanying program for the NTFP exploitation must be applied in the RNG and its periphery and integrate ongoing initiatives (honey, mushrooms...).

- Development and implementation of a small-scale livestock accompanying program

An expert mission in “Domestic animal proteins” will be launched for: define the protein alternatives of animal origin to develop (hens, guinea fowls, pigs, caprine species) according to the local constraints (adaptation capacities of the farmers, phytosanitary risks - to identify vaccination profile of the zone, estimate potential productivity levels, estimate the environmental and social impacts, etc.) and to work out a support program for the small-scale livestock based on the study recommendations and other previous studies, as on the DPAZ recommendations.

- Development and implementation of a fish farming accompanying program

An expert mission in “fish farming” will be launched to study the social and environmental impacts of traditional fishing, identify the support opportunities for the interest economic groups of the local fishery sector and to work out an accompanying program of the fishery sector based on the study recommendations and other previous studies, as on the DPAZ recommendations.

### 3.6 Activities effectiveness evaluation:

As part of component 3, it will be set up a monitoring system for socio-economic impacts of communities activities in the zone

- Implementation of a “Local Observatory of the prices and agricultural production”.

This observatory will play a double-role. On the one hand, it will make it possible to collect precise statistical data to evaluate profitability of pilot activities suggested in the subcomponent 3.1: observed productivities, marketed volumes, selling prices, cash flow, etc. These data will be collected for traditional and improved systems, in order to compare their effectiveness. The results will be diffused to all the project stakeholders. In addition, the observatory has the role to centralize and store the quantified data over time, in order to observe the evolution of the indicators.

- Mid-term evaluation of pilot activities socio-economic impacts.

A mid-term evaluation will be led in order to draw up an inventory of socio-economic impacts of the suggested activities, in particular to identify: effective populations structuring, levels of profitability reached by activities implementation, “winners and losers” of the activities implementation, levels of capacities reached by the communities in practices changing and “technification”, effective improvement of agricultural incomes, pressure levels on the traditional resources (NTFP, bush-meat, etc).

### **Actors and partners:**

Implementation of the subcomponents:

- Subcomponent “Local communities structuring”: COSV, ADRA, KPMG
- Subcomponent “Conservation Agriculture”: COSV with the support of a local partner to be identified.
- Subcomponent “ZCV”: IGF with the support of a local partner to be identified.
- Subcomponent “Ecotourism”: IGF, COSV.
- Subcomponent “Economic Interests Groups”: COSV, IGF.

Partners: local authorities and Provincial Directions (DPAZ and DPTURZ), WWF Care-Alliance, local NGOs (RADEZA, ORAM, etc.).

Local NGOs having recognized experience in these fields could be hired to carry out a certain number of activities of the component.

### **III.4. Component 4 : The Reserve's management**

#### **Context :**

The RNG and its periphery REDD+ project will only be possible if the current co-management efforts are maintained. Some activities that have been initiated during the first phase have a direct impact on the GHG emissions reduction and are complementary with the proposed community-based REDD+ activities.

#### **Expected results :**

The REDD+ project will support the current Reserve's management through :

- the implementation of an efficient control and surveillance system in the Reserve: combined with community-based development activities, the control of illegal activities will be continued at local scale. The recruitment and training of additional rangers (known as "ecoguards"), as well as the acquisition and maintenance of patrol equipments will allow the on-going efforts to be continued. A particular attention will be paid to the strict coherence between the control system and the relevant authorities and regulations existing in Mozambique;
- the improvement of the RNG's forest management, implying as much as possible the closest forest concessions. Similar management issues exist between these concessions and the Reserve : social conflicts, fire risks... Hence, some management practices realized inside the Reserve might be extended to its periphery in case of success, such as : fire risks mitigation practices using firebreaks, communities training to reduce the impacts of agricultural fires, etc.
- the acquisition of equipments and building of infrastructures, necessary to develop ecotourism and for the general Reserve's management;
- the implementation of the Reserve's management plan and its revision;
- the exploitation of the Reserve's scientific potential, particularly to understand the Reserve's dynamics, develop sound ecotourist alternatives and for its good management;

4.1 Implementation of an efficient control and surveillance system, as well as a community sensibilization plan.

- |   |
|---|
| <ul style="list-style-type: none"><li>• Sensibilization of the stakeholders living at the RNG's periphery</li></ul> |
|---|

Some communities declare they don't know their rights and duties towards the RNG and its buffer zone. However, the RNG exists since 1932, and none of the communities completely ignore its presence and the risks they incur by poaching within it. The objective of the sensibilization trainings is to explain clearly their rights and duties in case of offence (notably what is exactly their rights towards the rangers). Sensibilization will be as much as possible realized with the communities, COGEPs' representatives, rangers, the RNG Administrator, Gilé and Pebane districts police service as well as local magistrate confronted to such cases. It is the best way to ensure that the whole judiciary channel is aware of its limits and attributions. The rangers role and comportment will also be tackled during these sessions. The sessions will first take place in Gilé, where many conflicts exist. The sessions will be held in the community centres and in each district main city (local Administration will be present).

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|---|
| <ul style="list-style-type: none"><li>• Strengthen the coordination between Government's services when treating fines</li></ul> |
|---|

An information and experience-sharing session will be organized to reaffirm the fines treatment procedure, as well as the retrocession procedures, with the RNG's administrator, the SPFFBZ, the DPTURZ and the district services. The retrocession procedure is legal and it is assumed that it makes direct control more efficient. However, this presents also risks of power abuse. Hence IGF will have a preponderant role, ensuring the fine treatment monitoring, in order to confirm that the process will be conform to the Mozambican regulation.

- |  |
|--|
| <ul style="list-style-type: none"><li>• Installation of information signs in the community centres</li></ul> |
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To complete these sessions, information signs will be installed in each community centre, in order to ease the access to the information. Moreover, the signs will indicate what species can be hunted, and where in the RNG's periphery.

- Continuation of the rangers and community guards training

The rangers will be trained and constantly up-to-date regarding the applicable legislation. They will also know exactly their rights and duties towards the offenders. These training sessions could be realized in close combination with WWF Care Alliance (operating in the Angoche district on the same issues). Roles, competences and limits of their assignments will constantly be reminded to the rangers.

- Implementation of internal rules and regulations for the RNG

Based on the training session outcomes, a set of internal rules and regulations will be implemented in the Reserve, so that the rangers can refer to it constantly. The rangers chief officer and the RNG's Administrator will make sure that the set of rules is implemented and respected.

- Control and surveillance reinforcement in the RNG and its periphery

It is an essential factor to decrease the poaching pressure inside the Reserve. The project will allow to reach the number of 50 ecoguards (35 full time equivalents on the field). The community guards and the rangers will continue to realize patrols jointly.

- Communication and alert reinforcement system

The community guards are assigned to an information mission towards the rangers. They can indicate offences that have been committed recently or on-going on their community land. They can also signal the presence of poachers inside the RNG. Their functioning resources will be strengthened (with bikes, radios, uniforms – different than those of the rangers).

- Customary hunting supervision

If a complementary study shows its sustainability for the concerned species, customary hunting could be planned for certain traditional uses (for *Sylvicapra Grimmia* mainly).

#### 4.2 Management plan enforcement and complementary measures

- Elaboration and implementation of a fire risks prevention and management plan

External support will be needed to elaborate a fire risks prevention and management plan. This plan will be in full consistency with the plan designed for the ZCV and will be expanded to the whole RNG and periphery.

- Elaboration and implementation of a wildlife reintroduction and reinforcement plan

IGF will continue to work on wildlife translocation, biological monitoring (birds, orchids, etc.) and will supervise the biological monitoring system implemented in phase 1. Hence, IGF will elaborate and implement a provisional reintroduction plan. Then, the foundation will integrate the biodiversity monitoring datas into the MRV system developed in component 2.

- Evaluation of the RNG management plans objectives and updates

The previous complementary measures, as well as the RNG and its periphery REDD+ strategy, will be integrated to the management plan when updates will occur during the project's second or third year.

#### 4.3 The RNG's scientific potential is exploited and generate knowledge

- Elaboration of a scientific program

A scientific program will be elaborated. It will integrate the Reserve's management objectives, the complementary management measures, the studies realized within the project first component and each study that might help to develop the scientific potential of the Reserve. The program will be entirely part of the MRV system. He will be followed by IGF's technical assistant.

- Implementation of a scientific program

Scientific studies will be led and their results will be diffused or published to contribute to the global knowledge on the *Miombo* ecosystem, and to raise RNG's national and international visibility.

#### 4.4 Additional infrastructures will be realized within the Reserve

- The tracks network is open and maintained as such

In order to realize the activities foreseen, new tracks will be created and the tracks network will be maintained. Tracks must allow an easy access to the ecotouristic and scientific camps as wells as to the control checkpoints. This includes the rehabilitation of several bridges to avoid stream fording. If external workers are contracted, attention will be paid to their geographical origin (some communities feel less privileged than others in this regard).

- A scientific camp (eco-lodge format) is installed ;

A site will be identified for the creation of a scientific camp. This structure will provide accommodations for the IGF human resources and temporary visitors (experts, scientists, etc.). The structure will be equipped in consequence.

- The RNG boundaries are clearly materialized ;

It is highly important to delimit the southern limit of the RNG. There are no natural boundaries like in the other areas. The delimitation must be done with the local communities living close to the limit. A map will be produced and installed in every community centre.

- Strengthening the vehicles fleet

In order to get the activities operational (patrols, tracks and firebreaks opening, soil flattening, material and staff transport, wildlife reintroduction, access roads maintenance, illegal cut timber recuperation, participation to the information sessions, trainings, etc.) the vehicles fleet will be reinforced with a new vehicle (pick-up type) and a 80cv tractor.

#### **Actors and partners :**

- Implementation entity: IGF ;
- Partners : COSV, communities, local authorities and Provincial Directions (DPAZ, DPTURZ), WWF Care Alliance, local NGOs (RADEZA, ORAM) ;
- International or national expertise will be consulted to realize the Fire risks prevention and mitigation plan.

### **III.5. Component 5 : Management of the project**

#### **Context :**

This component's objective is to strengthen the capacities of ANAC, the IGF Foundation and COSV to manage and coordinate a biodiversity and natural resources management project at a conservation area's scale, making sure that local demands are well addressed and fighting effectively against climate change.

#### **Expected results :**

The activities will allow to conduct and implement the project in an effective way, combining the respect of the schedules with the adaptation to unforeseen events.

The activity will also cover the general costs not affected to particular activities, such as equipments, functioning and mobilization of the project's team, unforeseen costs and the external audits of the project's accounts.

#### **Actions :**

- Implementation of a decision-making mechanism based on consultation

At the beginning of each year, an annual program of activities (APA) will be discussed and established by the COMGIL, which composition represents all the project's stakeholders. The COMGIL is the development committee of the RNG. It will coordinate and harmonize the interventions of the different actors in the project area, in accordance with both the RNG Management plan and REDD+ strategy. IGF and COSV will be responsible for the APA's redaction. They will provide a provisional budget and set of activities to be realized within the year. The COMGIL will examine the proposal and accept the APA or ask for its revision. This annual roadmap will be presented to the local, provincial and central authorities concerned by the project.

- Transmission of the activities reports

IGF and COSV will transmit their activities reports to the COMGIL every six months, giving details on the realized activities in comparison with the foreseen activities and justify every gaps and delays.

- External audits

Between 12 and 24 months after the project's beginning, a mid-term evaluation will be realized by an independent consultant.

Each year, an independent expert will be responsible to audit the project's accounts.

Maximum one year after the project's end, external experts will realize a final evaluation.

Component's 5 results will be evaluated taking into account the following indicators :

- Semestrial steering committees are held and their proceedings are written;
- The annual program of activities, activities reports and financial audits are held ;

- Constitution of the project's team

The project team will be constituted as follows:

- The RNG's Administrator ;
- A project manager based in Maputo ;
- An IGF technical assistant based in Gilé close to the Administrator ;
- A REDD+ technical assistant ;
- Close to the project manager, a Mozambican REDD+ expert linking the pilot project with the national REDD+ strategy and relevant work being done at national level.



## **IV. INSTITUTIONAL ORGANIZATION OF FFEM FINANCIAL SUPPORT**

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### **IV.1. Contracting authority and contract supervisor**

The MITUR will be the **contracting authority**<sup>6</sup> as long as the ANAC is not fully operational.

The COMGIL (RNG's management committee) will pilot the project's activities. According to the New conservation policy (2009), the COMGIL is responsible for the RNG's management plan implementation. This committee is a place where stakeholders take local decisions concerning the RNG's management on participatory basis. It is also responsible for the management plan's revision.

As a contracting authority for the FFEM financial support, the committee will have to :

- Discuss and approve the annual action plans with the corresponding budgets;
- Coordinate the actions within the five project's components;
- Make sure that the actions undertaken by the project correspond to the national strategies;
- Validate the activities reports submitted by the contract supervisor<sup>7</sup>;
- Validate the use of budget for unforeseen events (on contract supervisor's demand);

According to the current management plan (version 2011), the following stakeholders compose the COMGIL:

- the Reserve's director;
- the Reserve's manager (IGF's technical assistant);
- Gile's district administrator;
- Pebane's district administrator;
- Gile's district SDAE chief officer;
- Pebane's district SDAE chief officer;
- three communities' representatives;
- one local NGO representative;
- one private sector representative.

In order to take into account the present project, the COMGIL should integrate also:

- a representative of each of the international organizations working in the project's area (not just one), at least ADRA and KPMG;
- a representative of the private sectors (forest, sportive hunting and tourism) intervening in the project's area.

The local communities' representatives will be elected within the COGEPs by the communities themselves. The private sector representatives will be designated by each professional corporation, with a priority to actors involved in the project.

As RNG's operator and co-manager, IGF will be the contract supervisor regarding the FFEM funds. The Italian NGO COSV will be the contract supervisor regarding the Italian cooperation funds. The project supervisors' representatives participating to the COMGIL's meeting won't have a decisionary role, but be observers.

### **IV.2. Financial framework**

The project's administrative and financial procedures will be those established for the first MITUR/IGF project supported by the FFEM.

The French development agency will sign a financing convention with the Bank of Mozambique, representing the Republic of Mozambique. The convention will indicate the MITUR as final beneficiary of the FFEM funds. Thus the MITUR will guarantee the project's realization and funds management coming from FFEM.

FFEM's funds will be managed as follows :

- IGF will elaborate an annual working program and an annual budget ;
- The annual working program and the budget will be submitted to the COMGIL for their technical and financial validation ;

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<sup>6</sup> maîtrise d'ouvrage

<sup>7</sup> maître d'oeuvre

- Funds will be transfer from AFD to IGF on MITUR's demand. IGF will open a specific bank account for the project ;
- 250 000 euros will be paid in advance to IGF. This advance will be reconstituted with the list of expenses established and transmitted by IGF to the French development agency under MITUR's and the Bank of Mozambique's supervision ;
- Each year, an independent expert will audit the project's expenses and will present its conclusions and recommendations to MITUR as well as directly to the French development agency and FFEM ;
- Contracts established between IGF and services providers will be directly paid by IGF (via the aboved-mentioned advance) ;

### **IV.3. Supervision**

The French development agency (AFD) and the Italian cooperation will have an observing member at the COMGIL.

The COMGIL's meeting will take place twice a year, except year one (three meetings at month 0, 6 and 12).

### **IV.4. Project's stakeholders**

The project's stakeholders are:

- The MITUR, the MICOA and the MINAG ;
- Project's operators: IGF and COSV;
- Local communities living around the RNG, at different levels: COGEPs, economical interest groups, traditional authorities...
- Gilé and Pebane's districts local authorities: Administrators, SDAE (Economic activities districtal services), local representatives (*chefe de posto*, etc.);
- Provincial authorities : DPAZ (particularly through the SPFFBZ) and DPTURZ;
- Central Government bodies: MICOA (particularly through the ANAC), MITUR, MINAG (particularly through the DNTF);
- The REDD+ national coordination (and the REDD+ technical unit once created);
- National organisations intervening in the project's area: ADRA, KPMG ;
- Local NGOs : RADEZA, ORAM
- University Mondlane in Maputo
- The private sector : forest industries, sportive hunting and ecotourism representatives, as well as agricultural products mongers...

IGF Foundation will develop partnerships in order to realize the project's activities. The foundation will work closely with COSV, an Italian NGO already present in the zone to support local communities in a rural development project framework.

Partnerships will also be developed with universities and national research institutes, in order to create an **ad-hoc scientific committee** to support the validation of the technical and scientific studies realized within the project's framework.

### **IV.5. The project's targets**

The project's targets are, first of all, the local population living inside the project's area and benefiting from the pilot activities that are implemented by the project. These population are highly concerned by the disappearance of local natural resources, essential sources of revenues for them.

The project will also benefit to local authorities (district level) and provincial level (Governo) through the multiple capacity building sessions and trainings to which they will participate. The authorities will also benefit from the local incomes raise, through local taxes.

The Governement of Mozambique will gain local experience, scientific datas and knowledge on REDD+ at project scale, in close relation with the REDD+ national strategy.

Finally, the project will benefit to the whole international community through knowledge generation about the *Miombo* ecosystem and protecting it.

#### **IV.6. Synergies with other FFEM projects :**

Synergies might be found with the “Quirimbas National Park projec” currently supported by the FFEM and the AFD. This project contains a REDD+ component.

## V. DURATION, COST AND FINANCING PLAN

### V.1. Duration and implementation plan

The project will start early 2012. The project's duration is three years, hence it will be spread until end 2014:

- Financing convention signature : January 2012 ;
- FFEM project implementation phase : January 2012 to December 2014;
- Phase d'évaluation du projet FFEM: January 2015 to December 2015;

Starting the activities early 2012 is important in order to synchronize the pilot project with the implementation of the national REDD+ strategy, meaning that the project could support the work done under this process. A detailed program of activities is presented in Annexe 3.

### V.2. Costs & proposed FFEM financial support

The total amount of the project is 5 million EUR. An amount of 2 million EUR is asked to the FFEM as a REDD+ endowment.

### V.3. Provisional financing plan

The provisional financing plan will be implemented per component and per year.

Le plan de financement prévisionnel sera mis en œuvre par composante et par année.

Components	FFEM	COSV	GoM	ADRA	KPMG	Partenaires	Crédits carbone	TOTAL
1. Estimating the REDD+ ex-ante potential for the RNG and its periphery	290 000							290 000
2. Valuing the GHG emissions reductions and other amenities	480 000							480 000
3. Development of pilot activities	450 000	1 000 000		530 000	80 000	140 000	300 000	2 500 000
4. Management of the National Reserve of Gilé	210 000		150 000			300 000	100 000	760 000
5. Management of the project	370 000					300 000	0	670 000
6. Unforeseen (10%)	200 000					50 000	50 000	300 000
<b>Total</b>	<b>2 000 000</b>	<b>1 000 000</b>	<b>150 000</b>	<b>530 000</b>	<b>80 000</b>	<b>790 000</b>	<b>450 000</b>	<b>5 000 000</b>

**Table 3 : Provisional financing plan**

Several comments must be brought to the above-mentioned contributions :

- contributions from the Government of Mozambique, ADRA and KPMG are confirmed ;
- contributions from the NGO COSV and the "Partners" will be confirmed during the first semester of 2012 ; see chapter "VIII.2 Conditionality".
- the carbon credits component reflects the project's objective : the generation of carbon credits through REDD+ activities for the RNG's and surrounding populations benefit. The integration of these carbon revenues is proposed from year 3, based on a conservative amount according to the first estimations made during the feasibility study. Contacts have been taken with the private company Envirotrade, with whom a partnership already exists on the Quirimbas project. Others partners will be identify during the two first years of the project.

Additional contributions might be confirmed in 2012. As their amount could not be determined at this stage, they have not been indicated in the financing plan.

One of these contributions might be the forest carbon measurements that are likely to be financed on the RNG and at national level (methodological contribution to the project) by the Japanese cooperation.

Another contribution might be the methodological and institutional works that the FCPF will support, to improve the methodological framework of the project.

## **VI. MONITORING-EVALUATION AND COMMUNICATION**

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### **VI.1. Evaluation of the expected impacts & project's indicators**

The following impacts are expected:

- *Environmental impacts*

Reduction of deforestation, compared with an established reference scenario;

Biodiversity protection in the RNG;

Ecological rehabilitation in the RNG, particularly through the repopulation of large mammals.

- *Social impacts*

Populations structured in associations that are functional and operational;

Equitable benefits-sharing amongst the stakeholders;

Diminution of land-use conflicts;

Abandonment of destructive practices towards natural resources;

Decisions taken on a participative basis between all the project's stakeholders.

- *Economical impacts*

Development of economic alternatives generating incomes for the communities;

Particularly, agricultural incomes raise and production is diversified;

RNG's financial autonomy is partly reached through financing mechanisms such as REDD+.

- *Capacity building*

Development and validation of a PDD, with the support of both international and national REDD+ expertise;

The Reserve's principal investments are done;

Scientific and technical knowledge improvement about the ecosystem *Miombo* (stratification in forest/non forest, carbon stock per strata, biodiversity inventories, etc.);

The historical deforestation trend is known and future deforestation is spatialized and localized;

A REDD+ strategy strengthen the RNG's management plan;

Governo's local services (districts administrations) and provincial directions participate to the project's execution.

### **VI.2. Aggregated indicators**

- *Environmental indicators*

Deforestation rate within the project area;

Quantity of patrols, kilometers run, quantity of poachers arrestations and material seizure;

Evolution of the principal species for biodiversity protection interest;

Quantity of reintroductions, evolution of reintroduced population enrollment.

- *Social indicators*

Quantity of associations officially created (to the official journal);

Existence of a functional benefits-sharing system;

Cartography of community lands and their natural resources, of RNG's limits and its periphery and of the ZCV;

Quantity of demonstration areas implemented by the project, quantity of smallholders changing their former practices in their machambas;

Existence of a public consultations system.

- *Economical indicators*

Mean household/individual revenue increase in the project's area, mean household/individual revenue increase in particular zones (ZCV for example);

Evolution of the mean agricultural revenue per hectare cultivated, mean agricultural revenue for the community as a whole, technification index for agricultural practices (subsistence and cash crops);

Evolution of the RNG's specific revenues due to the implementation of pilot activities;

Commercialisation of carbon credits, whose benefits go to the project's stakeholders (communities, RNG, etc.).

- *Capacity building improvement indicators*

A PDD mixing international and national expertise is finalized and validated;

RNG desimbursements are conformed to the management plan and the annual activities plan;

Quantity of studies realized in the RNG, quantity of scientific publications realized (national and international), cartography and raw technical data centralized and diffused, quantity of inventories realized per inventory type, attribution of a carbon stock to each stratum;

Availability of an historic deforestation scenario and a future deforestation scenario, spatialized and localized;

REDD+ activities are integrated into the management plan;

Quantity of Governo's representatives participants (local administration and provincial directions) in the capacity building sessions held by the project.

### **VI.3. Others indicators**

Monitoring of the actions implementation : steering committees meetings reports, activities reports on progress, capacity building sessions reports, synthesis documents, technical reports.

### **VI.4. Monitoring system**

An annual activities plan will be presented by IGF, COSV and ANAC during the first semestre of each year. The plan will be validated by the COMGIL.

Activities reports will be transmitted to the COMGIL by IGF, COSV and ANAC, on a semestrial basis, allowing to verify the realized activities regarding the previsional ones. Each delay or difference between both will be justified.

### **VI.5. Evaluation system**

A mid-term evaluation will be held during the project's second year (between months 6 and 12). Moreover a final evaluation will be held within a year after the project's end. Evaluations will be carried out by independent experts. Conclusions will be presented to and discussed by the COMGIL.

Evaluations will lean on an exhaustive assessment of the realized activities, in comparison with the activities in this note. They will also use the indicators grid presented in Annexe 3.

### **VI.6. Communication system**

For its communication needs, the project will be supported by the IGF foundation, whose internet website communicates essential informations on the project (IGF foundation activities reports, edited or co-edited publications, technical and scientific reports, oral communications, press articles, thesis...) and on COSV who will notably realize information brochures.

## **VII. JUSTIFICATION OF FFEM'S INTERVENTION**

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### **VII.1. Contribution to local, economic and social development in the country**

Through deforestation and forest degradation reduction, the project will contribute to limit the pressure limited on natural resources and will participate to the economical development of both the country and the local communities (forests are fonts of activities and revenues : carbone revenues from REDD+ activities, revenues from sustainable forests exploitation, revenues generated by tourism, etc.), as well as to the local development (better land use planification, in constant respect of the forests and indigenous people, improvement of social services...).

The project's objectives are clearly into line with the country's priorities and international community's priorities in terms of development, as it has been underlined in the Strategic plan for poverty reduction in Mozambique (PARPA II) and in the Millenium Development Goals (MDG).

The project will participate to reach tje following points of the MDG: (1a) "Reduce of half the population leaving with less than 1 USD per day", (7a) "Integrate the sustainable development principles into the national policies and programs, compensate the loss of environmentale resources" and (7b) "reduce the loss of biodiversity by reaching right after 2010 a significative reduction of the species extinction rate".

The project will also help to reach the PARPA II's objectives, which underlines (article 205) that "the major environmental priorities in Mozambique are concentrated on (...) the prevention of soils degradation, the natural resources management, the conformity to law, the institutional capacities strengthening...".

Finally, the structuration of the communities in associations (COGEP) will allow to establish economical and institutional partnerships (contracts of services, works, etc.) between the communities and the private sector for the sustainable exploitation of the area's natural resources (hunting, NTFP, ecotourism, etc). These partnerships will be protected by the mozambican laws and regulations.

### **VII.2. Contribution to the world's environment preservation**

The project will contribute to fight against climate change, reducing GHG emissions linked to deforestation and forests degradation. It will also participate to the protection of other components of the environment: soils, local climate, biodiversity, etc.

It will allow, as for the Quirimbas National Park (other FFEM project), to implement a model of resilience and adaptation capacities improvement towards climate change, through the implementation of activities dedicated to the reduction of deforestation in the northern Mozambique *Miombo* ecosystems.

### **VII.3. Exemplarity and innovation**

The most innovative characteristics of this project are:

- Similarly to what has been done in the Quirimbas National Park, the project will strengthen the RNG's capacity to be "climate change proof", maintaining the ecosystems resilience capacities through REDD+ activities;
- The development of Payments for environmental services (including carbon revenues from REDD+) in the case of protected areas, for rural communities, in order to support the long term viability of the RNG and its periphery.

### **VII.4. Demonstrability and reproducibility**

Two products will be applicable to other projects in the country, or in other countries: 1) the "Monitoring, reporting and verification" system for REDD+ and 2) the project's methodology.

However it is of highly importance that the Gouvernement of Mozambique takes into account and supports the project, in the framework of the development and implementation of its proper national REDD+ strategy.

Equally, if pilot activities are conclusive, they might be reproduced elsewhere in the country, as proven integrated development models.



#### **VII.5. Post project economic and financial viability**

Mozambique will shortly subscribe to the REDD+ mechanism, once its RPP is proposed and approved. Once integrated to the REDD+ mechanism, the efforts realized on the RNG project will be retributed by REDD+ funds coming from the international community.

If the pilot activities are conclusive (ecotourism, sportive hunting, conservation agriculture) it is expected that the private sector carries out their financing.

#### **VII.6. Ecological and environmental viability**

The project will only present positive impacts on forests, climate (global and local) and in other components (biodiversity, wathersheds, soils, etc.).

The RNG, as a natural reserve, has “by definition” its activity turned towards ecological sustainability: the project’s implementation will help to increase the RNG’s capacities to reach this objective.

#### **VII.7. Social and cultural acceptability**

In accordance with the United Nations declaration on indigenous people rights, none of the activities will be programd without the previous and formal agreement of these last. That is why it is expected that the communities representatives participate to the COMGIL.

Moreover, the project’s purpose being the preservation of natural resources from which local communities depend, without to restrict unilaterally their use rights or prejudice their livelihoods, it is assumed that the communities participation to the project will be natural.

Clear strategies to improve the rangers acceptability (and the RNG’s acceptability itself) were proposed, based on information, sensibilization, choices in ecoguards origins, combined training for population and rangers and diversification of animal proteins sources.

#### **VII.8. Adapted organizational and institutional structure**

The steering committee will be composed by representatives of each stakeholder, in order to ensure a just balance of roles and responsibilities within the project. The ANAC, with technical support from IGF and COSV, will be responsible of the COMGIL’s Secretary.

The project will imply districtal administrations and provincial directions in order to participate to the local capacity building sessions (in terms of environmental management and law enforcement). These activities are in full consistency with their technical competences and duties.

Other NGO’s and funding agencies active in the Zambezia Province and around the RNG will be implicated, in accordance with their interests and specific capacities.

The private sector will be implied in the development of commercial activities foreseen by the project, working on the development of partnerships with the associations and local economic interests groups.

## VIII. RISKS, CONDITIONALITY AND ACCOMPANYING MEASURES

### VIII.1. Risks and mitigation measures

	<i>Expected results from actions</i>	<i>Risks</i>	<i>Risks level</i>	<i>Mitigation measures</i>
<b>Composante 1 : Estimating the REDD+ ex-ante potential for the RNG and its periphery</b>	<b>1.1 The quantity of carbon sequestrated in the forests of the RNG and its periphery is evaluated :</b>			
	The stratification of forests and non-forests zones is complete	Satellite images unavailable	Low	Sensibilization of the decision-makers (participation to the REDD+ debate, to the necessity to have images...)
	Carbon stocks are attributed to each stratum	No allometric equation adapted	Medium	Use of destructive samples to establish a dedicated allometric equation
	<b>1.2 Future deforestation of the RNG and its periphery's forests is estimated ex-ante</b>			
	The historical deforestation trend is known	Satellite images unavailable	Low	Sensibilization of the decision-makers (participation to the REDD+ debate, to the necessity to have images...)
	An econometrical model and a spatial model quantify and localize the future deforestation	1. No statistically significative regression	Low	External expertise implied at the beginning of the project
	2. Not enough datas, or non exploitable	Medium	Rigorous sample plan, measures on the field supervised by a project's team member	
<b>Composante 2 : Valuing the GHG emissions reductions and other amenities</b>	<b>2.1 A REDD+ strategy for the RNG and its periphery is elaborated</b>			
	The on-going activities effectiveness is assessed	Effects appearing after the project's end	Important	Quick start of the activities to observe the results at least for the final evaluation (yr 4)
	Complementary activities are identified and organized into a coherent action plan (strategy)	Strategy not validated and not integrated to management plan	Medium	Implication/Sensibilization of stakeholders on the strategy elaboration process (particularly the district administration)
	<b>2.2 The REDD+ carbon offsets valuation process is engaged</b>			
	A PDD is produced and validated ; the stakeholders are consulted and the carbon credits beneficiaries are identified	PDD not validated	Low	Expertise REDD+ strengthen the project's team (international and up-to-date)
	A redistributive system is established to deal with the benefits	Political or institutional barriers towards the implementation of such a system	Medium	Legal structuration of populations in associations/ Integrations of local authorities in the elaboration process/ Rigorous identification of beneficiaries after public consultations
Carbon credits verification, preparation and commercialization got prepared	Lack of preparation	Low	Expertise REDD+ strengthen the project's team (international and up-to-date)	
<b>Composante 3 : Development of pilot activities</b>	<b>3.1 Organizing the communities in COGEPs with an associative status:</b>			
	Communities awareness is raised on the « Association principle », which is legally recognized, and are in full knowledge of their rights and duties towards the use of local natural resources;	Difficulties to communicate the messages and key-concepts	Medium	Local NGOs sensibilize populations & supervised by project's team : quality of the messages rise.
	Communities awareness is raised on the « Payments for environmental services mechanism » and in particular on carbon offsets, initiating the public consultation process ;	1. lack of interest caused by the absence of concrete actions	Important	Presentation of success elsewhere in the country (Sofala, Niassa...) – Develop concrete activities in parallel
	2. Difficulties to communicate the messages and key-concepts	Important	Local NGOs sensibilize populations & supervised by project's team : quality of the messages rise.	

New COGEPs are created and obtain the status of associations the same year ;	Associations not functional but not operational (lack of interest)	Important	Quick start of the activities to generate revenues/partnerships with private sector
A participatory cartography of the communities natural resources is established before the project's end ;	Data dispersion between actors, lack of technical coordination	Medium	Similar technical options (geographic system + projections) and centralization by IGF
Communities land demarcation is realized before the project's end.	Land use conflicts – impossible to establish a cartography	Low	Participative cartography with the COGEPs and traditional authorities + representatives
<b>3.2 Developing conservation agriculture in the RNG's periphery:</b>			
The communities awareness on conservation agriculture is raised, and technical support is provided with the COGEP's implication ;	Difficulties to communicate the messages and key-concepts	Medium	Local NGOs sensibelize populations & supervised by project's team : quality of the messages rise.
Demonstration areas and community nurseries are implemented as capacity building and training tools ;	Demonstration areas do not show rapid results	Important	Presentation of success elsewhere in the country (Sofala, Niassa...) – Develop concrete activities in parallel
A rigorous scientific support accompanies the development of conservation agriculture ;	No scientific monitoring	Low	Rigorous monitoring by IGF/COSV
Communities benefit from inputs and production material against some good management warranties ;	Deforestation practices subsist	Low	Implementation of loan system/conditional renting to orient the production
Production storehouse and small-scale drying units are established before the project's end ;	Traditional practices subsist	Medium	Populations sensibilization on post-harvesting techniques
Smallholders receive support to organize the transport and commercialization of cash-crops ;	Traditional practices subsist	Medium	Populations sensibilization on post-harvesting techniques
Communities receive support to manage human-wildlife conflicts ;	none		
<b>3.3 Developing sportive hunting in the RNG's periphery</b>			
The communities awareness on Community hunting area (ZCV) is raised ; they understand the ins and outs of this concept ;	Difficulties to communicate the messages and key-concepts	Medium	Local NGOs sensibelize populations & supervised by project's team : quality of the messages rise.
The ZCV's limits are clearly materialized on the field, maps are produced and diffused to the project's stakeholders ;	Poaching subsists in the RNG	Important	Cartography + participative demarcation – Control/Prevention with the communities
The ZCV's management plan is elaborated and implemented ;	The ZCV management plan is not respected	Medium	Quick start of the activities to mobilize the communities/sensibilization+information meetings frequent/management plan established after wide consultation
The ZCV's management unit is identified and operational before the project's end ;	Management structure functional but not operational	Medium	Quick start looking for private partners
The ZCV's staff is trained ;	Difficulties to communicate the messages and key-concepts	Medium	Local NGOs sensibelize populations & supervised by project's team : quality of the messages rise.
A benefits-sharing plan is elaborated, implemented and verified ;	Political or institutional barriers towards the implementation of such a system	Medium	Legal structuration of populations in associations/ Integrations of local authorities in the elaboration process/ Rigorous identification of beneficiaries after public consultations
<b>3.4 Developing ecotourism in the RNG and its periphery</b>			

	Rehabilitation of access to and infrastructures of one or two touristic sites in the RNG and build ecolodges in each one ;	Low touristic interest for the area	Medium	Working with the tourism sector to establish the regional strategy
	Identify ecotouristic trails and tracks and draw-up their opening;	None		
	Private investors are identified and co-invest in the exploitation of the local ecotouristic potential;	No private investor interested	Medium	Working with the tourism sector to establish the regional strategy
	The projects contribute to the development of a regional ecotouristic strategy and its local declension;	None		
	Raising awareness of and inform communities on ecotourism opportunities ; participatory cartography of potential touristic sites;	Difficulties to communicate the messages and key-concepts	Medium	Local NGOs sensibelize populations & supervised by project's team : quality of the messages rise.
	Communities are prepared to face the development of local ecotourism;	Difficulties to communicate the messages and key-concepts	Medium	Local NGOs sensibelize populations & supervised by project's team : quality of the messages rise.
	<b>3.5 Developing economical interests groups : small-scale livestock farms, fisheries, joineries, non-timber forest products (honey, mushrooms) harvesting and saling groups...</b>			
	Communities awareness is raised on their rights and duties to use NTFP in the RNG's periphery;	Difficulties to communicate the messages and key-concepts	Medium	Local NGOs sensibelize populations & supervised by project's team : quality of the messages rise.
	A "NLFP use accompaniment program" is established and implemented;	Lack of interest by the communities	Medium	Early work with communities to define their relations/needs towards NTFP exploitation
	A "small-scale livestock accompaniment program" is established and implemented;	Same		
	A "small-scale fisheries accompaniment program" is established and implemented;	Same		
	<b>3.6 Estimating the pilot activities effectiveness :</b>			
	Implementation of a « Agricultural prices and production local observatory » ;	Lack of technical datas	Faible	Monitoring by COSV
	Mid-term evaluation of the pilot activities' socio-economical impacts ;	None		
<b>Composante 4 : Management of the National Reserve of Gilé</b>	<b>4.1 An effective control and watching system is implemented</b>			
	The stakeholders awareness is raised on law enforcement issues ;	Difficulties to communicate the messages and key-concepts	Medium	Local NGOs sensibelize populations & supervised by project's team : quality of the messages rise.
	The coordination between the governmental services when treating fines is enhanced ;	Political or institutional barriers towards the implementation of such a system	Medium	Remind legal procedures to treat fines and share the benefits, in the presence of magistrates
	Information signs are installed in the community centres ;	None		
	The training of rangers and community guards is pursued ;	Conflicts persist with the population	Medium	Strong supervision of the rangers team (even eviction) / Local authorities implication to reduce tensions/ Sensibilization and information on incurred risks

	Internal rules and regulations are set for the RNG ;	Unapplied rules	Low	Warnings/evictions (under the Administrator's authority)
	Control and watching system is strengthened in the RNG and its periphery;	Illegal activities continue	Medium	Development of efficient alternative activities
	The communication and alert system is strengthened ;	None		
	Customary hunting practices are supervised.	Difficulties to communicate the messages and key-concepts	Medium	Local NGOs sensibelize populations & supervised by project's team : quality of the messages rise.
<b>4.2 The Reserve's management plan is implemented and complementary measures are developed</b>				
	A prevention and management plan for fire risks is elaborated and operational ;	Lack of interest for the program	Medium	Early work with communities on alternative agricultural activities
	A wildlife reintroduction and repopulation plan is established and operational ;	Reintroductions fail	Low	Sub-regional and national expertise in terms of wildlife reintroduction
	The objectives of the RNG's management plan are assessed and updated.	Complementary plans do not fit with the management plan	Low	Implication/Sensibilization of stakeholders in the strategy elaboration process (and in particular the Governos)
<b>4.3 The RNG's scientific potential is exploited and generates knowledge</b>				
	A scientific program is elaborated, integrating the RNG's management plan objectives and the studies to be conducted in component 1;	None		
	The program is implemented : studies are conducted and their results diffused or published ;	No available data / No article published	Low	Integrate component 1,2,3 in the scientific program
<b>4.4 Additional infrastructures are realized inside the RNG</b>				
	The tracks network is open and maintained as such ;	Bad planification, increasing the operational costs	Low	National expertise to support IGF
	A scientific camp (ecolodge format) is installed ;	None		
	The RNG boundaries are clearly materialized ;	The communities do not recognize the RNG boundaries	Medium	Participative cartography with the COGEPs and traditional authorities + representatives
	The vehicles fleet is adapted to the project ;	Vehicles fleet under – dimensioned, controls and surveillance inefficient, low local appropriation	Medium	Integration of these elements to the 1st annual activities report and discussion at the project's beginning
<b>Composante 5 : Management of the project</b>	<b>5.1 Concertation of all the stakeholders drives the project's management;</b>	Lack of appropriation by stakeholders	Important	Look after the operability of the concertations (COMGIL) and public consultations (with district authorities)
	<b>5.2 The schedule of activities is respected by the project's team who adapts itself to unforeseen events:</b>	Differences significative between proposed/realized activities	Medium	Respect the COMGIL meetings program, transmission of the reports
	<b>5.3 External audits of the project's accounts allow the project to perform its functioning</b>	Differences/Delays in desimbursement	Medium	Steering committee controls the desimbursements
	<b>5.4 A project team is constituted so that the project remains fully operational</b>	The project team is not competent on REDD+ aspects	Important	Strengthening de current team with 2 REDD+ profiles (international voluntary + national junior expert)

**Table 4 : Risks and mitigation measures**

## VIII.2. Conditionality

**Condition to the engagement of the first FFEM fund issuance of 1 million EUR and to the first disbursement :**

- Co-financing must be confirmed up to 1,275 million Euros (except carbon credits);

**Condition to the engagement of the second FFEM fund issuance of 1 million EUR :**

- All co-financing must be confirmed (except carbon credits);

## IX. ANNEXES

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## **Annexe 1: Avis du CST et éléments de réponse**

### **Avis du CST**

Comité de pilotage du 31 mars 2011

Comité Scientifique et Technique du 8 mars 2011

### **Projet : Réduction des émissions de gaz à effet de serre liées à la déforestation et à la dégradation de la forêt de Miombo de la Réserve Nationale de Gilé et de sa périphérie**

#### **Rappel du contenu du projet**

Le projet se situe au Mozambique et vise à protéger la Réserve Nationale de Gilé dans la forêt de Miombo, qui a fait l'objet d'importantes dégradations pendant la guerre civile. L'objectif du Projet est de pérenniser les activités de gestion et protection de la réserve qui ont initiées depuis 2007 par la fondation IGF et le Ministère du Tourisme (MITUR, en charge des Aires Protégées) grâce au mécanisme REDD+. L'idée est d'intégrer ces activités dans un cadre de valorisation REDD+ et de développer de nouvelles activités pour réduire la pression qui s'exerce sur la Réserve. Le projet s'articule en 4 composantes principales :

1. préparer la RNG au mécanisme REDD+ en estimant ex-ante le potentiel d'abattement des émissions dues à la déforestation et à la dégradation de la forêt de Miombo ;
2. développer une stratégie d'activité et de valorisation financière REDD+ adaptée au potentiel d'abattement et aux exigences en matière de suivi de la réduction des émissions de GES ;
3. développer des activités pilotes pour réduire la pression exercée sur la forêt de Miombo tout en impliquant les communautés locales et en réduisant la pauvreté et la dépendance aux ressources forestières ligneuses ;
4. poursuivre et renforcer les efforts de gestion de la RNG en accord et en continuité avec le projet mis en œuvre depuis 2008 par le Ministère en charge du tourisme de Mozambique et la Fondation IGF auquel contribue financièrement le FFME.

Une cinquième composante concerne la gestion du projet en lui-même et notamment les comités de pilotage et missions de suivi-évaluation.

Le bénéficiaire principal du projet est le gouvernement du Mozambique à travers le MITUR et le Ministère de l'Environnement et de l'Agriculture en charge du REDD+ ; le projet fait l'objet de co-financement et d'appui technique de la fondation IGF et de l'ONG italienne COSV.

#### **Contribution au développement local, économique et social du pays**

La Réserve de Gilé n'est pas une réserve habitée, la stratégie principale de protection consiste donc à fournir aux communautés vivant autour de la Réserve des sources de revenus stables se substituant à des activités susceptibles de menacer la Réserve comme la chasse illégale, la surexploitation du bois et le développement agricole dans la Réserve. La composante 3 du projet est donc essentiellement orientée vers le développement communautaire de la zone tampon à travers des activités pilotes : intensification agricole par l'agroécologie, agroforesterie, valorisation des produits forestiers non ligneux, création d'une zone de chasse villageoise, écotourisme. Sous réserve que ces activités puissent atteindre une rentabilité économique effective, condition de leur efficacité à protéger la réserve, elles devraient donc apporter une bonne contribution au développement local.

Une attention particulière devra être portée à cet aspect (évaluation de la rentabilité des activités développées et modèles économiques sous jacents) lors de l'instruction et du suivi du projet.

La fiche ne fait pas apparaître clairement la façon dont le projet travaillera avec des communautés dont il est mentionné qu'elles sont peu structurées.

Il a cependant été mentionné lors de la discussion que le projet ne part pas de zéro dans ce domaine, et que les initiateurs ont déjà réalisé un gros travail pour organiser la structuration de ces communautés et la façon de travailler avec les populations, reflété par exemple par les travaux déjà engagés pour définir et faire classer une Zone Cynégétique Villageoise.

On regrette par contre qu'il y ait peu de précisions sur la façon d'engager le secteur privé pour développer des modèles économiques viables sur les activités commerciales (notamment l'écotourisme et la commercialisation des produits non ligneux).

#### **Contribution à la préservation de l'environnement mondial**



La Réserve de Gilé appartient à la formation du Miombo, un écosystème de savane arborée dominé par des arbres du genre *Brachystegus* qui appartiennent à la famille des légumineuses. Cette formation est la plus répandue au Mozambique et couvre la plus grande partie du nord et du centre du pays. Ce n'est pas une formation rare (elle couvre de très grandes superficies en Tanzanie, Zambie et le Congo), mais elle est riche en biodiversité et subit de fortes pressions anthropiques : extraction des bois durs, production de charbon de bois, culture de brûlis, etc., en particulier au Mozambique où la déforestation est rapide. Tout projet qui freine cette déforestation va donc contribuer positivement à l'environnement mondial : réduction des émissions de GES, protection de la biodiversité. La Réserve de Gilé et sa zone tampon recouvrent une grande superficie relative aux projets REDD existants et en cours, leur contribution peut donc être relativement importante.

Il a par ailleurs été souligné lors de la discussion que cet écosystème est très particulier : contrairement à d'autres formations tropicales, les composantes sol et litière peuvent y stocker une quantité importante de carbone en raison du rôle joué par les ectomycorrhizes. Ce stockage dans le sol compenserait ainsi le stockage relativement limité dans la biomasse érigée par rapport aux forêts denses des zones plus humides.

### **Caractère exemplaire et innovant**

Le projet de Gilé serait le premier projet à viser une valorisation REDD+ pour une réserve naturelle au Mozambique, et représente donc à ce titre une innovation, d'autant plus que le mécanisme REDD+ est en lui-même une innovation au niveau mondial. Le Projet montrera pour la première fois en Mozambique comment les réserves naturelles peuvent bénéficier du mécanisme REDD+, et peut donc avoir un caractère exemplaire pour l'application de ce mécanisme dans d'autres réserves au Mozambique et dans les pays voisins. Par ailleurs, le Projet contribuera à la connaissance de l'évolution historique des stocks de carbone forestiers de la Réserve de Gilé et de sa périphérie, qui seront particulièrement utiles comme référence pour cet écosystème dont le caractère original a été souligné ci-dessus.

### **Caractère démonstratif et reproductible, effet de levier**

Le caractère reproductible du projet dépendra de son succès à protéger effectivement la réserve tout en s'intégrant dans une stratégie REDD+ nationale. Si tel est le cas, la même stratégie pourra être appliquée à d'autres réserves. Les revenus de la vente des crédits carbone générés doivent permettre de dégager un fort effet de levier par rapport aux financements apportés. Il subsiste toutefois de fortes incertitudes sur le cadre de valorisation de ces crédits, qui est inhérent à tous les projets intégrés à une démarche REDD+.

### **Pérennité économique et financière du projet et après projet**

Le Projet vise à inscrire la gestion de la Réserve dans un programme de pérennisation et d'autonomie financière.

Le Projet propose le développement d'activités économiques alternatives destinées à générer de revenus pour les communautés locales, sa pérennité dépendra donc de la rentabilité effective de ces activités et des modèles économiques sous-jacents (cf. ci-dessus). La pérennité d'éventuels revenus REDD+ dépendra de l'intégration de la Réserve à une stratégie REDD+ nationale et de la valorisation effective de ces réductions d'émissions, qui est un des objectifs de la composante 2.

### **Viabilité au plan écologique et environnemental ; Acceptabilité sociale et culturelle**

Ces deux aspects sont intimement liés, et c'est bien là toute la problématique de ce projet, comme celle de tous les projets de protection intégrée similaires. L'objectif est de fournir aux populations des revenus plus attractifs que ceux qu'ils obtiendraient par des activités agricoles ou extractives dans la Réserve. La viabilité écologique dépendra donc entièrement de la capacité du projet à fournir des activités plus intéressantes que les activités existantes, ce qui est toujours difficile du point de vue social. Pour y parvenir, il est essentiel d'impliquer les communautés locales à tous les niveaux. En particulier, il est essentiel de réfléchir aux modalités de recrutement et d'intervention des gardes de la réserve qui semblent actuellement mal acceptés par la population, et ce alors que le projet propose d'en augmenter les effectifs.

### **Adéquation du cadre institutionnel et organisationnel**

Le montage qui est proposé semble être bien équilibré entre la participation d'acteurs étatiques pertinents et d'acteurs non gouvernementaux et bailleurs de fonds. On note toutefois une carence au niveau de

l'implication du secteur privé dont la participation sera essentielle pour certaines composantes comme l'écotourisme. La participation des institutions de recherche et d'enseignement supérieur doit également être spécifiée vu l'importance des composantes techniques et scientifiques sur la composante 1 en particulier.

### **Avis du CST : Avis favorable avec points d'attention pour l'instruction**

Le CST juge le projet intéressant, il représente en effet un bon équilibre entre la volonté de développer une stratégie REDD+ cohérente susceptible de s'intégrer dans une stratégie nationale, avec un montage institutionnel adéquat, et le développement d'activités de développement local pour protéger la réserve de Gilé de la pression anthropique. Si le projet atteint ses objectifs il aura un fort caractère d'exemplarité pour d'autres réserves au Mozambique et dans d'autres pays, et permettra de mieux comprendre la contribution de l'écosystème Miombo au stockage de carbone.

Le CST note toutefois un certain nombre de risques inhérents à ce type même de projets, liés aux incertitudes sur la rentabilité effective des modèles économiques proposés en remplacement des activités agricoles et extractives menaçant la réserve. Une attention particulière devra être portée à ce point lors de l'instruction du projet : quelle méthodologie pour évaluer, suivre et optimiser la rentabilité de ces activités et leur caractère attractif et durable pour la population ? Une meilleure implication du secteur privé sur certaines composantes (écotourisme, commercialisation des produits non ligneux...) est également nécessaire.

Une attention particulière devra également être portée à l'intégration dans la stratégie REDD+ nationale, et aux modalités de redistribution des revenus REDD+ éventuels. Enfin, le CST demande aux porteurs de projet de proposer des stratégies claires pour améliorer l'acceptabilité des interventions des gardes de la Réserve par la population.

#### **Eléments de réponse :**

##### **1. Evaluation de la rentabilité des activités développées et modèles économiques sous jacents**

Le projet ne propose pas de remplacer les activités agricoles et extractives actuelles, mais 1) de mettre en pratique les principes de gestion durable des ressources naturelles dans la gestion effective du milieu (activités agricoles et extractives y comprises) et 2) de placer les communautés en situation de tirer de véritables bénéfices de l'exploitation des ressources naturelles de la zone. Les activités agricoles proposées sont tournées vers l'augmentation des revenus communautaires, en augmentant la productivité agricole (utilisation de légumineuses, d'intrants, de variétés améliorées), en améliorant les techniques post-récolte (séchage et stockage) et en renforçant le lien entre les communautés et les marchés (transport et commercialisation), en capitalisant sur les cultures de rente déjà présentes dans la zone du projet (cajou, sésame, arachide...) et dont la mise en culture a encore des marges de manoeuvre. De plus le projet propose d'appuyer la structuration des communautés en associations, pour qu'elles accèdent aux bénéfices tirés de l'exploitation de leurs propres ressources naturelles par des tiers (taxe d'exploitation communautaire sous forme de rétrocession), incluant les activités forestières, écotouristiques et la chasse. Enfin le projet appuiera les groupements d'intérêts économiques pour la structuration de filières (PFNL, petit élevage, pisciculture, menuiserie...). Etant donné que les effets du projet ne se feront sans doute pas sentir à court terme, une activité de suivi et d'évaluation à mi-parcours spécifique des activités pilotes est proposée (3.6). Cette activité repose sur la mise en place d'un Observatoire des prix et de la production agricole qui permettra de récolter les données nécessaires pour évaluer la rentabilité des activités proposées.

##### **2. Structuration des communautés locales**

La structuration des communautés locales est un élément clé du projet, en continuité des actions entreprises en phase 1 (structuration des COGEP). Ainsi, un ensemble d'activité (3.1) est dédié à cet aspect. Les communautés structurées en COGEP (Comité de Gestion Participatif) obtiennent le statut d'association, leur octroyant notamment le droit d'établir des partenariats avec un tiers pour le développement d'affaires (personnalité juridique, compte bancaire, etc.). La cartographie participative des ressources naturelles intervient pour délimiter clairement les ressources de chaque communauté, préalable à l'obtention des DUAT (Certificats d'usage et d'exploitation des terres). A partir de ces documents, les communautés locales peuvent entrer en partenariat avec un tiers pour l'exploitation de leurs ressources. Toutefois, le projet prévoit un accompagnement sur le long terme des communautés dans cette démarche, à travers des sessions de formation et de sensibilisation au principe d'association, et l'application très concrète de la démarche (appui à l'obtention des statuts, prise en charge de la cartographie communautaire par le projet, appui à l'obtention

des DUAT). Actuellement 12 COGEP sont en voie de structuration (maison communautaire construite et bureau constitutif en place).

### 3. Modalités d'implication du secteur privé

Le secteur privé peut potentiellement intervenir à différents niveaux au sein du projet :

- a. à travers le développement de la chasse sportive (ZCV) : il est proposé que l'équipe de gestion de la ZCV soit issue d'un partenariat entre les communautés structurées en associations et un intervenant privé. Pour l'heure cet intervenant n'a pas été identifié, mais devrait l'être d'ici la fin 2011.
- b. à travers le développement de l'écotourisme dans la RNG et sa périphérie : le projet sera intégré à la stratégie régionale écotouristique de la province de Zambezia (à laquelle participent des représentants du secteur privé et du MITUR) et des professionnels du secteur seront invités à s'exprimer sur le potentiel de la zone, dans le but de développer à terme un partenariat pour son exploitation écotouristique.
- c. à travers les groupements d'intérêts économiques, pour l'appui à la mise en place de filières de transformation, transport et commercialisation (PFNL notamment).
- d. à travers la mise sur le marché de crédits carbone REDD+.

### 4. Prise en compte du carbone du sol dans les inventaires de GES

Dans l'écosystème Miombo africain, le carbone du sol représente une fraction majeure du carbone total présent dans l'écosystème. D'après Walker et Desanker (2004), on estime que le carbone jusqu'à 1,5 mètre de profondeur représente entre 50% et 80% du stock total de carbone présent dans l'écosystème Miombo (dont 40% dans les 20 premiers centimètres). D'après Campbell et al. (1998) 60% du carbone total de l'écosystème Miombo est compris dans le sol. Selon Williams et al. (2008) ce chiffre monte jusqu'à 84%. Les protocoles d'inventaires tiendront compte de ce phénomène en incluant l'étude de la biomasse souterraine.

### 5. Acceptabilité des écogardes et modalités de leur recrutement

Les stratégies d'amélioration de l'acceptabilité des écogardes font l'objet d'activités spécifiques:

- a. sensibilisation des communautés sur leurs droits/obligations vis-à-vis de la Réserve et de la zone tampon. Ces sessions communes de sensibilisation auront lieu en présence des bureaux constitutifs des COGEP, des gardes communautaires, des écogardes, de l'Administrateur de la RNG et des services de police de Gilé ou Pebane ainsi que des magistrats des districts compétents pour juger ces affaires. L'objectif est de mettre chaque acteur en face de ses responsabilités et de préciser les risques encourus par chacun lorsqu'il outrepassé ses attributions/droits.
- b. Les écogardes seront recrutés en priorité parmi les gardes communautaires de la zone du projet, dont certains ont déjà tous les prérequis pour devenir écogardes (excepté l'entrée officielle au service de l'Etat mozambicain).
- c. Les écogardes devront être formés et tenus constamment à jour de la législation applicable et connaître parfaitement leurs droits et obligations envers les contrevenants, ceci afin de limiter les risques de contestation de la part de ces mêmes contrevenants. Ces formations pourront être réalisées conjointement avec le WWF-Care Alliance qui opère dans le district d'Angoche sur les mêmes problématiques. Rôles, compétences et limites de leur fonction seront constamment rappelés aux écogardes.
- d. Un règlement intérieur sera mis en place dans la RNG de manière à ce que les écogardes puissent s'y référer à n'importe quel moment. Le chef des écogardes et l'Administrateur de la RNG veilleront à la rédaction du règlement intérieur et à son application.

### 6. Implication des organismes de recherche et de coopération scientifique

Les organismes de recherche et de coopération scientifique pourront intervenir dans le projet à différents niveaux:

- a. exécution des travaux de l'ensemble d'activités 1.1 : réalisation de la stratification forêts / non-forêts, inventaires de GES, établissement d'équations allométriques.
- b. suivi scientifique des aires de démonstration (cf. activité 3.2)

Pour ces activités ils seront contractés sur appels d'offres avec mise en concurrence, excepté si un organisme souhaite co-investir dans le projet pour prendre en charge une ou plusieurs activités en particulier.

Pour faciliter l'ensemble des activités scientifiques menées au cours du projet, un camp scientifique sera installé au sein de la RNG et un programme scientifique établi pour la coordination de l'ensemble.

### 7. Incertitudes sur le cadre de valorisation des crédits carbone REDD+

En l'absence d'un cadre de valorisation réglementaire pour les crédits carbone issus de projets REDD+, le marché volontaire offre de bonnes perspectives de commercialisation des crédits.

#### 8. Intégration dans la stratégie REDD+ nationale

Les activités ont toutes été pensées dans un double cadre : réponses à des besoins locaux – intégration à la stratégie nationale REDD+. La stratégie nationale (draft à l'heure actuelle) indique que la REDD+ représente une opportunité pour stimuler l'implication des communautés locales dans la préservation de la biodiversité (p.26). Ainsi, parmi les potentielles aires de test de REDD+ 2010-2012 établis pour le Mozambique figure la zone tampon de la RNG.

Les objectifs du projet coïncident avec les objectifs stratégiques détaillés dans la stratégie nationale REDD+, notamment:

- objectif stratégique n°1 (extrait):
  - o établir et opérationnaliser les Comité de gestion participative (COGEP) (cf. Act 3.1)
  - o évaluer les potentialités de la terre et développer un plan d'usage des sols à une échelle opérationnelle (cf. Act. 3.1)
- objectif stratégique n°2 (extrait) :
  - o promouvoir la recherche appliquée sur les systèmes agricoles et l'élevage (cf. Act 3.2 et 3.5)
  - o améliorer les rendements agricoles et les niveaux de production (cf. Act 3.2)
  - o promouvoir l'analyse des marchés des produits agricoles (cf. Act 3.6)

Les activités proposées prennent en compte certains aspects détaillés dans la stratégie nationale REDD+ au sujet de la mise en oeuvre locale des projets :

- a. nécessité d'établir les causes exactes de la déforestation et de la dégradation, en effectuer le zonage (composante 2) et identifier les potentielles alternatives économiques (composante 2 et 3)
- b. pour le Zambezia en particulier, prendre en compte l'impact des incendies non maîtrisés et développement d'alternatives (composante 4)

Enfin, concernant les inventaires forestiers, il est prévu de travailler étroitement avec le DNTF responsable de l'élaboration des méthodologies d'inventaires nationales, afin que les données issues du projet s'inscrivent dans le système national de monitoring, reporting et verification (MRV).

#### 9. Modalités de redistribution des revenus REDD+ éventuels

Les modalités de redistribution des revenus REDD+ éventuels seront définis en cours de projet par une analyse du rôle des parties-prenantes, de leur implication dans le projet, du cadre légal en vigueur au Mozambique, etc. Un plan de redistribution des revenus REDD+ sera élaboré dans le cadre de la composante 2.

*Ces éléments de réponse sont établis par le responsable de la NEP avec l'appui du Secrétariat du FFEM en tant que de besoin.*

**Annexe 2 : Avis du Secrétariat et commentaires du Comité de Pilotage sur la note d'identification du projet (NIP)**

**Commentaires du Comité de Pilotage du 5 Avril 2011**

PROCES-VERBAL

DE LA REUNION DU COMITE DE PILOTAGE DU 31 MARS 2011

**1. Examen des projets présentés à l'engagement et à l'identification**

**b) Examen des projets présentés à l'identification**

**Changements climatiques**

**MOZAMBIQUE – « Réduction des émissions de gaz à effet de serre liées à la déforestation et à la dégradation de la forêt de Miombo de la réserve nationale de Gilé et sa périphérie » (présentation AFD) - Financement FFEM : 2.000.000 euros**

Le Président du Comité de pilotage ne prend pas part à la discussion compte tenu de conflits d'intérêt.

Sur la base de la note d'identification proposée avec des avis favorables du CST et du Secrétariat, le projet est accueilli favorablement par tous les membres du Comité de pilotage.

Il est demandé à ce que l'étude de faisabilité analyse plus finement le jeu des acteurs locaux, ce que le projet va changer pour eux : qui va y perdre et qui va y gagner ?

► **Le projet est adopté au stade de l'identification.**

**Eléments de réponse :**

1. Qui seront les gagnants et les perdants du projet ?

Le projet bénéficiera aux communautés dans leur ensemble, avec toutefois différents degrés de bénéfices. Parmi les principaux bénéficiaires des communautés on trouvera les représentants qui siègent au COGEP, car ils bénéficieront de la plupart des activités de renforcement de capacités et seront des acteurs essentiels de la gestion des ressources naturelles de leur communauté. Les représentants des communautés au COMGIL auront également un statut supplémentaire. Ensuite, concernant les activités agricoles, viennent les individus qui peuvent se permettre (économiquement) de passer le cap "technologique" plus rapidement que les autres. Ceux-ci verront leurs revenus augmenter plus rapidement que les autres. De manière générale, seront favorisés les individus lettrés de la communauté. En effet, le développement économique de la zone repose sur la structuration d'associations légales et le partenariat avec le privé, ce qui implique la création de statuts, de DOAT, etc. Les individus lettrés devraient tirer partie de cette situation en occupant des postes importants au sein de la communauté (dans les COGEP notamment). Entre les communautés, celles qui sont situées dans la ZCV devraient tirer plus rapidement de bénéfices du projet (en matière d'appui à la structuration et au lancement d'activités pilotes). Celles qui sont en dehors de la ZCV pourront bénéficier de la présence d'aires de démonstration, ou de sites écotouristiques. Les bénéfices qu'elles en tireront seront a priori moins immédiats. Les communautés se situant au plus proche des camps de la RNG seront des réserves de main d'oeuvre pour la construction d'infrastructures. Ainsi, les communautés les plus éloignées devront ressentir un manque à gagner par rapport à leur situation défavorable. Les communautés qui ne seraient pas structurées en associations seraient également défavorisées. Enfin les communautés se situant aux abords de la zone de projet mais non incluses dedans seront les plus "perdantes" dans l'immédiat.

Les activités agricoles et le développement d'activités économiques en général (PFNL, pisciculture) devraient bénéficier également à l'ensemble de l'aval des filières en question jusqu'aux commerçants locaux (augmentation d'activités, bénéfices liés à la diminution des coûts de récolte, etc.). A l'exception toutefois des individus de la filière en situation de monopole (notamment certains acheteurs). Les clients finaux pourront être considérés comme gagnants (mise sur le marché d'une plus grande quantité de produits de qualité : miel, champignons, cajou) à l'exception de ceux qui s'approvisionnent sur les marchés parallèles

aux prix plus faibles. Enfin l'appui de certains acteurs au détriment d'autres pourraient être perçu comme de la distorsion de marché par ceux-ci (exemple : favoritisme de sites touristiques par rapport à d'autres). L'ensemble des filières clandestines ou illégales (braconnage, exploitation illégale de bois et de PFNL, et les filières Annexes type "fournisseurs de pièges à trappes" etc.) devraient être atteintes par le projet qui prévoit un renforcement du système de contrôle et de surveillance, un meilleur traitement des amendes, ainsi que le renforcement de la position des communautés dans la gestion des ressources naturelles.

La modification de certaines pratiques traditionnelles peut également défavoriser certains acteurs ponctuellement. Un plan de gestion et de prévention des risques incendies trop prohibitif défavoriserait certains chasseurs (légaux) et les agriculteurs n'ayant pas encore d'autres alternatives que le feu à disposition.

La puissance publique (du niveau central au niveau local) devrait bénéficier dans son ensemble du projet. La mise en place d'un projet pilote REDD+ est bénéfique au développement du contexte national REDD+. Le Governo bénéficiera de diagnostics précis des causes de déforestation/dégradation. Au niveau local, il bénéficiera directement de certaines sessions de sensibilisation. Certaines des activités proposées recoupent également le champ des compétences du Governo, lui permettant de réallouer des fonds sur d'autres composantes de sa politique générale.

La communauté scientifique devrait bénéficier des données et études produites par le projet. L'exécution du projet participera au renforcement des capacités nationales en matière REDD+ et au transfert de compétences. Les entités qui réaliseront les services et travaux prévus dans le cadre du projet seront également des gagnants du projet (ONG locales, bureaux d'études nationaux et internationaux, universitaires, etc.).

## **Avis du Secrétariat**

**Secrétariat du FFEM**

**Comité de pilotage du 31 mars 2011**

### **AVIS DU SECRÉTARIAT**

**« Réduction des émissions de gaz à effet de serre liées à la déforestation et à la dégradation de la forêt de Miombo de la Réserve nationale de Gilé et de sa périphérie »**

#### **Eligibilité**

Le projet a pour objectif de réduire les émissions de gaz à effet de serre liées à la déforestation de la forêt de Miombo de la Réserve nationale de Gilé (RNG), qui dispose pourtant d'une forte capacité de séquestration carbone.

Seule aire protégée de la province du Zambézie, au Nord du Mozambique, la Réserve nationale de Gilé fait face à une pression anthropique non-négligeable dans sa périphérie (cultures sur brûlis, exploitation forestière, pratiques cynégétiques, etc.). Par le développement d'une stratégie d'activités et de valorisation financière REDD+, le projet participera à la lutte contre le changement climatique, mais également à la protection des sols et de la biodiversité. Une fois intégrés au mécanisme REDD+, les efforts réalisés sur le projet RNG pourront être rétribués par les fonds REDD+ de la communauté internationale, assurant ainsi la pérennité financière du projet. Par l'intermédiaire de la réduction de la déforestation et de la dégradation des forêts, le projet contribuera à limiter la pression sur les ressources naturelles et participera au développement économique du pays et des communautés locales. Enfin, l'écosystème du Miombo couvrant une bonne partie de l'Afrique australe, la méthodologie développée par le projet pourra être diffusée dans toute la région.

Le projet est donc éligible au FFEM pour sa contribution au développement local, sa participation à la préservation de l'environnement mondial, son caractère démonstratif et reproductible et sa pérennité économique.

#### **Instruction du projet**

L'étude de faisabilité devra préciser plus particulièrement les points suivants :

- détailler les modalités de structuration et de participation des communautés locales ;
- préciser la méthodologie employée pour la valorisation carbone REDD+ ;
- préciser la répartition de la rente carbone entre les différents acteurs (populations locales, sociétés privées, etc.) ;
- définir les actions pilotes les plus adaptées pour lutter contre la déforestation en concertation avec les communautés locales.

L'étude de faisabilité devra par ailleurs préciser les partenariats envisagés avec les différents types d'acteurs : secteur privé, ONGs, universités, etc.

#### **Avis favorable**

##### **Eléments de réponse :**

1. Quelle méthodologie employée pour la valorisation carbone REDD+ ?

En écho à la question n°7 posée par le CST, on se dirige plutôt vers un cadre de valorisation volontaire auprès du Verified Carbon Standard. A l'heure actuelle, 4 méthodologies REDD ont été approuvées par le VCS. Deux d'entre elles pourraient potentiellement être applicables aux forêts tropicales sèches de la zone du projet (celle développée par Terra Global Capital LLC et celle de Wildlife Works Carbon LLC). Des modifications seront nécessaires pour appliquer l'une ou l'autre de ces méthodologies au cas concret de la RNG. Ces changements devront être validés par le VCS, ce qui peut prendre du temps et entraîner des coûts supplémentaires.

2. Modalités de répartition de la rente carbone entre les différents acteurs ?

*Voir réponse à la question n°9 du CST*

**Annexe 3 : Logics**

**Finality and objectives**

<i>Finality</i>	<i>Specific objectives</i>	<i>Expected results</i>	<i>Indicators</i>
<b>Estimating the REDD+ ex-ante potential for the RNG and its periphery</b>	The potential reduction of emissions due to deforestation and forest degradation is known.	1.1 The quantity of carbon sequestered in the forests of the RNG and its periphery is evaluated	The RNG and its periphery are stratified in forests-non forests A document describes the inventory methods Raw inventory results available Capacity building sessions reports Allometric equations established for the project
		1.2 Future deforestation of the RNG and its periphery's forests is estimated ex-ante	Reference area localised, reference period identified Land use and forest cover evaluated Synthesis report on the evolution of deforestation drivers An historical deforestation scenario and a future deforestation scenario (spatialized and localised) are provided
<b>Valuing the GHG emissions reductions and other amenities</b>	The project's objectives in terms of GHG emissions reductions are defined and are valued as REDD+ carbon offsets	2.1. A REDD+ strategy for the RNG and its periphery is elaborated	A public consultation system exists A PDD realized by national/international experts is finalized and validated REDD+ activities are integrated to the management plan revision A MRV system exists
		2.2 The REDD+ carbon offsets valuation process is engaged	An equitable benefits-sharing system exists A public consultations system exists Carbon credits are commercialized and benefit to the project's stakeholders An adapted project methodology is chosen
<b>Development of pilot activities</b>	Incomes of the communities living in the RNG's periphery will improve through the implementation of activities such as agricultural intensification, development of sportive hunting and ecotourism, as well as through activities linked to the organization of local communities and economical interests groups.	3.1 Organizing the communities in COGEPs with an associative status:	Quantity of officially created associations (see official journal) Community land cartography (natural resources, RNG limits, ZCV) Quantity of participants from Government (local and provincial) in capacity building sessions Capacity building sessions reports
		3.2 Developing conservation agriculture in the RNG's periphery:	Quantity of demonstration areas installed by the project, qty of smallholders adopting the new practices in their <i>machambas</i> Quantity of smallholders having modified their agricultural practices Capacity building sessions reports Evolution of the human-wildlife conflicts
		3.3 Developing sportive hunting in the RNG's periphery	An equitable benefits-sharing system exists Cartography of the ZCV and its natural resources Capacity building sessions reports ZCV management plan is functional ZCV management team is functional and operational



		3.4 Developing ecotourism in the RNG and its periphery	Capacity building sessions reports Report on the private sector mobilization (visits, partnerships, etc.) Quantity of identified sites, rehabilitated sites, accessible sites Integration of the RNG + its periphery in the regional strategy
		3.5 Developing economical interests groups : small-scale livestock farms, fisheries, joineries, non-timber forest products (honey, mushrooms) harvesting and sale groups...	Mean household/individual revenue increase in the project's area, mean household/individual revenue increase in particular zones (ZCV for example) Capacity building sessions reports Existence of accompanying programs : NTFP, small-scale livestock, fisheries...
		3.6 Estimating the pilot activities effectiveness :	Mean household/individual revenue increase in the project's area, mean household/individual revenue increase in particular zones (ZCV for example)  Evolution of the mean agricultural revenue per hectare cultivated, mean agricultural revenue for the community as a whole, "technification" index for agricultural practices (subsistence and cash crops). Evolution of prices and agricultural production Evolution of the RNG's specific revenues due to the implementation of pilot activities. Deforestation rate in the project's area Socio-economic impacts analysis (reports)
<b>Management of the National Reserve of Gilé</b>	The Reserve is well-managed and its long-term financial autonomy is assured.	4.1 An effective control and watching system is implemented	Quantity of patrols, kilometers run, quantity of poachers arrestations and material seizure. Capacity building sessions reports Quantity of well-treated fines according to IGF Quantity of signs installed in the community centres Existence of an internal set of rules and regulations in the Reserve Technical report on sportive hunting
		4.2 The Reserve's management plan is implemented and complementary measures are developed	Existence of a fire risks prevention and management plan Existence of a wildlife rehabilitation plan Evolution of the principal species for biodiversity protection interest. Quantit of reintroductions, evolution of reintroduced population enrollment Complementary measures are integrated to the management plan Technical reports and synthesis
		4.3 The RNG's scientific potential is exploited and generates	Existence of a scientific program Quantity of studies realized in the RNG, quantity of scientific publications realized (national and international), cartography and raw technical data centralized and

		knowledge	diffused, quantity of inventories realized per inventory type, attribution of a carbon stock to each stratum. Technical reports, synthesis, scientific articles...
		4.4 Additional infrastructures are realized inside the RNG	Openings of new tracks, maintenance of new infrastructures to consolidate what already exists Technical reports and synthesis
<b>Management of the project</b>	The responsibility of the project, its implementation, its monitoring and evaluation by external auditors are adequately realized, via the direct support from the RNG's management team.	5.1 Consultation of all the stakeholders drives the project's management;	RNG disbursements are conformed to the management plan and the annual activities plan Steering committees meetings are held Annual activities plan and activities reports
		5.2 The schedule of activities is respected by the project's team who adapts itself to unforeseen events:	
		5.3 External audits of the project's accounts allow the project to perform its functioning	Evaluation and audits reports
		5.4 A project team is constituted so that the project remains fully operational	

## Activities and financial resources

<i>Expected results</i>	<i>Activities</i>	<i>Indicators</i>	<i>Financial resources (€)</i>
The potential reduction of emissions due to deforestation and forest degradation is known.	1.1 The quantity of carbon sequestered in the forests of the RNG and its periphery is evaluated	The RNG and its periphery are stratified in forests-non forests A document describes the inventory methods Raw inventory results available Capacity building sessions reports Allometric equations established for the project	290 000
	1.2 Future deforestation of the RNG and its periphery's forests is estimated ex-ante	Reference area localised, reference period identified Land use and forest cover evaluated Synthesis report on the evolution of deforestation drivers An historical deforestation scenario and a future deforestation scenario (spatialized and localised) are provided	
The project's objectives in terms of GHG emissions reductions are defined and are valued as REDD+ carbon offsets	2.1. A REDD+ strategy for the RNG and its periphery is elaborated	A public consultation system exists A PDD realized by national/international experts is finalized and validated REDD+ activities are integrated to the management plan revision A MRV system exists	480 000
	2.2 The REDD+ carbon offsets valuation process is engaged	An equitable benefits-sharing system exists A public consultations system exists Carbon credits are commercialized and benefit to the project's stakeholders An adapted project methodology is chosen	
Incomes of the communities living in the RNG's periphery will improve through the implementation of activities such as agricultural intensification, development of sportive hunting and ecotourism, as well as through activities linked to the organization of local communities and economical interests groups.	3.1 Organizing the communities in COGEPs with an associative status:	Quantity of officially created associations (see official journal) Community land cartography (natural resources, RNG limits, ZCV) Quantity of participants from Government (local and provincial) in capacity building sessions Capacity building sessions reports	2 500 000
	3.2 Developing conservation agriculture in the RNG's periphery:	Quantity of demonstration areas installed by the project, qty of smallholders adopting the new practices in their <i>machambas</i> Quantity of smallholders having modified their agricultural practices Capacity building sessions reports Evolution of the human-wildlife conflicts	
	3.3 Developing sportive hunting in the RNG's periphery	An equitable benefits-sharing system exists Cartography of the ZCV and its natural resources Capacity building sessions reports	

		ZCV management plan is functional ZCV management team is functional and operational	
	3.4 Developing ecotourism in the RNG and its periphery	Capacity building sessions reports Report on the private sector mobilization (visits, partnerships, etc.) Quantity of identified sites, rehabilitated sites, accessible sites Integration of the RNG + its periphery in the regional strategy	
	3.5 Developing economical interests groups : small-scale livestock farms, fisheries, joineries, non-timber forest products (honey, mushrooms) harvesting and sale groups...	Mean household/individual revenue increase in the project's area, mean household/individual revenue increase in particular zones (ZCV for example) Capacity building sessions reports Existence of accompanying programs : NTFP, small-scale livestock, fisheries...	
	3.6 Estimating the pilot activities effectiveness :	Mean household/individual revenue increase in the project's area, mean household/individual revenue increase in particular zones (ZCV for example)  Evolution of the mean agricultural revenue per hectare cultivated, mean agricultural revenue for the community as a whole, "technification" index for agricultural practices (subsistence and cash crops). Evolution of prices and agricultural production Evolution of the RNG's specific revenues due to the implementation of pilot activities. Deforestation rate in the project's area Socio-economic impacts analysis (reports)	
The Reserve is well-managed and its long-term financial autonomy is assured.	4.1 An effective control and watching system is implemented	Quantity of patrols, kilometers run, quantity of poachers arrestations and material seizure. Capacity building sessions reports Quantity of well-treated fines according to IGF Quantity of signs installed in the community centres Existence of an internal set of rules and regulations in the Reserve Technical report on sportive hunting	760 000
	4.2 The Reserve's management plan is implemented and complementary measures are developed	Existence of a fire risks prevention and management plan Existence of a wildlife rehabilitation plan Evolution of the principal species for biodiversity protection	

		<p>interest.</p> <p>Quantit of reintroductions, evolution of reintroduced population enrollment</p> <p>Complementary measures are integrated to the management plan</p> <p>Technical reports and synthesis</p>	
	4.3 The RNG's scientific potential is exploited and generates knowledge	<p>Existence of a scientific program</p> <p>Quantity of studies realized in the RNG, quantity of scientific publications realized (national and international), cartography and raw technical data centralized and diffused, quantity of inventories realized per inventory type, attribution of a carbon stock to each stratum.</p> <p>Technical reports, synthesis, scientific articles...</p>	
	4.4 Additional infrastructures are realized inside the RNG	<p>Openings of new tracks, maintenance of new infrastructures to consolidate what already exists</p> <p>Technical reports and synthesis</p>	
The responsibility of the project, its implementation, its monitoring and evaluation by external auditors are adequately realized, via the direct support from the RNG's management team.	5.1 Consultation of all the stakeholders drives the project's management;	<p>RNG disbursements are conformed to the management plan and the annual activities plan</p> <p>Steering committees meetings are held</p> <p>Annual activities plan and activities reports</p>	670 000
	5.2 The schedule of activities is respected by the project's team who adapts itself to unforeseen events:		
	5.3 External audits of the project's accounts allow the project to perform its functioning	Evaluation and audits reports	
	5.4 A project team is constituted so that the project remains fully operational		

Unforeseen :

300 000

## Calendar of implementation

	Years	1	2	3
<b>1. Estimating the REDD+ ex-ante potential for the RNG and its periphery</b>				
1.1 The quantity of carbon sequestered in the forests of the RNG and its periphery is evaluated				
Project area stratification				
Inventory methodology development				
Training session				
GHG inventory				
Data analysis, establishment of an allometric equation				
1.2 Future deforestation of the RNG and its periphery's forests is estimated ex-ante				
Localisation of the reference area				
Identification of the reference period				
Forest cover and land use analysis during the reference period				
Identification and analysis of the deforestation drivers				
Quantification of potential future deforestation				
Localisation of the deforestation				
<b>2. Valuing the GHG emissions reductions and other amenities</b>				
2.1 A REDD+ strategy for the RNG and its periphery is elaborated				
Identification of REDD+ activities regarding the deforestation drivers				
Estimation of the activities economic efficiency				
Implementation of a long-term monitoring system				
2.2 The REDD+ carbon offsets valuation process is engaged				
Adapted standard and carbon methodology selection				
Elaboration and implementation of monitoring systems for biomass/area/socio-economic benefits				
PDD finalization				
PDD validation				
<b>3 Development of pilot activities</b>				
3.1 Organizing the communities in COGEPs with an associative status:				
Sensibilization, capacity building, communities training on the Association principle				
Sensibilization to payments for environmental services and carbon revenues				
COGEPs and community associations creations				
Cartography of community natural resources				
Delimiting of community lands				
3.2 Developing conservation agriculture in the RNG's periphery:				
Sensibilization and information on conservation agriculture				
Implementation of training and capacity building tools				
Demonstration area scientific monitoring				
Equipment and inputs diffusion to the economic groups				
Installation of graneries and drying units				
Support to population to transport and commercialize the products				
Support the communities managing wildlife-animals conflicts				
3.3 Developing sportive hunting in the RNG's periphery				
Sensibilization of the communities to the ZCV concept				
Identification and delimitation of the ZCV				
Elaboration of a management plan for the ZCV				
Identification and operationalization of the ZCV management staff				
ZCV staff training sessions				
Implement an equitable benefits-sharing system				
3.4 Developing ecotourism in the RNG and its periphery				
Rehabilitate one or two sites inside the RNG and construct eco-lodges				
Identify tracks and trails for tourist purposes, plan their openings				
Private sector :organize visits to the sites				
Support to the development of a regional strategy for ecotourism and its local implementation				
Sensibilization, information, participative cartography of tourist sites				
Prepare the communities to the development of ecotourism				
3.5 Developing economical interests groups : small-scale livestock farms, fisheries, joineries, non-timber forest products (honey, mushrooms) harvesting and sale groups...				
Sensibilization, information on NTFP exploitation at the Reserve's periphery				
Elaboration and implementation of an accompanying program for the sustainable exploitation				

<p>of NTFP.  Élaboration et mise en œuvre d'un program d'accompagnement du petit élevage  Elaboration and implementation of an accompanying program for small-scale livestock  Élaboration et mise en œuvre d'un program d'accompagnement de la filière piscicole  Elaboration and implementation of an accompanying program for fisheries</p>	
<p>3.6 Estimating the pilot activities effectiveness :  Implementation of an « prices and agricultural production observatory »  Mid-term evaluation of the socio-economical impacts of the pilot activities</p>	
<b>4. Management of the National Reserve of Gilé</b>	
<p>4.1 An effective control and watching system is implemented  Sensibilization of the stakeholders living at the Reserve's periphery  Reinforce the coordination with the Governmental services in the fines treatments  Installation of signs in the community centres  Training of rangers and community guards  Implementation of an internal set of rules in the RNG  Control and surveillance system strengthening  Communication and alert system strengthening  Customary hunting supervision</p>	
<p>4.2 The Reserve's management plan is implemented and complementary measures are developed  Elaboration and implementation of a fire risks prevention and management plan  Elaboration and implementation of a wildlife repopulation plan  Mid-term evaluation of the RNG's management plan objectives</p>	
<p>4.3 The RNG's scientific potential is exploited and generates knowledge  Elaboration of a scientific program  Implementation of a scientific program</p>	
<p>4.4 Additional infrastructures are realized inside the RNG  Opening and maintenance of the tracks network  Installation of a scientific camp  RNG's boundaries are clearly identified  The vehicles fleet is strengthen</p>	
<b>5. Management of the project</b>	
<p>Supervision, management and coordination  External audits and assessment</p>	

### **Annexe 4 : Communication on the Project**

When preparing a NEP, it is also necessary to communicate a synthetic note in french and english. Once the steering committee has approved the project's grants, the note will be used on FFEM's website or in any other communication material developed by the FFEM. These elements will be updated every year.

#### **1. General description - Table 1 -**

Application sector	Climate change
Member institution	AFD
Beneficiary	Republic of Mozambique
FFEM Contribution	2 M€
Co-financing entities	<ul style="list-style-type: none"> <li>• NGO COSV : 1,00M€</li> <li>• GoM : 0,15 M€</li> <li>• Adra : 0,50 M€</li> <li>• KPMG : 0,80 M€</li> <li>• Partners : 0,79 M€</li> <li>• Carbon credits : 0,45 M€</li> </ul>
Project amount	5 M€
Grant approval date	25/11/2011
Project duration	3 ans

#### **2. Main goal**

The project aims to fight against deforestation and degradation of the Miombo forests of the RNG and its periphery by reducing the pressure exerted on the ecosystem. REDD+ mechanism will be used to achieve these objectives, making Gile one of the first REDD+ pilot project in Mozambique.

#### **3. Synthesis**

##### 1. Context

Mozambique is a still rich country in terms of vegetal and animal biodiversity. This natural capital is nevertheless endangered. The annual deforestation rate amounts to 0,58% between 1990 and 2004, equivalent to a net loss of 220 000 ha of forests every year.

The Zambezia province is one of the most wooded province of the country. It is also one of the most threatened by deforestation due to shifting agriculture, illegal logging, mining... The National Reserve of Gilé (RNG) is the only protected area of the province and is facing serious pressures in its periphery.

Mozambique is also one of the 37 countries eligible to Forest Carbon Partnership Facility (FCPF) support. The national REDD+ process is coordinated jointly by the ministry in charge of environment (MICOA) and the ministry in charge of agriculture (MINAG). Currently, a national REDD+ strategy as well as a R-PP (Readiness Preparation Proposal) are under elaboration. The R-PP should be finalized by the end of 2012.

After a set of national and local consultations, both documents identify the RNG and its periphery as a potential REDD+ pilot project site.

##### 2. Objectives

The project aims to fight against deforestation and degradation of the Miombo forests of the RNG and its periphery by reducing the pressure exerted on the ecosystem. The project aims to prepare RNG and its periphery to REDD+ in order to secure their long term management.

##### 3. Description



On-going activities will be integrated into a REDD+ framework and new activities will be developed in order to reduce the pressure exerted on the RNG and its buffer zone. This will generate environmental externalities which are economically valuable and will help to initiate the transition towards the RNG's sustainable financial autonomy.

The project has four components. Two are dedicated to the preliminary studies conducting to REDD+ certification. Two are dedicated to the implementation of pilot activities and the Reserve's management.

► **Component 1: Estimating the REDD+ ex-ante potential for the RNG and its periphery**

<u>Expected result:</u>	The potential reduction of emissions due to deforestation and forest degradation is known.
<u>Expected results by action:</u>	<ol style="list-style-type: none"> <li>1.1 The quantity of carbon sequestered in the forests of the RNG and its periphery is evaluated;</li> <li>1.2 Future deforestation of the RNG and its periphery's forests is estimated ex-ante.</li> </ol>

► **Component 2: Valuing the GHG emissions reductions and other amenities**

<u>Expected result:</u>	The project's objectives in terms of GHG emissions reductions are defined and are valued as REDD+ carbon offsets.
<u>Expected results by action:</u>	<ol style="list-style-type: none"> <li>2.1. A REDD+ strategy for the RNG and its periphery is elaborated;</li> <li>2.2 The REDD+ carbon offsets valuation process is engaged.</li> </ol>

► **Component 3 : Development of pilot activities**

<u>Expected result:</u>	Incomes of the communities living in the RNG's periphery will improve through the implementation of activities such as agricultural intensification, development of sportive hunting and ecotourism, as well as through activities linked to the organization of local communities and economical interests groups.
<u>Expected results by action:</u>	<ol style="list-style-type: none"> <li>3.1 Organizing the communities in COGEPs with an associative status;</li> <li>3.2 Developing conservation agriculture in the RNG's periphery;</li> <li>3.3 Developing sportive hunting in the RNG's periphery;</li> <li>3.4 Developing ecotourism in the RNG and its periphery;</li> <li>3.5 Developing economical interests groups: small-scale livestock farms, fisheries, joineries, non-timber forest products (honey, mushrooms) harvesting and selling groups;</li> <li>3.6 Estimating the pilot activities effectiveness.</li> </ol>

► **Component 4 : Management of the National Reserve of Gilé**

<u>Expected result:</u>	The Reserve is well-managed and its long-term financial autonomy is secured.
<u>Expected results by action:</u>	<ol style="list-style-type: none"> <li>4.1 An effective control and watching system is implemented;</li> <li>4.2 The Reserve's management plan is implemented and complementary measures are developed;</li> <li>4.3 The RNG's scientific potential is exploited and generates knowledge;</li> <li>4.4 Additional infrastructures are realized inside the RNG.</li> </ol>

► **Component 5: Management of the project**

<u>Expected result:</u>	The responsibility of the project, its implementation, its monitoring and evaluation by external auditors are adequately realized, <i>via</i> the direct support from the RNG's management team.
<u>Expected results by action:</u>	<ol style="list-style-type: none"> <li>5.1 Dialog between all stakeholders drives the project's management;</li> <li>5.2 The schedule of activities is respected by the project's team who adapts</li> </ol>

- itself to unforeseen events;
- 5.3 External audits of the project's accounts allow the project to perform its functioning;
- 5.4 A project team is constituted so that the project remains fully operational.

#### 4. Expected impacts and results

- The potential reduction of emissions due to deforestation and forest degradation is known.
- The project's objectives in terms of GHG emissions reductions are defined and are valued as REDD+ carbon offsets
- Incomes of the communities living in the RNG's periphery will improve through the implementation of activities such as agricultural intensification, development of sportive hunting and ecotourism, as well as through activities linked to the organization of local communities and economical interests groups.
- The Reserve is well-managed and its long-term financial autonomy is secured.
- The responsibility of the project, its implementation, its monitoring and evaluation by external auditors are adequately realized, via the direct support from the RNG's management team.

#### 5. Time period and amount:

The project started in the first semester of 2012 for a three-year period..

FFEM contribution comes to 2 million EUR.

The sum of the contributions to finance the project comes to 5 million EUR.

#### **4. Co-financing entities - Table 2**

<b>Contributor</b>	<b>Amount (EUR)</b>	<b>Percentage</b>
<b>FFEM</b>	2,00 M€	40%
<b>COSV</b>	1,00 M€	20%
<b>GoM</b>	0,15 M€	3%
<b>ADRA</b>	0,53 M€	11%
<b>KPMG</b>	0,08 M€	2%
<b>Partners</b>	0,79 M€	16%
<b>Carbon credits</b>	0,45 M€..	9%

**Annexe 5 : Carbon credits - certification and commercialization costs (Source: Calmel et al., 2010)**

Step	Description	Facteur(s) de sensibilité	Fréquence		Coût*
Validation	Validation of the project by an independent entity and accredited by the standard chosen	Chosen standard Verificator	VCS	Unique	40 à 50k€
			CCBS	5 yrs	
			Plan Vivo	Unique	8'535€*
Verification	Verification of emissions reductions by a third independent entity and accredited by the chosen standard or by the standard itself	Chosen standard Verificator	VCS	5 ans (encouragée)	30 à 50k€
			Plan Vivo	Annuelle	0,12€/certificate*
Registration	An account is open for the developer and the project	Determined case by case by the registry	VCS	Unique	-
Delivery	Registration fees are paid	Chosen standard Additional fees by the registry	VCS	À chaque VCU généré	0,034€/VCU +0,05€/VCU
			Plan vivo	À chaque certificat généré	0,12€/certificate*
Commercialization	Définition de la propriété des crédits et contrat (ERPA) Definition of credits property and contracts (ERPA)	Juridical expertise	Variable		5-40 k€
	Brokerage fees	Service types	Variable		3 à 10% of VERs