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## Feasibility Study: Sustainable Financing of Protected Areas in Mozambique



Melissa Moye and Sean Nazerali  
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**Abstract:** *Feasibility Study: Sustainable Financing of Protected Areas in Mozambique* identifies existing and potential sources of financing for Mozambique's conservation areas and will serve as the basis for adopting a comprehensive sustainable financing strategy for Mozambique's conservation areas. The report recommends priorities for developing pilot sustainable financing mechanisms and an action plan for implementation.

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**Contacts:**

WWF-Mozambique

<http://www.wwf.org.mz/>

Brit Reichelt-Zolho, [brzolho@wwf.org.mz](mailto:brzolho@wwf.org.mz)

Sean Nazerali: [snazerali@wwf.org.mz](mailto:snazerali@wwf.org.mz)

WWF Conservation Finance

<http://www.worldwildlife.org/conservationfinance>

Melissa Moye: [melissa.moye@wwfus.org](mailto:melissa.moye@wwfus.org)

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## Acronyms and Abbreviations

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<b>AFD</b>	French Development Agency/ <i>Agence Française de Développement</i>
<b>ANAC</b>	National Administration of Conservation Areas/ <i>Agencia Nacional de Áreas de Conservação</i>
<b>A/R</b>	Afforestation/Reforestation
<b>ARA</b>	Regional Water Administration/ <i>Administração Regional de Águas</i>
<b>BBOP</b>	Business and Biodiversity Offsets Programme
<b>BIOFUND</b>	Foundation for the Conservation of Biodiversity/ <i>Fundação para a Conservação da Biodiversidade</i>
<b>BMZ</b>	Federal Ministry for Economic Cooperation and Development (Germany)/ <i>Bundesministerium für Wirtschaftliche Zusammenarbeit</i>
<b>C2D</b>	Debt and Development Contract/ <i>Contrat Désendettement et Développement</i>
<b>CBD</b>	Convention on Biological Diversity
<b>CBNRM</b>	Community Based Natural Resources Management
<b>CCB</b>	Climate, Communities and Biodiversity (standard)
<b>CDM</b>	Clean Development Mechanism
<b>CI</b>	Conservation International
<b>CEPF</b>	Critical Ecosystem Partnership Fund
<b>CITES</b>	Convention on Trade in Endangered Species
<b>CSR</b>	Corporate Social Responsibility
<b>DFID</b>	Department for International Development (UK)
<b>DNA</b>	National Directorate for Water/ <i>Direcção Nacional de Águas</i>
<b>DNAC</b>	National Directorate of Conservation Areas/ <i>Direcção Nacional das Areas de Conservação</i>
<b>DNTF</b>	National Directorate of Land and Forests/ <i>Direcção Nacional de Terras e Florestas</i>
<b>DUAT</b>	Land Use Title/ <i>Direito de Aproveitamento e Uso de Terra</i>
<b>EIA</b>	Environmental Impact Assessment
<b>EITI</b>	Extractive Industries Transparency Initiative
<b>FAS</b>	Amazonas Sustainable Foundation
<b>FCPF</b>	Forest Carbon Partnership Facility
<b>FFI</b>	Fauna and Flora International
<b>FFEM</b>	French Global Environment Fund
<b>FFP</b>	Fisheries Development Fund/ <i>Fundo de Fomento Pesqueiro</i>
<b>FUNAB</b>	Environment Fund/ <i>Fundo do Ambiente</i>
<b>GCF</b>	Global Conservation Fund (Conservation International)
<b>GEF</b>	Global Environment Facility
<b>HIPC</b>	Heavily Indebted Poor Country
<b>IFC</b>	International Finance Corporation (World Bank Group)
<b>IIED</b>	International Institute for Environment and Development
<b>IMF</b>	International Monetary Fund
<b>INATUR</b>	National Tourism Institute/ <i>Instituto Nacional do Turismo</i>
<b>INP</b>	National Petroleum Institute/ <i>Instituto Nacional de Petróleo</i>
<b>IUCN</b>	The World Conservation Union
<b>KfW</b>	German Development Bank/ <i>Kreditanstalt für Wiederaufbau</i>
<b>MDN</b>	Ministry of National Defense/ <i>Ministério da Defesa Nacional</i>
<b>MICOA</b>	Ministry for Coordination of Environmental Affairs/ <i>Ministério para Coordenação da Acção Ambiental</i>
<b>MINAG</b>	Ministry of Agriculture/ <i>Ministério da Agricultura</i>
<b>MIREM</b>	Ministry of Mineral Resources/ <i>Ministério dos Recursos Minerais</i>
<b>MITUR</b>	Ministry of Tourism/ <i>Ministério do Turismo</i>
<b>MTn</b>	Meticaís
<b>NGO</b>	Non-governmental organization
<b>NP</b>	National Park
<b>PA</b>	Protected Area
<b>PARPA II</b>	Action Plan for the Reduction of Absolute Poverty II/ <i>Plano de Acção para a Redução da Pobreza</i>

	<i>Absoluta II</i>
<b>PES</b>	Payment for Ecosystem Services
<b>PPF</b>	Peace Parks Foundation
<b>PIN</b>	Project Idea Note
<b>PWS</b>	Payment for Watershed Services
<b>REDD</b>	Reduced Emissions from Deforestation and Forest Degradation
<b>R-PIN</b>	Readiness Preparation Idea Note (FCPF)
<b>R-PP</b>	Readiness Preparation Proposal (FCPF)
<b>SADC</b>	Southern Africa Development Community
<b>SAVE</b>	Scientific, Academic, Volunteer, Educational Travel Alliance
<b>SGDRN</b>	Society for the Management of Niassa Reserve/ <i>Sociedade para Gestão e Desenvolvimento da Reserva do Niassa</i>
<b>TNC</b>	The Nature Conservancy
<b>TFCA</b>	Transfrontier Conservation Areas/ <i>Áreas de Conservação Transfronteira</i>
<b>UNDP</b>	United Nations Development Programme
<b>USAID</b>	United States Agency for International Development
<b>VCS</b>	Voluntary Carbon Standard
<b>WWF</b>	World Wide Fund for Nature

## Executive Summary

**Objective of study:** This feasibility study was commissioned as part of preparation for a UNDP-GEF project on “Sustainable Financing of Mozambique’s Protected Areas” with the objective of identifying priorities for a sustainable financing strategy for Mozambique’s conservation areas.

**Sustainable financing mechanisms reviewed:** The following sustainable financing mechanisms are summarized in the study: government revenue allocations, including direct government support and public taxes, fees and fines; tourism-based revenues; debt relief; donor funding; conservation trust funds; sustainable investment funds; payment for ecosystem services, including payment for watershed services and bioprospecting; carbon markets, including forest carbon, alternative energy and mangrove carbon; and compensation and biodiversity offset mechanisms.

**Current financing:** Bilateral and multilateral donor funding is currently the largest source of support for Mozambique’s conservation areas (about US\$22 million projected in 2010). Public sources of finance are limited, with US\$1.3 million in tourism revenues and negligible amounts of direct government budget support in 2008.

- ✓ Both donor and government support for conservation areas could be increased through a public communications campaign and policy work to mainstream poverty-conservation area linkages into planning for the Action Plan for the Reduction of Absolute Poverty (PARPA).
- ✓ Improved management of tourism-based revenues could yield significant financing for conservation areas

**Recommended pilot projects:** Based on review of sustainable financing mechanisms, four pilot projects are recommended for implementation:

- ✓ Conservation Trust Fund Start-up and Operational Funding
- ✓ Tourism-based revenues
- ✓ Mangrove carbon development
- ✓ National biodiversity offsets program

## 1. Introduction

In 2007, Mozambique launched an initiative to support the development of a national sustainable financing strategy for Mozambique's conservation areas. Mozambique's Ministry of Tourism (MITUR) and the Ministry for the Coordination of Environmental Affairs (MICOA) sponsored an international conference on "Sustainable Financing of Protected Areas", and commissioned background studies on institutional, legal and regulatory aspects, economic benefits and financial planning. The Biodiversity Group was charged with implementing recommendations from the 2007 conference, with the creation of a conservation trust fund (foundation) selected as the first priority for sustainable financing.

In parallel, the creation of a new institutional framework for management of conservation areas, including the establishment of a National Administration of Conservation Areas (ANAC), is expected to facilitate mobilization and management of sustainable financing for conservation areas. Mozambique's Conservation Policy, adopted in 2009, incorporates principles that promote sustainable financing of conservation areas through the creation of a national conservation foundation, payments for ecosystem services (PES), carbon market mechanisms and partnerships with communities and the private sector. It also calls for more effective and transparent implementation of Ministerial Diploma N<sup>o</sup> 93/2005 of May 4 relative to revenue sharing with communities. (MITUR 2009)

## 2. Objective and Methodology of Feasibility Study

This feasibility study was commissioned as part of preparation for a United Nations Development Programme-Global Environment Facility (UNDP-GEF) project on "Sustainable Financing of Mozambique's Protected Areas." The objective of the study is to: identify existing and potential sources of financing for Mozambique's protected areas; establish baseline data for the project that serves as the basis for adopting a comprehensive sustainable financing strategy during project implementation; and, identify priorities for developing pilot sustainable financing mechanisms and recommend an action plan for implementation at both national and Protected Area (PA) levels.

Research for the feasibility study was conducted over a seven-month period from October 2009 to May 2010 through an extensive literature review and consultation with key stakeholders in Mozambique and outside of the country. The literature review for the study consisted of review of recent guides and case studies on protected area financing; existing documents on sustainable financing and PES in Mozambique; and, conservation area business plans. During a workshop on sustainable financing in March 2010, potential sustainable financing mechanisms were presented and criteria for pilot projects were discussed. Site visits were also conducted to Gorongosa National Park (NP), Limpopo NP, Quirimbas NP and the proposed Lake Niassa reserve. This study was prepared as part of a set of technical studies, including protected area network financial projections and a road map for creation of a conservation trust fund.

The report is presented in three parts: 1) review of financing mechanisms, 2) findings and recommendations; and, 3) action plan for implementation of pilot programs.

### 3. Review of Financing Mechanisms

By diversifying financing mechanisms, protected area networks can reduce dependence on government budget allocations and external donor support, and manage risks in the event of unforeseen events or market downturns (e.g., tourism-based revenues decline due to terrorism or natural disaster). More effective revenue collection and cost reduction are also important financing strategies to achieve financial sustainability. The identification and selection of sustainable financing mechanisms is based on analysis of both existing and prospective financing mechanisms, which can be implemented at national and protected area levels. Feasibility analysis helps to set priorities for making existing financing mechanisms more effective and introducing new financing mechanisms.

A set of criteria can be used to analyze financing mechanisms, focusing chiefly on feasibility of implementation and impact. In addition, some mechanisms may be more feasible for a certain type of conservation area, program or activity. Annex 7 presents criteria that were used to select pilot sustainable financing projects for the UNDP-GEF project, based on feasibility, impact, geographical coverage and demonstration value.

References in Annex 1 include conservation finance guides that classify and provide additional information on financing mechanisms. For the reader not familiar with protected area financing options, basic definitions of the mechanisms are provided, along with relevant examples. This study presents an overview of sustainable financing options for Mozambique's conservation areas, but much more extensive feasibility analysis on particular mechanisms will be needed to develop a comprehensive strategy.

#### 3.1. Government Revenue Allocations

The government budget executes the Economic and Social Plan, which is developed each year to implement the Action Plan for the Reduction of Absolute Poverty II (PARPA) covering 2006-2010. Some efforts have been made to mainstream the environment in national development strategies, in favor of pro-poor environmental outcomes. (UNDP-UNEP Poverty and Environment Initiative 2010)

There are three sources of public sector funding for the environmental sector, reflected in the government budget: general budget support, earmarked revenues generated by environment management activities and earmarked funding provided by donors (investment).

**Government revenue allocations** are an important source of support for protected areas. In developing countries, direct **government budget support** is often inadequate, with financing gaps typically met by revenues generated internally by protected areas and external donor assistance. New sources of public finance can be accessed to increase government support for conservation through public taxes, fees or fines derived from natural resources exploitation or use, and other sources of public finance, such as debt relief. Effective financial management and revenue retention regulations, including revenue sharing with local communities, are also critical to increasing public support for protected areas.

### **3.1.1. Government Budget Support**

There are no central statistics on public expenditures for conservation areas since the government accounts provide information by ministry, but not by project (except for donor investments), making it difficult to account for spending specifically on conservation areas. Based on data collected from conservation areas, general budget support for operational expenses (excluding central management) totalled only US\$153,094 or 1% of total revenue for conservation areas. (Tua and Nazerali 2010)

Salaries of staff working in conservation areas are paid through provincial government offices. One of the key aspects for future sustainability is to ensure that increasing numbers of conservation area staff enter onto the official state payroll to secure them for the indefinite future. So far bureaucratic obstacles have prevented this from occurring, with donor projects paying salaries in many conservation areas.

Other government ministries also provide financing for conservation areas. For example, under a national Memorandum of Understanding signed in December 2004 between MITUR and the Ministry of National Defence (MDN), the MDN has provided weapons and ammunition to three different National Parks (NPs). In addition to material support, the MDN has placed military personnel inside six NPs and Reserves, paying their salaries and other benefits, and contributing to their food needs as well. Since the funds are from another ministry, this contribution has never been captured in either national or site-level accounting.

### **3.1.2. Public Taxes, Fees and Fines**

Taxes, fees and fines related to natural resource exploitation or use are charged in sectors such as petroleum, mining, fisheries, forestry, land, water and tourism (for a detailed list, see Sal and Caldeira 2007). As described below, a percentage of fees, taxes and fines for tourism and environmental licensing and EIA fees are used for environmental purposes. Other fiscal revenues contribute to the state budget or are used for development of the sector that generated the revenues. With the exception of tourism, it is likely to be politically difficult to justify earmarking fiscal revenues to conservation areas. Reform of the existing tourism fee system is likely to be the most promising way to raise additional funds for conservation areas.

#### ***Forestry***

The Ministry of Agriculture (MINAG), through the National Directorate of Land and Forests (DNTF), is responsible for awarding and monitoring of concessions and licenses for forest exploitation. In 2006, revenue collected from licensing fees, fines and sales of apprehended products totalled US\$6 million. (Cabral and Francisco 2008) At the conservation area level, the levying of fines on infractions and revenues raised through public auction sale of confiscated goods (primarily timber) do not contribute to the conservation area's actual

revenues, as 50% is returned to the people directly involved in apprehending the crime, and the other 50% is deposited in the general state budget.

### *Fisheries*

In Mozambique marine and inland fisheries are governed by the Fisheries Law (1990), which recognizes subsistence, artisanal and industrial fishing. The Fisheries Development Fund (FFP - *Fundo de Fomento Pesqueiro*) was created as an autonomous public institution under the tutelle of the Ministry of Fisheries. (Ministerial Diploma N° 60/2003 of June 4). FFP manages most fisheries revenues collected by the government, including fish license fees, fish inspection fees, aquaculture license fees and fines. FFP's objective is to support private sector involvement in fisheries, in line with Mozambique's fisheries policy.

The European Union–Mozambique Fisheries Partnership Agreement for Tuna runs until 2011. The financial contribution of €900,000 per year is entirely earmarked for support of sectoral fisheries policy. Allocation and management of this funding is agreed jointly between the government and the EU.

### *Environmental Fees and Fines*

Mozambique's Environment Fund (FUNAB) was established as a public fund under the tutelage of MICOA in 2000 (Decree N° 39/2000 of October 17). FUNAB's revenue sources include: 60% of environmental fees and fines collected (under Decree no. 45/2004 of September 29), compensation funds related to environmental accidents, revenues from sale of an environmental stamp or certificate; inheritances, legacies, donations and subsidies, revenue from sales of publications, and state budget subsidies. FUNAB's mission is to generate and mobilize resources to fund environmental initiatives in the areas of promotion of clean technology, environmental management and response to environmental disasters. Through 2007, FUNAB financed \$500,000 in project activities, but no funds were allocated to conservation areas. (FUNAB 2008)

**Fisheries revenues** in a few African countries have been allocated to conservation in marine protected areas, recognizing their contribution to sustainable fisheries.

The European Union–Mauritania Fisheries Partnership Agreement (2006-2012) allocates €1 million per year in support for Banc d'Arguin NP, an important fish breeding nursery for Mozambique's fisheries sector. (Hegener 2007)

Tanzania has proposed that a percentage of fishing revenue retained by its Deep Sea Fishing Authority be managed by a revolving fund – the Marine Legacy Fund, which would support marine conservation among other objectives. (Ruitenbeek et al. 2005)

## 3.2. Tourism-based Revenues

Tourism has been identified by the Government of Mozambique as an important sector for Mozambique's economic growth and development strategy. Conservation areas are an integral part of implementation of tourism anchor investments and the Northern Arc project, priorities for MITUR's proposed five-year plan for 2010-2014. MITUR also proposes to focus on developing partnerships with the private sector and local communities for management of conservation areas, catalyzing revenue-generating activities.

### 3.2.1. Tourism-based Fees

The Forest and Wildlife Law (Law Nº 10/1997 of July 7) stipulates that user fees should be paid to the state for tourism in NPs and Reserves. Tourism revenues amounted to US\$1,260, 260 in 2008 (National Directorate of Conservation Areas - DNAC 2010). Of the various types of conservation areas in Mozambique, the fee schedule for non-consumptive tourism usage is regulated at the present time only for NPs and Reserves, which are governed under Decree Nº 27/2003 of June 17. Hunting fees are regulated by the Forest and Wildlife Law and regulations (Law Nº 10/99 and Decree Nº 12/2002, with the fee schedule updated by Ministerial Diploma Nº 96/2003), and Community and Marine protected areas have no specific regulatory legislation regulating tourism use.

**Tourism-based Revenues:** As the largest industry in the world, tourism has the potential to generate substantial funding for biodiversity conservation. Protected areas are often a major source of attraction for tourists, but may lack the supporting infrastructure to receive tourists and generate revenues. Several different types of revenue can be collected at the site, national and even international levels through visitor entrance and user fees, concession fees, licenses and permits, tourism-based taxes, airport or country entry fees, airplane or cruise boat passenger assessments, and voluntary contributions of tourism operators and tourists.

As listed in Annex 5, Decree Nº 27/2003 defines several types of fees, namely:

- Entrance fees
- Adventure Fees
- Spatial Concessions
- Camping Fees
- Other fees

The primary problems with the current fee system have been identified as the following:

**Complexity.** There are presently 29 different fees, making it difficult to collect, record, and monitor. No national statistics exist as to the distribution of income by type of fee, as no conservation area is systematically collecting and recording this information.

**National uniformity.** By setting the fees at the national level, there is no possibility to adjust the levels to local realities. This is most glaring with regard to concession fees,

where the rate is set on a per hectare basis, regardless of whether the site is prime beachfront or deep in the miombo forest.

**Coverage.** The current fees, particularly activity fees, were set taking into account some of the activities foreseen. In reality, the conservation area network is so large and varied that the activities to be practiced and promoted can never be adequately foreseen and taxed at a national level.

**Lack of differentiation between public and private provision of services.** Under the terms of the present fee schedule, the fees are charged at the same level regardless of whether the conservation area is providing these services themselves, and thus incurring costs that should be covered by these fees, or if the private sector is providing the service. One of the consequences of this is that certain conservation areas are providing services at rates below the cost of such provision. Limpopo NP, for example, is required to charge no more than 100Mt/day for camping sites, below the cost of creating, maintaining, and managing them.

**Lack of relationship between fees and market rates.** Fees have been set at levels that do not reflect the value of the attraction offered to the tourist. No “willingness to pay” surveys have been carried out, nor have any market mechanisms been established to determine the “market rate” of the services offered.

Recognizing that the current legal and regulatory regime is not maximizing income, MITUR is currently carrying out an internal effort to review and adjust this system. The task has been divided into two different areas, with the Transfrontier Conservation Areas (TFCA) and Tourism Development project involved in reviewing the concession policy and DNAC internally leading the revision of the rest of the fees described in Decree N° 27/2003.

When Decree N° 27/2003 came into effect, it was not fully implemented for several years in the conservation areas. This was true in particular for concession fees, with implementation delayed until MITUR converted existing land titles (DUATs) into special licences, a process that took until 2007. Several tourism operators still do not have their Special Licences issued and so are continuing to pay the older (and much lower) DUAT rate. While the fees are legally obliged to be submitted by March 31<sup>st</sup>, in reality many of the operators have negotiated instalment payments with DNAC. There have also been delays in payment of fees to community funds and financial management of these funds is not always well managed.

Decree N° 27/2003 was recently altered by another decree, N° 15/2009 of April 14, which states that of the fees collected, 20% should go to the general state budget, 16% to communities, and 64% to Parks and Reserves. The accompanying Ministerial Diploma specifies that the entire 64% will be returned to the conservation area that generates the revenue.

As a result, there is a significant potential for PA revenue to be generated through this mechanism. The legal framework is approved and in place, as are the mechanisms for

channelling the revenues to PAs. It is worth noting that the periodic revision of Decree nº 27/2003 has been delegated to MITUR together with the Ministry of Finance, so the institutional framework for revision is also clear. As shown by the recent attempts to update this framework, the political motivation for a revision is also very high.

### 3.2.2. Tourism-based Revenue Sharing with Communities

In the accompanying regulations to Law Nº 10/1997 of July 7 (Decree Nº 12/2002, of June 6), 20% of tourism fees are designated for distribution to local communities. Ministerial Diploma Nº 93/2005 of May 4, and Decree Nº 15/2009 of April 14 further develops this mechanism. The most recent decree substantially alters revenue distribution for communities by first allocating 20% of fee income in NPs and Reserves to the general state budget, and only then allocating 20% of the remaining value to local communities, thus in practice reducing their percentage from 20% to only 16% of overall income received by the state.

These amounts are channelled back to NPs and Reserves upon request and then given to local communities. Bureaucratic issues, such as the necessity to have a legally recognized association and a bank account, both of which can be difficult for rural communities with poor levels of education and a general lack of official documentation (such as identification documents), have meant that not all of these funds have in fact been returned to communities.

Communities also benefit from tourism in other ways, both through employment and lodge programs set up to benefit local communities, either informally or with specific institutional mechanisms created (e.g., Manda Wilderness Trust in Niassa, Nema Foundation in Cabo Delgado, etc.). Statistics on these voluntary contributions are not currently being collected or considered at a national level, though they appear to make a considerably larger contribution than the official program.

### 3.2.3. Sport Hunting

Mozambique is a signatory to the CITES Convention and Southern Africa Development Community (SADC) Protocol on Wildlife Conservation and Law Enforcement which regulate sport hunting at the international level. Sport hunting and fees in Mozambique are regulated by the Forest and Wildlife Law and regulations (Law Nº 10/99 and Decree Nº 12/2002).

**Sport Hunting** can generate significant revenue for protected areas. Effective enforcement and monitoring of regulations is needed to ensure that hunting does not lead to depletion of wild species.

Communities can also benefit from sport hunting as long as they have the right to use, manage and benefit from wildlife within communal areas. The Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) programme in Zimbabwe has been replicated in other African countries such as Namibia and Zambia. For example, 50 conservancies in Namibia earned Namibia\$39.1 million (US\$5.6 million) in 2007. (NACSO 2008)

While hunting may take place in many different areas of the country under a complex set of regulations, sport hunting by foreigners may only occur in the following type of hunting areas: hunting areas (*coutadas*), hunting blocks around the Niassa Reserve, the two community managed areas of Chipanje Chetu and Tchuma Tchato, and game farms (*fazendas de bravio*). Mozambique Nationals may also carry out sport hunting activities with simple licences in multiple use zones of the country.

The law attributes responsibility for licensing and regulating hunting in community areas and game farms to MINAG, and in the hunting blocks to MITUR. In practice MITUR has assumed this role (and receives the corresponding income) for the community-managed areas as well.

For the hunting blocks, quotas are set on annual basis by DNAC, and for the game farms by MINAG. CITES quotas are shared between the two Ministries, with a tacit agreement that DNAC will receive and attribute 70% of the national CITES quota. The setting of appropriate quotas is made more difficult by the fact that scientific data as well as clear criteria for their attribution are lacking. Quotas have risen significantly in recent years, with overall numbers climbing 54% from 2007 to 2009, with the quotas for the highly sought after species of lion, elephant, leopard, and buffalo rising by 50% over the same period. Unfortunately, due to the poor collection of statistics, it is difficult to evaluate the actual fulfilment of these quotas.

Fees for sport hunting are fixed by the Council of Ministers, with MINAG, MITUR and the Ministry of Finance responsible for their periodic revision. Tchuma Tchato has a special set of fees (approximately 1.8 times higher) set by Ministerial Diploma Nº 92/95. The fees per animal are quite low when compared to the regional level. Other fees collected are the hunting licence (MTn772.80 per person), the concession fee, the value of which is set by market forces in the tender process, and a surtax for restocking, which while set at 15% of the licence fee, but which in practice is not collected by either MINAG or MITUR. The hunting concessions all together make up a significant portion of DNAC revenue from conservation areas, representing 54% in 2008 and 62% in 2009. (DNAC 2009)

With support from the French Development Agency (AFD) and IGF Foundation, DNAC is currently implementing a three-year project for the “protection and sustainable management of wild fauna”, which aims to promote more rational management of Mozambique’s wildlife resources, respecting local community interests, and achieving an increase in state revenues from the development of sport hunting. This section of the study is based on a preliminary evaluation of sport hunting. (Magane et al. 2009)

### **3.3. Debt Relief**

As of 2009, the Republic of Mozambique owed \$3.9 billion in external debt, consisting of debt owed to bilateral and multilateral creditors. (Ministry of Finance 2010) In 2008, Mozambique concluded the second of two debt buy-backs which extinguished all of its

commercial debt. (IMF 2008) The International Monetary Fund considered Mozambique to be at low risk of debt distress in a 2009 updated analysis of debt sustainability, in spite of deteriorating debt indicators. (IMF 2009)

The Ministry of Finance's National Directorate of Treasury is currently the government office in charge of managing Mozambique's external debt. Decree Nº 24/88 of December 28 provides a legal basis for converting Mozambique's foreign debt in to foreign direct investment, including for environmental purposes.

In the 1990s, the Government of Mozambique negotiated debt-for-development swaps with several European creditor agencies. By 1997, the Foundation for Community Development had received about US\$3 million for its endowment fund from swaps with creditors in Denmark, Finland, Norway, the Netherlands and Sweden. (Dupree et al. 2000)

In Heavily Indebted Poor Countries (HIPC) countries, such as Mozambique, there is less incentive for swapping debt at a discount since many bilateral and multilateral official creditors have already provided full debt cancellation for eligible debt. Although Mozambique's Paris Club official creditors agreed to a provision enabling creditors to voluntarily engage in debt swaps (see <http://www.clubdeparis.org>), most of Mozambique's Paris Club creditors cancelled 100 percent of Mozambique's eligible debt without concluding debt swaps.

In 2001, France created a bilateral debt relief mechanism as a complement to the HIPC Initiative called the Debt and Development Contract (C2D). Through a bilateral debt relief grant, France provides debt relief in exchange for the debtor country committing to provide budget resources for agreed purposes. In March 2010, the French and Mozambique governments signed a C2D agreement for the period 2010-2014 which allocated €4 million (US\$5.3 million) for Quirimbas NP and €4 million (US\$5.3 million) for the Foundation for the Conservation of Biodiversity (BIOFUND Mozambique). The final financial terms for the BIOFUND allocation have not yet been concluded, but bilateral discussions between the two countries indicate that payment will be made in the form of sinking funds.

Based on Mozambique's debt profile, future prospects for debt-for-nature swaps seem limited. Two potential avenues for negotiating debt relief linked to funding for conservation areas could be explored:

- HIPC countries, such as Tanzania and Madagascar, have allocated funding to the environmental sector through HIPC debt

A **debt-for-for-nature swap** involves the cancellation of external debt of a developing country in exchange for local currency funding for nature and environmental protection in that country. The most common type of debt-for-nature swap currently is between a debtor and creditor country negotiated on a bilateral basis, with countries such as France, Germany, Italy, Spain and the U.S.A. operating active debt swap programs. With the advent of the Heavily Indebted Poor Countries (HIPC) Initiative and changes in the market for commercial debt, there are currently only a limited number of developing countries where debt swaps are feasible.

Debt swap payment terms may have some impact on the amount and timing of funds available for protected area financing, along with possible delays in disbursement of public budget allocations and the potential for erosion of debt swap proceeds due to currency depreciation. Conservation trust funds have typically provided an accountable mechanism to manage funds generated by debt-for-nature swaps.

relief funds programmed through their poverty reduction strategies. In the case of Mozambique, Italy, Russia and Spain have expressed interest in dedicating debt relief funds to projects. In order to access debt relief funds, financing for conservation areas would need to be identified as a priority in the PARPA and annual government economic and social plans. (Macamo, Personal Communication 2010)

- The Commonwealth Secretariat recently commissioned research on the feasibility of debt relief to combat climate change, concluding that for HIPC countries such a mechanism would most likely only apply to creditors who had not yet participated in existing debt relief initiatives or for certain debt that had been excluded to date. (Development Finance International 2009)

### 3.4. Donor Funding

Donor funding for conservation areas is projected to amount to an estimated US\$22 million in 2010, representing 1.6% of Mozambique's foreign aid. Annex 4 presents profiles of major and emerging donors in the environmental sector, as well as implementing organizations who raise funding for conservation areas where they work. Annex 5 summarizes donor financing for conservation areas, based on information collected from donors.

Projects supported by bilateral and multilateral donors, such as France (AFD, FFEM), Germany (BMZ/KfW), the Global Environment Facility (GEF), Italy, Japan, USAID and the World Bank, provide the largest share of funding for Mozambique's conservation areas. The largest private donor is the Gorongosa Restoration Project (Carr Foundation). The Biodiversity and Environment Working Groups provide forums for government and donor coordination, with participation from other stakeholders.

The ODAmoz database is a useful tool for tracking donor contributions, but biodiversity conservation and conservation areas are not among the categories for grouping data, and not all donors provide data. DNAC has begun to collect information about donor funding for conservation areas, but there is need for a more systematic database of funding for conservation areas.

**Donor funding** is a major source of funding for protected areas in developing countries, with bilateral and multilateral agencies the largest source, along with donations from individuals, non-governmental organizations, private charitable foundations, and private companies. Depending on the type of donor, donor interests and procedures vary significantly, which means that fundraising approaches need to be tailored for each donor. Most donors provide support through three to five year projects, but donors are also willing to consider grant funding to catalyze development of long-term sustainable financing mechanisms and to capitalize financing mechanisms, such as conservation trust funds. Public-private-community partnerships, supported by donor financing, also provide new models for sustainable financing.

New approaches to traditional donor fundraising can help to raise more funding for conservation areas. Some general trends and opportunities relevant to donor funding for Mozambique’s conservation areas are:

- **Bilateral donors:** focus on priorities in PARPA II and budget support; conservation areas can capitalize on increased interest in climate change and PES;
- **Multilateral donors:** conservation areas can benefit from GEF 5 funding; there is also potential for a larger country allocation for regional projects and thematic areas;
- **NGOs:** existing international NGO partners – Fauna and Flora International, IUCN, Peace Parks Foundation and WWF – raise funding through their international networks and membership; new financing partners active in Mozambique, such as Conservation International (CI), The Nature Conservancy (TNC) bring access to new donor networks;
- **Private charitable foundations:** mostly focused on social sectors in Mozambique (with exception of Carr Foundation); in short-term, availability of grant funding will be affected by financial downturn;
- **Private companies:** increased private investment in Mozambique may create new opportunities for private sector financing through Corporate Social Responsibility (CSR), partnership agreements, sustainable investments, and biodiversity offsets;
- **Zoos and aquariums:** potential for partnerships with conservation areas, with funding provided for research and conservation
- **Internet:** direct links to donors can be made through internet-based match-making such as the CBD’s Lifeweb platform ([www.cbd.int/lifeweb](http://www.cbd.int/lifeweb)) for protected area financing.

**Conservation trust funds** have been legally established in over 50 countries, typically as trust funds or foundations, as a way to manage long-term financing for protected areas, biodiversity conservation or other environmental purposes. These funds are usually independent of government, and are typically set up as private grant-making institutions that are governed by an independent board of directors which is charged with ensuring that funds are used for the specific purposes defined in the fund’s legal statutes.

Conservation trust funds are often established to anchor other sustainable financing mechanisms by providing a transparent and efficient way to manage funding for conservation purposes. Conservation trust funds can manage endowment funds (e.g., only investment income is spent), sinking funds (e.g., both capital and investment income is disbursed) or revolving funds (e.g., pass-through sources of revenue are disbursed), or a combination of any of these.

### 3.5. Conservation Trust Funds

Mozambique’s Biodiversity Group is responsible for developing a “trust fund” project based on recommendations from a feasibility study conducted in 2008. (Putney and Neves 2008) A Founders Committee, currently composed of eight notable individuals and three institutional representatives (MICOA, MITUR and WWF) has been meeting since 2009 to guide development of the conservation areas trust fund (foundation), designated BIOFUND Mozambique, which is expected to be legally incorporated as an independent private foundation under Mozambique’s Civil Code. A

foreign fund will be created for investment purposes. Progress has been made in drafting a profile and legal documents, and in securing donor financing. AFD, CI, KfW, UNDP and WWF have all provided start-up funding for BIOFUND, and expressed their interest in contributing to its capital. The recent C2D debt swap will provide BIOFUND's initial capital, required for legal registration.

BIOFUND is being designed to manage a variety of revenue sources, including donor funding and PES. BIOFUND's financial projections and fundraising strategy will be based on the long-term financial plan elaborated for Mozambique's conservation areas network.

### 3.6. Sustainable Investment Funds

Support for environmentally sustainable tourism investments in Mozambique has primarily focused on investment facilitation, planning and promotion, rather than debt or equity financing. Tourism operators have shown high levels of interest in bidding on investment opportunities in conservation areas, such as Maputo SR and Gorongosa NP. Availability of financing appear to be less of a factor in investment decisions than the high cost of doing business, access and limited infrastructure in some conservation areas.

Verde Ventures provided \$495,000 in financing to Wildlife Adventures to renovate and expand Ibo Island Lodge, in Quirimbas NP. Benefits of the project include sustained income for local people through tourism jobs and sales of local handicrafts, joint patrolling and monitoring with park officials and environmental education. (Verde Ventures 2010)

**Biodiversity enterprise funds** and other types of **sustainable investment funds** channel capital – debt or equity – into environmentally-sustainable businesses. By tapping into the substantial financial resources of the private sector, for-profit investments can be structured to provide financial returns for investors while promoting Corporate Social Responsibility (CSR) and environmental conservation (triple bottom line benefits). In this way, these funds can provide both a direct financial benefit through a sustainable financing model and can also promote adherence to environmental standards for use of resources.

Through the Tourism Anchor Investment Program, MITUR's National Tourism Institute (INATUR) and the International Finance Corporation (IFC) aim to attract sustainable private investment to Mozambique by facilitating the investment process for anchor sites. Two of the anchor sites – Gilé NR and Maputo SR – focus on low impact ecotourism in conservation areas. Three concessions in the Maputo Elephant Reserve are the first to be marketed to potential investors through a public offer, including the development of a model community-public-private partnership concession at Ponta Chucamane.

The Northern Mozambique Tourism project, supported by USAID, aims to increase tourism in the provinces of Cabo Delgado, Nampula, and Niassa. Preservation of the environment and cultural/historical resources along with developing niche tourism markets have been

targeted for support. MITUR recently signed an MOU with the SAVE (Scientific, Academic, Volunteer and Educational) Travel Alliance.

There is also some emerging interest in sustainable investing in the forest sector to produce certified timber, with firms such as the Global Environment Fund and Green Resources developing concessions. The Global Environment Fund's Pemba Sun concession is in the buffer zone of Quirimbas National Park, and may provide opportunities for collaboration with the park.

### 3.7. Payment for Ecosystem Services (PES)

A variety of PES mechanisms exist, but significant challenges remain to scale up PES so that substantial resources can be raised for protected areas. New approaches to mapping "natural capital" and valuing ecosystem services have been applied in Mozambique; however, in the absence of accurate and comprehensive data, it is likely that conservation areas' contribution to Mozambique's natural capital is being undervalued. Although economic valuation tools can show potential values of ecosystem services provided by different land uses, analysis of the legal framework and market for a particular ecosystem service is needed to determine whether it is feasible for protected area financing.

#### 3.7.1. Payment for Watershed Services

Mozambique has limited access to raw water supplies and receives roughly 50 percent of its surface water from upstream neighbours; approximately 75 percent of the population relies on groundwater sources.

The National Directorate for Water Affairs (DNA) has responsibility for the entire water sector. It manages most potable water sector schemes in the rural areas, as well as in smaller towns and cities. The 1995 National Water Policy and the National Water Development Program reformed and clarified the allocation of administrative, regulatory and development roles in the sector. The policy sought to balance strong regulation with delegated management (Delegated Management Framework), which allowed transfer of operational responsibilities for water supply to private companies. Underpinning the reforms was the new Water Tariff Policy. This policy set out a more rational and

#### **Payment for Ecosystem Services (PES)**

mechanisms are based on the principle that those who provide ecosystem services should be compensated by those who receive ecosystem services. PES can contribute to poverty alleviation by compensating communities.

#### **Payments for Watershed Services (PWS)**

target watershed services provide by forests that typically affect water flow and quality. PWS requires:

- a well-defined environmental service (e.g., specific changes in peak- or dry-season stream flow at the outlet of a watershed) or a suitable proxy for this service (e.g., hectares of forest conserved);
- at least one buyer of this service;
- at least one seller;
- Transactions between buyer(s) and seller/provider(s) are voluntary; and
- Payments are conditional on contracted environmental services actually being supplied.

(adapted from Wunder 2007)

"Working for Water" in South Africa is one of the few examples where PWS in Africa is operational.

commercially-oriented tariff regime that would support cost recovery and long-term financial sustainability of the water supply system.

The sector has also implemented comprehensive decentralization reforms by progressively setting up Regional Water Administration entities (ARAs). The only ARA currently fully operational is ARA-Sul (South). ARA-Sul is responsible for the southern part of the country up to the Save river. As for the other regional water authorities, ARA-Centro is already functioning, but needs continuing support, and ARA-Zambezi is newly established. ARA-centro-Norte and ARA-Norte have not yet been established.

In general, Africa has seen relatively little progress with development of PWS and Mozambique is no exception. A number of reasons are put forward for this, amongst them that getting water users to pay for hydrological services is made difficult by high levels of poverty, high transaction costs, land ownership issues, lack of enabling legislation, and low institutional capacity. All of these issues are relevant for the Mozambique case.

### 3.7.2. Bioprospecting

There is a legal framework for bioprospecting in Mozambique through ratification of the Convention on Biological Diversity (CBD) and the Carthage Protocol on Biosecurity, as well as relevant national policies (Traditional Medicine 2001) and regulations (Decree Nº 19/2007 of 8 August and the Industrial Property Code). MICOA is the national authority on access and benefit sharing (ABS) relative to exploitation of genetic resources. Mozambique is currently participating in the ABS Capacity Development Initiative for Africa which supports the development and implementation of access and benefit sharing policies. Some Mozambican companies are marketing natural products that have been sustainably harvested for cosmetics and other consumptive uses. (Phytotrade)

**Bioprospecting** is the systematic search for new sources of genes, compounds, organisms and other products with a potential economic value for product development. Costa Rica's National Biodiversity Institute (INBio) is the most widely cited example of a successful bioprospecting program, but the scale of investment in bioprospecting worldwide has been lower than originally expected.

Protected area agencies in Africa, such as the Kenya Wildlife Service and South African National Parks, have played a role in negotiating research and bioprospecting agreements.

The Ministry of Science and Technology and the Ministry of Health would play important roles in developing a bioprospecting program in Mozambique. MITUR's role would be to authorize access to conservation areas, draft regulations on collection of species in conservation areas, and to develop commercial bioprospecting partnerships with business and research organizations. Key constraints for implementing bioprospecting in Mozambique include the lack of a biodiversity inventory, limited efforts to market

Mozambique's rich biodiversity and inadequate protection for the rights of community stewards of traditional knowledge.

### 3.8. Carbon Markets

Mozambique has limited experience with carbon markets, and there is a need to build capacity in government ministries and the private sector. MICOA is Mozambique's Designated National Authority for the Clean Development Mechanism (CDM) under the Kyoto Protocol. So far, only one project has been submitted by Mozambique to the CDM for validation (*Cimentos do Moçambique*, Matola Gas Fuel Switching).

The following barriers were identified relative to Mozambique's capacity to participate in CDM carbon markets, and will be relevant for Mozambique's participation in other carbon markets:

- Low awareness of CDM opportunities
- Lack of upfront financing for pre-investment studies
- Lack of a national definition for "forest" under the CDM
- Low capacity to develop CDM projects, with few professionals and institutions having an in-depth understanding of the CDM process. (UNDP 2010)

#### 3.8.1. Forest Carbon

Land-use change and deforestation account for 80% of Mozambique's carbon emissions. With an annual deforestation rate of 0.58%, Mozambique is losing about 219,000 hectares per year of mostly miombo woodland forests due to shifting cultivation and conversion to agriculture. The miombo, coastal and piedmont forests of central and northern Mozambique sequester substantial quantities of carbon, and mangrove swamps all along the Mozambican coast also sequester carbon, both in their tree biomass and in the deep mud that accumulates around their roots. With 13 million hectares (32%) of Mozambique's forests found in conservation areas, there is potential for development of forest carbon projects in conservation areas and their buffer zones, but

**Carbon markets** include **compliance markets**, like the **Clean Development Mechanism (CDM)** created under the Kyoto Protocol, and **voluntary markets** for carbon credits that are not subject to government regulation.

Deforestation is estimated to contribute about 20% to global carbon emissions. The historical market value of forest carbon credits is estimated at \$149.2 million, mostly through transactions in voluntary markets. (Hamilton et al. 2009)

The application of standards in registering forest carbon projects, such as the **Voluntary Carbon Standard**, has enhanced the credibility of forest carbon offsets. Forest carbon projects can also generate social and environmental benefits beyond climate change mitigation, with the **Climate, Community and Biodiversity (CCB)** standard validating the multiple benefits of projects.

A global framework is emerging for **Reduced Emissions from Deforestation and Forest Degradation (REDD)** that is expected to compensate countries that reduce emissions, through public funding, as well as market-based carbon offset transactions.

much work needs to be done to capitalize on this opportunity to scale up funding for conservation areas.

Forest carbon projects that integrate afforestation and reforestation (A/R) and REDD activities offer the potential to address deforestation in Mozambique, while protecting biodiversity and providing economic benefits to community “stewards” of forests. Mozambique’s experience with CBRM in forests areas provides a good platform for developing forest carbon projects. (Nhantumbo 2009) Lessons learned from implementation of revenue sharing with communities can also be reviewed in designing community-based payment systems.

Mozambique began investigating REDD in 2008, which led to the creation of a multi-stakeholder National REDD working group. Mozambique was selected as a REDD country participant for the World Bank-managed Forest Carbon Partnership Facility (FCPF) Readiness Fund, based on submission of a Readiness Preparation Idea Note (R-PIN). Although Mozambique is eligible for technical assistance and capacity building from the FCPF Readiness Fund, Mozambique has so far not received “readiness” support services from the FCPF. In December 2009, an FCPF mission concluded that there is a strong case for FCPF grant funding for Mozambique, which could complement REDD strategy work already underway. (Spears 2009) The next step for FCPF Readiness Fund participation will be to prepare a Readiness Preparation Proposal (R-PP).

MICOA and MINAG, and Brazil’s Amazonas Sustainable Foundation (FAS) are leading a multi-partner “South-South REDD” initiative, facilitated by the International Institute for Environment and Development (IIED) and financed by the Royal Norwegian Embassy. The main objective of the initiative is to develop a National REDD Strategy, based on extensive consultation and technical studies. This initiative is also expected to contribute to development of the FCPF R-PP and to help identify potential pilot sites for REDD development.

The development of forest carbon projects is at an early stage of development in Mozambique compared to some countries. The following forest carbon initiatives were identified:

- Envirotrade’s Carbon Livelihoods Programme operates community-based forest carbon projects based on the Plan Vivo model in N’hambita, the Marromeu Complex (near Nhampakué and Inhamitanga Forest Reserves) and Quirimbas NP. The N’hambita project has raised over \$900,000 in financing from voluntary carbon markets. Lessons learned from this project, based on recent evaluations, can help to inform future project development. (Marzoli and Del Lungo 2010, evaluations on Envirotrade website)
- Fauna and Flora International (FFI) conducted scoping work for carbon in Niassa Reserve.

- In 2007, PPF prepared a feasibility assessment on the carbon sequestration potential of TFCAs in southern Africa.
- WWF has conducted pre-feasibility work for biochar in the proposed Lake Niassa reserve and is exploring the potential for forest carbon in other sites.
- Green Resources is developing a 126,000 hectare plantation forestry and carbon sequestration project in Nampula province, and a CDM reforestation project in Niassa province. (Green Resources 2010)

### 3.8.2. Alternative Energy

Although Mozambique is energy rich, 80% of the population relies on fuel wood and charcoal derived from wood to supply energy needs. The demand for wood by communities living in or near conservation areas results in deforestation. New technologies, such as energy efficient stoves and biochar, have been proposed for Mozambique, but so far there is not much evidence of carbon projects being developed. The Programme for Basic Energy and Conservation in Southern Africa is currently developing a carbon facility at the regional level that could provide carbon financing for scaling up the introduction of stoves in Mozambique.

**Small-scale energy** projects, including energy efficient stoves and biochar, apply technological solutions that can benefit both communities and protected areas, while generating carbon offsets. Approved methodologies already exist for CDM small-scale energy projects. For example, in Uganda, Climate Care has introduced energy efficient “rocket” cook stoves, resulting in cost savings and health benefits for households and businesses. Gold Standard Verified Emission Reduction credits have been issued for the project, which is being replicated in other African countries.

### 3.8.3. Mangrove Carbon

Mangroves offer a special opportunity to sequester carbon in Mozambique. Mozambique’s estimated 390,000 hectares of mangroves extend over one of the largest areas in Africa. (Food and Agriculture Organization 2007) Mangroves provide important ecosystem benefits, including habitat for fish and birds, food security, flood and coastal protection, and carbon sequestration. As feeding grounds for the larvae of shrimps, mangroves are particularly valuable for Mozambique’s wild shrimp fisheries, one of its top export earners. (Guveya and Sukume 2008)

Mangroves in Mozambique are threatened by conversion to agriculture and aquaculture, cutting for housing, firewood and charcoal, pollution, the impact of dams and oil and gas development. Oil and gas exploration in the Marromeu Complex, Mozambique’s only Ramsar Convention on Wetlands site, recently triggered a Ramsar Advisory Mission that recommended compensation in the event of future oil and gas exploration or exploitation.

(Pritchard 2009) Article 26 of the general regulation on aquaculture provides protection for mangroves by prohibiting the transformation of areas with mangroves into aquaculture.

Large stands of mangroves are protected by Mozambique's conservation areas, including Bazaruto Archipelago NP, Inhaca and Portuguese Islands Faunal Reserve, Maputo SR, Marromeu Complex, Pomene Game Reserve and Quirimbas NP. With the emergence of so-called "blue" and "wet" carbon, carbon markets may offer a new way to protect and restore mangroves. Although the total carbon stored by above ground mangrove biomass in Mozambique is estimated at 11.8 million tons (Faytoyinbo et al. 2008), there are no estimates of below ground carbon, which provide much greater carbon sinks.

More extensive feasibility work will be required to assess whether carbon projects in conservation areas are technically feasible and financially sustainable, and technical assistance will also be needed to develop project concepts and design documents, and to bring forest carbon credits to market. Carbon markets offer one of the most promising avenues for raising sustainable financing for Mozambique's conservation areas. The Royal Norwegian Embassy and the World Bank are expected to continue supporting REDD readiness activities that will lead to development of a National REDD strategy and pilot projects. Other donors, like Finland and Japan, are increasing their support for forest programs. Special attention should be paid to how these projects can sustainably finance conservation areas, particularly forest reserves, which are both degraded and underfinanced.

### 3.9. Compensation and Biodiversity Offset Mechanisms

As a party to the Convention on Biological Diversity (CBD), Mozambique has committed to achieving a significant reduction in the current rate of biodiversity loss. As Mozambique increases investments in agriculture, hydroelectric, infrastructure, mining, petroleum and tourism sectors, development needs will need to be balanced with biodiversity protection. There is a lack of reliable and accessible geographic information on the overlay between development projects and conservation areas in Mozambique, making it difficult to fully assess the impacts that project investments may have on high conservation value areas.

The concept of **blue carbon** highlights the critical role that oceans play in sequestering carbon. Seagrasses, mangroves and salt marshes cover only 1% of the seabed, but account for as much as 70% of the carbon sinks provided by oceans. (Nellemann et al. 2009) Coastal ecosystems are so far not incorporated into national and international emission reduction strategies or reported in national greenhouse gas inventory submissions, but their potential to provide intense carbon sinks is being increasingly recognized.

In 2009, the Danone Fund for Nature, a partnership of the Danone Group, IUCN and Ramsar, launched an initiative to finance projects that preserve and restore wetlands – so-called **wet carbon** – to offset the carbon emissions of some of Danone's brands (e.g., Evian). The fund has already supported a first pilot project for mangrove planting in Senegal.

The VCS recently released proposed guidance for peatlands (VCS 2010) and other types of wet or blue carbon may not be far behind in seeing new methodologies introduced.

One of the fundamental principles stated in Mozambique's Environmental Law (Law Nº20/1997 of July 30) is "Responsibility, on the basis of which whoever pollutes or in any way degrades the environment shall always have the obligation to repair or compensate the resulting damage" (article 4, paragraph 7). The Environmental Impact Assessment (EIA) Act (Decree Nº 45/2004 of 29 September) provides the legal framework for managing environmental impacts of development. An EIA must be conducted before a license can be granted for a development project. MICOA is responsible for reviewing EIAs and granting licenses. The EIA process is not always effectively implemented, with capacity limitations reported for both government and EIA contractors. (Chemonics 2008, Cabral and Francisco 2008)

Sector laws also provide guidance on mitigating impacts, with Environmental Units established within some sectoral ministries. For example, Article 23 of the Petroleum Law calls for petroleum concession holders to: "ensure there is no ecological damage or destruction caused by Petroleum Operations, but where unavoidable, ensure that measures for protection of the environment are in accordance with internationally acceptable standards. For this purpose, the holder of a right shall prepare and submit to the relevant authorities for approval and environmental impact assessment, including environmental impact mitigation measures." (Republic of Mozambique 2001)

Growth in international investment in Mozambique has led to increased awareness of Corporate Social Responsibility (CSR). Companies such as BHP Billiton and Kenmare Resources have introduced an integrated approach to addressing social and environmental impacts of large-scale mining investments. As part of their CSR commitments, both companies have established social funds, including: BHP Billiton's Mozal Community Development Trust, which has provided US\$10 million in funding for 200 projects and programs in the vicinity of the Mozal Aluminum Smelter project since 2000 (Mead et al. 2008); and Kenmare Resource's award-winning partnership with the Moma Development Association.

Mozambique is taking steps to apply international standards for exploitation of natural resources. For example, in 2007, new legal frameworks for mining and petroleum fiscal

#### **Compensation and biodiversity offset**

mechanisms have contributed to protected area financing through a range of different mechanisms that address development impacts on biodiversity. Biodiversity offsets incorporate a "no net loss" approach to residual adverse impacts that goes beyond traditional planning and environmental impact assessment, and should be pursued only after the mitigation hierarchy has been applied to avoid, minimize and mitigate environmental impacts of project development.

Although no standards have been adopted at the international level for biodiversity offsets, more than 30 countries have laws requiring biodiversity offsets or compensation. Brazil's industrial compensation program requires that, as a condition for licensing, project developers pay a percentage of the capital costs of development to finance the establishment or maintenance of protected areas. In Africa, although there are examples of companies voluntarily compensating for impacts on biodiversity (e.g. in Ghana and Madagascar), South Africa is one of the few countries that is developing a national biodiversity offset policy, and offset guidelines have already been drafted in the Western Cape and KwaZulu-Natal provinces. (Madsen et al. 2010)

regimes were introduced. Mozambique was accepted as a candidate country by the Extractive Industries Transparency Initiative (EITI) in May 2009, and has two years to undergo validation for EITI. The objective of EITI is to ensure that all revenues received by government and payments made by companies from mining and oil and gas exploitation are transparently reported.

Current production of mineral resources includes natural gas, coal and titanium, with active exploration in all parts of the country. Exploration and production contracts have been signed with international oil companies, including Anadarko (USA), ENI (Italy), Sasol (South Africa), Petronas (Malaysia) and StatoilHydro (Norway). The National Petroleum Institute (INP), in the Ministry of Mineral Resources (MIREM), manages Mozambique's petroleum resources, implementing the Petroleum Law (Nº 3/2001 of 21 February) and related regulations.

INP manages social funds from hydrocarbon companies which are paid as part of their exploration contracts. For example, in Quirimbas NP, INP contributed US\$250,000 for installation of a pilot phase of electric fencing to mitigate human elephant conflict in the park, which represented the largest state contribution to Quirimbas NP's management costs. (Nazerali 2009)

In response to recommendations from the EIA for offshore oil and gas exploration adjacent to Bazaruto Archipelago NP, Sasol decided to postpone shallow water exploration and finance the Bazaruto Conservation Support Program. So far, the program has funded implementation of the park management plan through dugong research and monitoring, review of monitoring activities, building visitor facilities and rehabilitation of park buildings and equipment. Sasol is planning to invest about \$500,000 per year in the program over the next five years, in partnership with DNAC. (Sasol 2009)

Given the growth of investment and existing EIA and CSR approaches in Mozambique, there is high potential for exploring the introduction of new types of biodiversity offset and compensation mechanisms in Mozambique, as part of national planning for development.

#### **4. Findings and Recommendations**

The creation of ANAC and BIOFUND will provide a stronger institutional base for raising and managing sustainable financing for Mozambique's conservation areas. Already, the government's willingness to develop public-private partnership approaches is producing more funding for conservation areas, as the Carr Foundation/Gorongosa Restoration Project and the Society for the Management of Niassa Reserve have shown. Continued development of CBNRM partnerships, not just compensation arrangements or revenue sharing, should be encouraged. At the conservation area level, more can be done to develop and implement "living" business plans.

Donor funding is currently the largest source of support for Mozambique's conservation areas (with about US\$22 million projected in 2010), but it represents a small share of

Mozambique's foreign aid. Mozambique's conservation areas depend on bilateral and multilateral donor funding, but there has been some success in attracting new corporate and private donors. New forest and climate change program funding can also be targeted at conservation areas, particularly to forest reserves.

Government support for conservation areas is negligible, although tourism revenues allocated to conservation areas have the potential to deliver significant funding, but the fee system is not maximizing the revenue potential of this mechanism. Market-based approaches to managing tourism fees and sustainable investment funds can play an important role in attracting tourists and stimulating private tourism investment in conservation areas.

Both donor and government support for conservation areas could be increased through a public communications campaign targeting key decision makers and external audiences. Policy work is also needed to mainstream poverty-conservation area linkages into planning for the PARPA. Key messages should recognize:

- the value of conservation areas as a driver of economic growth through their contribution to tourism and provision of other ecosystem services such as nurseries for shrimp farms;
- the role that conservation areas play in climate change mitigation and adaptation;
- the business case for investing in protected areas;
- the importance of conservation areas to human well-being and poverty alleviation.

As shown in Annex 3, there are many new sustainable financing mechanisms that could be introduced in Mozambique, but not all of them are feasible or would produce much impact in terms of sustainable financing. Annex 7 sets forth criteria that were used to select a small set of pilot projects ("low-hanging fruit") designed to catalyze new approaches to sustainable financing. The four recommended pilot projects described below are:

- Conservation Trust Fund Start-up and Operational Funding
- Tourism-based revenues
- Mangrove carbon development
- National biodiversity offsets program

The pilot projects reflect a new way of doing business that has been seen in protected areas around the world, placing a value on protected area "goods and services", and then adopting a business approach to sell them. Experience implementing these mechanisms can lead to experimentation with other mechanisms which may have similar legal and financial requirements for implementation (e.g., PES).

## 5. Action Plan for Implementation of Pilot Projects

### 5.1. Pilot Project: Conservation Trust Fund Start-up and Operations: BIOFUND

*Objective:* A Conservation Trust Fund is established, effectively administered and capitalized

Mozambique has made considerable progress - since the launch of the initiative in 2007 - to establish a trust fund to finance conservation areas in Mozambique. This initiative is now in the second phase of development, the “start-up phase”, 2010-2012). The objective of the start-up phase is to establish a functioning foundation, the “BIOFUND Mozambique”. A detailed work plan and budget has been prepared for this phase (see “*Road Map for Establishment and Operation of a Mozambique Conservation Trust Fund*” which defines the activities required to ensure the:

- registration of the BIOFUND;
- establishment and initial capitalisation of a foreign investment fund;
- development of operational and strategic plans, policies and procedures;
- election of the Board, and the constitution of other governing bodies; and
- recruitment and equipping of Foundation staff.

Work under this pilot project will implement the start up phase activities, including:

- (i) Drafting the strategic (strategic plan, fund-raising strategy) and operational instruments (operational manual, investment policy and grant-making policy) for BIOFUND
- (ii) Legal registration of BIOFUND and foreign investment fund;
- (iii) Election of the BIOFUND’s Board of Directors and Oversight Committee;
- (iv) Recruitment of a small executive team to administer the day-to-day management of BIOFUND;
- (v) Establishment and equipping of office facilities for BIOFUND’s executive team (office space, office equipment, communications equipment, transport, etc.)
- (vi) Implementation of administrative (e.g. filing system) and financial processes (e.g. set up bank account) to manage the day-to-day activities of BIOFUND

The suite of activities under this start-up phase (2010-2012) will be implemented by WWF in terms of a management agreement with MITUR. The BIOFUND Founders Committee - comprising three institutional representatives from MITUR, MICOA, and WWF, and eight individuals from various sectors of society will guide the activities of WWF during the start-up phase.

Experience with other conservation trust funds (e.g., Mgahindi Bwindi Conservation Trust) has shown that financial support for the operating costs in the first few years of a trust fund’s operation enables the fund to focus its activities on the core activities (fund-raising and investment management) that could secure its long-term financial sustainability.

Once the fund is established and the executive team is in place, the following operational activities of the BIOFUND will thus be co-financed, for the period 2012-2015, under this pilot

- (i) Recurrent costs of the BIOFUND executive team;

- (ii) Training and capacity building of the executive team staff and the Board of Directors;
- (iii) Implementation of the fund-raising strategy to finance BIOFUND's operational costs, and build its capital in support of conservation areas;
- (iv) Implementation of an investment strategy for BIOFUND;
- (v) Implementation of the communications strategy for the Foundation;
- (vi) Piloting the implementation of the grant-making procedures and protocols.

Once the foundation is registered and the Board of Directors and executive team are established in 2011, the executive team will take over responsibility for the day-to-day development and management of the fund from WWF (a formal transition process has been provided for in phase 2), under the guidance and supervision of the Board of Directors. The executive team will then contract in technical assistance and expertise as and when it may require.

## **5.2. Pilot Project: Tourism-based Revenues**

*Objective:* Improved management of tourism-based revenues generated by national parks, national reserves and marine reserves results in more financing for conservation areas

There is significant potential for additional revenue to be generated from tourism-based revenues for the different categories of conservation areas. While the enabling legal and institutional framework is already in place, and political support for the user-pays approach is high, the current fee structures and collection mechanisms for national parks, national reserves and marine reserves are still sub-optimal.

Work under this pilot project will then focus on systematically reviewing the park/reserve fees for facilities and services, and the development of a more market-based user fee structure. This would include: determining the willingness to pay; evaluating existing pricing structures; assessing expected revenue generation from increases in fees; developing fee collection methods; developing compliance systems; catalyzing the development of voluntary contributions from tourism; and monitoring the income from (and costs of) providing and maintaining the adventure tourism product.

Activities in this pilot project are directed at:

- (i) Updating the overarching user fees policy for the parks and reserves;
- (ii) Estimating the supply costs for each of the facilities and services (i.e. capital costs, maintenance and replacement costs, operational and administrative costs) in order to define the minimum fee levels required for each park/reserve service to enable full cost-recovery;
- (iii) Establishing the "market rate" for each of the facilities and services, at different levels of demand (e.g., tented camp along the coast in Quirimbas NP vs. tented camp in miombo of Niassa NR);
- (iv) Implementing "willingness to pay" surveys for selected facilities and services in "destination" parks and reserves;
- (v) Determining the acceptable levels of equitable cross-subsidisation between different user groups (i.e. differential fees for locals-nationals-SADC-international);

- (vi) Evaluating the cost effectiveness of the current collection arrangements of different user fees and identifying viable alternatives (e.g. internet bookings, outsourced collection, pre-paid user card systems, etc.);
- (vii) Defining discounting options for different user groups, use types and times of year;
- (viii) Determining an indicative price for each of the facilities and services provided by the parks and reserves based on the following factors (see above): cost recovery; economic efficiency through identification of a “market rate”; maximising consumers “willingness to pay”; costs for improvement of facilities and their management; differential fee structures (e.g., foreign/national); and transaction costs;
- (ix) Consulting with organisations representing different user groups to review and comment on the proposed new fee structures;
- (x) Advertising the intent to update the user fees for parks and reserves and making the user fees policy, user fee objectives and new fee structures widely available for review and comment;
- (xi) Updating the proposed pricing of fees for parks and reserves, based on comments and inputs received from different interest groups;
- (xii) Following the legal procedures required to revise Decree Nº 27/2003;
- (xiii) Standardising data collection procedures on users’ numbers and profiles;
- (xiv) Implementing accounting procedures to enable ongoing estimation of cost-effectiveness or profitability of user-pays enterprises in parks and reserves;
- (xv) Updating all conditions of permits, leases and other user agreements to ensure their enforceability;
- (xvi) Developing capacities in parks and reserves to enforce compliance with user fees;
- (xvii) Developing mechanisms to catalyze private sector financing from tourism, such as surveys of existing best practice, distribution of concept ideas to PA and ANAC/DNAC staff, and dialogue with the private sector.

### 5.3. Pilot Project: Mangrove Carbon Development

*Objective:* Catalyze the development of mangrove forest carbon pilot projects in coastal conservation areas.

With growing interest in REDD and other carbon markets in Mozambique, new opportunities are likely to emerge for financing conservation areas. Mozambique’s 2700 kilometer coastline is vulnerable to climate change – investing in mangroves provides a win-win solution to address both adaption and climate change mitigation. Carbon markets are less developed for “blue” or “wet” carbon, but there is growing recognition that mangrove forests are important carbon sinks that also provide multiple ecosystem services. A pilot project catalyzing the development of mangrove forest carbon will be ground-breaking in pioneering a new approach to greenhouse gas mitigation.

It is important that the pilot project be developed in line with Mozambique’s National REDD Strategy currently under preparation. One of the results of the pilot project should be that

mangrove forests are included in Mozambique's definition of forests and that forest and inventories assess them properly.

The pilot project will need to be managed by a full-time project director, supported by technical experts with carbon and legal expertise.

Work in this pilot project will catalyze the development of mangrove forest pilot projects in coastal conservation areas, by focusing on: identifying a portfolio of mangrove forest pilot projects in conservation areas; supporting development of a demonstration pilot project; and, developing a mangrove carbon methodology that can be applied in different project sites. Pilot project sustainability will be ensured through fundraising to secure sufficient funds for project implementation.

To implement this pilot project, specific recommended activities are targeted at:

- (i) Conducting pre-feasibility scoping for potential mangrove carbon projects in conservation areas, including identification of project sites and project proponents;
- (ii) Preparing project idea note (PIN) or concept for a pilot site to be selected, including defining project scope, identifying project area, identifying potential partners, analyzing legal feasibility, initiating stakeholder engagement, and assessing project feasibility;
- (iii) Consulting with other project proponents developing mangrove projects;
- (iv) Designing project through in-depth feasibility analysis resulting in preparation of Project Design Document (PDD), including work to: establish carbon baseline, social and economic assessment of the drivers of deforestation; define project activities and monitoring system; analyze financial costs and legal issues; stakeholder consultations; and identification and/or development of project methodology;
- (v) Identification of co-benefits of provided by mangroves;
- (vi) Validation of project by third party auditor and registration of project to comply with standards (e.g., CDM, VCS, CCB);
- (vii) Beginning implementation of community-based mangrove restoration and protection activities, such as training communities in sustainable harvesting of mangroves, the introduction of energy efficient stoves to reduce deforestation and re-planting mangroves;
- (viii) Initiation of project monitoring system; and,
- (ix) Fundraising, including project marketing and communications with donors, to raise sufficient funds for project implementation.

#### **5.4. Pilot Project: National Biodiversity Offsets Program**

*Objective:* The potential for funding conservation areas from the implementation of biodiversity offset and compensation mechanisms is assessed.

Although a legal and institutional framework exists to manage environmental impacts, there is no established mechanism in place in Mozambique to address residual adverse impacts resulting from project development. With the growth of mega-projects in agriculture, forestry, hydroelectric, infrastructure, mining, petroleum and tourism sectors, there is

potential to implement compensation and biodiversity offset mechanisms that finance conservation areas in order to achieve “no net loss” of biodiversity from investments.

Since the concept is new to Mozambique, recommended activities will address capacity building needs, as well as deliver technical outputs required to elaborate offset policy, revise legal procedures and design and implement pilot biodiversity offsets (the exact number of pilots to be carried out will depend on available co-financing from both the companies involved and the international community). Mozambique can learn from experience in other countries with compensation/biodiversity offset policy and pilot development, including Brazil and South Africa. The Business and Biodiversity Offsets Program (BBOP) is currently developing a program to assist countries to develop national-level biodiversity offset programs. By partnering with BBOP, Mozambique could participate in its learning network and have access to technical expertise on biodiversity offsets.

The design and implementation of a national biodiversity offsets program will require a multi-stakeholder, public-private partnership approach. Given MICOA’s coordination role and responsibility for supervising the EIA process, MICOA is the appropriate ministry to coordinate this program, in collaboration with sectoral and planning ministries. DNAC/ANAC will play an important role in facilitating the identification of offset locations in conservation areas and defining implementation arrangements.

Specialized multi-disciplinary expertise will be needed to implement a national biodiversity offset program, with a national and international consulting team collectively having expertise in legal, financial and scientific aspects of biodiversity offset policy, design and implementation.

Recommended work would include: reviewing the current framework for managing development impacts; mapping project development; engaging with private sector project developers; developing and implementing an offset policy and, identifying and designing a pilot biodiversity offset.

Specific activities that are recommended include:

- (i) Assessing the legal and regulatory context and market conditions for introducing compensation and biodiversity offset mechanisms, evaluating the best options, and recommending an action plan for designing and implementing an offset policy;
- (ii) Building capacities among stakeholders engaging in biodiversity offsets, including the following activities: 1) an introductory national workshop; 2) three thematic workshops on topics related to offset design and implementation, such as cost-benefit analysis; 3) participation in Business and Biodiversity Offset Program (BBOP) international and Africa regional meetings; and, 3) exchanges with experienced counterparts working on biodiversity offsets (both public and private sector) in countries such as Brazil and South Africa;
- (iii) Mapping project development in agriculture, forestry, hydroelectric, infrastructure, mining, petroleum and tourism sectors in order to identify potential offset pilots and assess potential impacts near conservation areas;

- (iv) Coordinating work on compensation and biodiversity offsets with existing initiatives on building EIA capacity, promoting CSR, and achieving validation under the EITI;
- (v) Developing an offset policy and revising the legal framework (if required), taking into account the need to integrate compensation/offset approaches into the EIA process, investment and spatial planning processes and the Conservation Policy;
- (vi) Engaging with private sector companies in order to identify and select potential investors/projects that would be interested in developing an offset on a pilot basis;
- (vii) Designing at least one pilot offset by: 1) reviewing project scope and activities; 2) reviewing the legal framework and policy context; 3) initiating a stakeholder participation process; 4) determining the need for an offset based on residual adverse effects; 5) choosing methods to calculate “loss/gain” and quantify residual losses; and, 6) reviewing and selecting offset locations and activities and calculating offset gains;
- (viii) Implementing a pilot offset by defining: 1) how the offset will be operated and managed; 2) how the offset will be financed over the long-term (e.g., through PES and/or BIOFUND); 3) how the offset will be monitored and evaluated; and, 4) launching the offset by signing an agreement among offset partners (e.g., developer, DNAC/ANAC, local authorities or implementing organizations);
- (ix) Reviewing lessons learned from design and implementation of the pilot offset(s) in order to assess possible changes in the offset policy and related legal framework;
- (x) Developing an offset policy and revising the legal framework (if required), taking into account the need to integrate compensation/offset approaches into the EIA process, investment and spatial planning processes and the Conservation Policy.

## Annexes

1. References
2. Institutions and People Consulted
3. Overview of Potential Sustainable Financing Mechanisms
4. Donor Profiles
5. Donor Funding for Conservation Areas
6. Table of Tourism Fees based on Decree No. 27/2003 of June 17
7. Criteria for Selection of Pilot Projects

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## Annex 2: Institutions and People Consulted

Institution	Name
DNTF, MINAG	Mandrate Nakala Oreste
	Marcelino Foloma
	Fatima Nkanji
National Directorate of Environmental Management, MICOA	Rogério Wamusse
Public Debt Division, Ministry of Finance	Piedade Macamo
National Petroleum Institute, MIREM	Carlos Zacarias
EITI, MIREM	Benjamin Chilenge
DNAC, MITUR	Francisco Pariela
	Samiro Magane
TFCA, MITUR	Bartolomeo Soto
TFCA, MITUR	Madyo Couto
TFCA, MITUR	Alessandro Fusari
Provincial Fisheries Service, Sofala	Cassamo Hassane
Bazaruto NP	Luis Namanha
Limpopo NP	Baldeu Chande
Maputo Special Reserve	Rudolfo Cumabane
Elephant Agency	Ntela Papucides
INATUR, MITUR	Mário Sevane
ADECOR	António Mutouo
AFD	Bruno Leclerc
	Karen Colin de Verdière
Associação de Apoio e Assistência Jurídica às Comunidade, Tete	Rui de Vasconcelos Caetano
Business and Biodiversity Offset Programme	Kerry ten Kate
	Amrie von Hase
Cabo Delgado Biodiversity and Tourism	José Oscar Monteiro
Centro de Integridade Publica	Benilde Mourana
Covane Community Lodge	Sr. Reginaldo
Conservation International	Jennifer Morris
Critical Ecosystem Partnership Fund	Daniel Rothburg
Global Conservation Fund	Chris Stone
Consultant	Antoine Boulet
Consultant	Arild Molstad
Consultant	Stuart Williams

<b>Institution</b>	<b>Name</b>
Consultec	Tiago Dray
Envirotrade	António Serra
Ernst and Young	Nelson Matimbe
	Benedito Murambire, Jr.
Epsilon Investments	Abdul Magid Osman
	Paulo Massinga
Forest Trends	Michael Jenkins
	Winnie Lau
	Becca Madsen
Global Environment Fund	Jim Heyes
Gorongosa Restoration Project	William Wright
	Amy Gambrell
	Scott Kip
	Ivan Machava
	Mateus Matemba
	Franziska Steinbruch
IGF Foundation	Hubert Boulet
	François Lamarque
IIAM	Teresa Alves
	Camila de Sousa
International Biochar Initiative	Debbie Reed
International Finance Corporation	Michelle Souto
International Institute for Environment and Development (IIED)	Isilda Nhatumbo
	Duncan Macqueen
IUCN – The World Conservation Union	Roberto Zolho
Japanese Embassy in Maputo	Akiko Aikawa
KfW	Ralph Kadel
Kenmare Resources PLC`	Gareth Clifton
Manda Wilderness Community Trust	Alexis Toyé
Mbuna Bay – Colongue Retreat	Maya Litscher
Niassa Reserve Management Society	Anabela Rodriguez
Nkwichi Lodge	Patrick Simkin
Peace Parks Foundation	Antony Alexander
	Carlos Pepomuceno
	Derek Potter
	Gilberto Vicente
Royal Norwegian Embassy in Maputo	Øystein Botillen

<b>Institution</b>	<b>Name</b>
Sal and Caldeira Legal and Consultants	António Baltazar Bungallah
	Samuel J. Levy
Sasol	Belindo Manhiça
Student	Julieta Alfândega
Sustainable Amazonas Foundation	Thais Megid
TurConsult, Lda.	Rui Monteiro
UNDP	Jocelyn Mason
USAID	Robert Layng
Vale	Marinaa França Mungai
	Karina Pongeloupe
	Wallace Fontana Nonato
Voluntary Carbon Standard	Naomi Swickard
World Bank	Frauke Jungbluth
WWF	Peter Bechtel
	Leo Bottrill
	Geraldo Chizango
	Detlev Drenkhahn
	Albino Nandja
	Caroline Simmonds
	Michael Wright

### Annex 3: Overview of Potential Sustainable Financing Mechanisms

FINANCING MECHANISM	SOURCE OF REVENUE	POTENTIAL FOR SUSTAINABLE FINANCING (Feasibility, Impact)	ACTION RECOMMENDED OR OBSERVATIONS
<b>Government Revenue Allocations</b>			
Direct allocations from government budgets	Government budget revenues	Existing - High	Greater integration of conservation areas in PARPA
Government taxes, fees and fines earmarked for conservation	Government fiscal revenues paid by companies and individuals	Existing - Medium	Advocate for allocation to conservation areas
Government taxes, fees and fines raised by conservation areas	Government fiscal revenues paid by companies and individuals	Existing - High	Develop pilot program - Revision of user fees for conservation areas
Government taxes, fees and fines – revenue sharing with communities	Government fiscal revenues paid by companies and individuals	Existing - High	Improve management of community revenue sharing mechanisms, based on existing legal framework (e.g., tourism, forestry); Expand community revenue sharing frameworks to other sectors (eg., Mining)
Debt relief (debt-for-nature swaps, PARPA)	Creditors, Government	Yes - High	Negotiate terms of C2D allocation to BIOFUND Review potential for other debt relief mechanisms
<b>Grants and Donations</b>			
Bilateral donors	Donors	Existing - High	Develop strategy for increased funding from existing donors (AFD, KfW, USAID) and attracting new bilateral donors (e.g., NORAD)
Multilateral agencies	Donors	Existing - High	Develop strategy for increased funding from existing donors (GEF, UNDP, World Bank ) and attracting new multilateral donors; develop Africa regional GEF project
Private Charitable Foundations	Individuals, Corporations	Existing - High	Develop strategy for attracting new foundation donors
Non-governmental organizations (NGOs)	Individual members and donors	Existing - High	Develop strategy for increased funding from new NGO donors; explore new partnerships
Cause-related marketing – wildlife friendly Adopt-a-park or species	Individual donations	Yes - Medium	Link to new ANAC brand, introduce through PA business planning
Corporate funding (donations, foundations, sponsorship, partnerships)	Companies – Mozambique and international	Existing – High	Develop strategy for increased funding from existing donors (Sasol – Bazaruto, Coca Cola – Lake Niassa) and attracting new corporate donors from South Africa, Europe and the U.S.A.
Academic and Research Institutions	Zoos, Aquariums, Universities, research centers	Yes - Medium	Identify potential zoo and aquarium “twinning” arrangements, link to SAVE tourism

FINANCING MECHANISMS	SOURCE OF REVENUE	POTENTIAL FOR SUSTAINABLE FINANCING (Feasibility, Impact)	ACTION RECOMMENDED OR OBSERVATIONS
<b>Environmental Funds</b>			
Conservation Trust Funds	Multi-source	Yes - High	Register BIOFUND and raise funds
Biodiversity enterprise and sustainable investment funds	Private equity and lending, investment promotion	Yes - High	Existing: Verde Ventures, IFC Tourism Anchor Investment, Northern Arc; Review potential for sustainable investing in other sectors than tourism
<b>Carbon Markets</b>			
Forest carbon offset (REDD+, mangrove)	Public donors, private buyers (voluntary and future compliance market)	Yes - High	Establish national policy framework and develop pilot projects for CDM and voluntary markets
Alternative energy carbon offsets (energy efficient stoves, biochar, solar)	Public donors, private buyers (voluntary and future compliance market)	Yes - High	Establish national policy framework and develop pilot projects
<b>Tourism-based Revenues</b>			
Protected area entry fees	Tourists	Existing - improve, High	Develop pilot program
Recreational fees: diving, boating, hunting	Tourists	Existing - improve, High	Develop pilot program
Recreational fees: sport hunting	Hunters	Existing – improve, High	Review hunting policy to reflect best practice
Concessions	Tourism operators	Existing - improve, High	Review concession policy
Product marketing	Tourists	Existing - Low	PA business planning to improve
Airport passenger fee, Visa fee	Tourists	Yes - Medium	Advocate for conservation area link to existing fees,
Hotel taxes	Hotel clients	No - Low	Hotel tax eliminated with introduction of VAT
Donations by Tourists and Tourism Operators	Tourism operators, Tourists	Exists - Medium	Sensitize tourism operators about best ways to implement (e.g., “opt-out) and contact airlines about on-board donations or carbon offsets allocated to conservation areas
<b>Other Mechanisms</b>			
Payment for watershed services	Government utilities, Water Consumers, Companies	Maybe - Low-medium	Not much evidence of willingness to pay; consider review of legal basis for water and advocate for public payments
Bioprospecting and natural products	Medical, Pharmaceutical, Cosmetics	Yes - Medium	No evidence of interest, although legal basis exists
Compensation and Biodiversity offsets	Project developers	Yes - High	National-level program and pilots
<b>Fishing Industry Revenues</b>			
Fisheries licensing and access payments, fines	Governments, Fishermen	Yes - Medium	Consider potential allocation to conservation areas from EU agreement
Recreational fishing license fees and taxes	Recreational fishers	Yes - Low	Review - sport fishing regulation

## Annex 4: Donor Profiles

**Critical Ecosystems Partnership Fund (CEPF):** Founded in 2000, CEPF is a joint initiative of AFD, CI, the GEF, the Government of Japan, the John D. and Catherine T. MacArthur Foundation and the World Bank, and is managed by Conservation International. CEPF provides grants to civil society organizations to help protect biodiversity “hotspots” CEPF recently completed an ecosystem profile for the Maputaland-Pondoland-Albany Hotspot, including a five-year investment strategy which will be financed beginning in 2010. In Mozambique, areas identified for investment include the Ponto do Ouro Partial Marine Reserve, Lebombo Transfrontier Corridor and Licuati Forests. (<http://www.cepf.net>)

**Denmark:** Denmark finances a five-year (2006-2010) sector-wide program for the environment that provides institutional support for MICOA, natural resource management in Sofala, coastal zone management at the provincial and district level and the urban environment in greater Maputo. The program has supported work on the issue of communities living in conservation areas and their buffer zones.

**Fauna and Flora International (FFI):** Fauna and Flora International has supported the Niassa Reserve since 2002 through its Arcadia Land Trust, a fund which leverages funding from the UK-based Arcadia Fund. The Arcadia Land Trust has contributed US\$1.86 million to the Society for the Management of Niassa Reserve, leveraging an additional US\$3.9 million through other donations. (Arcadia Land Trust 2009) In 2009, FFI conducted an initial review of the potential for REDD in Niassa Reserve.

**Finland:** Finland’s bilateral assistance in Mozambique focuses on education, health and rural development. Finland is developing a forest program that is expected to contribute to Mozambique’s national forest program, addressing threats posed by increased logging and considering community needs.

**France: French Development Agency (AFD) and French Global Environment Fund (FFEM):** France is currently the largest donor for Mozambique’s conservation areas, with support for the development of Gilé NR, Limpopo NP and Quirimbas NP. AFD also supports cross-cutting program for wildlife management and sustainable financing, both intended to contribute to the sustainability of Mozambique’s conservation areas. Through a C2D debt swap, France will be the first donor to contribute to BIOFUND Mozambique’s capital.

**Germany: German Development Bank (KfW) and Federal Ministry for Economic Cooperation and Development (BMZ):** The German government is one of the most important contributors to the Program of Work on Protected Areas. Germany also supports sustainable financing through support for conservation trust funds, debt swaps and PES. In Mozambique, the German government’s main intervention in conservation areas is in support of Limpopo NP through the Peace Parks Foundation. A third phase of financing (€10 million) is expected to begin in 2010.

**Global Environment Facility:** More than half of GEF investments worldwide support protected areas, including sustainable financing through conservation trust funds that support park operations and livelihoods of communities living around protected areas. GEF has provided US\$23 million for biodiversity conservation in Mozambique since 1991, including support for TFCA projects. A new four-year GEF program (GEF5) will begin in 2010.

**Global Conservation Fund (GCF), Conservation International:** The Global Conservation Fund has provided financing through WWF for the establishment of a Primeiras and Segundas marine reserve. GCF has committed to granting US\$1 million in endowment funds to BIOFUND for the support of the proposed reserve.

**Gorongosa Restoration Project:** In 2008, the Carr Foundation/Gorongosa Restoration Project signed a long-term agreement with the Government of Mozambique to restore and manage Gorongosa NP. Over the 20-year agreement, the Gorongosa Restoration Project will contribute at least US\$24 million to the public-private partnership. It is expected that over time the partnership's sustainable business model – based on park entrance fees and conservation contributions from tourism and donors – will allow Gorongosa NP to generate sufficient revenues to sustain its operations. The Gorongosa Restoration Project currently has contracts, grants and cooperative agreements with IAEA, PlanetAction, Portugal, UNDP, USAID and Zoo Boise.

**Japan:** Japan is one of the donors supporting the TFCA project. In April 2010, the Japanese government pledged to provide about US\$7.4 million in support of a program to preserve forests, thereby mitigating climate change.

**Norway:** Norway promotes sustainable development in Mozambique through support to sector programs on petroleum and fisheries, and has financed capacity building for CSR. Norway financed preparation of Mozambique's FCPF R-PIN and is currently supporting the South-South REDD initiative. Although NORAD financed Bazaruto NP through WWF, Norway is not currently providing any funding for conservation areas.

**Peace Parks Foundation:** The Peace Parks Foundation has been successful in raising funds for TFCAs through lotteries, private corporations and individuals and its network of "friends of" organizations in Europe and the U.S.A. For example, in February 2010, the Dutch Postcode lottery announced a grant to Peace Parks Foundation that includes €2 million (US\$2.8 million) to create a corridor along the Futi River to allow for the movement of elephants between Tembe Elephant Park in South Africa and Maputo SR. The Peace Parks Foundation has also raised private donations for Maputo SR from the Principality of Monaco and Virgin United.

**United Kingdom (Department for International Development - DFID):** The UK is one of the largest bilateral donors in Mozambique. In line with its commitment to the Millennium Development Goals, DFID's funding focuses on health, education and governance. DFID is currently reviewing how climate change can be supported through its program in Mozambique. At the global level, DFID finances green technology, adaptation and carbon market development

**United Nations Development Programme (UNDP):** As one of the implementing agencies for the GEF, UNDP has been instrumental in supporting protected area financing and PES program around the world. In Mozambique, UNDP supports the Poverty-Environment Initiative (in collaboration with the United Nations Environment Programme (UNEP) and Irishaid), which has promoted strategic environmental assessment. UNDP and UNEP also implement a CDM capacity building project.

**United States Agency for International Development (USAID):** USAID is Mozambique's largest bilateral donor overall. USAID supports Gorongosa NP and the creation of Lake Niassa Reserve. Through the Northern

Mozambique Tourism Project, USAID supports nature-based tourism. USAID has expressed interest in developing innovative carbon projects and public-private partnerships. The U.S. Fish and Wildlife Service supports human-animal conflict programs.

**World Bank:** The World Bank Group is one of the major donors for biodiversity and natural resources management through both loans and as an implementation agency for GEF resources. Two World Bank projects in Mozambique focus on sustainable tourism and conservation areas, including the TFCA project and the IFC Tourism Anchor Investment Program. The World Bank is managing new multi-donor climate change funds, such as the Pilot Program for Climate Resilience and the Scaling up Renewable Energy Program.

**World Wide Fund for Nature (WWF):** WWF raises funds through its international network of national organizations, accessing funds from private companies, major individual donors and foundations, as well as bilateral and multilateral agencies. Private donors for Quirimbas NP include Johnson and Johnson, the Sall Family Foundation and the Dutch Postcode Lottery. WWF worked with the Coca Cola Company and USAID to design a Global Development Alliance, a public-private partnership model developed by USAID, to finance creation of the Lake Niassa reserve.

## Annex 5: Donor Funding for Conservation Areas in Mozambique

Project	Donors	€ Amount	US\$ Amount	Period	Years	US\$/year (2008)	US\$/year (2010)
<b>Development of Limpopo NP</b>			<b>32,060,000</b>	2008-2012	4	8,014,999	8,014,999
	AFD	11,000,000	15,400,000				
	KFW/BMZ	11,900,000	16,660,000				
<b>TFCAs: Banhine, Chimanimani, Limpopo, Maputo, Zinave</b>			<b>35,920,000</b>	2006-2013	7	5,131,428	5,131,428
	World Bank		20,000,000				
	GEF		10,000,000				
	Japan		3,720,000				
	PPF/AWF		2,200,000				
<b>Quirimbas NP Development Project</b>			<b>8,608,600</b>	2004-2009	5	2,152,150	
	AFD	3,500,000	4,900,000				
	FFEM	700,000	980,000				
	WWF	1,949,000	2,728,600				
<b>Consolidation of Quirimbas NP Development</b>			<b>8,706,250</b>	2010-2015	5		1,741,250
	AFD/France C2D	4,000,000	5,600,000				
	FFEM	1,000,000	1,400,000				
	WWF		1,706,250				
<b>Bazaruto Conservation Support Program</b>							
	Sasol		<b>1,500,000</b>	2010-2015	5		300
<b>Co-Management Gilé National Reserve</b>			<b>5,151,440</b>	2009-2012	4		1,287,860
	FFEM	1,000,000	1,400,000				
	Italian Cooperation	1,200,000	1,680,000				
	IGF Foundation	687,400	962,360				
	Private Partners	568,700	796,180				
	MITUR	203,500	284,900				
	FAO	20,000	28,000				
<b>Gorongosa Restoration Project</b>			<b>28,849,972</b>				
	Carr Foundation		24,000,000	2008-2028	20	1,200,000	1,200,000
	USAID		4,500,000	2008-2012	4	1,125,000	1,125,000
	Portugal	249,980	349,972	2007-2008	2	174,986	
<b>Creation of Lake Niassa Reserve</b>			<b>1,700,000</b>				
	USAID		1,100,000	2006-2012	6	183,333	183,333
	Coca Cola		600,000	2008-2010	3	200,000	200,000
<b>Protection and sustainable management wild fauna</b>							
	AFD	800,000	<b>1,120,000</b>	2009-2011	3		373,333
<b>BIOFUND Mozambique</b>			<b>6,120,000</b>				
	AFD/C2D	4,000,000	5,600,000	2010-2012	3		1,866,666
	AFD		184,000	2009-2010	2		92,000
	KfW		252,000	2009-2010	2		126,000
	WWF		84,000	2008-2010	3		28,000
<b>Sustainable Financing of Protected Areas</b>			<b>281,500</b>	2009-2010	6 months		281,500
	Carr Foundation		35,500				
	UNDP-GEF		210,000				
	WWF		36,000				
<b>Development and Management of Niassa NR</b>							
	FFI		<b>600,000</b>	2008-2009	2	200,000	400,000
<b>Totals</b>						<b>18,381,896</b>	<b>22,051,669</b>

Sources: AFD, FFEM, Gorongosa Restoration Project, MITUR, Niassa Reserve Company, Peace Parks Foundation, Sasol, World Bank, WWF, ODAmoz.  
Sasol: under negotiation; WWF Quirimbas funding includes Johnson and Johnson, Sall Family Foundation, U.S. Fish and Wildlife Service, Dutch Postcode Lottery  
Exchange rate: €1= US\$1.4

## Annex 6: Decree 27/2003 of June 17 (Unofficial Translation)

NB Applies to all National Parks and Reserves

### Fee Table

Entrance fees (MTn)		
	Mozambican	Foreign
Over 60 years	Free	200.00
Age 21-59	100.00	200.00
Age 13-20	25.00	50.00
Under 12	Free	Free
Passenger cars	200.00	200.00
vehicles, 6 to 15 passengers	175.00	175.00
vehicles, 16-25 passengers	150.00	150.00
vehicles, >25 passengers	125.00	125.00
trailer	50.00	50.00
caravan	50.00	50.00
small boat up to 6 passengers	100.00	100.00
large boat, >6 passengers	150.00	150.00
Airplanes	600.00	600.00

### Camping Fees (MTn)

Activity	Information	
Camping	Per person per day	100.00
Caravan	Per site per day	150.00

### Concession fees (MTn)

Land Concession	ha/yr	1,000.00
Area concessions	Dive school or exclusive use area (Per year)	24,000.00

### Activity Fees (MTn)

Activity	Information	
Walks	With a Park Guide	450.00
Car safari	With/without a guide	450.00
Motorcycle safari	4 night package up to 4 people	8,500.00

### Other Fees (MTn)

Activity	Information	
Photography	Daily Fee	12,000.00
Filming	Daily Fee	24,000.00
Towing		150.00
Rescue	Lost tourists	
	Foreign	1,000.00
	Mozambican	500.00
Sport Fishing	Per stay	500.00
Fish Trophies	Per trophy	300.00
Diving/Snorkelling	per dive/ snorkeling	200.00
Scientific research conducted by foreigners	Per research program	12,000.00

## **Annex 7: Criteria for Selection of Pilot Projects**

### **Feasibility**

Political, legal and technical conditions  
Implementing partner capacity  
Return on investment (reasonable transaction costs)  
Availability of co-financing

### **Impact**

Significant additional financing  
Matches financing need  
Stimulates new opportunities for partnerships (e.g., private companies, communities)  
Creates positive environmental impacts and incentives

### **Geographical coverage**

All or most of conservation areas covered by at least one of the pilot mechanisms  
Different scales – national-level and conservation area

### **Demonstration value**

Innovation – new or improved conservation financing mechanism  
Can be replicated in other conservation areas