



Forests and the Biodiversity Convention

**Independent Monitoring of the
Implementation of the Expanded Programme
of Work
in Mozambique**



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CONTENT

CHAPTER	PAGE
1. INTRODUCTION	4
2. BRIEF DESCRIPTION OF THE ENVIROMENTAL, GEOPHYSICAL AND SOCIO-ECONOMIC CONDICTIONS IN MOZAMBIQUE	5
3. CHARACTERISATION OF MAIN TYPES OF FOREST	8
4. LAND TENURE REGIME AND FOREST MANAGEMENT SITUATION	11
5. PREDOMINANT FOREST MANAGEMENT PRACTICES INCLUDING LEGAL FRAMEWORK	13
❖ 5.1. PARPA AND PROAGRI	13
❖ 5.2. AGENDA 21	14
❖ 5.3. AFLEG	14
❖ 5.4. PROGRAMME OF WORK ON FOREST BIOLOGICAL DIVERSITY CBD	14
❖ 5.5. NATIONAL LAND AND FOREST POLICIES, LAW AND REGULATION	15
6. ROLE OF INTERNATIONAL INSTITUTIONS	17
7. ASSESS ENVIRONMENTAL CHANGES OCCURING IN THE COUNTRY SINCE IMPLEMENTATION OF CBD	19
8. CONCLUSION	25
Annex I: Questionnaire on the implementation of the programme of work on the biological diversity of forests, of the convention on biodiversity (CBD) in Mozambique	26
Annex II: List of questionnaire recipient	30
BIBLIOGRAPHY	30

1 INTRODUCTION

The present report is aimed at assessing the level of implementation of the expanded programme of work (POW) on forest biodiversity of the Convention on Biological Diversity (CBD) in Mozambique.

Mozambique ratified the CBD on the 24th of August 1994, and by doing so, it committed itself to the implementation of a series of mechanisms to ensure the sustainable use of forest resources and the equitable sharing of its benefits, facilitate conservation actions, allow for the participation of local communities in the management of forest resources, ensure capacity building for the implementation of the POW on forests, incorporate activities into national strategies, and attain synergy with other programmes implemented by international bodies.

In recognition of the CBD, the Government of Mozambique (GoM) tasked the Ministry for the Coordination of Environmental Affairs (MICOA), in 1996, to draw up a National Strategy and Action Plan for the Conservation of Biological Diversity. Shortly thereafter, National Strategies of four key areas were developed, namely flora, fauna, marine and coastal resources. These were integrated in a single and first document, the National Strategy. Furthermore, and in compliance with Article 26 of the CBD, the GoM has submitted National Reports of the CBD.

The present report is based mainly on a literature review and field work. A questionnaire was developed and sent to relevant institutions, although at this stage no reply has come through (The questionnaire can be found in Annex I, while Annex II lists the institutions to which the questionnaire was sent to). The report gives a brief description of the environmental and socio-economic conditions in the country, and a characterisation of the main types of forests.

Forests can be described as "...land area of more than 0.5 ha, with a tree canopy cover of more than 10%, which is not primarily under agricultural or other specific non-forest land use..." (CBD). The main forest biomes found in Mozambique are the tropical and subtropical biomes, where several forest types can be found.



A forest biome "reflects the ecological and physiognomic characteristics of the vegetation and broadly corresponds to climatic regions of the Earth", whilst a forest type "is a group of forest ecosystems of generally similar composition that can be readily differentiated from other such groups by their tree and under canopy species composition, productivity and/or crown closure" (CBD).

Despite the existence of very small and remote patches of "primary forests" in Mozambique, or "forests that have never been logged and have developed following natural disturbances and under natural processes, regardless of its age" the majority are "secondary forests, or forests that have been logged and recovered naturally" (CBD)

Main laws and regulations pertaining to forest resources are described, as well as the role of international institutions in the sector's performance. A few 'positive' and 'negative' case-studies are presented, in order to assess the level of implementation of sustainable forest practices in the country.

2 BRIEF DESCRIPTION OF THE ENVIRONMENTAL, GEOPHYSICAL AND SOCIO-ECONOMIC CONDITIONS IN MOZAMBIQUE

Brief Environmental and Geophysical Description

Mozambique lies on the South-eastern coast of Africa, between the Rovuma River mouth (10°30'S) and the South African border (26°49'S). Mozambique borders Tanzania in the North, Malawi, Zambia, South Africa and Swaziland in the West, South Africa to the South and the Indian Ocean to the East. It occupies an area of approximately 784 755 km² and has a total population of about 19 million (Moçambique, 2003).

The Northern region of the country is characterised by a great mountainous block, with highest altitudes found on the Eastern edge of the East African Rift Valley System. From these western heights the land slopes gently eastwards and south-eastwards, with many extensive plateaus, towards the Indian Ocean. Drainage occurs through 18 perennial rivers and many small streams (Micoa, 1998).

The central region is characterised by the low Zambezi Valley and its delta plains. Towards the country's interior, in Tete Province, the rims of the valley are mountainous, reaching 2095 masl at Mt Domue on the border with Malawi. Drainage follows the Lake Cahora Bassa or the lower Zambezi, by numerous fast flowing seasonal streams which descend steeply into the valley. River Chire, draining from Lake Niassa, joins the Zambezi in the lowlands (Moçambique, 2003).

Southern Mozambique, more specifically South of Beira (19°49'S/34°52'E) comprises a vast coastal plain, backed by mountains along the western national border. The land is generally below 500 masl in the South, except along the border with Zimbabwe and South Africa, and more than 85% of the land surface is lower than 200m. However, along the western border with Zimbabwe, which in part coincides with the "Great Escarpment", the highest elevation is attained, at 2436 masl, at Mt Binga (Micoa, 1998).

During most of the year, the weather is dominated by a high pressure system which prevails over the Southern African Plateau, while NE and SE air masses from the Indian Ocean provoke rainfall between October and March. Despite its close proximity to the sea, and the warm southward flowing Mozambique current, much of the country is surprisingly dry. Rainfall is erratic and unreliable, with substantial annual variations, especially in southern and central districts (Micoa, 1998).





Figure 1: Map of Mozambique (source:http://www.osisa.org/files/country_maps/mozambique_map.jpg)

On average, rainfall is highest on the coast, with between 800 and 900 ml of rain per year, with four humid pockets on SW-NE stretches of the coast, where the SE Trade Winds blow perpendicular to the coast in summer (Micoa, 1998). Precipitation is usually high in Southern Mozambique (about 750 ml/year), rapidly decreasing in the interior, and increasing again after the Libombos mountain range, towards the west. The interior of Gaza Province, close to the Zimbabwe and South Africa borders, is arid. Northern Mozambique is generally more humid than the south, except in the Zambezi Valley, Tete Province, which has less than 600 ml of rain per year. Precipitation exceeds 1500 ml along the remote Gorongosa mountain range (18°30'S/34°03'E), located between the western plateaus and the City of Beira (Sofala Province) on the coast. All higher mountainous areas located further north from the Zambezi River are characterised by heavy rainfall (Mozambique, 2003).

There is a close relationship between the different ecological zones and precipitation. Those areas receiving rainfall values over 2000 ml per year are normally characterised by dense forests. Rainfall drops between the transition from moist savannah to arid savannah.

Humidity is high and fairly constant throughout the year with mean relative humidity near 70% in the south, reaching close to 100% in certain areas and for short periods after summer storms. Winds are light to moderate, with recorded mean annual speeds of 6-8km/hr, but with high winds of up to 100 km during summer storms. The northern coast experiences occasional hurricanes. Most of the country experiences at least 3000 hours of sunshine per year (Micoa, 1998).

Brief Socio-Economic Description

Although Mozambique has shown increasing rates of economic growth, "differentiation is also increasing, with most of the growth in GDP going to the top 20%, while the spread between the poor, the very poor and extremely poor is increasing" (Hanlon, 2007).

Mozambique remains one of the poorest countries in the world, with a population of 19.2 million (OECD, 2006) of which 54% live below the national poverty line (National Household

Income Survey -IAF, Mozambique National Institute of Statistics -INE, 2003), with an average annual income per person of US\$ 250 (World Development Indicators 2005). The distribution of wealth is skewed rather dramatically in favour of urban dwellers and geographically in favour of the South, with the provinces of Cabo Delgado, Nampula, Niassa, Tete, and Zambezia all exhibiting the highest figures on the human poverty index (INE, 2003). Corruption in the country is also high, affecting all sectors of society.

Mozambique is essentially an agriculture-based economy, with agriculture and fishing contributing 22% to the GDP in 2004 (OECD, 2006). The bulk of the population live in rural areas and within a 40 kilometre wide coastal strip (FAO, 2004). Estimates suggest that some 85% of the population is dependent on agriculture and fishing and that these activities occupy 94% of the economically active population (ADB, 2006). There is some discrepancy in the available literature on this matter, with some suggesting that approximately 75% of the population is employed in the agriculture sector (FAO, 2004).

Despite the numbers of those dependent on and employed within agriculture, only about 10% of the arable land is estimated to be cultivated (FAO, 2004). According to FAO 'access to natural resources and linkages to sustainable livelihoods', the percentage of cultivated land in Mozambique does not, however, paint a true picture of the importance of uncultivated land to the rural poor. "Other natural resources are collected, processed and/or marketed by many families, either as a predominate activity or as part of a diversified portfolio of livelihood strategies designed to spread and minimize specific risks. These include resources such as bush meat, honey, clay, roots and tubers, medicinal plants, building materials, thatching grass, firewood and the production of charcoal and salt" (FAO, 2004).

New threats to forests

Climate change has been affecting Mozambique in the form of extreme weather events such as floods, droughts and tropical cyclones. In a country where the majority of the population lives below the poverty line, these extreme weather conditions have severe effects on health and local livelihoods, increasing the vulnerability of the poor. Furthermore, climate change directly or indirectly affects several sectors in the country such as agriculture, forests, cattle breeding, water resources, coastal areas, and health. One of the main contributions to climate change in Mozambique is the high deforestation rate, due to a series of inappropriate activities such as agriculture practices, collection of wood and firewood, selective and illegal forest exploitation, lack of community involvement in the management of forest resources, weak institutional capacity, lack of demarcation of forest areas and the lack of forest management plans.

In this respect, the GoM has implemented a series of plans and strategies to combat climate change. It has:

- Signed and ratified the UNFCCC
- NAPA
- Implemented strategic plans in different areas:
 - o Strategic and action plan to control and combat desertification
 - o Strategic and action plan to prevent and combat uncontrolled fires
 - o Strategic and action plan to combat soil erosion
 - o MDGs
 - o Evaluation of the country's vulnerability in relation to climate change and strategies for adaptation
 - o An institute for the management of natural disasters

Mozambique is now developing a policy and strategy for the production of agrofuels. The country has already given an indication of the primary cultures which will be used for agrofuel production, which include coconut oil, jatropha, and African palm, amongst others. For ethanol the primary culture will be cane sugar and cassava, the feasibility of the latter being currently discussed due to its importance as a staple food.

On a recent visit throughout Mozambique, it became evident that most provinces, administrative posts and localities are eager for agrofuel projects, which are seen as a way out of poverty. There are several plans for the production of agrofuels and ethanol, mainly from jatropha and sugar cane. Depending on the scale and location of these plans, they may become one of the biggest threats to deforestation in Mozambique, as forest areas will be lost to plantations, and rural communities, dependent on agriculture and the collection of forest products will be further marginalised.

The Centre for Engineering Studies from the University Eduardo Mondlane, with Environment Ministry's supervision, has implemented a national capacity building plan for the implementation of the Clean Development Mechanism (CDM). The country is looking at the forest sector for implementing CDM projects, so as to rehabilitate degraded land, and contributing to food security.

3. CHARACTERISATION OF MAIN TYPES OF FORESTS

Mozambique is a country rich in forest resources, with a total forest area of approximately 30,601,000 ha (Earth trends, 2003). Most provinces have vast areas of unspoiled, beautiful forests, from where rural communities acquire several goods for subsistence as well as for cultural and spiritual reasons. Forest diversity is however poorly documented due to several reasons such as the vastness of the country, poor transport network, the long-lasting civil war, and the general lack of human and financial resources.

A few studies, however, based on White & Barbosa's mapping of Africa's vegetation types, refer that the most extensive forest type in the country (occupying about two-thirds of the country) is the so called Miombo Forest, where dominant species such as *Brachystegia spiciformis* often mixed with *Jubernardia globiflora* occur, associated with a variety of other plant species. These forests are more common in Northern Mozambique (Micoa, 1998).

The Miombo physiognomy is characterised by a dense vegetation cover, with deciduous and semi-deciduous trees, with heights reaching between 10 and 20 metres when mature and non-degraded. Fire is an important ecological component in the Miombo forests. Precipitation in the ecosystem is highly seasonal (varying between 650 and 1400 ml per year), leaving the vegetation dry for several months of the year. Thunderstorms at the start of the rainy season can easily set the vegetation alight

(http://www.worldwildlife.org/wildworld/profiles/terrestrial/at/at0706_full.html). However, in addition to being naturally fire-prone, Miombo forests are also frequently burned by people to clear land for cultivation, to maintain pastures for livestock, or to drive game animals to positions where they can be easily hunted.

In Mozambique, this type of vegetation occupies vast areas in the central and Northern regions; however, there is no exact data about its extent. It is estimated that there are approximately 334 tree species in the Mozambican Miombo forests. Endemism is low, and fauna diversity is also low, perhaps due to the long dry period and intense fires which occur in these forests. There are some large herbivores such as the Pala-Pala (*Hippotragus Niger*) and the deer. Avifauna is rich with some distinct species such as the African-Grey Penduline-tit (*Anthoscopus caroli*), the Sentinel Rock Thrush (*Monticola Explorer*) and the Shelley's Sunbird (*Nectarina Shelleyi*). The variety of insects and reptiles is rather low (Moçambique, 2003).

Some of the most important rivers in Mozambique occur in regions covered by Miombo vegetation, notably the Zambezi River, where water quantity and quality often depends on the overall state of the Miombo forests. These forests are also important for local people. Main uses include source of firewood, charcoal, and medicinal plants, source of nutrients and soil fertilisers, through fires and recycling of leaf material, and as a source of food for domestic animals. Due to its generally fertile soils, miombo forests are also used for agriculture (Moçambique, 2003).

The second most extensive forest type found in the country is the Mopane Forest, occurring especially in the Limpopo-Save area and upper Zambezi Valley, dominated by *Colophospermum Mopane*, as well as *Adansonia digitata* (the baobab tree), *Azelia quanzensis* (Chanfuta, a tree species falling under the 1st class wood species¹ according to Forest and Wildlife Regulations of 2002) and *Sterculia rogersii*.



The Mopane vegetation is characterised predominantly by the occurrence of trees and bushes, and the most important vegetation types are the dry savannahs with deciduous trees and secondary savannahs of low and medium altitudes. Other important species found in the Mopani forests are *Sclerocarya birrea*, *Combretum sp.*, *Terminalia sericea*, *Strychnos sp.* amongst others.

This eco-region falls mainly in the tropical rainy and hot climate, where the rainy season occurs between November and April. Mean annual precipitation varies between 450 and 710 ml, with peak areas of about 1000 ml. Temperatures vary between -4° e 46° C, with an annual average of between 18° and 24° C. The landscape is usually plain or lightly undulating, with elevations between 200 m and 600 m (Moçambique, 2003).

Mopane forests have high plant diversity, although two vegetation units have particularly high floristic diversity rates. About 2000 species of vascular plants were registered in the SE. However, species richness only rarely exceeds 283 species per 625 km² and only exceeding 614 species per 625 km². A few medicinal plants can also be found in these forests, such as the wild ginger (*Siphonochilus aethiopicus*) and *Warburgia salutaris*.

This eco-.region is one of the most important in Southern Africa, and is home to a series of fauna species such as the Impala, Elephant, Rhino, Buffalo, lions, hyenas, and leopards, amongst others. There are a few endemic bird species and a variety of endemic reptiles.

The unsuitability of the soils and the occurrence of large numbers of fauna in Mopane forests resulted in the conservation of large areas, such as those forming the Banhine, Zinave and Gorongosa Parks in Mozambique.

The remainder of the country is characterised by several other types of vegetation such as coastal mosaics, acacia woodland, libombos woodland, sublittoral woodland, mixed baobab woodland, moist forest woodland, littoral thicket and recent forest dunes, lowland palm savannah, afromontane elements, dry conifer montane forests, moist evergreen forests, swamp and mangrove vegetation. Generally, the North of the country has denser and less exploited forests than southern Mozambique (Micoa, 1998).

The country is also characterised by vast areas of coconut, mango and cashew tree plantations, which are used mainly by local communities. It is estimated that there are approximately 38 000 ha of pine and eucalyptus plantations in the country, mainly in Manica and Niassa Provinces. These plantations were established during colonial times, and most of

¹ 1st class wood species can only be exported after being processed internally. The final product may be in the form of planks, beams and parquet.

them are now abandoned, although the ones in Manica are now being rehabilitated by a South Africa company, and new plantations are being developed in Niassa. The GoM has recently developed a draft national reforestation strategy for discussion, which establishes 7 million ha of the country for future plantations. The land set aside for plantations is supposedly degraded land, where natural forests no longer exist, and aiming to improve the country's economy and reduce poverty rates.

People, Forests and Forest exploitation

The majority of Mozambicans are poor and live in rural areas, relying on natural resources for daily livelihoods. Subsistence agriculture is practiced by the majority of the rural poor, and commercialisation of products only takes place when there is surplus production. Approximately 7% of the population has access to electricity – the remaining makes use of firewood, charcoal, petrol and gas. The collection of firewood and the production of charcoal for cooking and heating represents 85% of the total energy consumption in the country. It is estimated that approximately 17million m³ of biomass is used every year in Mozambique. In 2005 alone, 22 029 000m³ of wood was removed for the production of charcoal, which represents a major form of resource depletion.

Timber and precious woods are also used by communities for the construction of houses and for arts and crafts particularly carvings and sculptures. Non wood forest products (NWFPs) include medicinal plants, grass, bamboo, reed and veldt foods such as wild vegetables, fruit and tubers, amongst others. Most of these NWFPs are not marketed by local communities, largely due to a lack of infrastructure and the difficulties in accessing towns and markets. The result is that mats, baskets, chairs and beds made out of grass are sold mainly along main roads.



Figure 2: Arts and crafts made by local communities, Cabo Delgado, 2006.

A national forest inventory was recently carried out, although its results have not yet been made public. According to the media, the forest inventory stipulated that 70% of Mozambique is covered in forests and other woodlands, while the 1994 national inventory presented a value of 80% of the country being covered by different forest types (O País, 2007). Several tree species (around 118) are commercially exploited in Mozambique, although only 10 species have higher demand and exploitation rates. In total, there are approximately 4 critically endangered tree species, 2 endangered species and 40 vulnerable species. Some of the species listed in IUCN's red data list include:

- Umbila (*Pterocarpus angolensis*), Chanfuta (*Afzelia quanzensis*), Jambire (*Milletia stuhlmannii*), Pau-ferro (*Swartzia madagascariensis*), listed under species of 1st class wood under the national Forest & Wildlife Regulations Decree No 12/2002 of 6th of June 2002, and Ministerial Diploma no 8/2007.

- Pau-preto (*Dalbergia melanoxylon*), Pau-rosa (*Berchemia zeyheri*), Tule (*Milicia excelsa*), Mecruse (*Androstachys johnsonii*), Mondzo (*Combretum imberbe*) e Umbaua (*Khaya nyasica*) – all listed as precious woods under the same Regulations.

Despite the results presented in the inventory, it has also been documented extensively that one of the main causes of deforestation in Mozambique is illegal logging. Illegal logging in Mozambique is linked to a variety of actors and actions, such as the illegal granting of forest concessions and simple licenses, logging in prohibited areas, and failing to consult with local communities. This 'business' also involves a number of people and sectors: local community members, concessionaires, sawmill operators and exporters, brokers, sawmill and concession workers, transporters, shipping companies and civil servants and other government officials.

The national inventory further stated that the annual rate of deforestation in the country is 0.58%, corresponding to approximately 219 000 ha of forests. The annual deforestation rate in 2004 was equivalent to 0.81%.

The pine and eucalyptus plantations which are now being established in Niassa are often in non-degraded land, and it has been said that virgin forest areas are being cut down for plantations. Furthermore, there have been several complaints from communities affected by these new plantations. Some of these include:

- A proper community consultation has not been followed. Only community chiefs were consulted, failing therefore to do a participatory consultation which is mandatory in Mozambique;
- Eucalyptus and pine trees are being planted in local people's machambas (or crop areas) without their consent;
- Occupation of land which is not degraded and which is used by local people for the collection of firewood, medicinal plants and other forest products;
- Fencing off areas and therefore cutting accesses to water, hunting and other activities practiced by local people;
- Failure to generate promised employment;
- Failure to enter into partnerships with local people.

4. LAND TENURE REGIME AND FOREST MANAGEMENT SITUATION

All land in Mozambique is state owned. The forestry authority is the *Direcção Nacional de Florestas e Fauna Bravia* (DNFFB, or National Directorate of Forests and Wildlife), which is part of the *Ministério da Agricultura* (MINAG, Ministry of Agriculture). These public institutions, together with provincial bodies such as the *Serviços Provinciais de Florestas e Fauna Bravia* (SPFFB, Provincial Services for Forests and Wildlife), the *Serviços Provinciais de Geografia e Cadastro* (SPGC, Provincial Services of Geography and Cadastre), and the *Direcção Provincial de Indústria, e Comércio* (DPIC, Provincial Directorate of Industry and Trade) and *Direcção Provincial do Turismo* (Tourism Provincial Directorate), are responsible for the licensing and monitoring of forestry activities, and ensuring the sustainability of resource exploitation.

One of the essential criteria for natural resource sustainability is the security of tenure over land and other natural resources. Without security of tenure, local farmers and other users of natural resources have little or no incentive to alter their subsistence practices. Poor people in particular have no incentive to invest their very scarce resources in the protection and conservation if some third party can obtain the rights to reap the benefit of their sacrifice and hard labour. Secure tenure for all, local people and the new investors whose capital and know-how are essential inputs to local development, is at the heart of the rural and social development model built into the 1997 Land Law (Durang & Tanner, 2004).

Two sets of laws govern and protect forest resource stakeholders: The Land Law of 1997 and the Forestry and Wildlife Law of 1999, with regulations approved only in 2002. The Land Law (1997) recognises and protects traditional rights to land, including forests. The Forest and

Wildlife Law (1999) delineates the rights and benefits of forest dependent local communities, such as: subsistence level use of the resources; participation in the co-management of forest resources; community consultation and approval prior to allocation of exploitation rights to third parties; development benefits derived from timber production under a concession regime.

The Land Law of 1997 recognises community's rights to land and makes community consultation compulsory when assigning rights of use to a second party. It also has a limited recognition of customary rights as a means to defend women's rights (Negrão, 1999). Communities therefore, have the right to habitation and subsistence, as well as the option of negotiating with commercial entities certain agreements that could potentially bring benefits. Although communities can utilise any forest product for their own consumption, they are not allowed to commercialise these products without a license (Norfolk et al., 2004).



Although, in Mozambique all land is owned by the State which can grant title for occupation and use, but not ownership, to individuals and judicial entities, the new land law recognizes the existing customary rights of rural communities and its role in conservation of natural resources. In rural areas, local communities live on a complex system of tenure and access. Thus, although the access to the resource may be classified as open, the pattern of land -use is established on a clan system in which rights of cultivation and other agricultural land-use practices are vested in the chief or *régulo*. Although, there are different clans in the same tribe and the customs vary from one clan to another, rights of use are granted and controlled by this *régulo* as custodian of the people's cultural heritage and land. This form of resource-holding in the past was greatly respected. But, currently there are some frictions between *regulados*. The authority of the chief was diluted by centralized government and due to civil unrest that disrupted the socio-economy of the country from 1975-1992. The area under jurisdiction of a *régulo* is called a "*regulado*" and the boundaries between *regulados* are defined and agreed upon by the *regulos* (Mangue & Nakala, 1999).

The State, as owner of the land, allocates a single type of land use right or DUAT that can be acquired in three distinct ways:

- ❖ Through local community occupation (customary norms and practices);
- ❖ Through good faith occupation (when a Mozambican citizen has used the land without any objections or counterclaims for over a period of 10 years);
- ❖ Through a formal request to the State (this is the only option for an 'outside' investor with an interest to develop economic activities on the land. The formal request is a lease – contract with the Mozambican State for a right to use the land for a period of 50 years).

As customary land access and management are fully integrated into the formal land law of the State, a community consultation process is legally required when investors seek land through the formal request procedure. And while all forest and wildlife resources are also owned by the State and are subject to state licensing for commercial use, the new laws also transfer certain use rights and a resource management role to the family sector. Again, when granting logging rights to commercial companies for example, adequate consultation with the local communities in the area concerned also needs to be undertaken first (Durang & Tanner, 2004).

The Forest and Wildlife Law was aimed at sustainable forest resource management, and to create a more effective structure for the generation and distribution of related tax revenue. Central to this law is the concept of Community Based Natural Resource Management (CBNRM), which has been largely embraced in Southern Africa as a “*decentralisation process aimed at giving grass roots institutions the power of decision making and rights to control their resources*” (Nhantumbo et al., 2003).

One of the main drawbacks of the Forest Law is that it does not include the criteria of occupancy in relation to communities claiming resource rights. The law only offers some protection in relation to subsistence activities. Therefore, it has to be concluded that the two laws governing forest utilisation contradict each other substantially, as the Land Law enables the transfer of real rights to land, while the Forest and Wildlife Law restricts resource use to non-commercial subsistence levels only, making compulsory the application for a licence for commercial resource use (Norfolk et al., 2004). Thus, the Forest and Wildlife Law puts local communities on the same playing field as the private sector and international companies, which means they have to apply for licences and implement management plans in the same way as does the private sector, despite the fact that they lack both financial and technical resources to do so.

5. PREDOMINANT FOREST MANAGEMENT PRACTICES INCLUDING LEGAL FRAMEWORK

The Government of Mozambique’s legal framework regarding forests is set out in three main policy areas: the national agenda for economic development, international environmental and forestry agreements and national forest policy, law and regulations (Mackenzie, 2006).

Mozambique ratified the Convention on Biological Diversity in 1994 (Resolution N 2 of 24 August, 1994) showing the country’s commitments to the adoption of appropriate measures to ensure the national implementation of the objectives of this Convention, namely the conservation of biological diversity, sustainable use of its components as well as access and benefit sharing of genetic resources.

5.1 PARPA and PROAGRI

The Action Plan for the Reduction of Absolute Poverty 2001 – 2005 (PARPA I also known as Poverty Reduction Strategy Paper in most countries) is the main strategic document which binds the Mozambican government to the objective of poverty reduction sets out and directs its activities and provides the framework for assistance by bilateral and multilateral donors (Mackenzie, 2006).

PARPA I recognised that poverty is largely a rural phenomenon and that the strategies to address it should be based on the resources within the command of rural communities. Through this document, Mozambican government commits itself to striving for social and environmental sustainability and identifies the sustainable development of natural resources and raising productivity as key objectives (Mackenzie, 2006).

Regarding forestry, PARPA I, recognised the importance of forests for rural livelihoods and their potential to act as an engine for rural development (Mackenzie, 2006).

The Poverty Reduction Strategy and Action Plan (PRSP II 2006-2009) makes relatively little mention of forestry. It makes some vague statements about ensuring the sustainable management of forest resources, and about promoting an information system on existing resources (Bossel and Norfolk, 2007).

PROAGRI is a multi-donor agricultural sector support programme, started in 1998, and later incorporated into the broader framework of the PARPA. DNFFB (2003) has summed up the Forestry and Wildlife Component of PROAGRI thus:

"The challenge of forest and wildlife sector development of Mozambique is consequently two fold:

- i) to stop the deterioration of this important resource base and achieve its sustainable management and conservation, and
- ii) to formulate and implement effective strategies to tap the potential of the forest and wildlife resources for the benefit of the rural poor." (Mackenzie, 2006).

5.2 AGENDA 21

UNCED, The Rio Earth Summit in 1992, produced several key multilateral environmental agreements, including the Agenda for the 21st Century (Agenda 21), the linked Rio Declaration on Environment and Development and the "Non legally binding Authoritative Statement of Principles of the Global Consensus on the Management, Conservation and Sustainability Development of all Types of Forest (Forest Principles) all of which derived from the basic "right to socio-economic development on a sustainable basis" (UN 1992 Annexes 1 and 3).

Mozambique committed itself to the 27 principles of the Rio Declaration and the 15 Forest Principals (Mackenzie, 2006).

5.3 AFLEG

African Forest Law Enforcement and Governance (AFLEG) is an international Ministerial declaration undertaking to combat illegal logging, which Mozambique signed up to in Yaoundé, Cameroon on October 16th, 2003 committing itself to 30 intentions and 42 indicative actions including fair and equitable enforcement of forest laws, and immediate and coordinated regional and international action to combat illegal logging, hunting and trade and corruption. It also called for transparency by forest agencies, awareness raising amongst national constituencies and partnerships between governments and civil society for monitoring (Mackenzie, 2006).

5.4 PROGRAMME OF WORK ON FOREST BIOLOGICAL DIVERSITY – CBD

Since ratifying the CBD, Mozambique has produced two sets of 'Strategies and Areas of Action for the Conservation of Biological Diversity' in 1997 and 2003.

Regarding forests, the Strategy focuses on the conservation and sustainable use of forest resources in the country, where the main objective is the sustainable and integrated use of forest resources (both wood and non-wood products), ensuring benefit sharing for all players involved in forest exploitation, especially to local communities.

In particular, the 2003 Strategy sets out the following goals for 2010:

- Proper functioning of forest concessions, with the adoption of integrated management plans adapted to the particular type of forest, including replanting of species;
- Equitable sharing of benefits from forest exploitation;
- Setting up a monitoring system (criteria and indicators) for Diversity of forests used for the production of wood
- Implementing mechanisms for the control and reduction of forest fires;
- Improve the understanding of forest fires and its influence in ecosystems
- Improvement of forest exploitation systems for the production of firewood and charcoal;
- Improved enforcement system
- Adoption of measure for the rational use of forest resources by simple licence operators and rural communities;
- Setting up integrated management plans to include non-wood forest products.

5.5 NATIONAL LAND AND FOREST POLICIES, LAW AND REGULATION

a) Land Law

The Land Law was promulgated in 1997. Prior to implementation of the 1997 land law, roughly 75% of arable land was controlled by less than 1% of the country's population. The role of the land law is essentially to outline the conditions under which a broader range of individuals and communities can gain long term usage rights of land, all of which remains the legal property of the state. It basically allows forest dwelling communities free access to use and otherwise exploit the land and its resources for non-commercial activities. It is the mechanism recognizing the rights to habitation and subsistence livelihoods, making it possible for people to sustain themselves without owing the means to such a small number of individuals. To the extent that it has taken genuine effect, this law represents a long overdue end to the *prazo* system referred to above (Reyes, 2003).

b) The Forest and Wildlife Policy and Act

The National Forestry and Wildlife Development Strategy and Policy were approved on the 1st of April 1997, through Resolution N^o 8/97. The long term objectives of the National Forestry and Wildlife Development Strategy and Policy are to secure the protection, conservation, rational and sustainable utilization of forestry and wildlife resources for the economic, social and ecological benefit of the present and future generations of the country (CONDES, 2002).

The Forest and Wildlife Act of 1999 is divided into 9 Chapters: General (Chap. I); Protection of forest and wildlife resources (II); Sustainable forest resources exploitation regimes and Sustainable wildlife conservation regimes (III) Forest and wildlife resources restocking (IV); Management of forest and wildlife resources (V); Forest guarding (VI); Offences and penalties (VII); Final dispositions (VIII). The present Law establishes the basic principles and norms for the protection, conservation and sustainable utilization of forest and wildlife resources under an integrated management framework for the economic and social development of the country. The Law classifies the national forest heritage according to potential, location and mode of utilization different types and other conservation areas. The State promotes the reforestation for commercial, industrial or energy purposes and for recuperation of degraded areas, preferably on dunes, in watersheds and in fragile ecosystems. The wildlife heritage consists of all wild animals in the national territory and is classified in function of its rarity, economic and socio-cultural value for species listed under a special decree. The holder of a title, whether by virtue of occupation or through authorized request, to the right to use and make improvements on land does not necessarily have a licence to exploit the forest and wildlife resources in the respective area, save in those cases where such exploitation is under taken solely for subsistence purposes. It defines different types of protected areas. Any illegal activity (such as fires in forest, cropfield, woodland) shall be condemned up to one year of imprisonment and the corresponding fine, specified in the text (<http://www.iucnrosa.org.zw/elisa/Environmental%20Law/Mozambique/act10-1999%20summary.pdf>)

In sum, this legislation is meant to make the exploitation of these resources more sustainable while providing a more effective structure for the generation and distribution of related tax revenue. As noted above, timber resources were, for the most part, not exploited during the civil war. However, after the peace accord timber represented, and still does, a means of generating significant foreign currency return with minimal capital investment. Until the 1999 law, up to 500 cubic meters of timber could legally be cut per year by anyone who paid a small fee to obtain what was called a simple license. Officially, these licenses could only be held by nationals, were valid for one year and allowed for the timber be taken from large, ill-defined land areas. No management plan as such was required and abuses, including illegally obtained licenses, false licenses, over harvesting, and harvesting outside the permitted boundaries were apparently quite common. The new law retains the simple license system (including most of its shortcomings), adding to its requirements, however, that a management plan be approved and observed (Reyes, 2003).

The 1999 law also creates a new exploitation regime allowing for logging by way of forest concession contracts. According to the law, forest concession agreements can cover up to 100,000 hectares with no explicit annual harvest limit and can last for up to 50 years. And, concessions should be available to any individual or group of individuals including Mozambican communities and foreign nationals. Concessions also require implementation of an approved management plan that must be presented within 180 days from the granting of the concession. Furthermore, the law calls upon concessionaires to process the wood they harvest prior to export and it provides that concessionaires may process, under contract, the produce of simple license holders (Reyes, 2003).

Explicit protections for local communities under the forest and wildlife law are quite strong. The rights of third, or non-contracting parties are explained in Article 18:

"Forest exploitation. . . should always safeguard all rights to third parties existent in the area being exploited as well as safeguarding unimpeded access by the local communities into the area being exploited and including use rights of the natural resources which these communities need for their subsistence."

The concession regime also mandates consultation with potentially affected communities *prior* to awarding a contract. The same is not true of the simple license system. This consultation must be done through local government administrative organs and is commonly understood as giving communities something akin to veto power over the allocation of a concession. The actual text, however, is more ambiguous on this. What seems to occur in practice is some form of meeting between district or provincial level government officials, lower to mid-level company representatives and community representatives who may or may not actually speak for their communities, depending on which accounts one relies (Reyes, 2003).

Regulation of the Forest and Wildlife Law (MADER 2002), elaborates on measures to implement the Forests and Wildlife Law, and includes 119 articles, structured around the same nine chapters as the Law. It sets out in some detail, the requirements for application, rights and obligations of the two main regimes of forest exploitation, the Simple Logging License (section II) and the Concession (Section III), but does not include operational details for harvesting, transport or export. The Regulations also prescribe:

- priority of concessions over simple licenses in the longer term,
- transfer of rights to local populations,
- adequate consultation between operators and communities, prior to exploitation,
- local councils to make resource management decisions, including community representatives, private sector and local government (Mackenzie, 2006).

c) Governance, Taxation and Remedies

Structure of governance.

As noted above, Mozambican law provides that the state retains ownership of all land and that logging takes place under one of two permitting regimes. Administering the exploitation of forest resources falls within the purview of the Ministry of Agriculture and its National Directorate of Forestry and Wildlife (DNFFB). Each province (the country is comprised of 10) has a Provincial Directorate of Agriculture with its Provincial Service of Forests and Wildlife (SPFFB) (Reyes, 2003).

Provincial level governance is executed by a Provincial Governor, District Governors, and Administrative Posts, each with an appointed Head of Post. This is the lowest level at which the central government provides salaries. Then there are the localities which overarch small communities and villages. These are governed largely by structures without formal governmental support that include elders who, presumably, enjoy the respect of their communities (Reyes, 2003).

Concession contracts of up to 20,000 hectares and all simple licenses can be authorized at the level of Provincial Governor without the involvement of the national government. Concessions ranging in size from 20,000 to 100,000 hectares must be approved by the Ministry of Agriculture. The basis for granting a concession begins with a direct request presented to the provincial director of forestry by those who seek it. This should be followed by a number of steps including an estimated timber inventory and the community consultation process explained above. After the consultation a more detailed topographic representation of the area, its population and its timber should be forwarded along with plans for the operation of two sawmills. Analysis of these materials is done at the provincial level. Meanwhile, the proposal is made public through the media. Depending on the size of the possible concession, authorization is granted or denied at the level of Provincial Governor or the Minister of Agriculture, as explained above. What actually takes place is less definitive or constant. For example the detailed timber inventories would call for a substantial expense for the would-be concessionaire prior to having any guarantee of a return. Thus, these inventories, by and large, have not been required and are generally not performed. The inclusion of sawmill plans may or may not happen, but a general shortage of functioning mills at least indicates a lack of implementation. There is no mention of how monitoring might take place (Reyes, 2003).

Taxation and Fines

Regulations subsequent to the Forest and Wildlife Act of 1999 create a licensing fee structure and divide Mozambique's 118 commercially valuable species of trees into five categories for purposes of taxation. The first category classifies certain species as "precious" and, as the name implies, covers the most rare and valuable types. All others fall within classes numbered one through four based on their relative scarcity and commercial value. Levels of taxation depend on species classification (Reyes, 2003).

Taxes are levied based on the harvester's total volume of timber cut and are controlled by roadside checkpoints where government controllers track timber volumes by category, check licensing compliance and levy fines. Regarding revenues from fines, 50% of fines collected for breach of natural resources management Law go back to the people who participated in law enforcement (<http://www.ieed.org/forestry/research/project/forest.html>)

The 1999 law calls upon "all citizens [to] collaborate in exercising the vigilance needed for. . . reporting offences to the nearest authorities." It goes on to state that "anyone who had the legal obligation to collaborate in exercising vigilance but did not do so [shall] have to answer for an offence committed." However, in none of the interviews conducted did anyone mention these provisions. Whether this was the result of simple oversight or lack of awareness is difficult to say (Reyes, 2003).

The regulations also require that 20 percent of public revenues from commercial forest and wildlife ventures are given to local communities to support local development (Durang & Tanner, 2004).

6. ROLE OF INTERNATIONAL INSTITUTIONS

There are several forest resource management programmes in the country, which are largely funded by external organisations. Under the framework of PROAGRI (National Agriculture Development Programme), the Forests and Wildlife Programme is receiving assistance from various donors and international co-operation agencies. The major funding agencies include Denmark, The Netherlands, United Kingdom, Ireland, Sweden, The European Commission, and the International Development Association (Sitoe, 2003).

The Sustained Forest Resources Management Project (PMSR), being carried out by DNFFB and FINNIDA (Finnish Department for International Development Cooperation), has been conducting a forestry inventory in Zambézia and Manica, with the objective of delimiting the best areas for reserves and establishing an allowable cut (Mackenzie, 2004). Further objectives of the project include: the improvement of national and provincial capacity for effective forest management and utilisation and to improve access to the forest resource at community level, thereby improving economic sustainability of forest resource management and conservation (Barne, 2001b).

DFID has funded a Policy Support Programme, which in 2004 set up a Policy Working Group with a core group containing representatives from DNFFB, the private sector, NGOs and Eduardo Mondlane University. The group is intended to continue to develop policy standards after DFID funding ends. The intention is that this group fosters a consensus approach, and allow all stakeholders to debate and consider forest policy developments. DFID also commissioned a study on policy instruments for sustainable forestry, covering community rights, concession processes, and fiscal incentive for industry and law enforcement.

The National Forest Forum was officially constituted through DNFFB in 2002, partly funded by DFID, to prioritise, discuss and propose changes to policies relating to land use and forestry (Bila, A., *et al.*, 2004). It has four main working areas: concession law (including taxes and regulations); community rights and benefits; industrial incentives; and law enforcement (Mackenzie, 2004). The Forum takes place on a quarterly basis, and involves key members of MINAG, DNFFB, the private sector, civil society, education and research institutions (Bila, *et al* 2004).

The Forest Governance Learning Group (FGLG) is an international initiative to promote the exchange and the development of ideas on forest governance in both Western and Southern Africa. It is facilitated by the International Institute for Environment and Development (IIED) and supported by DFID (IIED, 2004). The FGLG aims to contribute to the Africa Forest Law Enforcement and Governance (AFLEG) processes. A new DFID supported FGLG in Mozambique is being developed as "an alliance of independent agencies which aims to exchange learning and develop ideas on forest governance – and to help make them work" (IIED, 2004). FGLG is finding its place as a sub-grouping of the Forum and it has been active in reconciling different approaches used in the development of laws related to forest and land use.

GERFFA, the Forest and Wildlife Resources Management Project, funded by the African Development Bank was introduced in 1994 and is currently being implemented in Manica, Sofala and Cabo Delgado (Barne, 2002). It is a joint effort by DNFFB and SPFFB, and has conducted a forest inventory of 1.3 million hectares and prepared forest management plans for considerable areas (Barne, 2002). It is also currently undertaking a similar exercise in Cabo Delgado Province, where an inventory of 1.4 million hectares will be developed (Barne, 2002). The project deals mainly with capacity building, wildlife management, production forestry and social forestry.

Through its Environmental and Awareness Fund Programme, IUCN has received funding from the Royal Netherlands Government to support local initiatives that promote the sustainable management of natural resources, through the encouragement of local participation in environmental projects and the raising of awareness through training and research (IUCN, 2003). The programme will involve the dissemination of information and exchange of approaches to natural resource management; training and development of pilot projects, empowerment and advocacy; and the creation, publishing and distribution of Community-based Natural Resource Management (CBNRM) (IUCN, 2003).

Forest certification is an instrument that could strengthen the contribution of companies to forest enforcement, promote the sustainable management of forest resources, and contribute to the implementation of the Forest and Wildlife Law, Land Law, Environment Law and its regulations (DNFFB/FAO, 2003). There is no capacity in Mozambique related to certification, and international NGOs and donors have been pushing for the implementation of the certification process in the country. However, due to lack of capacity in the country, the process will begin through building human and institution capacity. Some of the drawbacks are the general concentration of representatives of the forest sector (such as public institutions, private companies and NGOs) in Maputo, lack of information regarding the certification process, lack of financial means, lack of political will and general lack of national and international demand for certified wood products (UEM, 2005)

"The Southern and East Africa Region Forest Investment held in Pietermaritzburg, South Africa, from June 13-16, 2006, identified emerging opportunities for responsible private investment in the forest sector to drive economic development, reduce poverty and conserve forest resources. The Forum discussed constraints to such investment, specifically forest sector corruption and governance failures more broadly that manifest in a lack of transparency in forest resource use, ineffective land tenure policies, and a poor investment environment." (World Bank, 2006)

The Global Solidarity Fund (GSF), an initiative taken by the Diocese of Västerås (Church of Sweden) in partnership with local dioceses, was "set up to design and invest in forest projects in the developing world that provide economic, environmental and social benefits." (GSF, n/a). GSF is developing two major forest projects in Niassa and Sofala Provinces. The projects include reforestation with eucalyptus, pine and teak, and conservation of natural forests, and aim to "improve sustainable forest management, enhance biodiversity and build local capacity". For the initiative, the Diocese of Västerås is working in cooperation with the local Anglican Church, the Mozambique government, the Swedish International Development Agency, with the support of the Alliance of Religions and Conservation (GSF, n/a).

7. ASSESS ENVIRONMENTAL CHANGES OCCURRING IN THE COUNTRY SINCE IMPLEMENTATION OF CBD

Mozambique has implemented a series of mechanisms to improve the management of forest resources and community benefit sharing of forest products, since the ratification of the CBD, such as new laws, programmes and projects. However, practical implementation has been rather slow.

The following paragraphs will describe a few case studies, positive and negative, related to the management of forest resources and implementation of the POW on forests. It is however important to keep in mind that most of the 'good-case studies' presented in this report have a series of drawbacks, which immediately questions their future success and overall contribution to the protection of forest resources.

Community Based Natural Resource Management

Research suggests that there are approximately 68 Community Based Natural Resource Management (CBNRM) initiatives in the country. CBNRM is a strategy adopted by government in order to implement the social objectives of the national Forest and Wildlife Law of 1999, which embrace the principle of participation in the decision making process regarding the sustainable use of natural resources. This type of approach is designed to bring benefits to conservation, to the national economy, to private operators and to communities

In Macosso District (Chinguinhene & Tsetsere localities), there are examples of local communities being involved and empowered in the management of forest and wildlife resources. These have *Comités de Gestão dos Recursos Naturais* (Natural Resource Management Committees), composed of 10 community members (including women), who are chosen by the local community (although in some instances government decides), and meet

on a regular basis to discuss problems encountered and possible solutions to control, manage and protect forest resources.

The allocation of 20% of forest fees to local communities

Another of such mechanisms is Decree No. 12 of 2002, which stipulates that 20% of the value of access, exploitation and utilization fees of forest products should be channelled to local communities. However, this has been very poorly implemented, as communities lack both information and resources, and are usually not sufficiently organized to be able to effectively utilize the 20% on their own.

For example, Cabo Delgado Province had, in 2006, a total of 14 forest concessions and 47 simple licenses. In that same year, only one community received the 20% of forest fees. The channelling of this 20% to local communities is done by the Provincial Services of Forests and Wildlife, which face several constraints, such as the costs involved in the process; the general lack of knowledge about the forest legislation; bureaucracy; lack of input from relevant sectors; lack of communication between different actors; rigid bank mechanisms related to the opening of bank accounts by community members, amongst other issues.

Nangade is a District situated in Northern Cabo Delgado, bordering Tanzania. The District has only one forest concession, occupying an area of approximately 37, 652 ha. There are 7 villages inside the concession area, with a population of 3387. Cashew nut production is the only income generating crop in all villages, and the product sold mainly in Tanzania.

According to these communities, Comadel (a private logging company with a few forest concessions in Cabo Delgado) has been exploiting the area's forests for many years. In 2005, local communities found out about their rights to the 20% of forest exploitation fees, through the Provincial Unit for Community Management (from the Provincial Services of Forest and wildlife) of Cabo Delgado. A series of community consultations were carried out, and a Community Council was formed. The council identified 3 people to open a bank account, in order to receive the 20% of fees. In order to do so, they have to travel for very long distances, on untarred roads, where transport is difficult to find and expensive. However, they did not have identity cards which are compulsory in order to open bank accounts. With the help of Provincial Unit for Community Management, they eventually managed to open a bank account. In October 2006, the Nangade community received two cheques in the form of 'posters', with the values of 277.560,00 Mtn (year 2006), and 229.000,00 Mtn (year 2005)². However, the community still didn't know if the money was indeed in their bank account, as they did not receive any real cheque, no documents, and they lack the means to travel to Mocímboa da Praia. Even if they did have the money, they would not know how to deal with bank bureaucracy, and they are not fluent in Portuguese.



² 1USD equals approximately 28.5 Mtn.

Figure 3: The community of Nangade, with the cheques received from forest fees, Cabo Delgado, 2006.

Furthermore, there is no programme to capacitate communities in terms of managing funds, laws, projects and monitoring. There is also the risk of communities becoming totally dependent on this income, and failing to develop other income generating activities.

Concession regimes in favour of simple licenses

The Policy and Development Strategy for Forests and Wildlife, and the Forest and Wildlife Law of 1999 aimed to institute the use of concession regimes and slowly abandon *licenças simples*. Concessions can be attributed to any national or foreign enterprise, as long as the timber produced is processed. This requires a detailed forest inventory as well as the adoption of a management plan. Concession regimes are in line with the national forest programme to ensure a better promotion of Mozambican timber, a better technical assessment of the forest sector by the extension services, helping with the control of illegal activities (Reyes, 2003). Furthermore, concessions guarantee sustainable resource management as they occur over a long enough period to guarantee investment, and act as a platform for the interaction between timber companies and local communities.

Although the Forest and Wildlife Law of 1999 was aimed at instituting concession regimes while slowly phasing simple licence systems out, most logging in the country is still done through simple licence systems. In 2002, 24 concessions were allocated in Sofala and Cabo Delgado, and a further 22 concession permit requests were submitted in the country. However, of the 24 concessions allocated, none submitted a management plan (Bila et al., 2003). In 2003, there were a total of 76 concessions authorised, of which only 25 submitted management plans.

The reason behind this inefficiency in the allocation process is due to its complicated and unclear nature:

- It does not include criteria for the allocation of concessions;
- There is no zoning system, where particular areas are designated for concessions;
- Concession areas can be of any size (up to date, these have varied between 10 000 and 100 000 ha), where a tax land is paid to the relevant authorities. Tax on land is 15 000MT/ha or US0.65/ha.
- Logging taxes are usually very low if compared to the value of timber at national and international levels. Because there is still no set tax for logging, its value is estimated by comparison with other land uses such as agriculture, which has a tax of only USD 0,12/ha.
- There are no definitions of procedures such as community consultation;
- There is no guidebook on how to implement management plans, and
- *Fiscalização*³ is extremely weak (Bila, A., et al., 2003).

Ban on the export of 1st class wood without in-country processing

Decree No 12/2002, prohibits the export of logs of 1st class species and requires processing within the country. Although this is directed at adding value to forest products in Mozambique, job creation and decreasing export of logs, most saw-mills in Cabo Delgado produce mainly wooden planks, which are not labour intensive and do not really add much value to the exported material.

³ Fiscalização is the Portuguese word for Enforcement.



Figure 4 & 5: Chanfuta (*Azelia quanzensis*) being sawn into planks for export, Cabo Delgado, 2006.



Figure 6 & 7: Pau-preto (*Dalbergia melanoxylon*) & Umbila (*Pterocarpus angolensis*) outside Mocímboa da Praia's Port, waiting to be exported.

Co partnership of fines

Decree No 12/ 2002, 6th of June establishes that 50 % of the value of fines derived from the transgression of the forest and wildlife law shall be attributed to law enforcement officials, community agents and local communities involved in the exposure. However, this co-partnership of fines has been very slowly implemented. For example in 2006, in Montepuez District, Cabo Delgado, the local law enforcement officials passed 100 fines, totalling about 47 000 Mtn, and never received the 50%. All fines are paid at the Provincial Level, which means that they have to travel all the way to Pemba (the capital of Cabo Delgado) in order to receive their share. Distances are far, and transport costs high for officials and community members. This same situation occurred in Mocímboa da Praia and Mueda, two other Districts in Cabo Delgado.

Field Study in Cabo Delgado Province

During a recent field trip over 150 interviews were carried out with various individuals linked to the forest sector, including government, communities, forest operators, wood exporters and NGOs. These interviews showed some major areas of convergence. In total, 80% identified illegal logging and fires as being the major problem linked to forest sustainability, while firewood/charcoal, agriculture and human animal conflicts made up the rest of the concerns.

The illegal forest exploitation has been a well documented problem and, based on estimations of a study by DNFFB and FAO (2003), clandestine timber production in Mozambique may account for between 50 and 70 per cent of the total national production. In terms of roundwood, this corresponds to 90,000 and 140,000 m³ of illegal production per year. In monetary terms, this corresponds to a gross state loss of US\$15-24 million. The data was presented to the interviewees, and the majority agreed by stating that this was a realistic statistic.

Communities' perspective

The communities surrounding forest exploitation areas commented on extensive logging, high level of abandoned wood in the forests, logging of small and large trees, nocturnal activity of

forest operators (which is illegal in Mozambique), and high level of foreign operators especially of Asian origin. In the case of the northernmost districts there is also a high level of illegal Tanzanian loggers crossing the boarder usually at night.

As for the 20%, only 15% of the 30 plus communities in the five districts visited had received any form of revenue. The few that had received the 20% tax revenue had issues around the accessibility and use of the money.

Besides the lack of implementation of the 20% revenue that affected communities are legally entitled, other problematic issues raised by community members are the inhumane conditions, backlog of salaries, below minimum wage salaries and lack of contracts within the forest sector. These issues were confirmed by the provincial director of labour (Provincial Directorate of Labour (4th of September 2007) where he commented on the bad reputation that forest sector companies have developed. Almost all logging and wood export companies have or have had processes and complaints put against them relating to unpaid salaries (some with unpaid salaries of six months), lack of contracts, salaries below the minimum wage and even illegal immigrant workers from Asia and other parts of Africa.

The logging teams work in extremely precarious conditions, where they have no access or very little access to safety gear such as helmets, gloves, masks and even boots. No first aid kits or medical support, which makes any basic injury a major risk and deaths are common. There is a lack of basic amenities such as water. The workers are often forced to use the dew (moisture) on the leaves and grasses early in the morning in order to get clean. This lack of amenities further increases health issues.



As for problems around forest fires, the communities identified rodent hunting as the main cause of the fires. The decrease in larger mammals in the last 20 years has forced many hunters to resort to smaller mammals to obtain revenue and protein rich diets. These small mammals are difficult to hunt and therefore fire is necessary for successful catches. Agriculture is the second main cause of fires. In addition to community induced fires, loggers also make use of fires to clear paths and improve visibility for the scouts that look for precious woods. Other less common reason for the use of fires by both communities and loggers is to chase away animals in order to decrease animal human conflict that seems to be high during the dry season on national parks and in more remote forest areas such as in Nangade district. Communities also mentioned the need for fire to clear undergrowth such as grasses that have been on the increase in the last 2 decades and can takeover paths and hinder movement in the forest.

Government's perspective

The closest group to the grass roots level is the forest guards. Their prospective is similar to that of the communities, but not as strong. They admit a major problem around illegal logging, mentioning the cutting of 10% above the allowed amount stipulated by the license (for example, Wood Export Lda. had been caught recently doing this), transporting logs without documentation (e.g. MOFID Lda. had been caught with no license, transport permit or volume permit), logging trees with sizes below the legal diameter (e.g. Momed Ali had been caught recently with this problem), uprooting of trees and attempt to export (in Mueda, MOFID Lda. was caught with roots of precious hard wood species). These roots are used for building tables for the extremely rich, and are becoming popular in the Middle East).

One of the forest guards interviewed (Forest Enforcement Officer of District Directorate of Agriculture, 27th of August 2007) commented on the collaboration between community guards, but mentioned the difficulty in maintaining the community guards motivated and believing in the system. The reason for this is once they catch an illegal act and contact one of the forest

guards, they receive no feedback on the conclusion of the process once it reaches the provincial level.

Communities often see operators that were caught in illegal activity back in the field doing the usual work. In some extreme cases it was reported that not only did the individuals caught returned to the logging area, but threatened the community guards involved in the process. This breaks the trust of the communities in the system and questions the usefulness of placing time and resources in helping with the monitoring of forests.

In an interview with the provincial director of customs (Customs Provincial Directorate, Pemba, 21st of August 2007) he commented on the system's corruption, such as under reporting of volumes, false registry of cargo and wood species, and illegal export of raw logs of 1st class wood species. The Asian exporters dominate the market, having a major interest in raw logs because the main destination (China) doesn't not impose taxes (or imposes very low taxes) on raw logs, but does impose significant taxes on processed woods. Various interviewees commented that the taxes in china were the main reason for the interest in raw logs, and not the high inefficiency of the processing mills (around 50%) in Mozambique, because the losses are covered by the processing mills and not by the Asian buyers, who pay for volume of final product. The issue around high losses of processing should be addressed as it will promote over logging in order to compensate for these inefficiencies. Some countries like Burma have used bilateral agreements with China to solve some of their logging issues and this was often raised as a solution to this problem by some interviewees, but the central government has shown little interest in taking up the suggestions.

All government bodies interviewed (e.g. Agriculture, Customs, Labour, Health and Migration) mentioned problems of illegal forest exploitation. In an interview with the provincial director of agriculture (Chief of the Provincial Services of Forests and Wildlife, Pemba, 4th of September 2007) he commented that all concessions in Cabo Delgado are legal, but that operators have 180 days after the issuing of the concession license to present their management plans. The concessions that currently do not have management plans are still within these 180 days, while all the rest have management plans. He also mentioned that the problem around the low number of communities receiving the 20% tax revenue of forest exploitation is due to the recent nature of the process (even though approved in 2002, the implementing mechanism was only approved in 2005) and the constant change in operators within the same area. In relation to the nocturnal activity of loggers he raises the possibility of communities confusing transport of logs (which is legal) with actual logging. Even though nocturnal logging does occur, especially in the northernmost districts where there is a strong Tanzanian influence, he doesn't believe it is as prevalent as mentioned by communities.

Interestingly, the dynamic between provincial and national levels follows a similar pattern to that mentioned between district and provincial levels, with some negative interference from the national level on the initiatives at the provincial level to resolve the excessive forest exploitation in Cabo Delgado. Interviewees from various stakeholder groupings commented on the link between loggers/wood exporters with important national level government individuals. Some comments claimed that even though many problems are still occurring, there has been a general improvement in the forest sector since the new provincial director (Governor Lázaro Sebastião Mathe) has come into office. The governor and all the other government departments were also very opened about sharing information, with the exception of the department of agriculture, which did not allow consultation of certain documents such as the concession management plans.

Operators' perspective

The loggers and forest operators raised the difficulties they face working in the sector. In addition, they agreed that the forest sector does have problems, to which they attribute to a few bad operators that give the larger group the current (bad) reputation. A large percentage commented on the bureaucracy of the sector, which makes even following the legal option time consuming and complicated, and at time requiring bribes to obtain things that should be

legally available. One example was of a foreigner operator trying to open his wood processing mill. He commented on the lack of documentation in any other language besides Portuguese, the numerous locals who offered help and ended up scamming, the regular requests of money just to allow the legal paper work to advance, fake requirements and payments which were later unnecessary, and numerous other issues that made the process one of the worse in any country he has ever worked in. However, he did comment that this was done a little while back and some changes have occurred since then.

The lack of support around the sector was often raised with examples like the requirement for reforestation. One of the operators who has been trying to fulfil this requirement mentioned the difficulty in obtaining even the basic material such as small black plastic bags for seedlings. This simple limiting factor was one of the major limiting factors in the amount of seedlings planted this year. When he approached the government for help with this problem or even requesting information on where to obtain large quantities, no effort was made by the government to help. One of the operator's points of view is that the lack of support, the high level of bureaucracy and corruption are a stimulant for illegal practices.

8. CONCLUSION

Mozambique is rich in forest resources, with a total forest area of approximately 30, 601,000 ha. The majority of the Mozambican population is rural and poor, and often dependent on the collection of both wood and non-wood forest products.

Since ratifying the CBD, Mozambique has implemented a series of mechanisms, strategies and plans to improve sustainability of the forest sector. However, and despite this, deforestation rates in the country remain high, mainly from illegal logging practices, firewood collection and charcoal production, forest fires, coupled with weak institution and human capacity, extremely weak law enforcement, corruption, and lack of political will. This has been forcing local communities to migrate to degraded land, putting at risk local livelihoods.

The general lack of political interest or will to reverse current deforestation rates, and the current type of economic growth and development that is encouraged and facilitated by the Mozambican government, are often contradictory to the sustainable use of natural resources including forests. The increased foreign direct investment in the form of mega and large scale projects, which are exempt from taxation, employ few people and transfer much of the profits out of the country, are examples of this. There is a risk that reforestation with exotic species and agrofuel projects will be presented as a solution to the utilisation of degraded land, to combat deforestation, and as a conservation mechanism, putting at risk national food security. In fact, this can be substantiated by the national draft reforestation strategy recently developed.

There are no simple solutions for the problems encountered in the national forest sector. There are too many players (including higher government officials) benefiting from illegal logging and export of precious woods. Despite the programmes, mechanisms, laws and regulations implemented since the CBD and the POW on forests, a lot more needs to be done in order to attain sustainability of our forests, which could include stronger mechanisms to ensure communities benefit from forest exploitation, building partnerships with NGOs, fighting corruption, cancelling the simple license system, providing training to Mozambican officials, amongst others.

ANNEX I

QUESTIONNAIRE on the implementation of the programme of work on the biological diversity of forests, of the convention on biodiversity (CBD) in Mozambique

REPORTING

1. Has the government sent its national report on the implementation to the CBD secretariat?

- Yes
- No

Comment.....
.....

2. Has the government sent its thematic report on forest ecosystems to the CBD secretariat?

- Yes
- No

Comment:.....
.....

IMPLEMENTATION AND INTEGRATION

3. A national biodiversity strategy has been

- developed
- adopted
- implemented
- none of these

(please tick appropriate boxes)

4. A national forest plan/programme has been

- developed
- adopted
- implemented
- none of these

(please tick appropriate boxes)

5. Is the national biodiversity strategy integrated in the national forest plan/programme?

- Yes
- No
- Other, describe.....

6. Is the national forest plan/programme integrated in the national biodiversity strategy?

- Yes
- No
- Other, describe.....

.....

Article 6

Each contracting party shall in accordance with its particular conditions and capabilities develop:

A) National strategies, plans or programmes for the conservation and sustainable use of biological diversity or adapt for this purpose existing strategies, plans or programmes which shall reflect, inter alia, the measures set out in this Convention relevant to the contracting party concerned; and

(b) Integrate, as far as possible and as appropriate, the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies.

NEGATIVE IMPACTS ON BIODIVERSITY AND MONITORING

7. An inventory of all activities that are likely to have significant negative impacts on the conservation and sustainable use of forest biological diversity has taken place.

- Yes
 - No
 - Other, describe.....
-

8. A programme to monitor potentially negative impacts on forests biodiversity has been

- developed
- adopted
- implemented
- none of these

(please tick appropriate box)

9. If a significant negative effect of a particular process or activity on forest biological diversity has been determined, has that activity or process subsequently been regulated or managed?

- Yes
- No

Other, describe.....
.....

Article 7

(c) Identify processes and categories of activities which have or are likely to have significant adverse impacts on the conservation and sustainable use of biological diversity, and monitor their effects through sampling and other techniques.

Article 8

(l) Where a significant adverse effect on biological diversity has been determined pursuant to Article 7, regulate or manage the relevant processes and categories of activities.

PARTICIPATION

10. All stakeholders, including indigenous peoples and environmental NGOs have been invited to contribute to the assessment of status and trends, including gaps and priority actions needed to address threats to forest biological diversity.

- Yes
 - No
 - Other, describe.....
-

Decision V/4 of COP5, no 15

Requests the Executive Secretary to invite relevant organisations and forest related bodies, institutions and processes, including criteria and indicator processes, as well as indigenous and local communities, non-governmental organisations and other relevant stakeholders to contribute to the assessment of status and trends, including gaps and priority actions needed to address threats to forest biological diversity

PROTECTED AREAS AND BIODIVERSITY CONSERVATION

11. A system of protected areas has been established.

- Yes
 - No
 - Other, describe.....
-

12. Are there any outstanding land claims or disputed areas in the protected areas network?

- Yes
 - No
 - Other, describe.....
-

13. There is a system in place to regulate or manage biological resources important for the conservation of forest biological diversity whether within or outside protected areas.

- Yes
 - No
 - Other, describe.....
-

Article 8

(a) Establish a system of protected areas or areas where special measures need to be taken to conserve biological diversity

(b) Develop, where necessary, guidelines for the selection, establishment and management of protected areas or areas where special measures need to be taken to conserve biological diversity.

(c) Regulate or manage biological resources important for the conservation of biological diversity whether within or outside protected areas, with a view to ensuring their conservation and sustainable use.

INDIGENOUS PEOPLES' RIGHTS

14. Has action been taken towards the implementation of Article 8j and related provisions?

- Yes
 - No
 - Other, describe.....
-

15. Is there a programme to strengthen indigenous and local communities participation in the National Biodiversity Strategy and Action Plan?

- Yes
 - No
 - Other, describe.....
-

Article 8

(j) Subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices.

Work Programme on Forest Biological Diversity: A.3.e.

To identify traditional forest systems of conservation and sustainable use of forest biological diversity and to promote the wider application, use and role of traditional forest related knowledge in sustainable forest management and the equitable sharing of benefits, in accordance with article 8j and other related provisions of the Convention

Decision V/16 of COP5,12

Urges Parties and Governments and, as appropriate, international organizations, and organizations representing indigenous and local communities, to facilitate the full and effective participation of indigenous and local communities in the implementation of the Convention and, to this end:

12a

Provide opportunities for indigenous and local communities to identify their capacity needs with the assistance of governments and others, if they so require.

12c

Provide for sufficient capacity in national institutions to respond to the needs of indigenous and

local communities related to Article 8j provisions

THREATENED SPECIES

16. Legislation has been developed for the protection of threatened species and populations.

- Yes
 - No
 - Other, describe.....
-

Article 8

(k) Develop or maintain necessary legislation and/or other regulatory provisions for the protection of threatened species and populations.

CUSTOMARY USE AND LOCAL SUPPORT

17. There is a programme in place to protect and encourage customary use of biological resources in accordance with traditional cultural practices.

- Yes
 - No
 - Other, describe.....
-

18. Local populations are supported to develop and implement remedial action in degraded forest areas

- Yes
 - No
 - Other, describe.....
-

Article 10

(c) Protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements;

(d) Support local populations to develop and implement remedial action in degraded areas where biological diversity has been reduced.

INCENTIVES

19. Incentives for the conservation and sustainable use of forest biological diversity have been

- developed
 - adopted
 - implemented
 - none of these
- (please tick appropriate box)

Article 11

Each contracting party shall, as far as possible and as appropriate, adopt economically and socially sound measures that act as incentives for the conservation and sustainable use of components of biological diversity.

ENVIRONMENTAL AND STRATEGIC IMPACT ASSESSMENTS

20. Appropriate procedures have been developed and implemented that require environmental impact assessments of projects that are likely to have significant negative impacts on forest biological diversity

- Yes
 - No
 - Other, describe.....
-

21. There are plans to expand the EIA procedure to a Strategic Impact Assessment (SIA) Procedure.

- Yes

- No
 Other, describe.....
.....

Article 14.1

(a) Introduce appropriate procedures requiring environmental impact assessment of its proposed projects that are likely to have significant adverse effects on biological diversity with a view to avoiding or minimizing such effects and, where appropriate, allow for public participation in such procedures.

Please return to

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ANNEX II

List of Questionnaire Recipients

1. Ministry for the Coordination of Environmental Affairs
2. Ministry of Agriculture
3. Organização Rural de Ajuda Mútua (ORAM) in Maputo, Inhambane, Gaza, Sofala, Manica, Zambézia, Tete, Nampula and Niassa Provinces.
4. CARE Nampula
5. SNV Nampula
6. Provincial Directorate for the Coordination of Environment – Nampula and Cabo Delgado Provinces
7. Provincial Directorate of Agriculture – Nampula and Cabo Delgado Provinces
8. Engenheiros sem Fronteiras - Cabo Delgado Province
9. AMA – Associação do Meio Ambiente de Cabo Delgado
10. WWF Cabo Delgado

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