

A REVIEW OF FOREST FINANCING IN AFRICA

By

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ACRONYMS AND ABBREVIATIONS

ADMADE	Administrative Management Design Programme
AfDB	African Development Bank
CAR	Central African Republic
CAMPFIRE	Communal Areas Management Programme for Indigenous Resources
CBD	Convention on Biodiversity
CBFF	Congo Basin Forest Fund
CBFP	Congo Basin Forest Partnership
CBNRM	Community-based Natural Resources Management
CBO	Community Based Organisation
CDM	Clean Development Mechanism
CITES	Convention on Trade in Endangered Species
COMESA	Common Market for Eastern and Southern Africa
COMIFAC	Central African Forests Commission
CSO	Civil Society Organisation
CTF	Clean Technology Fund
DAC	Development Assistance Committee
DRC	Democratic Republic Of Congo
EAC	East Africa Commission
ECOPAS	Ecosystems Proteges d’Afrique Soudano-Saheli
ECOWAS	Economic Community of West African States
ETS	European Union Emission Trading Scheme
FAO	Food and Agriculture Organisation of the United Nations
FCPF	Forest Carbon Partnership Facility
FDI	Foreign Direct Investment

ACRONYMS AND ABBREVIATIONS

FLEG	Forest Law Enforcement and Governance
FIP	Forest Investment Programme
FSP	Full size projects
GDP	Gross Domestic Product
GEF	Global Environment Facility
GEPRE-NAF	Gestion Participative des Ressources Naturelles et de la Faune
GGWSSI	Great Green Wall for the Sahara and the Sahel Initiative
GOF	Global Objectives on Forests
GM	Global Mechanism
IBRD	International Bank for Reconstruction
IDA	International Development Association
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
ITTO	International Tropical Timber Organisation
IUCN	International Union for Conservation of Nature
LULUCF	Land use, land-use change, and forestry
NFFS	National forest financing strategy
NFP	National forest programme
NLBI	Non-Legally Binding Instrument on All Types of Forests
NGO	Non-Governmental Organisation
NTFP	Non-Timber Forest Product
ODA	Official Development Assistance
OECD	Organisation for Economic Cooperation and Development

ACRONYMS AND ABBREVIATIONS

OTC	Over-The-Counter
PFI	Public Forest Institution
PFE	Permanent Forest Estate
PES	Payment for Environmental Services
PROFOR	Programme on Forests, World Bank
RAF	Resource Allocation Framework
REDD	Reduced emissions from deforestation and forest degradation
SADC	Southern Africa Development Community
SCF	Strategic Climate Fund
SFM	Sustainable forest management
SSA	Sub-Saharan Africa
TFA	Tropical Forest Account
TIST	International Small Group and Tree Planting Program
UN	United Nations
UNCCD	United Nations Convention On Combating Desertification
UNFCCC	United Nations Framework Convention on Climate Change
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Programme on Development
UNEP	United Nations Environment Programme
UNFF	United Nations Forum on Forests
USD	United States Dollar
VAT	Value Added Tax
WB	World Bank
WFP	World Food Programme

WWF	World Wide Fund for Nature
ZAWA	Zambia Wildlife Authority
ZICGC	Zones d'Interet Cynegetique a Gestion Communataire in Cameroon

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Chapter I. Introduction and background

1.0 Introduction

Africa's forests cover an estimated 674 million hectares (ha) or 23% of Africa's land area and account for 16.7% of global forest cover. The region's forests can be classified into nine categories including tropical rain forests, tropical moist forests, tropical dry forests, tropical shrubs, tropical mountain forest, sub-tropical humid forests, sub-tropical dry forests, sub-tropical mountain forests and plantations. The distribution of these forests varies from one sub-region to another, with the southern extremes of the Sahara desert having the least forest cover while Central Africa has the densest cover. The distribution by sub-region is shown in Table 1 below. Five countries with the largest forest area are Democratic Republic of Congo, Sudan, Angola, Zambia and Mozambique and together they account for about 55% of the continent's forests.

Table 1: Forest Area and Rate of Change in Africa

Sub-region	Forest Area (1000 ha)	% of land area	Annual change rate			
			1990-2000		2000-2010	
			Area (1000 ha)	%	Area (1000 ha)	%
Central Africa	254 854	48	-676	-0.3	-660	-0.3
East Africa	73 197	18	-784	-0.9	-783	-0.9
North Africa	78 814	8	-590	-0.7	-41	-0.1
Southern Africa	194 320	33	-1 057	0.5	1 056	-0.5
West Africa	73 234	15	-961	-1.1	-875	-1.1
Total Africa	674 419	23	-4 067	-0.6	-3 414	-0.5
World	4 033 060	31	-8 323	-0.2	-8 323	-0.1

Source: FAO, 2010

Table 2: Planted Forest Area in Africa, 2000 - 2010

Sub-region	Area (1000 ha) 2010	Annual change (1000ha) 2000-2010	% Annual change rate 2000-2010
Central Africa	709	20	1.58
East Africa	1 477	22	1.62
North Africa	8 091	78	1.01
Southern Africa	2 639	21	0.82
West Africa	2 494	115	6.35
Africa total	15 409	245	1.75
World Total	264 084	4 925	2.09

Source: State of the World's Forests (FAO, 2011)

Planted forests account for a total of 15.4 million ha with the bulk being in North Africa (Table 2).

Seventeen African countries are “mega-biodiversity” countries and two of its forested areas, the Upper Guinea forest of West Africa and Eastern Arc mountain forests in East Africa are recognized as biodiversity hotspots. The Congo Basin, the second largest contiguous expanse of tropical rainforest in the world, accounts for 65% of sub-Saharan Africa’s biodiversity. Further, Central African forests store 25-30 billion tonnes of carbon and can sequester up to 630 kg of carbon per ha per year thereby providing a critical buffer against global climate change (Katerere *et al*, 2009).

Although the local, national and global importance of forests and other ecosystems for human well-being, socio-economic development, poverty reduction, biodiversity and environmental conservation, and achievement of the Millennium Development Goals is widely acknowledged, the forests in Africa continue to decline rapidly due to high rates of deforestation and forest degradation. A total of 4 million ha were lost between 1990 and 2000 whilst a further 3.4 million were lost between 2000 and 2010 (FAO 2010). The highest rates of loss are in West and East Africa (Table 1). Analysis shows that Africa accounts for nearly half of global deforestation and most of this is coming from the tropical dry forests of eastern and southern Africa. Although the deforestation rates are declining, they are still too high. The most notable slowing down in deforestation occurred in North Africa where the rate declined from 590 000ha lost between 1990 and 2000 to 41000ha lost between 2000 and 2010.

Whilst the need for sustainable forest management to halt and reverse the loss of forests has been recognised and accepted in Africa, the area of forest under sustainable management, although growing, is still relatively small.. For example less the area of the permanent forest estate in ITTO African member states under sustainable management increased from 4.3million ha to 6.6million ha in 2011 (Blaser, et al, 2011). Only about 4.63 million ha of forests have been certified (FAO, 2011). Reasons for deforestation include agricultural expansion, population growth and increasing demand for forest products, poverty, and high dependence on natural resources for subsistence and income, and economic pressures to increase exports of agricultural produce, timber and minerals. In addition, accelerating urbanization (3.5% per annum) is increasing energy demand and will invariably lead to more expanses of forest and woodlands being cut. Thus, there is a need to adopt measures that will address this downward spiral by engaging governments, individuals, communities, private sector, and NGOs managing, protecting, and forest management to adopt sustainable forest management.

Sustainable forest management is aimed at maintaining and enhancing the economic, social and environmental values of all types of forests, for the benefit of present and future generations (Prabhu et al., 1996; ITTO, 1998; Tainter, 2001). The FAO (2005) defined SFM as “the stewardship and use of forests and forest lands in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality and potential to fulfil, now and in the future, relevant ecological, economic and social functions, at local, national, and global levels, and does not cause damage to other ecosystems”. But for this to be realized SSA must address the weak policy, legal, and institutional frameworks that have inadvertently promoted deforestation and degradation in the region over the years. Further, forests are not highly prioritized in most SSA countries and consequently, receive limited resources from central governments (Kufakwandi, 2000; Tomaseli 2006). From a technical perspective, inadequate or non-existent inventories, lack of data and information on forests and poor monitoring have over the years

collectively hindered effective management and deployment of the economic opportunities offered by forests.

1.1 Forest trade

Forest trade makes an important contribution to economies of countries in Africa. Exports of primary and, increasingly, value-added forest products (wood and non-wood) generate significant foreign exchange for some countries in the region (FAO, 2011 and ITTO, 2011). Ecotourism based on scenic forest areas is also important in many countries for example, Ghana, Kenya, Zimbabwe, Botswana and Namibia. There are few national and regional estimates that are comprehensive, on the economic contribution of timber and non-timber forest products. The breadth of the information on forest trade depends on the focus of institutions. ITTO is the main source of information on timber trade and presents latest data from 2010. FAO's State-of-Forests series also publishes information on timber trade focusing on industrial roundwood, sawnwood, wood-based panels, pulp for paper and woodfuel. NWFP trade is not comprehensively tracked nor documented and there is no basis for trend analysis in most countries. However there is growing trade in NWFPs in Africa, most of which occurs in the informal sector and hence is rarely captured in national trade statistics. In fact it is not clear whether the current magnitude of increase in trade volumes of NWFP is due to improved reporting or due to actual increase in trade.

1.2 Round wood production

FAO (2008) estimated that roundwood production increased slightly between 1995 and 2008, from 568 to 658 million cubic metres. In 2008 the eastern and south eastern Africa region produced a total of 35,707 million cubic metres (Annex 1), estimated at 5% of the total African production. Southern Africa is the main source of industrial roundwood. South Africa produced about 20% of Africa's industrial roundwood in 2006, largely from planted forests. The slowing of plantation expansion in South Africa is expected to be compensated by increasing investments in Mozambique, Tanzania and Uganda. East Africa round wood production is decreased (-1.3% per annum) between 2005 and 2008 due to the declining natural forests and the ban in logging in Kenya. Other countries e.g. Gabon, imposed restrictions on the export of logs in order to encourage domestic processing, but this has not necessarily had the intended result of value addition. At best, it has led to some investments in preliminary processing. Gross value added increased from about US\$12 billion in 2000 to US\$14 billion in 2006. Increases have been entirely in roundwood production; value addition in wood processing and pulp and paper has stagnated. Industrial roundwood production is expected to grow in the next two decades, and some of the sub-regional shifts will become more pronounced. Southern Africa's share of industrial roundwood production (which is primarily attributed to South Africa) is expected to rise, considering potential increases in logging (especially in Angola, Ghana, Kenya, Tanzania, Mozambique and Uganda).

1.3 Sawnwood production

The production of African sawnwood in 2006 is estimated at 8 million of m³, accounting for about 2% of global output. Southern Africa accounted for 36% (2.986 million of m³) (Annex 1) Although Africa is a net exporter of round and sawn wood, its share in the global wood products trade is extremely low and is geared to the production of low-value-added items (with the exception of South Africa). Intra-regional

trade in wood products is also low. Between 1980 and 2006, Africa's total wood products exports increased from US\$1.6 billion to US\$4 billion, while its share of the global total (now in excess of US\$200 billion) declined. Between 2006 and 2010 exports of both roundwood and sawnwood generally decreased both in volume and value (Table 3).

Table 3: Trends in Timber Products Imports and Exports in Africa

Year	EXPORTS				IMPORTS				Balance of trade
	Round Wood		Sawnwood		Round wood		Sawnwood		
	x 1000 m3	US\$ x 1000	x 1000 m3	US\$ x 1000	x 1000 m3	US\$ x 1000	x 1000 m3	US\$ x 1000	
2006	3681.07	1129949.92	1656.10	913826.75	6.43	1367.31	19.19	5569.58	+ve
2007	3954.74	1429422.64	1818.33	955308.29	6.02	919.78	3.89	1771.04	+ve
2008	3980.01	1478329.39	1670.47	889253.55	14.57	4538.66	11.98	4322.80	+ve
2009	3086.13	1063848.57	1519.02	666532.23	12.87	3642.57	5.25	3023.81	+ve
2010	3085.99	1063797.16	1498.49	669695.89	14.87	4142.57	8.82	4407.90	+ve
Trend over the years	Decrease 16%	Decrease 9%	Decline 13%	Decline 27%	Increased 133%	Increased 215%	Declined 57%	Declined 20%	

Source: ITTO (2010) <http://www.itto.int>

Over the past decade it has been estimated that forest sector in many African countries contributes an average of 3% to the GDP. A number of researchers however indicate that if trade in this sector was comprehensively documented, a combination of industrial wood products, ecotourism and NWFP would contribute close to 20% of GDP in the region.

Non-wood forest products African NWFPs (gums and resins, honey and beeswax, dying and tanning materials, bamboo and rattan, bushmeat, fodder and a considerable number of medicinal plants) are largely used for subsistence and traded informally. Thus, their livelihood contribution and local significance exceed that which may be apparent from official statistics (Shackleton, et al, 2007). With increased opportunities for local, regional and international trade, the NWFP sector in Africa is undergoing perceptible changes. African governments are increasingly developing policies and legislation aimed at formalizing NWFP value chains (FAO, 2011). Of particular significance is the emergence of markets for "ethnic foods", medicinal plants and natural or organic goods, such as honey, beeswax and shea butter. Several products that are traded nationally and internationally straddle the

informal and formal sectors. For example, collection from the wild honey may remain in the informal sector, while processing and trade are in the formal sector.

Since the start of the 1990s, sustainable forest management (SFM) has been promoted as a fundamental element in the protection of environmental services of major ecological value and as a viable approach in the pursuit of international, national and local development objectives. Notably, the notion of putting sustainable forest management to work has occupied centre stage since UNCED 1992, with the mobilization of finances for the deployment of the concept being at the core of these deliberations. Over the last decade the question of how to broaden and diversify financial resources for supporting sustainable forest management especially in developing countries has dominated both national and international forest policy dialogue and agendas. At the special session of the ninth session of the UN Forum on Forests (UNFF9), held on 30 October 2009, a resolution addressing the need to identify the means of implementation for sustainable forest management was adopted. This followed closely on the UNFF's Non Legally Binding Instrument (NLBI) on All Types of Forests whose text provides a set of comprehensive actions to be taken by governments in order to achieve SFM and the Global Objectives on Forests (GOF). Concern is specifically centred on GOF 4, which calls for reversing the decline in official development assistance for SFM as well as mobilizing new and significantly increased additional financial resources for its implementation.¹ The resolution basically consists of two sets of actions: establishment of an open ended intergovernmental *ad hoc* expert group, and a facilitative process. In the first operative paragraph of this resolution (OP1), the UNFF decided to establish the open ended intergovernmental *ad hoc* expert group with a view to:

“... making proposals on strategies to mobilize resources from all sources to support the implementation of sustainable forest management, the achievement of the global objectives on forests and the implementation of the non-legally binding instrument on all types of forests, including, inter alia, strengthening and improving access to funds and establishing a voluntary global forest fund, taking into account, inter alia, the results of the Forum's review of the performance of the facilitative process, views of Member States, and review of sustainable forest management-related financing instruments and processes....”

The purpose of this study is to conduct an analysis of sustainable forest management financing in Africa with a view to identifying and recommending issues that should be addressed and actions to be taken by countries and other stakeholders in the region to improve financing to the forest sector. It provides some examples of innovative ways of funding SFM and some thoughts on how the region can generate funding for SFM. In doing this, the extent to which the adoption of SFM in SSA can contribute to global environmental benefits as well as the degree of alignment with other strategic programmes such as biodiversity, climate change and land degradation are examined.

¹ Adopted by the seventh session of UNFF and by the United Nations General Assembly in 2007 (A/RES/62/98) <http://www.un.org/esa/forests/nlbi-GA.html>

Chapter 2. Objectives, Methodology, and Scope

2.1 Objectives

The general objective of the study is to conduct an analysis of forest financing in Africa. The specific objectives are:

- To assess the current forest financing needs and gaps in Africa for SFM and in the context of the implementation of ,the implementation of the Non-legally Binding Instrument on All Types of Forests (forest instrument);
- Conduct analysis of current funding sources/mechanisms on forests in selected countries including lessons learned and constraints, if any;
- To document experiences, lessons-learned, challenges, opportunities and success stories on forest financing in Africa including
 - The institutional and governance structures for SFM and its financing
 - The extend of the flows and effectiveness of financial resources for SFM (public, private, philanthropic, domestic and external resources
- To document experiences of state ministries/agencies responsible for forest management, planning and finance on the flows and effectiveness of the international financial resources (public, private and philanthropic).
- To identify areas, issues and actions that countries of the region consider crucial for forest financing strategies.

2.2 Methodology

The study was execution was divided into 4 phases: (i) Planning; (ii) Information Collection; (iii) Information Analysis; and (iv) Report Preparation.

Planning phase

The first phase covered the planning of the study activities, including. The main activity was the identification of gaps of information based on the AHEG 1 Africa case study. This rapid gap assessment revealed that there were very few concrete and comprehensive examples of how countries are mobilizing domestic financial resources for SFM from all sources. This information is also not available in secondary data sources. Thus the collection of this information from primary sources was prioritized.

Data Collection and analysis phase

This study is based on the review of available literature; case studies, documents and workshop reports addressing existing and emerging financing mechanisms for sustainable forest management. Lessons and experiences were also obtained from selected country studies. The study also used earlier work carried out on the subject of financing sustainable forest management by the World Bank and FAO (e.g. Simula, 2008, Tomaseli 2006, and FOA, 2009), UNFF and AHEG 1 (2008). Most recent reports and articles were obtained through internet search. Additional data was collected through questionnaires and

interview with different stakeholders. The 18th session of the African Forestry and Wildlife Commission (AFWC) of FAO, was used as a forum for identifying and linking with heads of forestry from different countries.

In addition questionnaires were also sent to other UNFF focal points (see Annex 1). The study is by no means exhaustive but is meant to provide indicative information on the current status of sustainable forest management financing in Africa and the issues that still need to be addressed in order to improve mobilisation of adequate financial resources for SFM in the region.

Chapter 3: Financing Implementation of Forest Instrument

3.1 Domestic Financing

Public Financing

Domestic public financing is the major source of financing for forestry activities in Africa. Unfortunately most of the countries are unable to raise adequate domestic public funds for the forest sector. This is mainly due to low levels of general economic growth, lower priority of the forest sector in national policy (thus smaller budget allocation). In some countries with extensive commercially valuable forests, forests are treated as quick sources of revenue but with minimal re-investment into the management of the forests. Domestic public funding generally comes from government budgetary allocations to official forestry institutions/bodies and revenues generated from state- owned forests. Most Governments in the East and Southern Africa however have mechanisms for generating revenue from forest resources from the formal sector. The most common sources of revenue include:

- User fees/harvesting or use licenses which take various forms including:
 - lease fees for the allocation of land,
 - Fees for contracts to harvest timber
 - Fees for forest concessions,
 - Stumpage fees/payments for felling permits,
 - Licenses and stamp duty for the transporting forest products
 - Licenses for ecotourism in protected forest areas and similar permits;
 - Sale of hunting licenses
- Taxes (VAT, export duties);
- Fines, confiscation and damages for infringements of the law
- Direct sale of plants and plant material and other forest products;

The mechanisms for generating revenue through user fees appear to be generally standard across the region with minor variations across countries due to varying contexts. For example, the Mozambique government has introduced an afforestation levy - a percentage of the timber volume harvested and sold. Forestry South Africa charges a levy of about R 1.38 (about \$0.2) per cubic metre of wood sold by

its members. This levy is used to run the affairs of the association and to finance research for the benefit of members. In Tanzania, levy collection has been steadily increasing since 2005/2006 to date.

Concession fees are an important source of revenue in countries that are harvesting natural timber and granting hunting and conservation concessions. For example, the DRC has granted major concessions for timber and conservation in the last five years. However in some countries the revenue collection potential from concessions has not been fully realised due to a number of challenges including monitoring. For example in Mozambique, there are an estimated 64 small to medium scale companies that have been allocated 150 timber concessions in indigenous forest areas but have not paid the concession fees for various reasons including trying to get the fees reduced or scrapped. The government has however been able to effect collection of fees from the single licence fee holders who operate on annual permits. It is estimated that Government only realises 10% of the total value of fees from indigenous forest concessions. A study of forest sector receipts from the Department and Natural Resources and Tourism, Government of Mozambique (Fig 1) below indicates a gradual decline in receipts over the past 5 years to 2009 and a sudden increase which is attributed to improvement in collection of a result of payments for licence fees for establishment of plantations and improvement in wildlife utilisation receipts.

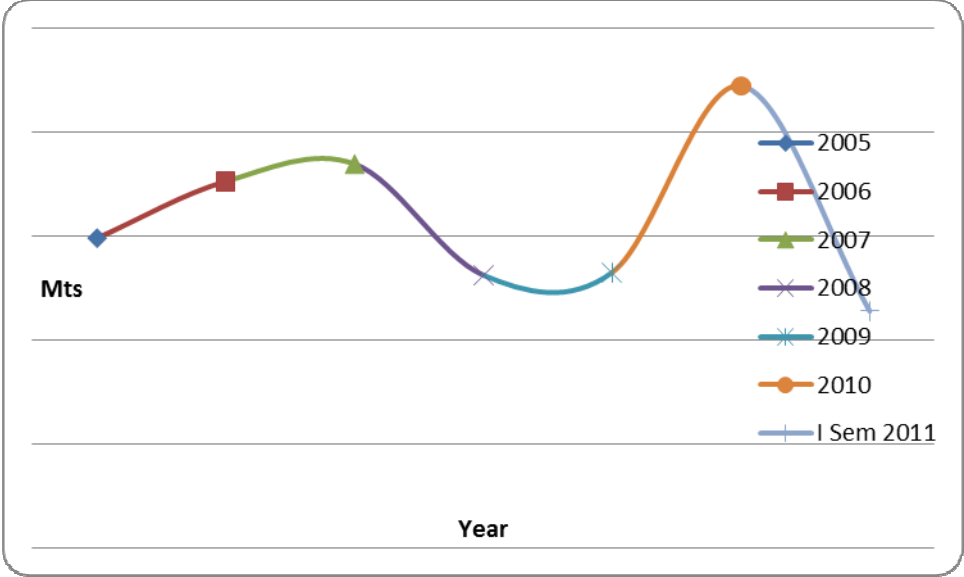


Figure 1: Trends in Revenue from Forestry and Wildlife Government of Mozambique Receipts (Source Planning Unit)

Tax evasion and limited knowledge of the value of forest products by revenue collection authorities also contribute to the reduction of tax collected and poor tracking of the tax revenue from forest products. Most governments in the region have plans to broaden the tax net to include the informal sector.

When the revenue is collected, in most countries in the region, it goes directly to central government treasury. Forestry departments only access it through annual budgetary allocations. The actual allocation to forestry, and the proportion of forestry funding in relation to the national budget, vary from country to country depending on national and political priorities (Gondo, 2010). Ghana's national forestry budget for 2011 is about \$55 366 522.00. 10% of this is raised from stumpage fees whilst 2% is from export levies. In addition the government has now directed that 1% of the Common Fund in every district/county be allocated to forestry management

In Zambia the budgetary allocation to forestry declined from 13% of total national budget in the 1980s to less than 4% in 2009, whilst in South Africa and Kenya the budgetary allocation to forestry has grown slightly in nominal terms. In Botswana expenditure of agriculture, forestry and fisheries sector declined from 4.5% to 2.9% between 2006 and 2008 (Bank of Botswana, 2007). For South Africa the national budget allocated to the Forestry Department is almost adequate for their needs whilst in Kenya the allocation is about 75% of what is required. In addition to the low budget allocation, a further constraint in some countries, is the delay in disbursement or failure to access the total allocated budget. For example in 2006/2007 the Forestry and Beekeeping division's approved budget for 2006/07 was TzS 5,421,357,000 but the total disbursed to the division was TzS 3,401,110,000, or 62% by end of the financial year. This negatively affects the planning and forestry activities supported or managed by the division. The major influencing factors include the type and extent of forests, the level of commercial forestry activities and the relative importance of forestry to the national economy in comparison to other sectors. Examples of public domestic financing/revenue generation systems common in sub-Saharan Africa are given in Box 1.

Box 1: Examples of public domestic financing to the forest sector

Niger: The forestry sector in Niger accounts for about 4% of Gross Domestic Product and has been identified as important because of the role of forests in energy supply and the control of desertification. Niger collects revenue from roundwood production and commercialisation, based on the size and tree species of trees. The fees collected are also according to whether the roundwood is harvested in a controlled, uncontrolled or guided harvesting area (*exploitation contrôlée, incontrôlée or orientée*). The fees that are collected are distributed between the state treasury, local management structures, communities and the Water and Forest Service. Part of the money retained by local management structures and communities must be used for forestry activities, but the rest can be used for general development purposes. Some of the money sent to the state treasury is also often put into a forest monitoring fund. There are no charges on the production of non-wood forest products, but fees are collected for the issuing of hunting permits, guide's licenses and for the capture or harvesting of animals. Revenue is also collected from visitor permits for recreation. Import and export levies are collected from international trade in forest products, but these levies are not administered by the forestry administration. Total forest revenue collected by the state since 1992 has remained constant at about 163 million FCFA. In addition, about 16 million FCFA (on average) has been retained each year by local management structures and communities under the arrangements for revenue sharing in rural wood markets. The state budget for operating expenses in the water and environment sectors was about 1 billion FCFA in 2000. This expenditure accounts for just less than one percent of the total state budget for operating expenses. International assistance for investment in forestry during the period 1999 – 2004 was approximately 6 billion FCFA per year.

Lesotho: Lesotho has 12,000 hectares of forest which are directly managed by the government. Forest charges are only levied on the production of roundwood from these forests and there are no other forest charges on any other production or trade in forest products. The relatively small area of natural forest in Lesotho is under the control of traditional authorities and falls outside the revenue system. Lesotho imports forest products from South Africa and VAT is charged on the value of these imports as they enter the country. National Forestry Policy in Lesotho clearly indicates that the primary responsibility for the sustainable and beneficial management of natural resources and the environment lies with individuals and communities. Therefore, the Government allocates very little money to sustainable forest management activities. The recurrent budget for the Forestry Division is a little over M 2.5 million out of which less than 20% is generated through forest revenue collection. The budget for capital investment is funded mainly by foreign assistance.

Source: FAO, 2004,

A common feature in many countries is that forestry activities also receive funds through Ministries which host a range of other portfolios including Wildlife, Fisheries, Tourism, Water, Nature Conservation, and Monuments (depending on the country). This tends to have a dilution effect on the importance of the sector. Low allocations may also be partly due to the prioritization of funds in relation to other needs such as health social welfare and food (Akroyd and Smith 2006, 2007).

The limited allocation of budget resources to the forest sector can, in many cases, be attributed to the sector's failure to make a convincing case for an increased share of resources as well. This is largely due to the fact that there most national accounting systems do not capture the full contribution of forests to national economy, especially as these occur mostly in the informal sector. This leads to undervaluing of forests in favour of other sectors like agriculture and animal husbandry. In particular, the non-timber forest sector has grown tremendously in recent years but also largely operates in the informal sector and very little revenue is collected from the sector by governments for re-investment into forest management (Gondo, 2010). For example the charcoal industry in Kenya, in 2008, was estimated at over \$425 million dollars annually employing more over 700 000 people but most of the sector operates in the informal sector and many aspects, such as charcoal production until recently were considered illegal and not accounted for in the fiscus. It was estimated that the government was losing about \$68 million dollars annually as a result of not having any regulatory and tax collection mechanisms for the charcoal industry. Studies in Tanzania and Zambia indicate a similar magnitude in charcoal trade and in its income earning potential (Lundgren *et al*, 2010). The situation is however changing as governments try to mobilise resources for forest management from all sources. For example the Kenya Forest Service has now introduced new charcoal regulations that formalise the charcoal trade and enable the government to collect revenue from the charcoal industry. Some of the challenges facing the government as they try to reform the charcoal sector are summarised in the box below.

Box 2: Charcoal sector challenges in Tanzania:

Charcoal is the single most important energy for millions of both urban and rural areas in Tanzania. The total national consumption of charcoal is estimated at 1million tonnes per year with an estimated value of \$650million. The value of charcoal trade Dar es Salaam alone is estimated at \$350million per year. However the charcoal sector in the country is neglected by government and is even treated as unwanted. For example there was an attempt to ban charcoal use in 2006. There is no comprehensive policy strategy or legal framework for developing and managing the charcoal sector. For example due to this government is estimated to lose \$100million in uncollected fees and taxes. It is estimated that on 20% of the taxes and fees are collected.

One of the major challenges is that the local authorities at village and district levels do not have the incentive to collect taxes and fines related to the charcoal as they are not empowered to retain these taxes and fines but are required to remit these to central government. Thus there is no legal and fiscal empowerment for these authorities to monitor and control charcoal production.

The sector is also characterised by institutional and policy overlaps and gaps. There are four ministries that have responsibilities over the sector and these have often pronounced policies that are not always known or well-coordinated with policies from the other ministries. Finally there is need for an equitable benefit sharing system that will provide genuine incentives to all the key players.

Source:

The other sector that is not properly accounted for is the non-wood forest products sector despite its importance and rapid growth in the last two decades. For example, Sudan supplies more than half the global output of gum Arabic, whilst Ethiopia, Eritrea, Sudan and Kenya are leading exporters of a number of valuable flavours and fragrances (frankincense, opopanax, myrrh). Sudan's gum Arabic exports have risen from \$54million in 2005 to \$78million in 2010 (Gafaar, 2011). Sudan and Ethiopia are the world's largest producers of olabanum resins. Central, east and southern Africa are also significant producers of medicinal bark from *Prunus africana*, harvested from montane forests in Madagascar, Kenya, Burundi and DRC and to a lesser extent, Ethiopia. Several countries especially Kenya, and to a lesser extent Uganda, Zambia and Zimbabwe are significant producers of woodcarvings. Until recently, few forestry policymakers were aware of the scale or economic value of this trade, which in Kenya involves 50000-60000 carvers generating around US\$20 million per year (Choge et al., 2005). The result is that these sectors do not contribute to the fiscus and rarely invest in forest management. Fortunately, there have been a number of studies that have highlighted the economic importance of some of the forest products in the formal sector (e.g. Chidumayo, 2008) and some governments are reviewing their policies to include these in the formal or main stream economy and improve revenue collection for re-investment into sustainable forest management. For example the Kenya Forest Service has recently initiated development of policy measures to regularise the charcoal industry in Kenya. In Zambia a new honey policy was initiated in 2009 to improve the contribution of the honey sector the national economy

To address the challenges in revenue collection and improve financial resources mobilisation for the sector, most governments in the region have instituted a number of reforms. The first type of reform that has been tried by some countries is to convert their public forest institutions into semi-autonomous commercial enterprises that are empowered to retain all the revenue they generate. This has been successfully implemented in Zimbabwe and Uganda where the Forestry Commission and the National

Forestry Authority retain all the income they generate including income from their commercial activities. In Ethiopia, the Oromiya Forest and Wildlife Enterprise retains all its income and funds all its own operations. The Forest national Corporation (FNC) of Sudan also operates along the same lines. Table 5 below shows the total revenue generated by the FNC and how it is used.

Table 4: FNC Revenue from Forestry and how it is used

Year	Total Revenue (US\$million)	Personnel Amount/%	Administration Amount (%)	Forest management Amount/(%)
2005	8.8	5.0 (57%)	2.2 (25%)	1.3 (15%)
2006	10.5	5.68 (54%)	2.4 (23%)	0.96 (9%)
2007	11.8	6.52 (55%)	2.5 (21%)	2.3 (19%)
2008	12.3	7.12 (58%)	2.6 (21%)	2.6 (21%)
2009	12.6	7.24 (57%)	2.6 (21%)	2.8 (22)
2010*	14.6			

Source: Gafaar, 2011

Other countries such as Kenya, Tanzania and Zambia are attempting to implement similar reforms but are meeting various challenges including lack of political will and resistance from treasury among others. For example Zambia produced the draft policy and legislation that provided for this transformation in 2009 but by end of 2010 had not been passed by Parliament.

A variation of this approach has been the hiving-off of the commercial activities into a wholly-owned government enterprise that is expected to pay dividends to the PFI directly or through treasury. The later approach has been implemented in South Africa, Zimbabwe and Zambia but has had mixed results. For example in Zimbabwe the forestry company (Allied Timbers) has not consistently remitted dividends for the last five years. Even when the dividend was paid it contributed less than 2% of the budget of the Forestry Commission. In South Africa, SAFCOL has not been able to remit dividends to government over the last 2 years due as it has not been able to generate profits during this period.

Another approach that has been tried by some countries in Africa is the establishment of national forest funds (NFFs). Many countries have designed, and are operating, national forest funds (Table 6). In their most basic form, forest funds are designed to set aside a portion of national revenues for forestry purposes. They exist for more than a single government budget cycle, segregating specific forestry-related revenues and earmarking them for investment in the forest sector (FAO, 2001). In some cases these have been developed as part of the national forest programmes whilst in other cases they have been developed as windows under National Environment Funds. The funds were suggested as a mechanism to enable public forest institutions to retain and manage funds to effectively support conservation, protection and sustainable utilisation of forests. The experience to-date with these funds has been mixed.

For example Kenya has provision for a National Forest Fund in the Forest Act but this has not been established as yet. Tanzania has established a forest fund as part of the national forest financing

strategy. The Tanzania Forest Fund (TFF) in was officially launched in July 2011. The forest policy also provides for the establishment of Tanzania Forest Services (TFS) to replace the Department of Forest and Bee Keeping. TFS is expected to retain all funds from forest royalties. Currently the department retains 2% of registration fees and 3% of royalties. In Mozambique, the Forest Law provides for the establishment of a National Forest and Wildlife Development Fund. However this fund is not yet fully operational and most of the revenue from levies and concession fees is remitted to the Agriculture Fund which then retains a percentage. Mali established two forest funds in 2004, namely Forest Development and Protection Fund and Fund for the Protection and Protection of Fauna. The forest fund was allocated \$ 0.8 million in 2009 was earmarked to receive \$1.2 million in 2010. These funds help to ensure that revenue generated through exploitation of forests and fauna respectively is ploughed back into forest and fauna management. Similar approaches have been developed and adopted in other West African countries such as Benin, Burkina Faso and Niger. Table6- shows some countries that are already operating various forms of National Forest Funds in Africa.

Table 5: Examples of Different Forms of Forest Funds in Africa

Country	Description of fund
Burkina Faso	National and local forest management funds that receive revenues from taxes and sales of forest products
Cameroon	Forest Development fund receives money from government budget allocation and own revenue from sale of forest products
Congo	Natural resources management fund receives income from multiple sources and supports forestry development wildlife and fisheries
Gambia	National Forest Fund: Receives income from multiple sources for protection, development, and sustainable use of forests and promotion of community forestry.
Ghana	Plantation development fund
Guinea	Forest Fund; gets revenue from multiple sources for supporting forest management and development activities
Lesotho	National Forest Fund; receives all forest fees and taxes and is used to support research, private and community forestry
Malawi	Forest development and management fund; receives income from government and other sources and is used for supporting forest development with emphasis on community forestry

Mali	Fund for the Development of Forests and Fauna. Established 2009 to finance forest development and investments in nurseries and reforestation
Mozambique	Forest and Wildlife Development Fund; receives money from royalties taxes and concession fees and has community funds
Senegal	National Forest Fund; receives income from sales of forest products and other sources; used to fund government, private and community forestry.
Tanzania	National Forest Fund; receives income from various sources and use it to support forest development, including education, research, and community forestry.
Zambia	National Forest Fund; receives incomes from royalties, and concession fees; uses it to support forestry development, research and community forestry

Decentralized governments may sometimes retain a proportion of revenues or internally generated funds with or without National Forest Funds (Table 7).

Table 6: Proportion of Revenue Retained**CAR (2001) Tanzania (2009) Liberia (2004)¹ Namibia (2001) Guyana (2001)**

	CAR(2001)	Tanzania (2009)2009)	Mozambique (Royalties 2011)	Namibia 2001	South Africa
Treasury	23%	32%		100 %	100%
Forestry Agency/Forest Fund	53%	63%	80%	0	0
Local Councils/Communities	24%	5%	20% (local communities)	0	0

The government of Mozambique in 2005, provided for 20% of revenue from the royalties to be given to the relevant local communities. However, by end of 2007 only 308 communities had been organized to be eligible of which 306 actually received the financial benefits.

Revenue Leakages

Most countries of the countries experience significant revenue leakages despite having in elaborate regulatory and institutional provisions. With the exception of South Africa, most countries in the region allude to weak capacity to manage revenue collection. Personnel assigned to collect revenue often have limited knowledge of the value of forest resources. In addition, there are huge losses along the forest value chains, especially in the timber industry, due to low processing efficiency, such that potential revenue is lost. According to Clarke and Nokkala, (2007) harvesting processes are wasteful resulting in a 10-30% loss; some sawmills are inefficient resulting in a 20-43% loss at sawmills; royalties are under collected resulting in further losses and undervaluation of royalties, resulting in up to 75% loss.

The issue of revenue leakages has received recent high profile attention and has been highlighted in a number of reports. Some revenue leakages are highlighted in the Box 1.

Box 3: Highlights of prominent evidence of forest leakages in the region.

- ❖ October, 2011: 6 containers, each with an estimated 12cubic meter of sawn hardwood timber logs discovered in Nacala Port Mozambique destined for China. No one claimed ownership
- ❖ TRAFFIC report (Milledge et al., 2007) estimates that 97% of revenue is lost from the FBD amounting to a figure of 40 billion uncollected forest revenues (Clarke and Nakkala, 2007 due to illegal activities).
- ❖ In 2002, the World Bank estimated the global cost of such evasion at between USD five and fifteen billion (Anon., 2006a; Colchester et al., 2006; Rosenbaum, 2005).

There are a number of channels through which forest sector revenue is collected. At national, district and local levels, forestry, customs and tax accountants collect revenue from the sector. Revenue collected is remitted either to Environment or Forest Funds or to Treasury. In some instances, a percentage of revenue is retained. District and local level public revenue collection offices are often poorly funded a situation that results in little commitment towards collecting and accounting for the funds. Even where local authorities collect significant revenue from forestry most of them do not reinvest in the management of forests but use the money to cover administrative and other costs. There is need to improve forest governance, including finding solutions to revenue leakages if sustainable forest management is to be attained. Gerster and Mutakyahwa, (2006) suggest that there are possibilities that access to external funding for the forest sector, and the degree to which Forestry Divisions are funded by official development assistance (ODA), is distorting commitment by Governments towards addressing domestic revenue leakages. Others indicate that domestic revenue collectors need capacity and incentives to address the situation. There have been recommendations that development partners should pay more attention to this area, perhaps through technical support that could accompany budget support to strengthen revenue agencies and monitor revenue targets.

In many African countries, domestic public funding is mainly used for:

- Financing operations for public forest administrations/institutions
- Conservation and management of protected areas
- Forest research, education, extension and administration undertaken by public forest institutions
- Policy reform, forestry law enforcement and governance and related institutional development.

Challenges in domestic financing

a) The wrong perception that the forestry sector contributes minimally to national economies continues to maintain the sector's profile low, and therefore a disadvantage when it comes to allocation of national budget to the various sectors of the national economy.

b) The bulk of forest products are consumed in small scattered, fairly unorganized rural markets with most actors poor. This tends to maintain their prices relatively low and makes the collection of taxes and fees difficult with low returns due to the low prices. As such the growth in revenues in the sector continues to be a function of poverty levels in the society as well as slow growth and weak strength of rural markets.

c) Public forest administrations and others charged with collecting forest fees, taxes and fines lack adequate capacity to do so. This results in massive losses of revenues to national governments (and relevant public forestry institutions) in many countries

d) There is very little the forestry sector can do on its own with respect to what it takes to improve rural markets. However, the sector can continue to find ways of raising the profile of forestry, especially at this time when climate change has been increasingly profiling this sector.

e) The potential for increasing domestic financing lies mainly in increasing revenue collection by public forest administrations and relevant institutions. This will require formalizing the informal sector in which many forestry activities are undertaken, and especially in the areas of secondary and tertiary forest production, as well as trade and markets.

Domestic private sector

Private domestic financing comes through investments by the domestic private sector investors, commercial banks and microfinance institutions; local philanthropists and local/national NGOs community based organisations (CBOs) individuals. Private sector participation is an important source of financing forestry and forest industries and has made significant contributions in developing countries in other parts of the world (e.g. Indonesia, Chile and Brazil) and in some countries in Africa.

Corporate Investors

The large private sector companies are mostly active in integrated processing industries and plantation forests. Despite the adoption of economic liberalization policies, many countries in Africa have limited domestic large scale formal private sector participation in forestry, particularly in the areas meaningful to sustainable forest management. Until recently the countries that have significant private sector investment in the forestry sector include South Africa, Zimbabwe and Swaziland. South Africa has over 1.2 million hectares of forest that are managed by 14 large corporate companies. In Zimbabwe the industry is dominated by five corporations. These companies are vertically integrated managing the plantations and also running their own processing facilities especially sawmills and pulp mills. Recent trends are that formal private sector investment has been propelled by enactment of policies that deliberately support local investors. Other Governments like in Tanzania are engaging in dialogue with local banks and supporting technology development, the two main factors that constrain investment in the sector. In Mozambique, AMOMA indicated that at least between 10-15 companies out of 126 registered concession holders (on 5.2 million hectares) are relatively large local companies that have a significant share of the forest business especially in indigenous forest industries.. In South Africa medium growers –tree farmers with forest areas up to 1000ha-1300 control 22-23% of forest area.

Industrial forestry in the region is dominated by plantation based forestry activities as most of the natural forests and woodlands have limited commercially valuable timber species. The main exception is the DRC, and to a lesser extent, Mozambique and Zambia. In Mozambique and Zambia this sub-sector is dominated by medium to small-scale enterprises involved in logging and sawmilling.

In most of Central and West Africa, forest industries are dominated by logging and sawmilling companies utilising timber from natural forests. Where planted forests occur these are predominantly

government owned and managed. In comparison to privately owned or managed forests these are generally poorly managed and characterised by a backlog in replanting, poor maintenance and low productivity.

The result is that in some countries, the actual contribution of large corporate private sector financing to sustainable forest management has been limited due to limited commercial forestry opportunities. For example Kenya, imposed a ban on logging in 1999, a situation that curtailed opportunities for domestic private sector investment and drove many of the companies out of business. There are however opportunities for partnerships with foreign investors. For example Green Resources indicated that they were prepared to partner with local investors and were offering 20% share in Nyasa and Nampula. Sappi, a global pulp and paper group has unveiled an 8 million rand employee share ownership deal. One innovative way of stimulating domestic investments in larger value chains was to implore larger investors to purchase a percentage of raw materials from local plantation or concession holders. These mechanisms can only be sustained if implemented within a clear policy framework.

The forest sector entry barriers have tended to promote investment by locals in small to medium scale forest enterprises than large companies. Investment has been directed more towards harvesting indigenous forest concessions and related timber value chains, small scale saw milling from plantation and indigenous forest ecotourism in forest protected areas, Some of the major challenges to private sector investment include lack of access to credit especially for plantation development given the long term nature of the enterprise, insecurity of tenure and policy inconsistencies e.g. the logging ban and land reform.

Currently there are very few financial institutions that have financial products and services that are suited or tailored to the forest sector. One good example is the Industrial Development Corporation in South Africa. The institution gives loans for up to 25years and tailors repayments to the revenue streams of the enterprise. This is very important as the short term loans offered by financial institutions in the other countries are not suited to the sector. The World Bank could play a catalytic role by linking with local finance institutions and helping them to develop financial products and services for the sector and facilitating lessons and experience sharing.

Small to Medium Scale Forest Enterprises (SMFE's)

In most African countries, forests occur in areas that are owned by individuals and communities. For example in Uganda nearly 70% of the forests are owned by communities and local authorities, whilst a similar proportion in Burkina Faso, Mali, Niger and Zambia is in open areas or under customary ownership. As a result most forestry activities are undertaken in the informal and/or smallholder sector where forests and trees play a major role in providing livelihoods for rural communities and the urban poor. SMFEs have been associated with informality. However there are a significant number that are formal and some have begun to organize themselves into associations in order to leverage growth, partnerships or business opportunities as concession holders and joint venture partners with larger local

or foreign investors. For example in most east and southern African countries such as Kenya, Tanzania and Uganda communities living adjacent to forest reserves are required to form forest user groups and community forest associations in order for them to secure forest management agreements with the forest administration (Lundgren et al, 2011 and Johansson et al, 2012)

In addition small-holder farmers and land owners are getting increasingly involved in industrial plantation forestry activities including through private–community partnerships. In Kenya there has been a marked growth in farm forestry following the ban in timber logging from government plantations. Although exact figures are not available a significant proportion of timber and poles are now being harvested from farm forests. The growth in this sector has also been fuelled by the high prices of construction and transmission poles especially in Ethiopia, Kenya, Tanzania and Uganda. In plantation forestry, an approach that has gained popularity, especially in southern Africa, is upfront financing through out-grower and contract plantation development schemes (Box 5).

In other cases the gap resulting from poor performance of government owned plantations has opened opportunities for the growth of small-scale industrial roundwood production. For example the bans of logging from government plantations in Kenya and Rwanda have resulted in a rapid growth of small-scale plantations to meet the demand for industrial and construction timber. Box 4 illustrates some of the developments in parts of Kenya.

Box 4: Embu, Kenya: Responding to growing markets for tree products

Growing local and national urban markets for tree products has been the driver of landscape restoration and tree planting in Embu district in the central Kenyan highlands. Embu district was substantially deforested by the mid-20th century due to agricultural expansion and other human activities. Market conditions changed sharply with the development of commercial coffee, growing markets in the capital Nairobi, and local population growth. Demand for forest products grew sharply in particular building poles, farm grown tree fodder, for small dairy farming, fruits for local consumption, and other products. Improved agroforestry technologies introduced to the area in the 1990s increased productivity of the trees that grew compatibly with crops. As higher value trees were grown Embu began to import lower value products such as fuelwood from other places. Over the last 25 years the landscape has been transformed into high tree density, through small plantations and little natural forest cover. This has been associated with significant increases in crop productivity and farm incomes.

Public agencies, NGOs and national research centres have contributed to the availability of improved agroforestry systems in Embu. However most of the investment has been undertaken by the smallholder farmers and private companies involved in developing the supply chains and inputs for on-farm tree growing and marketing. Important examples were tea and coffee factories and the Kenya Cooperative Creameries (KCC) and other milk producers.

Source: Eco-Agriculture Partners cited in Scherr, et al, 2011.

In Mozambique, simple licence holders are a common forest industry feature, with potential to harvest 500 cubic metres of top grade timber which trades at \$1,200/cubic. The Simple licence holder pays about \$980 for an annual licence. It is estimated that the number of licence holders grew from 421 in 2002

to 600 in 2006. Unfortunately due to their numbers and nature and spatial distribution, they are difficult to monitor.

Box 5: Examples of Out-grower schemes

Sappi and out-grower schemes

Sappi is an international pulp and paper company, and the second largest private forest owner in South Africa. It was the first company in South Africa to experiment with partnership arrangements with local communities as a way of increasing its access to forest resources. The original scheme, "Project Grow", was initiated in Kwazulu-Natal in 1982 and has since been managed by the Lima Development Foundation, an NGO with a track record in community development. Under this scheme, local communities sign a contract with Sappi, which entitles them to free expertise, training and seedlings, advanced payment for work, and a guaranteed market for their tree at current market prices. When the trees are finally ready, Sappi pays the participants the value of the produce, deducting any advance payments. This scheme has worked well, despite farmers not owning the land they plant. In general, individuals are granted rights to community-owned land for plots averaging less than one hectare per family. By 1999, 6 800 ha had been planted by 7 600 farmers, generating 2.4 million rands (R) (US \$545 000) per year. Participants earn about US \$205 per hectare per year, which compares favourably with the alternatives such as ranching or sugar production. In 1990 Sappi introduced a second outgrower scheme for title deed holders called the Management Associated Programme (MAP). MAP offers free seedlings and technical advice, a loan of up to R1 200

(US \$275) per hectare at the prime bank interest rate, and guaranteed market price for timber. Up until 1999, 28 000 ha had been planted. The average income is US \$115 per hectare per year. The grower must follow the harvesting practices prescribed by Sappi and cannot sell the timber grown to anyone else.

Source: Landell-Mills and Ford, 1999 in FAO, 2005

Organic Mango Out-growers Scheme: Integrated Tamale Fruit Company

The Integrated Tamale Fruit Company (ITFC) is a private GLOBALGAP certified Ghanaian company producing and marketing certified organic mango for both local and export markets. The company has its own 155 hectare 'nucleus' plantation but also runs an expanding out-grower scheme which has been running since 2001. Its declared aim is to reduce poverty by providing the local people with sustainable income through the establishment of community based organic mango plantations. As part of the scheme ITFC provides interest-free loans to contracted growers in the form of required inputs and technical services. Each farmer on the scheme is provided with all the necessary inputs for a 1 acre orchard of 100 grafted mango trees. Inputs can include tractor services for land preparation, organic compost, grafted mango seedlings (from ITFCs certified organic nursery), water tanks, organic pesticides and a technical advisory service. Poly tanks are filled with water at regular intervals by an ITFC tanker truck and tractor. The farmers then do the watering with buckets. The standard total cost for inputs over the first 4 years in 2005 was just under US\$3000. The out-growers are expected to start repayment of the loan in the fifth year through deductions from their net incomes. A 12-year repayment period is envisaged.

At first, ITFC tried to form farmers into groups themselves, mixing men and women in the same group. These groups proved unstable, with many internal arguments. They have now moved to working with existing informal groups at sub-village level. Often these are extended family groups. Each member is registered as an individual grower. They have their own trees within the family plot, but they share certain inputs, notably hand tools and water tanks. Other inputs are costed against the individual accounts (seedlings, compost etc.). ITFC provides both groups and individuals with end of year statements of account. The farmers are constituted into an association known as Organic Mango Out-growers Association). This association plays an intermediary role between ITFC and the local farmers and mediating role in any disputes between members. It is also an advocate for the farmers and in time it is expected to develop its own capacity to technical advisory services to farmers. ITFC has received funding from various donor groups for its out-grower scheme, which has perhaps permitted it to integrate more social development goals than some other out-grower schemes.

Source: (Betser, 2010)

Timber Out-growers scheme: Swiss Lumber Company

The Swiss Lumber Company launched an out-grower scheme in Manso-Amenfi for saw-log production in 1991. The company has a sawmill in Ghana but lacks access to forest areas to obtain an adequate wood supply. While the company has developed plantations on its own concession areas, they will be insufficient to meet the capacity of its sawmill. Consequently it has developed strategies to attract out-growers to produce indigenous trees on land which was degraded and producing marginal agricultural yields.

Under the scheme, the company pays the landholder – who may or may not be the grower – an annual rent for the land. It supplies growers with seedlings and equipment for plantation establishment. The company also employs growers to complete plantation maintenance. At harvest the grower and landholder receive 50% of the wood and the company the other 50%. The company has the first right to buy the grower's/landholder's 50% at market prices. The growers are allowed to keep the low-grade residual wood.

Source: (FAO, CIFOR, 2002, cited in Kamara, 2011).

The informal sector is characterized by numerous small-scale forest-based enterprises that are undertaken at individual or household levels, usually employing family members or neighbours (FAO, 2005). These not only create local employment but generate significant incomes for the people involved. Financial flows within this sector constitute a significant element for sustaining rural economies, to form the basis for formal medium scale investments that are important at sub-national levels and more importantly for sustainable forest management.

Small-scale and individual tree planting

Given the fact that most of the forest land in east and southern Africa is in hands of smallholder farmers and communities, future growth of the forestry sector will depend on the extent to which this sub-sector is developed. There are currently a few studies and initiatives in the region that are assessing, in detail, the nature of community forestry institutions (e.g. community forest associations) and their capacity needs if their role as vehicles of forest development in the region is to be enhanced (Bjorn et al, 2011). Two on-going initiatives include the support to the community forestry associations in Kenya that is being supported by VI Agro-forestry and the African Forest Forum's "Empowering producer Stakeholders in east and southern Africa" initiative. The overall objective of the latter initiative is to empower forest based producer stakeholders in east and southern Africa through building and strengthening their technical, organisational and marketing capacity in partnership with relevant Swedish and other institutions (Johansson et al, 2012).

Some studies in Kenya have shown that farm forests are supplying between 300000 and 400000m³ of sawlogs annually. However in recent years products such as construction and transmission poles have proved to be more popular with small scale growers due to the shorter rotations and higher prices (table 6). This has resulted in massive tree planting by smallholder farmers of small woodlots mostly below 2 ha. Similar trends are also observed in other parts of Africa

Table 7: Financial Returns from Farm Forestry Products in Western Kenya

Product	Yield /ha	Price per unit(\$)	Rotation/harvesting age	Nominal Value of production per ha
Sawlog	420m3	3000	25 years	\$15750
Transmission pole	1600pieces	700	12 years	\$14000
Pulpwood	320m3	750	10 years	\$3000
Construction poles	320m3	800	2-3 years	\$3000

Source: adapted from Cheboiwo, 2007

Rwanda banned harvesting of public plantations in 2000. This has opened up opportunities for smallholder farmers. Currently smallholder forest owners (owning mainly ≥ 2 ha) apply are the main suppliers of industrial and other commercial wood in Rwanda. Woodlots that are 0.5ha or less cover 6.6% of Rwanda's land area. These generate about Rwf 450 000 per hectare.

Significant income is generated through investment in a range of activities including honey, charcoal, crafts and medicinal plants. Many countries in east and southern Africa rely on this sector yet outflows are not adequately quantified. SFMEs are increasingly becoming important to the region because of their magnitude especially in terms of value and volumes of forest products harvested and produced, the large populations they sustain and the growing markets for products from the sector. A few examples in Box 3 demonstrate the level of revenues generated from this sector.

Box 6: Some examples of financial outflows from NTFPs within the SFMEs sector

Tanzania:

- The charcoal industry in Tanzania employs more than 200,000 people in production alone, contributes more than TSh5 billion in taxes, and meets the energy needs of 80 per cent of urban households and 34 per cent of rural households

South Africa:

- In South Africa there are small-scale growers or emerging tree growers who have land sizes ranging between 0.5ha-100ha adding to about 60000ha under their control. They generate about R57000 per hectare from the sale of pulpwood after investing about sale R7500 over a period of 7 years.
- Traditional medicines support over 28million users and 255 000 Traditional healers. A total of 20000t of medicinal plants are harvested annually. These have an estimated street value of R 270million.

Mozambique:

- SFMEs produce an estimated US32-44million per year worth of charcoal. This is higher than the estimated value of round wood production (Nhancale et al, 2009).

Zambia:

- 600 metric tons of honey was produced in Zambia in 2008. The production capacity in the Zambia North Western Province alone is estimated to 30,000 tons per year (A Case Study of Zambian Honey Exports, 2009,

<http://www.opentradegate.se>, National Board of Trade).

Tanzania

- The honey production sector, that has its origins from small household level income generating activities, has grown to become an important export earner. According to TFBK Department, annual honey exports now average 430 metric tonnes
- in bee keeping with an estimated potential production of about 138000 tonnes of honey and 9200 tonnes of bees wax per annum.
- Tanzania exported 756 tonnes of Cinchona species bark worth US\$258 000 in 1991.
- Namibia had an annual export of *Harpagolum prcumbens* (devils claw) valued at US\$1.5-2 mil in 1998.
- Zambia had honey production of 90 tonnes and beeswax production of 29 tonnes valued at US\$170 000 and US\$74 000 respectively in 1992.
- Ecotourism in Southern Africa generates an income flow of over US\$3.6 billion to national economies (although US\$2.3 billion of this is South Africa's alone).
- Traditional medicines support over 28million users and 255 000 Traditional healers. A total of 20000t of medicinal plants are harvested annually. These have an estimated street value of R 270million. 300t of ferns from the forests are also exported and these have an estimated value of R20million.

These outflows are rarely reflected in national accounts in most of the countries except for honey in Tanzania. Some of the common challenges that limit growth of the small forest enterprises include

- Lack of access to finance
- High value addition is still very negligible which means an opportunity foregone for generating employment and revenue for the country.
- Inappropriate structures for receiving and utilising revenue from royalties
- Poor permitting systems, in many instances permits are held by non-industrialists and middlemen
- Poorly developed markets
- Security of tenure for both leases and land held
- Limited capacity to negotiate, engage with business partners
- Huge capital costs involved in plantation establishment
- Declining indigenous forest stock. Communities have limited capacity to diversify, invest in new opportunities such as plantation forestry, or to engage in less wasteful harvesting and processing.
- Community forestry initiatives continue to be driven by external facilitators. In some areas especially in Kenya and Mozambique, there has been no deliberate investment made in growing trees to meet rising demand for the energy and other natural products. Instead semi-arid rangelands and government forests have borne the brunt of unsustainable harvesting leading to severe deforestation. This situation will mostly likely impact on the financial outflows.

Financial Institutions

The survey revealed that domestic capital markets for supporting forest industries are poorly developed. The commercial banking systems are highly constrained with most of them only able to offer small short term loans and requiring collateral which small-scale producers do not have. Various formal credit lines are on offer but a lot of them are difficult to assess. The new forestry development opportunities emerging in the region for establishing plantations have huge potential for enhancing incomes,

increasing employment and economic development in the region. Yet local financial institutions are not able to meet the capitalisation needs of the sector. The reasons for the low funding for the plantation industry include the long rotation periods that cause investment uncertainties because of biological and market risks, irreversibility, delayed cash-flow, and high start-up costs that involve prospecting, feasibility assessments and land preparation. The World Bank could play a catalytic role by assisting local financial institutions develop appropriate financial products and services for supporting forestry activities based on lessons and experiences from other parts of the World. A new area that is emerging is the need for small scale service providers in various aspects of forest management such as silviculture, harvesting and protection. This could be achieved through organising the youth and multitudes of forestry graduates being produced in from the region's universities and technical colleges. This will not only help generate employment but will help improve the quality of forestry management at smallholder level. This approach has been successfully supplied by Sappi as part of their strategy for supporting their out-growers (Pienaar, 2011 personal communication). The World Bank could play a significant role in catalysing the development of this subsector in the region.

Microfinance

Apart from accessing loans, SMFEs by nature of their location, have very limited access to deposit and credit facilities, and other financial services provided by formal financial institutions. This is due to the limited outreach of the formal banking sector which is mainly confined to urban centres. This is a major challenge in the region as only a small proportion of the population in most countries have access to formal banking services. For example, in Tanzania, Zimbabwe and Uganda only about 5–6% of the population has access to the banking sector (Basu et al, 2004, Gondo, 2010). This lack of access to financial services from the formal financial system is of major concern to the growth of the small-scale forest producers and SMFEs. The majority of small and medium forest enterprises (SMFEs) in Africa operate in the informal sector and mobilize personal or family savings to finance their activities. With income levels so low in the especially in rural Africa, this places serious constraints on the scale of activities possible (Kamara, 2011).

Given the status of commercial capital markets, the role of microfinance becomes key. A variety of microfinance institutions (MFIs) have emerged over time in the region to bridge this gap. Whilst the MFI initiatives could not be quantified in the region, it is estimated that there are now over 970 MFIs serving 27million microfinance client accounts in Africa, representing about 4% of the population (Gondo, 2010). In Mozambique, Nhancale et al (2009) estimates that close to 12 well established microfinance initiatives are in place to support SFMEs.

Box 7: Examples of microfinance initiatives in West Africa:

Benin

In 2007, 95% of loans were distributed by just five MFIs and 40% of service points were situated in rural areas which are home to 60% of the population. In terms of the suitability of the microcredit supply available for forestry activities, one observes that there is lack of resources for MFIs to make long-term loans, there is weak financing of agricultural activities (no specific information on forestry activities) and there are high interest rates – in 2007, most MFI's rates were higher than the usury rate cap of 27% placed by the WAEMU, ranging from 35% to almost 60% per annum.

Source: (UNDP, 2007)

Burkina Faso

In 2009, 285 MFIs were registered by the local microfinance regulating body. There is relatively good geographical coverage, with each of the 45 provinces in Burkina Faso hosting at least one MFI. However coverage is not even as more than 80% of provinces in 2009 hosted less than 6 institutions, whilst the province of Kadiogo, where the capital is located, hosted 18 institutions (and several more agencies). Clientele was estimated at almost 1.5 million borrowers and savers, which represents a penetration rate of 63%. The size of the loan portfolio in 2009 was 63.4 billion FCFA. The *Réseau des Caisses Populaires du Burkina* is by far the biggest microfinance service provider with a strong rural presence; it practices a very low interest rate for the region of 10% per annum.

Source : http://www.lamicrofinance.org/resource_centers/burkina/chiffres

Liberia

A 2007 USAID assessment of the microfinance sector in Liberia noted that the sector is probably 10 to 15 years behind many countries in Africa and the rest of the world in terms of advances in product development, financial sustainability, and human resource capacity. Having endured so many years in civil conflict, this is not surprising. The Liberia microfinance market is highly underserved with the three main microfinance providers, Liberty Finance, LEAP, and LCUNA credit unions reaching only about 10,000 to 11,000 people in 2007. Rural areas are grossly underserved.

Source: USAID (2007): *Liberia Microfinance Sector Assessment, June 29, 2007, draft for comment*

http://liberia.usaid.gov/sites/default/files/4_Liberia_Microfinance_Assessment_June_2007.pdf

Togo

The microfinance sector has seen strong growth recently and in 2009 there were an estimated 600,000 clients and a loan portfolio of more than 50 billion FCFA. As of end 2007, there were 167 registered institutions, including NGOs and projects with loan activities. Nonetheless, despite strong demand, financing of the rural sector remains marginal. Most loans are short term and there is a bias towards the funding of small trade activities, especially those practiced by women.

Source: http://www.lamicrofinance.org/resource_centers/profiltoogo/couverture.

Source: Kamara 2011

There is need to strengthen linkages between the MFIs and formal banking systems in order to increase resources to the small-scale sector and to ensure provision of appropriate financial product and services tailored to the needs of small-scale forest producers and processors. Whilst a range of MFIs are ready to support forest enterprises, SFMEs in most of the region remain a high risk for three main reasons that most lack legal registration; business management skills and lack of collateral. In Mozambique, simple licence holders present the highest risk. In these circumstances, vertical integration could be a way of overcoming these constraints.

In some cases what is only needed to mobilise investment in forest management is to create an enabling legal and policy framework that recognises and secures individual rights to forest resources. This

encourages private individuals to invest in forest resources management as illustrated by the example of Niger (Box-8).

Box 8:Farmer-managed natural regeneration and soil and water conservation, Niger

The southern savannas of Niger were long considered to be a ‘hot spot’ of dry land degradation. Farmer managed natural regeneration (FMNR) and soil and water conservation have led to what has been called a “re-greening” in Niger (WRI 2008). FMNR involves simple, low-cost techniques for native tree and shrub management to produce continuous harvests of trees for fuel, building materials, food, medicine and fodder. In Niger farmers incorporated the approach to agricultural landscapes. It is estimated that five million ha and 4.5 million people are affected. Restoration has been especially strong in the Maradi and Zinder regions (Figure 8): FMNR has been adopted almost universally by farmers in Zinder and there are four million regenerated trees in Maradi’s smallest district alone.

Benefits to ecosystems and to people have been significant. 200 million trees are protected and managed, amounting to a 10- to 20- fold increase (1975-2005). The associated reduced erosion, increased soil fertility, and better water availability have supported higher yields; for example sorghum yields have improved by 20-85% and millet yields by 15-50% in participating areas. With improved yields, people eat better and have better food security in drought years, and families and communities have been able to diversify their livelihoods. Not only is fuel wood and fodder more readily available, but households are able to sell surplus products in the local market. For example, regeneration on a 1- ha field can earn farmers an additional US\$140 per year from selling firewood, which is half of the average annual income of a farming household. In Zinder, each baobab tree can bring in US\$20 a year from the sale of its edible leaves. Large-scale re-vegetation with native tree has benefitted watershed functions and wild biodiversity.

The most important catalyst for restoration was the revision in regulation under the Niger Rural Code. The former Code disincentivized sustainable management of trees because they were federally owned. Local action catalysed by an NGO modified application of the law, which then spread and eventually resulted in a New Rural Code that transferred tree ownership to farmers. After it was signed in 1993 (and fully implemented in 2004) it provided the needed confidence for farmers to invest in tree management without fear of breaking the law. The past two decades have been a period of innovation in FMNR, supported by international donors and NGOs. World Bank, IFAD, and U.S, French, German and Dutch government assistance in research and dissemination. NGOs (e.g. CARE and Serving In Mission) have played the role of promoters in the field and intermediaries. Farmers conveyed the message that FMNR can be implemented at little cost and yields significant benefits. Landscape restoration benefited from cooperation between government agencies, NGOs, and donors. Since almost all tree regenerated, there was little need for nursery stock apart from isolated cases, and little role for markets.

Source: WRI, 2008 cited in Scherr et al, 2011

3.2 Foreign Financing

Foreign financing into the forestry sector flows through two main channels Official Development Assistance (ODA) and Foreign Direct Investments (FDI). ODA (multilateral or bilateral) takes various forms of financing including grants, concessionary loans, recoverable grants and is commonly targeting development programmes. FDI designed for industrial development is also packaged in various forms and targets private sector investment. Other foreign financing is accessed directly by local and

international NGOs. Vast information exists on foreign financing sources. One however has to search through a wide range of web based sources to establish the extent of inflows through this channel. This section presents highlights for an indicative view on the extent of foreign financing.

Official Development Assistance

Official Development Assistance (ODA) has been a major source of financing for many countries in east and southern Africa over the last 30 years. The ODA comes from two sources namely bilateral (official, from country to country in the form of international cooperation) and multilateral (official arrangements between international monetary institutions and countries and in the form of international cooperation from United Nations agencies). ODA flows to Africa between 1980 and 2007 have largely been provided through bilateral channels (68% on average) that encompass a wide range of development actors and partners including governments, international and national nongovernmental organizations (NGOs), private contractors and civil society. During the period 1994-1998 average annual ODA to forestry reached US\$500million. For the period 2000-2002 the average annual contribution rose to \$1.29 billion and reached \$1.9 billion during the period 2005-2007. Despite this increase, Africa's share of total ODA to forestry has actually declined from 33% during the period 1973-1988 to 13% between 1994 and 1998. Since 2000, two thirds of the cumulative forestry ODA has been allocated to Asia, only 20 % to Africa and 11% to Latin America.

It has been estimated that globally, the required funding for sustainable forest management is between \$70 - \$160 billion per year (Chandrasekharan 1997, Simula, 2008, WWF, 2009). However, actual funding available in the forest sector from all sources falls far short of even the more conservative estimate of the UNCED. For example the current bilateral flows are estimated at \$1.1 billion per year whilst multilateral flows, mainly from the World Bank group, are \$0.8 billion per year. The targeted amount for tropical forests management from ITTO is only US\$11million per year whilst the Bio-carbon Fund is providing US\$10 million/year and voluntary carbon markets are providing \$50million per year (Simula, 2008).

ODA in the forest sector in Africa has generally been uneven, and tended to be concentrated in a few countries. In Africa nearly 90% of the ODA to the forest sector in the last decade has been directed to 10 countries only. The top African recipient countries during the period 2002-2006 were Cameroon and Tanzania. Ghana and Morocco were the highest recipients of forest bio-diversity conservation funds at US\$62 million and US\$56 million, respectively in the same period. From East and Southern African region, Mozambique, Uganda, South Africa, Namibia and Malawi were among the top ten countries then. In the last two years the top ten recipients from the region feature Tanzania, Mozambique, Uganda, Kenya, Zambia and Malawi.

The DAC-OECD database for 2003/4 records that 78% of Swedish aid to Tanzania was 'environment-focused', 54% of Danish aid, 32% of EC aid and 18% in the case of Norwegian aid. There has been a shift over the last 5 years. In 2008, 64% of the Norwegian aid to Tanzania was environment focused, 64% for Swedish Aid and 39% for Finnish aid. The OECD statistics for 2008 also indicate that within and Southern Africa the main recipients appearing on the top 10 list are Tanzania, Mozambique, Uganda, Kenya and

Mozambique. According to WRO (2010) 61% of the 2010 confirmed EU climate change pledges will go through bilateral channels, a high share of which will go to African countries (63%).

Table 9 shows the level of donor presence in forestry in Africa during the period 2005-2007 (OECD, 2008). This study moves Tanzania to the top cluster of countries with 12 donors in 2011 from 10 donors in 2007.

Table 8: Presence of Bilateral and Multilateral Donors Providing Forest ODA in Africa in 2000 -2007
(adopted from Gondo, 2010 and updated)

Number of donors in the country	Number of recipient countries from Africa	Countries in the group
12	2	Tanzania, Kenya and Ethiopia
11	0	
10	2	Ghana, Uganda
9	0	
8	4	Burkina Faso, Malawi, Mozambique and Rwanda
7	1	Cameroon
6	3	Madagascar, Mali and Senegal
5	5	Cote d'Ivoire, DRC, Gabon, Niger, Zimbabwe
4	5	Benin, Namibia, Nigeria, Zambia
3	7	Cape Verde, Eritrea, Guinea, Liberia, Morocco, Sudan and Swaziland
2	5	Burundi Central African Republic, Republic of Congo, Guinea-Bissau, Sierra Leone, S. Africa,
1	8	Angola, Botswana, Egypt, Gambia, Libya Mauritania, Tunisia, Lesotho
0	5	Algeria, Equatorial Guinea, Somalia, Western Sahara, Togo
Total	44	

Tanzania in 2011 had 12 donors providing support to forestry or forestry-related activities. 9 of these were providing support to climate change and biodiversity whilst 6 provided support to forest management. Table 9 shows the contribution of the development partners to forestry in Tanzania in 2006.

Table 9: The budget support contributions from donors to Forestry in Tanzania in 2006

Donor Country	Amount in million Tzshs	%
DFID	261,751.45	29.70
IDA (multilateral)	246,295.65	27.95
NETHERLANDS	87,587.36	9.94
SWEDEN	67,215.19	7.63
EU	65,340.17	7.41
NORWAY	44,847.04	5.09
JAPAN	31,625.36	3.59
IRELAND	20,495.44	2.33
FINLAND	18,568.52	2.11
DENMARK	16,816.77	1.91
GERMANY/KfW	14,013.98	1.59
SDC	6,763.08	0.77
Total	881,320.00	100.00

Source: Ministry of Finance, 2007

As indicated in the section on domestic financing, most government funding goes to administrative costs especially salaries and management of protected areas. However ODA plays a significant role in funding forest development management activities. This is illustrated in the tables 10-12 below.

Table 10: Forestry and Bee Keeping Department 2010/2011: Donor Contributions to Projects

Project	MNTR Contribution TzSh	Donor Contribution Tzsh	Donor	Area of investment
Participatory Forest Management (PFM)	0	346,305,000	DANIDA	Conservation
Support to National Forest and Bee Keeping Programme (NFBK-ISP)	0	2,927,109,600	Finland	Monitoring and Conservation
National Forest Resources Monitoring and Assessments (NAFORMA)	0	1,445,050,000	FAO, FINIDA	National Biomass survey
Conservation of Biological Diversity	0	676,500,000	FAO, FINIDA	Conservation
UNDP Support Programme	0	78,000,000	UNDP	Conservation
Total	0	5,472,964,600		

Source: URT MNRT Budget speech 2010/2011

Table 11: Donor Contributions to Forestry to the Department of Natural Resources, Tourism and Forestry Mozambique (2007) to 2011 (Mts x 1,000)

Source of Financing	2011	2010	2009	2008	2007
Internal	182,497.65	70,952.78	158,240.97	8,933.08	3,510.71
External	42,368.78	148,379.08	25,662.96	81,833.12	44,433.48
Functioning			24,614.83	14,082.35	18,623.52
Total	224,866.43	219,331.86	208,518.76	104,848.55	66,567.71
% of total contribution by Govt. of Mozambique	81	32	76	9	5

Table 12: Mix of Funding Arrangements for Public Forestry Institutions

Country	Revenue	Total expenditure (USD '000)			Source of Funds (%)		
		Domestic Financing	External Financing	Total	Forest revenue	Govt (Net)	External
Ethiopia	2383	21345	3865	25209	9	76	15
Gambia	225	242	445	686	33	2	65
Kenya	1845	17407	1054	18461	10	84	6**
Kenya	8300	5000	3300	8300	25	50	25*
Lesotho	44	521	119	639	7	75	19
Madagascar	2734	4385	7255	11641	23	14	62**
Mozambique							
Namibia	68	2548	2767	5335	1	46	52**
Tanzania	2763	7567	31773	39,340	7	12	81**
Uganda	763	1282	2386	3668	21	14	45**
South Africa							

Source: Adapted from FAO 2003; ** 2003; *2011

Whilst ODA plays critical catalytic and supplementary roles, it is arguably a short-term solution, and the volumes fall far short of the estimated costs. The recent increase in forestry-related ODA, to almost USD 2 billion annually (2005–07), represents only a small fraction of the USD 11–19 billion recommended in the Eliasch review. Generally, ODA has accounted for a significant proportion of total investment in tropical forestry to-date. However, ODA has, and continues to play a valuable role alongside private investment and domestic public financing. In some countries, such as Liberia for example, it has been crucial in providing insurance to mitigate risk and co-investment with private funds. It also has had an important role in supporting the development of policy and regulatory frameworks and institutional capacity-building in most of the countries. These have been the main areas of support from ODA over the last decade and remain priorities in many countries of the region.

Bilateral Foreign Financing

Bilateral aid to forestry in Africa comes from a few sources with 95% provided by nine donors (European Community, Finland, France, Germany, Japan, Netherlands, Switzerland, UK and USA). This study however indicates that, Scandinavian countries appear to have increased their level of commitment

through their support to the region especially for forest and climate change programmes e.g. in Mozambique and Tanzania., On the other hand Japan has reduced aid to forestry in the region as revealed by the absence of the region's countries in the list of top ten recipients for environment focused aid in the OECD stats of 2009. This is despite the overall increase in Japan's environment focused aid from an estimated 1billion in 2002 to about 5.8Billion in 2009. In recent years bilateral ODA in the forest sector has tended to focus on development of national forestry programmes, strengthening national forest institutions, and preventing loss of global environmental services in particular reduction in emissions. About two-thirds of the ODA resources go to afforestation projects, with the remainder being spent on policy, administration, research, training and fuelwood and charcoal projects.

Forestry financing is also being increasingly treated as part of the climate change and biodiversity agendas rather than as a standalone sector (Simula, 2008). Aid in support of climate change has increased over the past five years. Most of the bilateral ODA support has shifted t from desertification and/or biodiversity focus to climate change. Globally, OECD data (2009) show that members of the OECD's Development Assistance Committee (DAC) provided USD 3.8 billion in bilateral official development assistance (ODA) in 2007 to help developing countries reduce their own greenhouse gas emissions. This represents about 4 percent of total bilateral ODA that year. The largest donors were Japan (USD 1.3 billion), Germany (USD 0.8 billion) globally and France (USD 0.5 billion). This funding contributes to greenhouse gas reduction in developing countries' energy, transport, water, and forestry sectors. Allocation to African countries from these two largest donors is however not prominent. In Africa the largest donors for climate change and related programme are Norway, Sweden, Denmark and Finland.

Multilateral ODA

A global analysis by Simula (2008) of the trends in multilateral ODA in the forest sector shows an increasing share of World Bank support, to a lesser extent AfDB compared to other multilateral funding channels. Of the few multilateral channels the most important to East and Southern Africa are the World Bank, GEF, AfDB, FAO, ITTO and African Sustainable Forestry Fund. Climate change financing is also being channelled through climate change focused facilities that are fast becoming key to the region.

World Bank

The main source of multilateral financing to forestry is the World Bank group which provided 72.7% in 2009. The World Bank's share of the total increased from 51% to 73% during the period 2000-2007 (Simula, 2008). Most (55%) of the funding is from the International Finance Corporation (IFC) which supports at least 14 countries in Africa (Appendix 1). The World Bank strategy (2004c) recognises the potential of partnerships with the private sector and engagement with responsible investors. The contributions of the International Development Association (IDA) and the International Bank for Reconstruction and Development (IBRD) have also increased during the study period, albeit less than that of IFC. The World Bank's Forest Strategy (approved in 2002) targeting an increased role in forests by addressing poverty reduction, integration of forests in sustainable development and enhancement of global environmental services has contributed to the recent upward trend in forest financing.

The regional distribution of the WB lending shows that the East Asia-Pacific region has been the largest recipient, partly due to large projects in China. Africa's share has been steadily increasing and represented 41% of the total IBRD/IDA financing in 2006. However the bank's largest investments are confined to Sub Sahara Africa's tropical rain forest countries such as DRC, Gabon and Liberia (Gondo, 2010). A few countries in East Africa received support for transforming forest sectors, capacity building and conservation activities. Most of the funding was channelled through IDA. The Bank also partners with other agencies such as GEF and UNDP. In Tanzania the World Bank -IDA disbursed USD44.7 million (USD 7 million from GEF) and supported 4 programmes between 2002 and 2006 namely Forest Management and Conservation Project; Eastern Arc Forest Conservation and Management Project; Assessment of Analytic and Advisory Activities; Transforming the Charcoal Sector. Kenya received a credit amount of US\$ 68.5 million for the period 2007-2013 part of which is for Management of Forest Resources.

Global Environment Facility (GEF)

GEF finances "new and additional grant and concessional funding to meet the agreed incremental costs of measures to achieve agreed global environmental benefits". The GEF is the only multi-convention financing facility in existence and is now the major source of funding specifically supporting the Convention on Biological Diversity (CBD) and the UNFCCC. Further, the GEF also provides support to the implementation of the UN Convention to Combat Desertification (UNCCD). Since 1991 the scope of GEF's forest-related activities has gradually expanded from the focus on biodiversity to include integrated ecosystem management, combating land degradation through sustainable land management, and (since 2007) sustainable forest management. The accumulated funding to forest-related projects (236) by 2005 was USD 1,192 million (Table 14). By 2009 the GEF had supported over 300 forestry projects worldwide out of which only 79 were in Africa. The total funding was \$1.6billion with an additional \$5billion of leveraged funds.

Table 13: GEF Financing Related to SFM from 1997 to 2005

Project type	No. of projects	US\$ millions	%
Forest conservation (primarily protected areas and buffer zones)	109	623.3	53
Sustainable use of forests outside protected areas	38	143.3	12
SFM in wider production landscapes (mixed land uses) beyond strictly forests	89	416.4	35
Total	236	1,183.0	100

Source: GEF 2005

In November 2007, the GEF Council approved a Sustainable Forest Management Programme to address this area of intervention in a more comprehensive and coordinated way than in the past. The projects falling under this category contribute to the implementation of the forest-related commitments and programmes of work of CBD (Biodiversity conservation), UNFCCC Climate change mitigation), and UNCCD (land degradation). In addition, the Programme will, in particular, support achievement of the Global Biodiversity Target 2010 set by CBD and the Global Objectives of Forests set by UNFF. This means that countries are encouraged to submit projects that cover one or more focal areas (biodiversity, climate change, and land degradation), promoting approaches that are multi-sectoral and ecosystem-based and consider forests within the wider production landscape (GEF 2007). The areas that are supported by the SFM programme include:

- sustainable financing of protected area systems at the national level;
- strengthening terrestrial protected area networks;
- strengthening the policy and regulatory framework for mainstreaming biodiversity;
- fostering markets for biodiversity goods and services;
- supporting SFM in the wider landscapes;
- promoting sustainable biomass production;
- prevention, control, and management of invasive alien species; and
- management of land use, land-use change, and forestry (LULUCF) as a means to protect carbon stocks and reduce greenhouse gas emissions (GEF 2007).

During the first nine months of the SFM programme implementation, the GEF committed about US\$152 million and leveraged about US\$482 million in co-financing. GEF investments in SFM during the fourth replenishment period may exceed US\$250 million (corresponding to about US\$60 million annually).

Another new GEF instrument is the Tropical Forest Account (TFA), which was established in 2007 to encourage greater investment attention in tropical forest management by forest-rich countries. By investing the resources allocated to them under RAF (Resource Allocation Framework), countries with significant tropical forest resources can leverage additional funds from GEF. The Tropical Forest Account supported the establishment of the GEF Strategic Program for Sustainable Forest Management in the Congo Basin (\$50 million GEF funding, leveraging \$160 million from other sources). The SFM program was established mid-way through the GEF-4 replenishment cycle and thus lacked dedicated funding. In GEF-5 (2010-2014), a separate funding envelope for SFM/REDD+ became available. Table ---gives a summary of GEF support to SFM/REDD by phase.

Table 14: GEF Financing and Co-financing for LULUCF and SFM/REDD +by Phase

Phase	Number of Projects	GEF Financing (\$ millions)	Co-financing (\$ millions)
GEF Pilot	2	4.4	0.1
GEF-1	0	0.0	0.0
GEF-2	1	0.8	1.0
GEF-3	0	0.0	0.0
GEF-4	25	122.40	774.0
GEF-5 FY 2011*	8	38.6	72.0
Total	36	166.2	847.0

Source; GEF 2011; * figures are for period up to July 2011

However countries have to reallocate this from the traditional areas of biodiversity, climate change and land degradation. The estimated value of this envelope is about \$1billion GEF-5 (GEF 2010). This investment is expected to leverage substantial additional funding from external sources. Table ---shows that regionally about half the LULUCF and SFM projects are in Latin America and the Caribbean and about 20% are in Africa

Table 15: Regional Distribution of GEF Investments in LULUCF and SFM/REDD+

Region	Number of Projects	GEF Financing (\$ millions)	Co-financing (\$ millions)
Africa	7	32.3	51.8
Asia	9	33.9	488.8
Eastern Europe And Central Asia	3	17.2	43.1
Latin America and The Caribbean	15	76.3	255.5
Regional and Global	2	6.6	7.9
Total	36	166.2	847.0

Table 16: GEF - 5 Financing for LULUCF Projects by Approach and Type (FY2011)

Activities	LULUCF And Mixed (\$ millions)	LULUCF and Mixed Related to Small Grants Program (\$ millions)	SFM/REDD+ Funds only (\$ millions)	Other focal Area funding (\$ millions)	SCCF/LDCF (\$ millions)	Total (\$ millions)
Project	7.8	17.1	4.4	9.3		38.6
Program (Sahel and West Africa)	11.5	----	18.5	57.9	21.0	108.8
Total	19.3	17.1	22.9	67.20	21.0	147.4

In the first year of GEF-5, GEF has combined resources from SFM/REDD, and some adaptation (SCCF and LDCF) projects (totalling\$108.8million) within the 12-country Great Green Wall of the Sahel and Sahara

Initiative. This coupling of SFM/REDD and LULUCF funding with other GEF focal areas such as Biodiversity and Land Degradation helps to capture improved synergies in multiple global environmental benefits (UNFCCC, 2011). The ability to leverage additional funds from other sources (bilateral donors and multilateral and regional development banks) is a major strength of the GEF. For example the leverage factor in SFM-related GEF funding between 1996 and 2005 was 2.8 times (GEF 2005) and up to 5.1 times for LULUCF and SFM/REDD+ (UNFCCC, 2011).

African Development Bank (AfDB)

The African Development Bank (AfDB) has become a major source of forest funding in Africa and its share has also increased significantly. The African Development Bank (AfDB) forestry portfolio is now around USD 352 million. The AfDB's contribution to forestry rose from US\$35.8 million per year during the period 2000-2002 to US\$72.7 million per year during the period 2005-2007 (AFDB, 2008). The AfDB's new commitments have varied extensively in the range of US\$ 13 to 138 million per year. The AfDB has recorded a growing trend in its forestry financing and it appears the bank's role in the forestry sector will continue to grow with increase in demand. The AfDB's portfolio in the forest sector has benefited 21 countries. The countries with active portfolios are shown in Appendix 2. The projects have covered industrial plantations, conservation, and restoration of degraded forests, agro-forestry and institutional capacity. The AfDB also hosts the Congo Basin Forest Fund which supports the Central African Forests Commission (COMIFAC) countries to sustainably manage and preserve the Congo Basin ecosystems.

The emergence of the AfDB as a major player in financing forest projects related to environmental services especially biodiversity and climate change is underlined by the increased allocation of funds through the recently established Regional Public Goods (RPG) programme (AFDB, 2011). The AfDB also recently launched a two-year technical assistance programme called the African Carbon Support Programme, . The programme, launched on 4 November 2010, is geared towards assisting member countries to access carbon finance in order to ensure the commercial viability of their investments. Essentially, the programme involves a screening process whereby the carbon finance potential of investment proposals received by the Bank is identified and assessed. At the same time, capacity building activities will be undertaken for host country government agencies where such carbon- finance eligible projects are going to be developed (AfDB, 2012).

The Africa Carbon Support Programme has benefited from a grant of US\$ 1 million from the Fund for African Private Sector Assistance (FAPA) which was established by the African Development Bank in partnership with the Japanese government. The fund will be scaled up in time. In the forestry sector, two new investment plans were approved under the FIP: USD 32 million for Burkina Faso to decentralize sustainable forest management, encourage participatory protection of state forest reserves, and integrate information-sharing; and USD 60 million for the Democratic Republic of Congo to address deforestation and degradation and provide small grants to promising small-scale initiatives falling within the Reduced Emission from Deforestation and Forest Degradation (REDD+) program. The funding will also help the country to engage the private sector in REDD+.

International Timber Trading Organization (ITTO)

The ITTO's contribution to forestry ODA was 5% of the total multilateral financing in 2001 but it has dropped to 2% due to constraints related to decrease in contributions from donors. The average size of ITTO projects is between USD 300,000 to USD 500,000, with a duration of two to three years. The number of ITTO recipient member countries has increased and currently includes 33 producer members (10 from Africa) and three developing consumer members. In Africa, the major recipient countries are Cameroon, Congo, Cote d'Ivoire, DRC, Gabon and Ghana. DRC is the only recipient country in east and southern Africa hence the role of the organisation in funding forestry in the region is limited.

National Forest Programme Facility

FAO is a key provider of technical assistance in forestry. Under its regular programme, the Forestry Department and regional offices programmes amount to \$48million per year. This includes the contributions to the National Forest Programme (NFP) Facility which is housed in FAO. The NFP Facility was established as a funding mechanism to support development or review of national forest programmes (NFPs) with active stakeholder participation at the country level. The Facility provides grants directly to stakeholders in partner countries to assist them in developing and implementing NFPs. Since its inception in 2002, the Facility has supported stakeholders in 70 countries including 14 in east and southern Africa and four sub-regional organizations. The activities include facilitation of stakeholder participation in national planning processes, NFP preparation and development of new legal, fiscal and institutional instruments and state of forest and genetic resources. Direct country support is typically in the range of USD 300,000 per country over a period of three years.

The support for preparation or updating of NFPs has provided east and southern African beneficiary countries with opportunities to develop or update their forestry programmes and databases. An important component of most NFPs is the development of national forest financing strategies to mobilise resources from different sources, for the implementation of the programmes. Some countries, for example Tanzania (Box 9) have managed to develop comprehensive national forest financing strategies as an integral part of their NFP.

Box 9: Tanzania National Forest Financing Strategy

Main components of the proposed national forest financing strategy are:

1. Expansion of revenue base
2. Improvement of revenue collection
3. Promotion of stakeholder involvement and domestic private sector investments
4. Increasing foreign direct investment and,
5. Optimising the use of foreign assistance and increasing the ownership: The aim of adopting a sector programme approach (sector-wide programme) is to attract donor assistance for the forest sector through a with clearly defined and well-managed basket funding. In this way, the multitude of administrative rules and requirements (with special reference to the steps in project cycle management, reporting, monitoring, and evaluation) are reduced and a constant inflow of various donor and expert missions demanding a lot of staff time, placing a heavy burden on the Tanzanian forestry staff, particularly the senior management will be streamlined.

Source: Simula, 2008

Unfortunately most countries in the region that have developed and updated their NFPs have not developed comprehensive financing strategies. Thus their forest financing needs are not clearly articulated and have not been fully considered in national development plans and financing priorities. The result is most of the NFPs have not secured financial resources for implementation and will need to be updated again before they can be implemented. Some of the beneficiary countries have recommended that the NFP facility should establish an implementation support component to help countries implement their programmes. Alternatively this could be funded through the Global Forest Fund, if established.

Africa Sustainable Forestry Fund (ASFF)

ASFF is targeting US\$150m. The fund is focused on sustainable forestry in sub-Saharan Africa and is the first of its kind. It is a 12-year closed-end private equity fund dedicated to investments in forestlands or forestry-related companies and projects in Eastern and Southern Africa together with two countries in West Africa. The first close saw commitments principally from development finance institutions; CDC was a cornerstone investor with US\$50m; the IFC committed US\$20m. Private investors are expected to invest alongside the DFIs to get the fund to its target size. GASFF will target commercial returns and is expected to invest in and develop between five and 10 forestry businesses across sub-Saharan Africa. The forestry businesses will grow process and market timber products to meet growing global demand from industries including construction, energy, furniture and biofuel. The fund will start to make investments immediately, with an investment size typically between US\$15m and US\$30m. Focus countries will include Mozambique, Tanzania, Swaziland, South Africa, Uganda, Ghana, Malawi and Zambia.

Other Multilateral Sources

The Global Mechanism (GM) of the UNCCD was set up to facilitate financing of the Convention but it was allocated no resources for funding support to its developing country members. The GM has developed tools to facilitate UNCCD members accessing funding sources (the FIELD database) and to develop country-level integrated financing strategies for sustainable land management (GM 2008). Forestry interventions form part of the national strategies for sustainable land management supported by GM. Other multilateral sources include the International Fund for Agriculture Development (IFAD) which has financed forestry components in their agriculture and rural development projects; UNEP, UNDP, World Food Programme (WFP) and some other international humanitarian aid programmes have also financed some forestry activities including tree planting for restoration of degraded lands and fuelwood production. These inputs have been locally valuable in several countries in the region, but there is no information on their total amounts which are limited compared to other funding sources.

Foreign Direct Investment

Total foreign direct investment (FDI) flows to Africa, in recent years have overtaken ODA, rising from \$29 billion in 2000 to \$53 billion in 2007 (AfDB, 2009). At global level, private foreign direct investment (FDI) flows to forest industries in developing countries have grown rapidly (more than two-fold in 1990–2005). The FDI flows to the forest sector increased by 29 % from USD 400 million in 2000–02 to USD 516 million in 2005–07 (Simula, 2008). The flow of FDI to the forest sector in Africa has generally been low and unevenly distributed and has been concentrated in forest rich countries that are stable and low risk. For example in West Africa FDI has been concentrated in Cote d' Ivore, Ghana, Liberia and Sierra Leone. In recent years there has been growing interest and investment in non-timber forest products in low forest cover countries albeit at a smaller scale and in small-to medium sized companies. Examples include investments in biofuels (e.g. jatropha production) shea butter and in the tree crops sector mainly cashew, cocoa and mango (FAO, 2011).

Until recently, the commercial forestry sector in eastern and southern Africa was not well developed except in a few countries such as South Africa, Zimbabwe and Swaziland. However in the last decade the region has been experiencing rapid growth especially in the plantation forest sector. This is being driven by substantial growth in foreign direct investment (FDI) in this sector. The major countries that have seen massive investment in this sector include Mozambique, Tanzania, Uganda and South Africa. In East Africa this is being driven by a clear shift in policies from public to private sector, especially in the area of commercial plantations. Examples of FDI investment approaches and experiences are given in Box 10.

Box 10: Examples of FDI in forestry in Africa

Green Resources Plantation development in Africa

Green Resources AS is a plantation, carbon off-set, forest products and renewable energy company that has invested about US\$55million in Africa, mainly Mozambique, Sudan, Tanzania and Uganda. The company now has 14000ha of plantation and has a planting target of more than 200 000ha. In 2009 the company signed a framework agreement with the Mozambique government to establish 125000ha of energy/pulp plantation and received title for 179000ha of land in southern Sudan. In Uganda, the company has established a pole treatment plant to supply transmission poles to the Lake Victoria region. Green Resources has integrated carbon sequestration into some of its plantation and natural forests management programmes. The company has carbon offset projects in Mozambique, Tanzania, Sudan and Uganda. The projects have potential to generate 20million tonnes of carbon offsets by the year 2020. Green Resources' Mapanda/Uchindile forest project was certified under the Voluntary Carbon Standard (VCS) in July 2009. The company received the first payment of \$0.8 million in 2010. 10% of this was passed on to communities for community development activities

Source: Green Resources, 2010

FDI in Liberia's forestry sector

Liberia's forest and agro-forestry sector attracts several multinationals, especially in the sectors of timber logging, rubber production and oil palm plantation. In the timber sector, in 2007 the Ministry of Commerce reported that 97 forestry-related companies were registered in the country (Blundell, 2008). Since then, the Forestry Development Authority has proceeded with the issuing of Forest Management Contracts, and several more foreign logging companies must have registered.

Following the negative experiences before and during the civil war in which logging companies were involved in financing parties to the conflict and UN sanctions on logs and timber products from Liberia from 2003 to 2006, the Government of Liberia undertook significant reforms aimed at installing safeguards in the forestry and agro-forestry sectors, that may help make FDI in the sector more beneficial to local communities.

The 2006 National Forestry Reform Law requires that logging companies (foreign and national) enter into Social Agreements with the affected communities in proximity to their concession areas as a means to ensure that such communities benefit from the forests. The Forestry Development Authority is not to proceed with offering any Forest Resources License unless it has obtained prior informed consent, in writing, from Community Forestry Development Committees – representing all affected communities - to negotiate in good faith a social agreement with the winning bidder.

Furthermore, in 2009, a Community Rights Law was passed, which represents another important step, the first of its kinds, towards participatory forest management in Liberia and in the West African Region (SAMFU, FAO, 2010).

In 2008, the government published a guide in English and Chinese entitled "Investment in the Liberian Forest Sector: a Roadmap to Legal Forest Operations in Liberia" to help companies abide by regulations.

Source: Kamara, 2011

Many countries in Africa have reviewed their forest policies and one of the major provisions is for the commercialisation of the forest sector including transforming the public forest institutions into semi-autonomous public sector enterprises. Other countries have gone a step further to develop clear incentives for attracting private sector investment. For example, in Mozambique FDI has been propelled by the Government of Mozambique's 2006 "National Reforestation Strategy". The strategy outlines plans for at least 2 million hectares of tree plantations in the next 20 years. A further 3 million hectares is to be zoned and made "available for potential investors for the development of industrial plantations". In total, the plan identifies an area of 7 million hectares as suitable for plantations (Raquel and Ribiero 2006).

Across the region FDI has been mainly through large regional transnational forest companies from Europe and within the region. The major investing companies include Green Resources, SAFCOL, Mondi, New Forest Company and Sappi (see table 18 below).

Table 17: Current Major Investors in Plantation Forestry in East and Southern Africa

Company	Country	Size of investment			
		Area (ha)	Capital (usd)	Nature of Investment	Planned Future investment
Green Resources (Norwegian)	Uganda Tanzania Mozambique (invested 14million so far)	6,000 Plans on planting 12,000ha per year	2008 – 49 million 2009 – 76 million 2010 – 96million	Feasibility assessments, plantation Eucalyptus and Pine establishment, infrastructure development 1 large saw mill	-Targeted 229,247ha by 2023 -Saw Mills
SAFCOL (South African)	South Africa	SA 187 320,27 Mozambique 23 600	R67 million (usd10)/yr Plant and Equipment value – R266,941m	Planting Eucalyptus and Pine Plantation management 5 processing plants	
SAPPI (South African)	South Africa Swaziland	SA 465,000 Swaziland 75,000	Not available Plans to produce 425,000 tonnes/yr of pulp	Pulp and Paper Mill	convert the plantations feeding its mill from pine to eucalyptus
Mondi (Europe)		430,000	?	Plantations paper mill, wood chip mill and 2 pulp mill	
New Forest Company (British Agri-Vie)	Uganda, Rwanda, Tanzania,	Mozambique - 40,000 hectares secured, has planted from	\$6.7-million		

	Mozambique	<p>2007 until March 2011 just over 3,200 hectares so far</p> <p>Uganda - 20 000ha secured, planted 7 700ha of pine and eucalyptus.</p>			
Portocell (Portuguese)	Mozambiuque			USD2billion over 20yrs	

Currently, (with the exception of South Africa) the countries of east and southern Africa are net importers of sawn timber and transmission poles and other forest products. There is however a deliberate drive in most of the countries to reverse this situation given that most of the countries have land suitable for commercial plantation based forestry. In this regard, FDI into the forestry sector is expected to continue growing in the next 10 years as countries continue to liberalise their economies and put more incentives for investors. This is backed by the fact that there is a lot of land with potential for forestry development especially plantation forests in the region. For example Uganda is one of the most profitable areas to grow trees in Africa as there is good rainfall for almost the entire year. Over a million hectares of land has already been identified and earmarked for forestry development.. Current investment by external companies has been taking place mainly in government gazetted forests. In countries like Mozambique, forest investment is certainly likely to increase over the next 20 years, in both primary production and processing facilities development. Most new plantations in Mozambique are currently between 4 and 8 years, hence investment in sawmilling will be a key priority over the next few years.

The interest to take advantage of the prospects for forestry investment on the continent is growing and this is illustrated by the example of the investment resources that have been set aside by CDC in the UK (Box 11).

Box 11: CDC Mobilising Resources for Forestry Investment in Africa

British development finance institution, CDC has committed US\$50 million to the Global Environment Fund (GEF) Africa Sustainable Forestry Fund (GASFF), the first private equity fund to focus solely on sustainable forestry in sub-Saharan Africa. The fund is to be run by the investment team of GEF which has a long history of investing in sectors that make a positive impact on the environment and quality of life. It is a pioneering investment to help develop and grow businesses in Africa's expanding forestry sector and bring jobs to those communities, as well as broader potential ecological benefits. The first tranche of GASFF is US\$84 million, which is being committed principally by development finance institutions. Private investors are expected to invest later, and this should eventually bring the fund to its US\$150 million target size.

The fund is targeting commercial returns and is expected to invest in and develop 5-10 forestry businesses across sub-Saharan Africa, with a particular focus on "greenfield" and existing plantations. The forestry businesses will grow, process and market timber products to meet the growing global demand from industries including construction, energy, furniture and bio-fuel.

GEF has around US\$1bn funds under management, including an emerging markets forestry fund which has invested in businesses in South America, South-East Asia and Africa. It is envisaged that the fund's investments will drive economic improvement in the communities in which it invests through direct employment, local taxes, support for local schools, and other community projects. The fund's investments will also support the basic needs of employees and families, including housing, schools, clinics, clean water, nutrition programs and job training. GASFF's forestry assets will also sequester significant quantities of carbon dioxide, and will avoid deforestation and degradation through its sustainable management of plantations and natural forests.

Land for new plantations is however expected to become less available in some countries especially in the case of South Africa due to water shortage. In addition, competition for land with agricultural production and increasing food security concerns are expected to have negative implications for forest sector investment growth. In countries where land is available, an increase in plantation establishment would be needed to keep up with the demand of raw materials. However new

investments in industrial plantations are hampered by the long and tedious land acquisition procedures, lack of effective communication between private sector and government authorities as well as lack of data on available land for investments i.e. reliable information on potential areas to expand in the future; poor infrastructure especially roads and rail. There is therefore need to map land suitable and available for forestry development to better guide investors. This will also help strike a balance between the needs for plantation and natural forests on the hand and food security on the other.

In a number of countries, the majority of the land suitable for forestry development lies outside gazetted forests in the hands of local authorities or local communities. Thus there is need to engage local authorities and communities in share ownership arrangements, out-grower schemes and equitable benefit sharing arrangements. The approach of using out-grower schemes has been successfully used in South Africa by several companies especially Mondi and Sappi. Currently South Africa has about 24000 small-scale timber growers most of whom are in out-grower schemes with the major companies. The same approach has also been adopted by Green Resources as a strategy for involving local people and improving livelihoods. It is however important to ensure there are effective measures and support to address tenurial arrangements and sustainable land management to give security to both the investors and the land owners.

JV partnerships between local and foreign investors are currently weak. The main constraint is failure to by local partners to access credit and raise capital. There is need to provide financial support to local investors to partner with foreign investors to ensure stability, security of investments and use of expertise and knowledge from the region. This requires engagement of financial institutions to provide access to financial products that are suited to forestry investment.

3.3 Philanthropic Funding

Philanthropic funding represents a significant source of forest financing in East and Southern Africa. These funds are provided by individuals, Foundations (e.g. Ford and Melinda and Bill Gates foundations) and churches. In general these funds are not driven by commercial choices but environmental and humanitarian concerns. Their general international contribution at global level has increased rapidly in the last decade. In 2005, their contribution to the environment sector was about \$230 million. Among the 15 largest foundations, 8 specify forest-related issues for their grants, such as protected areas, land rights, and the rights of indigenous peoples (Hoare, 2008). Two new mechanisms that have been successfully used by philanthropic organizations to support tropical forestry projects are programme-related investments and recoverable grants. The latter entail the payment of grants that must be repaid, but at very low interest rates. There are many examples of philanthropic support to forestry in the region and these include the support to forestry conservation in Zambia by the Bill Gates foundation and support to small-scale forest enterprises and community forestry by the Ford Foundation in several countries in east and southern Africa (Gondo, 2010). In Kenya Forest Action Network (FAN) is being supported by a church organisation to promote tree planting to take advantage of emerging carbon markets and good prices of poles and other timber products. Philanthropic funding thus plays a valuable catalytic role in Africa, helping to test and develop innovative projects and initiatives that would not be supported by the commercial sector. It also helps lay the foundations for sustainable forest initiatives, facilitating the subsequent

entry of commercial organizations such as banks with commercial savings and micro-finance schemes.

3.4 NGOs

In most countries of the region non-governmental organizations (NGOs) are major contributors to sustainable forest management. International environmental and conservation non-governmental organizations provide funding substantial funding to the east and southern African countries for various purposes including forest management biodiversity and environmental conservation. This support is generally provided through projects and programmes they implement directly or through partnerships with governments and local NGOs and CBOs. The most notable international NGOs working in east and southern Africa include WWF, IUCN and Conservation International and these have been very instrumental in mobilizing funding for forest conservation and sustainable forest management.

A wide range of local and regional NGOs work actively on forestry issues in Africa. They include small grassroots community based organisations (CBOs), national and regional NGOs. Unfortunately it is not easy to ascertain the amount of financial resources mobilised through these institutions as financial details of their investments are not readily available. Interviews with a few NGOs reveal that most of the NGOs rely mostly on the international donors and philanthropic organisations for funding with only a very small proportion coming from founder members.

Chapter 4: Gaps and Opportunities for Forest-Related Financing

4.1 Financing needs

Sustainable forest management requires substantial financial resources but so far the financial resources mobilised remain insufficient particularly in developing countries. Many attempts have been made since the UNCED conference in 1992 to estimate the financial needs for forest management in a bid to boost financial resources mobilisation efforts at global level. It has been estimated that globally, the required funding for sustainable forest management is between \$70 - \$160 billion per year (Chandrasekharan 1997, Simula, 2008, WWF, 2009). The most comprehensive effort to assess financing needs for the forestry sector in recent years has probably been carried out by UNFCCC (2007) which concluded with the indicative estimates for developing countries shown in table 7.

Table 18: Financing Needs for the Forest Sector

Financing area	US\$ billions/year
Opportunity costs for REDD	12.2
Sustainable forest management	8.2
Afforestation/reforestation	0.1-0.4
Total	21

The estimates were targeted at identifying opportunity costs of the main mitigation options:

- reduced deforestation,
- better management of productive forest, and
- afforestation and reforestation as a means to increase forest area.

UNFCCC presented the opportunity costs to reduce deforestation and forest degradation based on regional estimates of the key drivers (commercial agriculture, subsistence farming, and wood extraction), relating them to regional/sub-regional current deforestation rates (Appendices 2 and 3).

Table 19: Lowest Investment Cost Required to Compensat Deforestation/Degradation Opportunity Costs (USD million/year)

Deforestation source	Africa	Asia-Pacific	Latin America	Other countries	Total
Commercial agriculture					
Commercial crops	1372.2	1926.0	2144.5	322.5	5765.2
Cattle ranching	175.5	10.6	576.5	38.7	801.3
<i>Subtotal</i>	<i>1547.7</i>	<i>1936.6</i>	<i>2721.0</i>	<i>361.2</i>	<i>6566.5</i>
Subsistence farming					
Small-scale shifting cultivation	706.4	674.1	681.6	86.0	2148.1
Fuelwood and non-timber forest products	71.1	48.2	66.9	10.8	197.0
<i>Subtotal</i>	<i>777.5</i>	<i>722.3</i>	<i>748.5</i>	<i>96.8</i>	<i>2345.1</i>
Wood extraction					
Commercial harvest	311.0	2194.8	552.6	129.0	3187.4
Fuelwood/charcoal	40.4	16.0	16.6	12.9	85.9
<i>Subtotal</i>	<i>351.4</i>	<i>2210.8</i>	<i>569.2</i>	<i>141.9</i>	<i>3273.3</i>
Total	2676.6	4869.7	4038.7	599.9	12184.9

Source: World Bank (2008)

Africa's financing needs are estimated at 16%, or \$2 billion per year. These estimates have several limitations, that include inherent weaknesses of the opportunity costs method such as failure to capture other decision criteria of land owners and communities (e.g., food security, financial and natural risk mitigation), assessment of opportunity costs of forest degradation, and apparent underestimation of afforestation/reforestation (based on CDM eligibility) as a mitigation option.

These estimates are no more than indicative by nature. They are however useful in illustrating and highlighting the order of magnitude of what is required for the achievement of SFM. What is clear is that the actual funding available in the forest sector, from all sources falls far short of even the most conservative estimates. For example the current global bilateral flows are estimated at \$1.1 billion per year whilst multilateral flows are \$0.8 billion per year and foreign private sector investments are

estimated at \$0.5billion per year. The targeted amount for tropical forests management from ITTO is only US\$11million per year whilst the Bio-carbon Fund is providing US\$10 million/year and voluntary carbon markets are providing \$50million per year (Simula, 2008).

Several estimates for financing needs for SFM in tropical forests have also been made through ITTO surveys of national needs estimated by governments and by expert assessments based on different assumptions (Tomaselli 2006). Because of great variation in local conditions in African countries, estimating financing needs for implementing sustainable forest management is difficult and has not been attempted in this study. Suffice to say most of the African countries are experiencing major difficulties in raising adequate financial resources for sustainable forest management from all sources. The majority of the countries in Africa do not have the capacity to mobilise sufficient domestic public funds for the forest sector due to social and economic constraints. This problem is compounded by the low levels of general economic growth and poverty which result in the forest sector receiving low priority in national policy.

4.2 Thematic Gaps

The successful implementation of sustainable forest management requires the mobilization of adequate financial resources for all key aspects or thematic areas of SFM. Table 7 provides a summary of the main thematic areas that need to be financed to achieve SFM. A review of the financial resources mobilized by African countries shows that almost all of them are not able to raise adequate resources for the forest sector from both domestic and external resources.

Table 20: Thematic Areas Requiring Finance

Initial upfront investment	Mainstreamed upfront investment	Sustained forest management financing
<p>1. Analytical work (DD drivers, barriers to SFM, PES market potential, etc.)</p> <p>2. Stakeholder participation and engagement</p> <p>3. Planning (nfp, specific national strategies such as REDD, bio-energy, forest biodiversity)</p> <p>4. Information base (resource assessment, baselines, reference scenarios)</p> <p>5. Monitoring and verification system design</p> <p>6. Safeguards and SFM guidelines development</p> <p>7. Initial capacity building</p> <p>8. Programme and project design</p>	<p>1. Implementation of policy reforms (incl. Cross-sectoral impacts on forests)</p> <p>2. Restructuring of institutions</p> <p>3. Land-use zoning, planning, and monitoring of land-use change</p> <p>4. Strengthening of forest land tenure (demarcation, titling)</p> <p>5. Strengthening of law enforcement</p> <p>6. Restoration of degraded lands and forests</p> <p>7. Strengthening of stakeholder constituencies (smallholders, forest communities, civil society, private sector)</p> <p>8. Infrastructure development</p> <p>9. Forest protection (fire, pests, diseases, etc.)</p> <p>10. Education, training, and extension</p> <p>- smallholders, communities, SMEs</p> <p>- forest managers</p> <p>11. Research and innovation (silviculture, harvesting, utilisation)</p> <p>12. Market-based and other voluntary instruments</p> <p>13 Implementation of SFM by smallholders, community forests, SMEs,</p> <p>14. Company-community/smallholder partnerships</p> <p>15. Implementation of monitoring and verification systems</p>	<p>Forest products and services</p> <p>1. Timber production</p> <p>2. Non-timber forest products production</p> <p>3. Ecotourism</p> <p>4. Other services</p> <p>PES schemes</p> <p>1. REDD payments</p> <p>2. Sink creation payments (afforestation, reforestation, forest management)</p> <p>3. Biodiversity offsets</p> <p>4. Landscape offsets</p> <p>5. Watershed conservation offsets</p>

Source: Simula, 2008

Most of the domestic public financing is directed towards supporting the public forest administrations especially the salaries and other administrative costs. Many countries also invest in the management of protected areas. However protected areas in Africa are among the lowest staffed in the world and also have poorly developed infrastructure.

An analysis of national forest sector budgets reveals that most of Government funding is employed in recurrent expenditure whilst ODA and other foreign funding are employed in programmes. *Recurrent activities* supported by Governments include Forestry Administration and Education and Extension Services related to preventing forest fires and national tree planting. Most of the recurrent budget is allocated to salaries. For example in Tanzania, estimates for the 2011/2012 budget indicate that 78% of the requested funds will be committed to the salaries budget, and 32% allocated to other unspecified uses. The five forest institutions (research and forestry training colleges) operated by Government receive an estimated 21% of the total FBK budget which is distributed among the five. Three of the institutions do not receive salaries support from the MNTR budget. In many of the countries especially in Burundi, Tanzania, Ethiopia, Eritrea, Djibouti, Rwanda, Uganda, Sudan and Zambia funding for forestry is not sufficient to carry out developmental projects such as the rehabilitation of degraded areas, reforestation, safeguarding the vulnerable natural environments, community tree growing projects, afforestation and agroforestry. Many of these end up being funded by donors as demonstrated by the 2010/11 analysis of the funding of the Forestry and Bee-keeping Division, Tanzania (Table 22) .

Table 21: Forestry and Bee Keeping Department 2010/2011 Financial Analysis of Development Project

Project Type	MNTR Contribution TzSh	Foreign Contribution TzSh	Donor	Nature of investment
Participatory Forest Management (PFM)	0	346,305,000	DANIDA	Conservation
Support to National Forest and Bee Keeping Programme (NFBK-ISP)	0	2.927,109,600	Finland	Monitoring and Conservation
National Forest Resources Monitoring and Assessments (NAFORMA)	0	1.445.050,000	FAO, FINIDA	National Biomass survey
Conservation of Biological Diversity	0	676,500,000	FAO,FINIDA	Conservation
UNDP Support Programme	0	78,000,000	UNDP	Conservation
Total	0	5,472,964,600		

Source: GOT MNRT Budget speech 2010/2011

Although the allocations to Forest Departments have increased the net value of this support remains low and inadequate. In addition, in some countries, because donor support is being channelled directly through NGOs the core government obligations (regulation, forest law enforcement, education and awareness) have remained underfunded.

Research and training in most countries is supported by external funding or by revenue generated by the institutions themselves through student fees. A few state institutions receive salaries to support the core staff whilst the main research projects of student research and training is externally financed. In Mozambique forestry research is conducted within the Agriculture Research Institute and there is more attention to agricultural research than forest research. Researchers also competitively access funds from the National Research Funds under the Ministry of Science and Technology. In Kenya, KEFRI grant receipts from government have not been consistent over the past three financial periods. Whilst the allocation grew by 12% between 2009/2010 and 2010/2011, allocations were only increased by 2.8% in 2011/2012 and 95% of the funding being allocated to recurrent expenditure.

Research funding over the past two years in Mozambique, Uganda and Tanzania appears to be driven more by the REDD readiness research agenda. The focus has been on forest resource assessments and developing methods for carbon estimation for various species. Sustainable charcoal production is also on the top of the research agenda in some of the countries in the region. Charcoal is a forest product that has received particular support in terms of economic research and sustainable production. Research related to charcoal alone can be estimated to over usd1million/yr in Zambia, Tanzania and Mozambique.

Industry research is generally weak across the region except in South Africa. Forestry South Africa Association (an association of industry players) supports industry conducted by the Industrial Forestry Research Centre. The association provides up to 80% of the ICFR funding. In 2009 FSA provided R 9.8billion for research (R8.65billion to ICFR), in 2010 provided R10.3billion (9.3 billion to ICFR). Some members also conduct own research and FSA also supports research conducted by the state.

Monitoring and evaluation is poorly supported as noted by many respondents. On a regional scale, IUCN TRAFFIC initiative monitors trade in forest resources mainly timber. At national level, monitoring and evaluation which is a key mandate of the Forest Departments is poorly supported. M&E does not appear as a budget line in the Forest Department budgets that were provided. Although national forest inventorying and tracking harvesting and utilisation in key there is no information on how much funding has been set aside under national budgets. In countries where Government has supported national forest assessments, e.g. Tanzania, the process has taken years to be concluded due to underfunding.

Other thematic areas are variously funded. Local and international NGOs (including IUCN, WWF and ICRAF) are some of the important sources of financing for policy and planning, conservation, research and community based enterprise development. For example Tanzania forest conservation Group (TFCG) in Tanzania operates on an annual budget of over \$3 million to support conservation, advocacy and community development. For WWF in Tanzania the investment towards participatory forest management, policy and research has increased from \$700,000/yr in 2006 to \$2 million/yr in

2011. In 2010, WWF in Mozambique also provided funding for a reforestation programme to reforest areas degraded through illegal logging.

The thematic areas that are least covered by domestic public financing vary from country to country. However the most common are the following:

- Initial upfront investments such as policy reform, stakeholder engagement and organization
- Analytical work such as baselines for PES schemes, land use planning
- Sustainable forest management guidelines and the associated monitoring and verification systems
- Restoration of degraded lands and forests
- Market-based and other voluntary instruments

Most governments provide funding to the other thematic areas but the main challenge is that the funding levels are well below the funding needs. An analysis of the financing gaps from external bilateral and multilateral financing sources is summarized in table 10 below.

Table 22: Summary of Main External Financing Sources and their Financing Gaps

Source	Main focal areas in forestry	Gaps
Bilateral donors	Capacity building, catalytic investments	Mainstream investments (production forests, certification, forest restoration etc)
World Bank group	Poverty reduction, sustainable development, global environmental services	Mainstream investment (production forests, certification, forest restoration)
African Development Bank	Forestry for sustainable economic development, environmental conservation	Mainstream investment (production forests, certification, forest restoration)
GEF	Agreed incremental global benefits from biodiversity, land degradation, and climate change	Investment in SFM in production forests
ITTO	Capacity building for SFM from sustainably managed forests	Mainstream investment
BioCarbon Fund (BioCF)	Afforestation and reforestation pilot projects, avoided deforestation	Mainstreaming to meet the demand in developing countries
Forest Carbon Partnership Fund (FCPF)	REDD readiness building REDD carbon emission reduction offsets	Broader capacity building beyond REDD mechanisms Upstream investment for achieving emission reduction
Strategic Climate Fund (SCF)—PPCR, Forest Investment Program	Improve climate resilience Incentives for maintaining carbon-rich ecosystems	Production forests
Clean Technology Fund (CTF)	Incentives for clean technologies (biodiversity utilisation and industry efficiency)	Forests not covered

FAO and NFP Facility	Technical assistance, support to national forest programmes	Mainstream investment production forests, certification, forest restoration
Adaptation Fund	Adaptation measures in countries that are particularly vulnerable to the adverse effects of climate	Industrial timber production Coverage will possibly include ecosystem services. Currently very few disbursements
CDM	Afforestation/reforestation offsets	Production, analytical work
Conservation funds	Biodiversity hotspots and other protected and conservation areas	Poverty, forests outside protected areas Production of timber products

The analysis shows that a considerable share of forest ODA is allocated to forest conservation, in line with the principle of supporting enhanced production of global public goods. In relative terms, sustainable forest management outside protected areas is one of the thematic areas least supported by external funding. Only a few donors are supporting forest management activities in natural tropical production forests, and their funding is clearly insufficient. This is major gap as these forests generate important public goods. Very little ODA is directed at plantation forest development and management for production purposes. This has tended to be left to the private sector and domestic public financing. However external ODA has been important in funding the establishment of protection plantations especially in the Sahelian region. The adoption of sector wide support in some countries has led to the use of ODA in a more catalytic way in most thematic areas especially initial upfront financing.

New PES mechanisms, particularly REDD, have potential to provide financing for forest conservation, but there is still uncertainty about the funding flows, and extend to which they can support other forest management activities is still unclear. In general PES schemes do not cover the requisite upfront investments in capacity building, implementation of policy reform, strengthening of governance, market creation for environmental services, etc., and their potential is also constrained by the principle of payment upon performance. In fact, the general observation is that upfront investment in policy reforms, capacity building, and other national measures necessary for the successful implementation of the NLBI are grossly insufficient.

Although numerous sources exist for forest education, research and training, and forest conservation, accessing them is often constrained by eligibility criteria and procedural issues, which act as barriers, particularly for forest communities, smallholders, and local NGOs and community-based organisations.

Private sector financing is very important especially in areas that are suited to plantation forest development and areas with commercially valuable natural forests. Unfortunately not many countries in Africa have been able to attract private sector investment in plantation forest development due to unfavourable investment conditions and natural conditions (especially in countries with low forest cover). Where private sector investment has been secured it rarely covers upfront investments, management of protected areas, forest education, policy and legislative reforms. In most of the countries, the domestic private sector in the form of small-scale enterprises is the main source of private sector funding. Most of the enterprises rely on self-financing and microfinance.

An analysis of the sustainable forest management thematic areas that benefit from access to microfinance services in the forest sector reveals that the following thematic areas are covered albeit not to the required levels:

- Afforestation and reforestation especially in plantation forestry development (e.g. out-grower schemes and plantation development funds).
- Forest restoration in arid and semi-arid areas (e.g. for charcoal production and production of NWFPs)
- Management of forest plantations under out-grower and forest development schemes such as joint forest management
- Management of productive natural forests (where there are commercial products such as timber and NWFPs) but this is very limited areas where there are community forests with secure tenure rights and high value products.
- Forest conservation is financed through community-based initiatives that contribute to community livelihoods and local economies such as ecotourism under programmes such as CAMPFIRE
- Small scale enterprises for processing timber and non-timber forest products including acquisition of appropriate technology
- Sustainable production of non-timber forest products albeit to a limited extend
- Protection of forest against fires and invasive alien species is limited to where these are direct threats to commercially valuable forest resources
- Strengthening local institutions
- Tree growing and management for voluntary carbon markets
- Stakeholder participation and engagement in forest governance,
- Participation in community/ private sector partnerships
- Certification of production forest areas e.g. certification of honey producing areas in Western Zambia

- Technology transfer
- Management for some environmental services (e.g. carbon)

From the foregoing it is clear that microfinance has immense potential to contribute to financing of sustainable forest management through stimulating private investments from low income communities. However there are key thematic areas that are not covered and require financing from other sources. These include;

- Forest research and education
- Land use planning and forest zoning
- Forest monitoring and assessments
- Capacity building
- Policy and legislative reforms
- Biodiversity conservation in protected areas
- Securing tenure for local communities and small-holder farmers
- Creation of markets
- Development of information systems
- Management of forests for some environmental services (e.g. watershed protection)
- Analytical work and stakeholder organisation for new initiatives e.g. REDD

It is important to note that microfinance can contribute to some thematic areas that have been identified as major gaps in external financing through ODA. Examples include SFM outside protected areas; SFM in tropical production forests and forest restoration especially in arid and sem arid areas with low potential for commercial timber. In this regard the development of micro-financing in sustainable forest management should be undertaken in conjunction with the development of other sources of SFM financing especially public domestic and private sector financing.

The study reveals a number of issues in the forest sector that affect the financial flows in the region. Some of the key issues and suggested interventions are summarised in table 24.

Table 23: Emerging Issues and Possible Interventions

Issues and Gaps	Recommended Intervention
Low profile and priority of forestry sector	There is need to improve valuation of all forest products and services and provide evidence of, and demonstrate contribution of forests to global and national objectives
Inefficient revenue collection systems	There is need to build the capacity of governments to develop comprehensive and effective revenue collection systems that include the informal sector
Forest Revenue Leakages:	There is need to identify and quantify all forms of leakages. Institute mechanisms to curb these leakages, enhancing the capacity of Forest Departments to monitor and account for all commercial products (timber and non-timber) harvested;
Weak law enforcement resulting in illegal activities and low revenue collection	WB and other partners to strengthen support for forest governance reforms including: Efficiency in permit systems Improving monitoring systems
Forest mapping, zoning and inventory:: Most countries region do not have up-to-date forest inventories and forest land use maps to direct investment	This is a priority area which needs to be addressed to direct forest development and investments in the region
Limited Access to finance and credit lines for the private sector and SMFEs	There is need to support local banks and other financing institutions in developing appropriate financial services and products for the forest sector in the region to boost private sector investment
Limited financial support to Smallholder and community forestry support	There is need to support the development of SMFEs and local community institutions responsible for forest management and to develop encourage finance institutions to develop appropriate financing products and services for this sector
Inadequate capacity to take advantage of PES	There is need to invest in capacity building to enable countries to harness the potential in PES. This should include capacity in writing proposal to access finance from existing funds and mechanisms such as CDM, GEF, and the World Banks climate Investment funds, and v.
Insecure tenure and disruptive land	There is need to support countries in the region develop

reforms	progressive land reform policies and developing different models for the forest sector and facilitating information exchange and experience sharing between countries to improve investor confidence and security of tenure for both local and foreign investors
Weak business support and forest service provision to SMFEs	There is need to support development and strengthening of local private sector, and creation of SMFEs that provide support services to the growing numbers of small-scale forestry producers in the region.
NTFPs contribution to forest revenues not accounted for	Support research in valuation of NTFPs and institute mechanisms for accounting for economic value at national level
Local investors, large, small and medium scale have limited access to capital. There are no long term financing mechanisms and limited opportunities for local private sector to joint venture with large foreign investors	<p>Assist governments to pursue finance sector engagement as a part of investment drive.</p> <p>Engage Regional banks and Multilateral finance institutions to help provide capital local banks and microfinance institutions for application</p> <p>Establish partnerships between international banks and local banks to provide loan guarantee funding</p>

Opportunities

1. A growing middle class in many African countries that is looking for investment opportunities. With proper organisation of the forestry sector and appropriate incentives this could be harnessed to increase domestic private sector investment
2. Growing role of smallholder farmers and community based forest producer groups (CBFGs): Most forested lands in the region are under the control of smallholder farmers. Many countries in the region have adopted and are institutionalising Community based forest management. The associated CBFGs have the capacity to increase their contribution to forestry development. There is clear evidence that with little support and improved security of tenure smallholder farmers can mobilise massive investment into forestry especially plantations and trees outside forests
3. Growth in the micro-finance sector: The rapid expansion of microfinance institutions and services in the region provide an opportunity for increasing access to financial resources for the smallholder sector. What needs to be done is to facilitate the development of appropriate financial products and services that are suited to the forest sector and needs of smallholder farmers and SMFEs

4. Growth of mobile phone usage: Africa is experiencing a rapid growth in mobile phone access and usage. This has dramatically improved communication and access to information especially to small holder farmers. Related innovations such as mobile banking have also improved access to financial services for the smallholder sector
5. Growing demand for forestry products especially construction materials in the region. This provides a strong ready market for forestry products
6. Growth of both domestic and international markets for non-timber forest products. This is providing a market and investment opportunity especially in low forest cover countries
7. The African landscape is increasingly becoming a mosaic of patches of intact forests interspersed with farms with trees. Forests continue to be lost, but more trees continue to surface on farms. The potential for smallholder farmers in increasing investments in trees and forests is seen as rising fast. Income from carbon trade will provide an additional incentive if properly harnessed.
8. Carbon finance: There is a growing range of financing mechanisms that the region could take advantage of provided the issues of capacity and creation of an enabling investment climate are addressed
9. PES other than carbon: The growing urbanisation in most African countries provides an opportunity for development of PES mechanisms especially for watershed services. However governments need to invest in the development of this sector and create enabling conditions

Chapter 5: Trends and Implications of New and Emerging Forest-Related Financing Initiatives

5.1 Introduction

While conventional funding from both the public and private sectors is critical for sustainable forest management in Africa, it is clear that the resources generated from these sources are currently insufficient and relatively small compared to the needs. Efforts have been made to identify and develop new and innovative financing mechanisms for raising new and additional financial resources for supporting sustainable forest management. Most of the new and innovative mechanisms that have been developed to-date have been related to climate change and carbon markets. The extent to which some of the innovative financing mechanisms have or are contributing to mobilisation of financial resources for sustainable forest management in Africa is reviewed in the sections below.

5.2 Climate financing

Fighting climate change is one of the biggest challenges facing humanity today which requires concerted effort and participation of both developed and developing countries. However financial support to developing countries for adaptation, mitigation, technology development and transfer and capacity building to ensure effective participation and contribution by developing countries. Africa is in a particularly vulnerable position and is projected to be adversely impacted by the projected climate changes partly due to high poverty levels and weak institutional capacity to deal with the effects of the projected changes. In particular Africa still needs to develop and stimulate effective demand for adaptation and mitigations funds. The majority of countries in Africa still need to strengthen their financial and governance frameworks to be able to attract and manage adequate funds required to address the climate change challenges.

Climate financing is crucial for not only helping developing countries adapt to climate variability and change, but also to mitigate the effects of climate change through major reductions of greenhouse gases (GHG) emissions and securing a low carbon development future. The UNFCCC and the Kyoto Protocol recognise the need to provide financial and technical assistance to enable developing countries to cope with and manage climate variability and change. In this regard there have been several estimates of the financial resources required by developing countries The World Bank (2006) estimated that \$10-20 billion would be required in 2020, whilst Oxfam (2007) put the estimate at \$50 billion per year in 2015 and UNDP (2007) estimated \$86 billion per year in 2015. The UNFCCC recently estimated that about \$200-2010 billion would be a year by 2030 and \$75 billion will be required in developing countries. During the Copenhagen meeting in 2010, it was estimated that \$100billion per year would be required in 2030. Whilst the accuracy of the individual estimates may be questioned, they serve to demonstrate the magnitude of the resources required to help developing countries cope with climate change as well as contribute to mitigation.

A recent study by CPI (2011) of the global finance landscape suggests that \$97 billion per annum of climate finance is currently being provided to support low-carbon, climate-resilient development activities. Out of this \$55 billion is provided by the private sector, while at least \$21 billion is provided by public budgets. Private funding is in the form of direct equity and debt investments, to which bilateral and multilateral agencies and banks also contribute another \$20

billion by leveraging the public funding they receive. A relatively small share (less than \$3 billion) is provided by carbon markets and voluntary philanthropic contributions. Carbon finance currently plays a small role accounting for \$2 billion out of the \$97 billion. This is in contrast with the high expectations from this market following establishment of the Kyoto protocol and the Clean development Mechanism. The large majority of climate finance (USD 93 billion out of USD 97 billion) is used for mitigation measures with only a very small share going to adaptation efforts. Adaptation receives USD 4.4 billion. Adaptation is predominantly financed through bilateral institutions (\$3.6 billion out of \$4.4 billion), followed by multilateral institutions (\$ 475 million) and voluntary / philanthropy (\$210 million). A relatively small share (\$65 million) is provided by dedicated funds. This is of major concern to Africa as the majority of countries are low forest cover countries that require more adaptation support than mitigation support given climate change impacts predictions that show that Africa will be the most vulnerable continent.

Climate finance sources and mechanisms

The high level of global concern about climate change has resulted in forests attracting a great deal of attention because of their potential contribution to both climate change mitigation and adaptation. In particular, payment for carbon sequestration to mitigate climate change is one of the fastest growing environmental services markets. Under the Kyoto protocol, three mechanisms were created, namely the protocol's Clean Development Mechanism (CDM), joint implementation and emission trading. Carbon markets comprise the compliance or voluntary markets and the mandatory or regulated markets under the Kyoto protocol.. The three major mandatory markets for carbon offsets are the Kyoto Protocol's Clean Development Mechanism (CDM) and the Emission Trading Schemes (ETS) and Joint implementation (JI). The carbon market's total value for 2008 was estimated at US\$125 billion, almost double what it was in 2007. The total market value increased to about \$150 billion in 2010 (Makundi, 2011).The voluntary carbon markets, where a sizeable share comes from forests, also doubled in terms of emissions traded (65 million tonnes of carbon dioxide equivalent)) and tripled in terms of value to \$331million in 2007 (FAO 2009). There was a slight decline in the total carbon market value between 2009 (\$150 billion) and 2010 (\$142 billion) due to the global financial crisis.

Clean Development Mechanism (CDM)

The CDM allows developed countries to fulfil their commitments to reduce emissions through emission reduction or carbon fixation projects in developing countries. The main aim of CDM forest projects (restricted to afforestation/reforestation projects) is the capture of CO₂ from the atmosphere by establishing forest plantations or regenerating natural vegetation. However, natural forests are not yet included in this mechanism. The CDM regulations require a very high performance level, the application of sophisticated systems to measure and monitor the carbon captured in plantations, the demonstration of additionality and control of possible leaks. These are complicated requirements and procedures that are an obstacle particularly to developing countries.. Three problems have made CDM financing cumbersome in forestry:

- (i) There is a delay of two or more years in getting CDM projects approved,
- (ii) Transaction costs are so high that smaller projects are not viable, and

- (iii) Particular characteristics of forestry projects related to additionality, leakage, and permanence hinder forest CDM project approval.

By the end of 2009 there were only nine A/R CDM projects registered. Only two of these were in Africa and these are the Nile Basin Reforestation Project in Uganda and the Humbo assisted regeneration project in Ethiopia. Uganda's Nile Basin Reforestation Project became the first carbon credit venture of its type in Africa to achieve registration under CDM. The Nile Basin project involves establishment of forest plantations of a mix of pine and native species grown on previously cleared, degraded grassland in the Rwoho Central Forest Reserve (Box 14). It has five small-scale projects in a cluster covering 2100 hectares and is implemented by Uganda's National Forest Authority and financed through the World Bank's Bio-Carbon Fund. The successful registration of the Nile Basin project represented the overcoming of long-standing difficulties in achieving certification for afforestation and reforestation (A/R) projects in the CDM as well as the institutional obstacles that had hitherto seen a very slow uptake of the CDM in Africa in any project type. Africa accounted for just 2.4 per cent of the 4670 projects in the CDM pipeline, according to UNEP (2008). As at March, 2009, there were 12 AR/CDM projects approved, or in the pipeline, with five of these from African countries (DRC, Ethiopia, Mali, Tanzania and Uganda).

In general, Africa's share of the carbon market remains low and its growth remains sluggish. Without simplification of the application procedures and strengthening the capacity of African countries in how to make use of the mechanism, the level of accessing resources through the CDM is going to remain low. Furthermore, despite a strong potential supply of afforestation/reforestation (A/R) credits, the CDM has been slow in mobilising it. In terms of the future the potential for A/R CDM projects in Africa is very high. This is mainly due to the availability of degraded land that is suitable and eligible for A/R under the CDM and REDD+. It is estimated that at least 200million ha is available for A/R in Africa (Makundi, 2011). There are many barriers to realising the potential of A/R CDM in Africa and these include:

- Political instability
- High transaction costs, estimated at \$200,000 per project
- Temporary nature of credits (tCERs & ICERs) are unattractive to buyers since they expire and must be replenished.
- Limited number of buyers due to exclusion of A/R CERs from the largest buyer EU ETS
- Uncertainty (Social and Legal) – uncertain tenurial arrangements and community participation.
- Lack of national policy, strategy and guidelines for participation in carbon markets
- Lack of financing from local bank
- Lack of insurance for carbon project

It is important to give emphasis to addressing these barriers in order to improve Africa's participation in climate change mitigation and increase financial resources mobilisation for sustainable forest management and related livelihood activities. Attempts to remove the barriers of complex procedures that result in high transaction costs have been made by introducing the small-scale CDM and the pragmatic CDM which use simplified procedures. However the impact on Africa

has been minimal as the continent accounts for about 1% of the projects under these programmes.

Global Environment facility (GEF)

GEF is the operating entity of the UNFCCC financing mechanism since 1995. The **GEF Trust Fund** has been the main source (97.9%) for grants for environmental projects (GEF, 2010). The fund is mainly focussed on mitigation but has provided very limited support to Africa especially in the forestry sector. The major reasons for this include cumbersome administrative and disbursement procedures. The GEF also hosts two other funds namely the **Least Developed Countries Fund (LDCF)** and the **Special Climate Change Fund (SCCF)** that were established in 2001. The LDCF was established to help LDCs adapt to climate change by supporting design and implementation of National Adaptation Programmes of Action (NAPAs). The SCCF supports a range of climate change activities with priority being given to adaptation. Both funds are replenished through voluntary pledges and contributions by donor countries. This has raised concern of predictability and sustainability of the funds. The main thematic areas supported by the GEF funds include development or review of policies and the institutional framework; demonstration activities and scaling up activities. Africa has accounts for more than 50% of the disbursements from both funds. There is no specific information of support to forestry but to forest related activities.

Adaptation Fund (AF)

This is financed by 2% levy on certified emission reductions (CERs) issued under Clean Development Mechanism. The fund uses a direct access modality where parties to the Kyoto Protocol nominate a national organisation to be a national implementing entity (NIE). However the NIE has to pass an accreditation assessment before they can apply for adaptation projects. The accreditation is based on meeting fiduciary related to financial integrity, institutional capacity, transparency and self-investigative powers. This process is cumbersome and to-date only three countries from Africa (Benin, Senegal and South Africa) have been accredited. Only Eritrea (through UNDP) and Senegal have been funded by the AF. The major concern with this fund is that it is tied to the existence and performance of the CDM. To date the contribution of this fund to forestry financing has been negligible.

Climate Investment Funds

The World Bank, in partnership with the other multilateral development banks and other stakeholders, has developed measures to scale up assistance to developing countries in the mitigation of, and adaptation to, climate change by creating two large climate investment funds (CIFs), which would be new and additional to existing ODA flows.

Strategic Climate Fund (SCF)

The first is the **Strategic Climate Fund (SCF)**, which is designed to channel new and additional financing for addressing climate change through targeted programmes. The SCF, which has disbursed about \$1.8 billion worldwide and about \$700 million in Africa, provides incentives to maintain, restore, and enhance carbon-rich natural ecosystems to prevent these carbon sinks from becoming emission sources and to enhance all the services they provide, including climate resilience

or adaptive capacity. In addition the SCF finances piloting of new development approaches and scaling up activities aimed at a specific climate-change challenge or sectoral response through targeted programmes.

Under the Pilot Programme for Climate Resilience (PPCR) to pilot national-level actions for climate resilience in a few highly vulnerable countries will be supported. In Africa, DRC, Mozambique, and Zambia were recently allocated \$444 million, \$102million and \$110million respectively under the programme whilst Niger’s approval has also been approved (Table 25).

Table 24: Projects and Programs Funded by PPCR in Africa

Country	Projects and Programs	PPCR Funding (in US\$ million)	Co-financing (in US\$ million)
Mozambique	SPCR prepared and approved	50 in grant funding and 52 in other concessional resources	
	Introducing climate-resilience into the design and management of Mozambique’s unpaved roads.	20	15
	Coastal cities and climate change	20	40
	Climate-resilient water enables growth : transforming the hydro-meteorological services	10	5
	Sustainable land and water resources management	20	20
	Enhancing climate resilience agricultural production and food security	20	25
	Developing climate resilience in the agriculture and peri-urban water sectors through provision of credit lines from Mozambique banks	5	5
	Developing community resilience through private sector engagement in forest management, sustainable timber harvesting and /or tourism. Options include forest areas in Niassa, Gorongosa and central Mozambique	5	19
	Program management and technical assistance	2	1.5
	Climate change policy lending		100 million
Niger	SPCR prepared and approved	50 in grant resources and 60 in concessional Loans	

	Improvement of climate forecasting systems and operationalization of early warning systems	25	31.50
	Sustainable management and control of water resources	15	59
	Community action project for climate resilience	70	34.67
Zambia	SPCR prepared and approved	50 in grant funding and 60 in other concessional resources	
	Strengthening climate resilience in Zambia/Barotse	50	105
	Strengthening climate resilience in Kafue River Basin	45	171.8
	Private sector support to climate resilience	15	40.5

The SCF has a holistic approach to climate change mitigation and adaptation that is particularly relevant in the forestry sector because of its diverse opportunities to contribute to the SCF objectives (Climate fundsupdate.org, 2010). One of the concerns of the SCF is that most of the funds are given in the form of concessional loans rather grants. In particular civil society organisations are concerned that the loan approach violates the principle of “common but differentiated responsibilities.

Forest Investment Programme (FIP)

The main forestry targeted programme of the SCF is the Forest Investment Program (FIP). The main objective of the FIP is to support developing countries with their REDD efforts by providing up-front bridge financing for readiness reforms and investments identified through national REDD readiness strategy building efforts. The FIP finances efforts to address the underlying causes of deforestation and forest degradation and to overcome barriers that have hindered past efforts to do so (World Bank, 2008).

By December, 2010 The FIP had pledges of \$578million with \$262million already deposited. While no funds have been disbursed yet, the FIP sub-committee has approved programmes in eight countries worldwide that include three from the African region (Burkina Faso, DRC and Ghana). In addition, the FIP could be a financing channel for countries that cannot have access to REDD mechanisms, but have substantial potential for generating combined mitigation and adaptation benefits through restoration and sustainable management of degraded lands, forests, and watersheds As part of the FIP, the AfDB has supported the Republic of Congo, the Democratic Republic of the Congo (DRC), Burkina Faso (Box 12) and Ghana are preparing their national REDD+ strategies.

Box 12: Burkina Faso: An example of REDD+ in dry woodlands

Burkina Faso is one of the countries selected by the FIP, because of its involvement in improving a sector (forestry) which provides a means of livelihood for a large part of the population. The country is endowed with savanna and dry forests that are representative of resources on which many people in West Africa depend for their livelihoods. This initiative is aimed at demonstrating that the FIP was not designed to serve forest rich countries only. The experience from Burkina Faso will produce key lessons (in terms of MRV methodology, legislation, community-based management of forests, involvement of the private sector and civil society) to be replicated in ecologically similar countries (covering all the Sahelian belts in Western, Central and Eastern Africa, as well in other dry and semi-arid areas around the world). The Burkina investment plan was developed through an inclusive process led by the Government, represented by the Ministry of Environment and Sustainable Development (MEDD), with the assistance of the World Bank and the African Development Bank. The consultative process took place through several workshops and meetings attended by representatives of all main national stakeholders (ministerial departments, local governments, civil society, private sector, development partners, etc.). This led to a participatory identification of the main priorities for the FIP in Burkina Faso and definition of investment projects as well as the institutional arrangements for timely and efficient implementation of the investment plan. Its objectives will be achieved through providing support to policies, incentives and investment activities which will result in reduced deforestation and loss of woodlands (especially village forests and woodlands). Its major transformational outcomes will be, among others, the improvement of the livelihoods of people dependent on forests and woodlands, improvements in the enabling environment conducive to sustainable forest management, and reliable access to financial resources for improved forest management.

Burkina Faso, 2011.

Programme for Scaling up Renewable (SREP)

The other programme under the SCF is the Programme for Scaling up Renewable (SREP) in low income countries. The SREP operates in six pilot countries, with three of these (Ethiopia, Kenya and Mali) in Africa. The fund supports preparation of investment plans in the pilot countries. Some of these include forestry activities but to-date no forestry projects have been supported in Africa..

Clean Technology Fund

The Clean Technology Fund (CTF), which is targeted at, *inter alia*, providing positive incentives for the demonstration of low carbon development and GHG mitigation; promoting scaled-up deployment, diffusion, and transfer of clean technologies; and promoting realisation of environmental and social co-benefits of low-carbon technologies. The CTF's country-specific programmes involve both the private and public sectors, and they complement GEF and link with the capacity-building programmes of the United Nations Environment Programme (UNEP) and the United Nations Development Programme (UNDP). The CTF's grant financing can cover additional costs necessary to make projects viable and will be supplemented by concessional loans and risk mitigation instruments, such as guarantees. With regard to the forestry sector, investments in bio-energy and improvement of the forest industry's energy efficiency and management fall under the CTF. However to date there are no projects funded as yet in eastern and southern Africa.

Voluntary Carbon Markets

The open or voluntary carbon market, which preceded the regulated market, currently provides an important carbon market especially for small scale traders. In the voluntary market, forest projects are promoted that focus on;

- (i) carbon capture and storage by establishing planted forests and enriching and/or managing natural forests, and
- (ii) promotion of the conservation of natural forests to avoid the CO₂ emissions caused by deforestation (avoided deforestation).

Various carbon fixation projects, especially forest plantations, are now being implemented in the voluntary market. By using periodic direct payments, these arrangements work very similarly to traditional incentives that subsidize the establishment of plantations. One difference from subsidies lies in the requirement that the plantations be permanent and in the huge body of rules concerning project formulation and monitoring. On the other hand, payment is usually made in the first years after planting. The payment of carbon fixation certificates is made after the fifth year, and every five years from then on, on the accumulated “stock” or the equivalent of metric tons of CO₂.

The voluntary market for carbon credits grew to US\$331 million in 2007 or more than three-fold the 2006 level. The voluntary over-the-counter markets are currently have a higher proportion of forestry-based credits out of total market transactions than the CDM (36% for over the counter vs. 1% for CDM). The voluntary markets seem to be particularly favourable for smaller off-set projects (Hamilton et al. 2008). This indicates that in spite of small volumes, there is a significant forest carbon offset demand that cannot be channelled through the regulated market and is therefore traded in the voluntary market. However, the high cost of evaluation by certifying bodies and the relatively lower price (about \$5/tCO₂e in 2009) of captured carbon on international markets mean that the possible benefit of these projects remains very low.

In general, fewer forestry based carbon projects have been located in Africa than in the other developing regions of the world (Nanasta, 2007). Africa’s share of the Voluntary market was only 2% in 2007. This is despite the serious concern about the relatively low levels of carbon offset investments in Africa expressed by the UNFCCC secretariat in Bali, 2007 and the need to initiate more projects in the region. Even within Africa, the distribution of carbon sequestration projects is skewed, with east Africa receiving the most carbon investments. For example, the International Small Group and Tree Planting Program (TIST) has been supporting forestry projects in Kenya, Tanzania and Uganda, and only one in southern Africa. Community development-oriented carbon sequestration projects can provide significant economic benefits to local communities in the form of cash incomes as well as through access to NTFPs generated through forestry activities. For example, in the Nhambita Community Carbon Project in Mozambique (Box 13), local households receive a cash payment of US\$242.60 per ha over seven years for carbon sequestered on their farms. This represents a significant increase in cash incomes for most poor households and addresses their felt need of a regular cash source. Some of the projects linked to the voluntary carbon markets in Africa are shown in Annex---

Box 13: Miombo Community Land Use and Carbon Management – Nhambita Pilot Project

Nhambita is a small community located near Gorongosa National park in the Sofala province of Mozambique. The Miombo Community Land-Use and Carbon Management aims to develop forestry and land-use practices that promote sustainable rural livelihoods in partnership with rural communities in a way that raises living standards and to assess the potential of these activities to generate verifiable carbon emission reductions. The project was launched in 2003 as collaboration between the environmental company Enviro-trade Ltd. and the University of Edinburgh. The project is supported by the European Commission. The project is a collaborative effort between several different organisations which include, the University of Edinburgh, the Edinburgh Centre for Carbon Management, Envirotrade (UK), International Centre for Research in Agroforestry (Kenya), and the Park Administration of the Gorongosa National Park (Mozambique).

Local farmers and forest communities manage the planting and growth of trees in return for proceeds from the sale of carbon offsets to customers in the developed world using the Plan Vivo methodology developed by the Edinburgh Centre for Carbon Management. The Plan Vivo is a carbon management system that was developed for small farmers under the Scolel Te Project in Mexico in 1996. The Plan Vivo is a Trust Fund, which provides technical and financial assistance to local farmers to take up forestry/agroforestry activities and then on their behalf, sell carbon offsets that are generated.

By May 2007, the project had planted 230,000 trees as a combination of agroforestry and woodland restoration, and has over 500 farmers involved who have benefited from the payments and have been encouraged to become involved in other micro-finance initiatives, such as beekeeping and carpentry using miombo tree species planted by the project. The project will pay US\$ 242.60 per hectare to farmers who agree to undertake carbon sequestration activities on their farms, such as planting of trees, promoting agroforestry etc. The project will also pay US\$ 40.50 per hectare to a community fund on the basis of the number of hectares that are brought under carbon sequestration.

The Mozambique Carbon Livelihoods Trust (MCLT) was launched in 2007 to ensure that the community's and individual farmers' proceeds of carbon offset sales from Carbon Livelihoods projects were safeguarded. Approximately one third of the proceeds of any carbon sale goes directly to this fund and are paid out to individual farmers over seven years and other payments are reserved for forest management and conservation activities.

Source Marunda and Henri-Bouda, 2010

Reduced Emissions from Deforestation and Forest Degradation (REDD)

Deforestation and forest degradation are major sources of carbon emissions and are estimated to contribute nearly 17% of global emissions of greenhouse gases (Stern, 2006). Tackling these problems is therefore a critical component of the strategy for addressing climate change. One reason why they have attracted so much interest is that it has been estimated that reducing emissions from forests could be highly cost-effective, in comparison with reducing emissions from transport or industry, for example. The Stern report (2006) indicated that avoiding deforestation would be among the lowest-cost mitigation options to avoid increasing CO₂ emissions and possibly also increasing sinks. In addition, reducing deforestation could bring other environmental benefits, for example the conservation of biodiversity and maintenance of soils and water quality, as well as having significant benefits for the millions of people who depend on forests for their livelihoods. Through carbon revenue, prospects for the economic viability of SFM in natural tropical forests are expected to substantially improve because at least part of the ecosystem services that these forests provide could be remunerated and this is the essence of REDD+. Meeting such a broad range of interests will, however be a challenge. Implementation of REDD+ is still in its infancy with most of

the activities focussed on REDD readiness. This is being spearheaded by UN agencies (FAO, UNDP and UNEP), under the UN-REDD programme and REDD pilot projects supported by multilateral development banks led by the World Bank.

UN-REDD

The focus on REDD has resulted in many initiatives that are going to bring with them a range of challenges including coordination and harmonization and demands for upfront financing to build the capacity of developing countries to be able to implement the REDD initiatives. It is in this regard that FAO, UNDP, and UNEP have developed and launched the joint UN-REDD Programme in developing countries, building on their agency-specific comparative strengths (FAO/UNDP/UNEP 2008). The focus of the programme among other issues is to

- Facilitate partnerships and contribute to coordination and mainstreaming of in-country efforts.
- Assist developing countries to prepare and implement national REDD strategies and mechanisms
- Support the development of normative solutions and standardized approaches for a REDD instrument linked with the UNFCCC.

The programme is now working with 42 participating countries out of which 14 are receiving direct financial support to national programmes whilst the rest are partner countries. African countries receiving support to national programmes are the Democratic Republic of Congo, Nigeria, Tanzania, and Zambia. The partner countries from Africa are Benin, Cameroon, Central African Republic, Coted' Ivore, Ethiopia, Gabon, Ghana, Republic of Congo, Kenya, South Sudan and Sudan. To date the 14 UN-REDD Programme partner countries have presented National Programmes to the Policy Board and have been allocated a total of US\$59.3 million in funding. The UN-REDD Programme continues to pursue additional funding options that will enable the Programme to expand its financial support on REDD+ to more partner countries in the future. Norway has donated US\$35 million to the initiative to assist in initial capacity building.

Forest Carbon Partnership Facility (World Bank)

The World Bank has contributed to the development of REDD financing through the establishment of the Forest Carbon Partnership Facility (FCPF). The purpose of the facility is to assist developing countries in their efforts to reduce emissions from deforestation and degradation and to build capacity for REDD activities. The FCPF is also supporting a programme of performance-based incentive payments in developing tropical and sub-tropical pilot countries (including DRC, Gabon, Ghana, Kenya, and Liberia). The objective is to create an enabling environment and a body of knowledge and experience that can facilitate the development of a much larger global programme of incentives for REDD over the medium term (5–10 years). The FCPF has two elements:

(261) **The Readiness Fund** will build up specific capacity in participating countries to implement REDD schemes. This will include, inter alia,

- Assessing historical emissions from deforestation and degradation;

- Projecting emissions from deforestation and degradation into the future, using a national reference scenario;
- Preparing a national REDD strategy, with proposals for policy and regulatory changes and specific actions to achieve the planned emission reductions in the form of development programmes or the like, as well as design of mechanisms for distribution of benefits; and
- Establishing a monitoring and verification system for emissions.

Thirty-seven REDD countries (14 in Africa) have been selected in the partnership. Thirteen of these countries including the Democratic Republic of Congo, Kenya, and Tanzania have so far submitted Readiness Preparation Proposals (R-PPs). The World Bank is conducting due diligence on these proposals with a view to entering into readiness grant agreements of up to \$3.6 million to assist these countries conduct the preparatory work they have proposed (except Tanzania, which has access to other funding). One of the countries that is in the process of finalising its REDD strategy is Mozambique (Box 14)

Box 14: Mozambique: Getting ready for REDD

Mozambique is one of the few countries in southern Africa that still has a considerable area of natural forests, mainly miombo woodlands. The total forest cover is estimated at 40million ha or 51% of the country. These forests have lower carbon stocks per ha but cover large areas. In 2008 Mozambique submitted a Readiness Plan Idea Note to the FCPF and has since prepared a draft REDD+ strategy. A key feature of the Mozambican REDD strategy is the pro-poor approach which the government has adopted to ensure enhanced benefits to rural communities who are dependent on agriculture and natural resources for their livelihoods.

In August 2010 the Japanese cooperation provided financial and technical support for REDD+ readiness. In addition there is also a technical project on REDD+ MRV (monitoring reporting and verification) and reference levels, including provision of satellite imagery and GIS facilities to be undertaken during the period 2011-2014. The other major REDD initiative is the South-South cooperation programme with a Brazilian institution (FAS) on strategy development support. REDD+ projects are also emerging on the ground in addition to the on-going carbon projects by Envirotrade in Sofala and Cabo Delgado provinces. New pilot initiatives e.g. by MCI, are also now under way.

(2) **The Carbon Fund** will support a few countries that will have successfully participated in the Readiness Mechanism to finance performance based payments for REDD policies and measures as an incentive to these countries and their various stakeholders to achieve long-term sustainability in financing forest conservation and management efforts. The Carbon Fund will deliver emission reductions based on evidence that the projected volumes have been realized and verified as per methodologies deemed acceptable by the FCPF participants.

Sixteen financial contributors (Agence Française de Développement, Australia, British Petroleum, Canada, CDC Climat, Denmark, the European Union, Finland, Germany, Italy, Japan, The Nature Conservancy, the Netherlands, Norway, Spain, Switzerland, the United Kingdom and the United States) have pledged about \$447 million to the FCPF (\$232 million to the Readiness Fund and \$215 million to the Carbon Fund). Several African projects have been funded under the FCPF and examples are given in table 26 below (World Bank, 2010) and box 15.

Table 25: Selected FCPF Funded Projects in Africa

Country	Project	ER tCO2e	Project type	Carbon fund	Description
DRC	Ibi Bateke Carbon sink Plantation	210 863	Afforestation	Biocarbon Fund Tranche 2	Convert grassy savanna into plantations for production of charcoal and carbon sequestration. Reductions come from stopping of fires and switch to non-fossil fuel
Ethiopia	Humbo assisted regeneration	165000	Reforestation	Bio-Carbon Fund	Restore 2428ha of natural forest with farmer managed regeneration techniques
Kenya	Green Belt Movement	375000	Reforestation	Bio-Carbon Fund	Pay community forest associations to reforest 4000ha of degraded public and private land
Madagascar	Ankenyheny-Zahamena-Mantadia Biodiversity Conservation corridor and restoration project	200000=430000 REDD	Reforestation	Biocarbon Fund	Restore forest corridors linking fragmented habitats; establish sustainable fruit gardens and pilot avoided deforestation
Mali	Acacia Senegal plantation project	190 000	Reforestation	Bio-carbon fund	Develop 6000h of degraded dry forest into acacia plantations, intercropped with

					cultivated agricultural crops
Niger	Acacia Senegal plantation project	500000	Reforestation	Bio-Carbon fund	Develop 22800ha of acacia plantations on degraded land managed by local communities, intercropping with groundnuts and cowpeas.
Uganda	Nile Basin reforestation	261 211	Reforestation	Bio-Carbon fund	Establish 2000ha of pine and mixed native species plantation

There are also other REDD+ projects in the Congo Basin, such as the Geographically Integrated Eco-Makala pilot project in DRC, that are funded by the Congo Basin Forest Fund (CBFF). Some examples of REDD projects in Africa are presented in Annex 3.

Box 15: Nile Basin project- Rohwo Central Forest Reserve.

To increase carbon sequestration through pine plantations mixed with indigenous spp. Planted on grasslands. The project covers 2137ha. National Forest authority is the lead Agency. Main participants are NFA, WB Bio-carbon Fund, Local communities, DNA. BCF signed the emissions reduction purchase agreement in 2006 but benefits are not expected until after five years. Project was conceived in 2004. The BCF has committed to by the CERs (261 221) at \$4.15 per tCO₂e. 79% of the proceeds from the CERs will be shared between the NFA and communities whilst the rest (21%) will go to the BCF to cover the initial project preparation costs. The actual proportion that will go to the communities is not specified although this is dependent on area planted. So far the community have been allocated to plant 20% (427ha) of the total area. Key challenge is that both NFA and the communities are facing difficulties to mobilise adequate financial resources for plantation establishment due to the high establishment costs (\$\$697/ha for first 3 years).In fact, at this cost the establishment and management costs are higher (\$1 489489) than the income expected from the sale of CERs (\$1084025) to the WB. For their part communities are expected to invest \$297619 upfront in return for \$216805.00.

In addition to the multilateral supported initiatives, there are several REDD pilot initiatives that are being supported through bilateral institutions NGOs and other funders. One of the major funders is the Norwegian government which is supporting REDD readiness activities in several countries notably Brazil, Indonesia and Tanzania. As a result of this financial support, the country has developed a National REDD strategy which provides a framework for participation by different actors including communities and NGOs. Many REDD pilot projects have been initiated in the country (Table 27).

Table 26: Tanzania REDD Projects

Project	Implementing organisation	Investment
Advancing REDD in the Kondoa Irangi Hills Forests	African Wildlife Foundation (AWF)	US\$2.3 million; 3 year project; 22000ha
Hifadhi ya Misitu ya Asili (HIMA) Piloting REDD in Zanzibar through Community Forest Management	CARE Tanzania	\$5.5 million; 4year project
Building REDD Readiness in the Masito Ugalla Ecosystem Pilot Area in Support of Tanzania's National REDD Strategy	Jane Goodall Institute (JGI)	\$2.8 million;3 year prject;70000ha; sequestering 55000MTeCO2
Combining REDD, PFM and FSC Certification in South-Eastern Tanzania	Mpingo Conservation and Development Initiative (MCDI)	\$1.9million;4 year project; 50000ha;sequestering 50000MteCO2;18000 beneficiaries
Making REDD Work for Communities and Forest Conservation in Tanzania	Tanzania Forest Conservation Group (TFCG) and Community Forest Conservation Network of Tanzania (MJUMITA)	\$5.9million;5 year project; 215000ha;51000 beneficiaries
Community-Based REDD Mechanisms for Sustainable Forest Management in Semi-Arid Areas	Tanzania Traditional Energy Development and Environment Organization (TaTEDO)	\$2.1million; 4 years; 2500ha;6000beneficiaries; 108285MteCO2
REDD Readiness in Southwest Tanzania	Wildlife Conservation Society (WCS)	\$1.2million; 4years;52680ha; 50000 beneficiaries
Piloting REDD in the Pugu and Kazimzumbwi Forests Hifadhi Mapafu ya Dar es Salaam (HIMADA)	Wildlife Conservation Society of Tanzania (WCST)	\$3.9million;4 year project; 7272ha
Enhancing Tanzanian Capacity to Deliver Short and Long Term Dataon Forest Carbon Stocks across the Country	WWF (World Wide Fund for Nature)	\$1.9million; 3 year; National MRV system

Source: Tanzania Natural Resources Forum, 2011

The Voluntary carbon markets are also tapping into carbon credits from reduced emissions from deforestation and forest degradation (REDD). The first project to sell carbon credits from REDD in Africa is the Kasigau Wildlife Corridor project south east Kenya (Box 16).

Box 16: Kasigau REDD project: First VCS REDD credits in Africa

This project is being implemented by Wildlife Works Carbon LLC, Kenya Wildlife Service and a Community Group of landowners (who own group ranches), who are the owners of the carbon credits derived from the Reduced Emissions from Deforestation and Degradation (REDD) project in SE Kenya in an area of wilderness known as the Kasigau Wildlife Corridor. The Kasigau Wildlife Corridor covers more than 200 000ha between Tsavo East and Tsavo West National Parks. The objective of the project is to protect in perpetuity dryland forests that form a wildlife migration corridor between Tsavo East and Tsavo West National Parks, to conserve the important biodiversity found in the forests, to provide alternative sustainable development opportunities for the local communities that live adjacent to the forests and to prevent the GHG Emissions that would otherwise occur were those dryland forests to be converted to subsistence agriculture using the Slash and Burn methods typical to this area of Kenya. The project, now in Phase 2 is expected to prevent the *gross* emission of over 49,000,000 tonnes of CO₂e over a 30 year crediting period by preventing any further deforestation of the project area and surroundings.

For the first verification period, the project avoided over a million tonnes of CO₂e across the Carbon Pools of above and belowground biomass, as well as soil carbon. The project was first to issue forestry credits under a program known as Reduced Emissions from Deforestation and Degradation, or REDD. It was validated and verified under the Verified Carbon Standard, or VCS, and the Climate, Community and Biodiversity Standard. South Africa's [Nedbank Group Ltd. \(NED\)](#) received credits from the first batch of Kasigau credits to offset its own emissions and to sell on. [BNP Paribas \(BNP\)](#) SA provided initial support, buying an option for 1.25 million tons over five years and exercising the option in the first year for 250,000 tons.

The project has initiated several alternative livelihood activities. One of these is an organic clothing factory called Eco-factory, which employs young women from the community who sew organic cotton clothing. There is also an organic greenhouse used to grow citrus trees sold at a discount to local farmers, who plant the trees and earn an income from them. The sanctuary also includes an ecotourism camp, where safari guides and other service jobs provide employment for locals.

Source: Wildlifeworks, 2011

Most of the community based projects are based on anticipated future payments on a performance based system. At estimated Carbon prices of \$5-10 per tonne of carbon. For example, based on this, AWF estimates an annual total income of between \$52000 and \$105000 from avoided deforestation and forest degradation. The project will also generate an additional \$30000 from increased carbon stocks from enhanced regeneration and additional income from agriculture and other income generating activities (TNR, 2011). The extent to which these expected benefits will be realised largely depends on accessing the buyers and payments, equitable benefit sharing mechanisms that will ensure the expected incomes reach the individuals involved in the forest management activities and secure carbon and forest tenure. These are particularly critical given the high upfront investments being made by the communities.

The foregoing reveals that whilst there are immense opportunities to access carbon related funds for the forest sector, the number of African countries benefiting is very low. The fragmented nature of the funds adds to other complications that include the eligibility criteria, complicated project preparation and approval processes, high technical capacity and high transaction costs associated

with project preparation and implementation. Unless these issues are addressed, Africa's ability to benefit from these opportunities remains low. Other challenges include:

- Political instability
- Insecure tenurial arrangements especially given the long term nature of forestry projects
- Lack of national policies and strategies for participation in carbon markets
- Lack of financing from local banks
- Lack of insurance for carbon projects
- Risk for violating the rights of indigenous and other local populations concerning the use of forest areas and possible negative impacts of the separate ownership rights of carbon on other rights over forests and trees.
- REDD's impact on land prices, which may adversely affect land ownership and tenure of indigenous and other local people.
- Uncertainties about to what extent and how payments for REDD credits can be distributed to the rural people and what other benefits smallholders, farmers, and communities can obtain from REDD schemes; there is an additional concern about how to avoid the majority of payments being captured by elites or the state.

Another related concern is that those countries that have already addressed deforestation are not compensated; rather, they may often be penalized because their reference scenarios may be more demanding than in those countries where deforestation is still rapid. Differences in marginal costs between countries also need consideration because in the former cases, additional reductions are likely to require higher investments in relative terms than.

Considering that most carbon sequestration projects have a long gestation period; any investment is liable to be risky unless backed by long-term economic and political stability. In order to attract and sustain international carbon projects, it is essential to have good governance practices and appropriate institutional arrangements to enable benefits to accrue to the right people at national and local levels. Most carbon sequestration projects in SSA are fairly new, with many having been initiated very recently. As a result, there are few studies on the impacts of these projects on host countries or project participants.

5.3 Payment for Environmental Services other than Carbon

Payment for the services entails providing compensation to the owners of a forest (or other ecosystem) in return for the provision or maintenance of certain environmental services (Wunder, 2005). While such payments have long existed for recreational services, they have recently been extended to other services such as watershed protection, fresh water supply, carbon sequestration, biodiversity conservation and landscape beauty. Various regulatory, market-based, and voluntary payment mechanisms have been introduced over the last decade. Many such schemes have been developed around the world, and in the best cases, these have resulted in improved resource

management and economic development (Wunder et al, 2008). However the development and adoption of innovative instruments and schemes on payment for environmental services in Africa has been very slow (Gondo, 2010).

Watershed services

Watershed protection is one of the most important environmental services provided by forests. There is now growing recognition of the importance of forest management in watersheds on activities that are dependent on water. The importance of watershed services is growing rapidly as fresh water yield and quality are becoming critical issues around the world and especially in east and southern Africa. Various payments for water or watershed protection schemes have been developed in the last decade. However, examples of payments for watershed services in east and southern Africa are still very few. The market for watershed services countries is still very small largely due to poverty and low urbanisation.

Studies have found little evidence of the existence of, or demand for, market-based mechanisms, either by governments or potential “buyers” of watershed services (Georgehan 2005). Currently public budgets are the main source of funding for watershed services. An example is the Working-for-Water Programme in South Africa that involves the control of invasive alien species in catchments for the protection of water resources and ensuring water supplies (van Wilgen et al. 2001). In more recent years there has been an increase in pilot projects on payment for watershed services in the region. Examples include the Upper Tana watershed project that is considering the possibility of having the Kenya electricity company (KenGEN) municipalities and irrigators pay for watershed services to provide incentives to farmers and other land owners in the catchment area. Some farmers are already receiving premium prices for eco-certification of coffee and tea by UTZ and Rainforest Alliance. The production and management of the production areas includes good soil and water conservation practices and tree planting. Other pilot activities have been carried out in the Ruaha and Rufiji basins in Tanzania. Despite these developments it is unlikely that application of payments for watershed services will grow rapidly in the near future. Low income levels, small markets and weak institutional capacity, makes payments for water services difficult and uneconomic.

Eco-tourism

Forest ecosystems in Africa are among the most diverse and productive wild lands in the world. Best known are the east and southern Africa savannah systems, which teem with unparalleled populations of large migratory mammals. The trees and grasslands provide forage, browse and habitat to many wildlife animals. Thus, in many countries, wildlife and forests are the main attractions for tourists, which justify the fees the latter pay for their maintenance (an obligatory payment). Ecotourism activities based on forests and wildlife in national parks and forest reserves, and community based natural resource management programmes represent the main forms of payments for environmental services in the region. In the last 25 years, many countries in Africa have adopted and promoted community based natural resources management (CBNRM) as an approach for advancing the objectives natural resources conservation and economic development of those who manage the natural resources based on sustainable utilisation of the natural resources as

an economic incentive. This approach has been particularly successful in eastern and southern Africa. Examples of some successful CBNRM programmes in Africa include the CAMPFIRE (Communal Areas Management Programme for Indigenous Resources) in Zimbabwe and ADMADE (Administrative Management Design Programme) in Zambia.

If payment for forest biodiversity conservation is to be advanced, then forest authorities that manage and regulate forest resources must be allocated a reasonable proportion of tourism revenues. In Zambia, the Zambian Wildlife Authority (ZAWA) collects revenues from hunting and photographic safaris and distributes it as follows: Ministry of Finance 36%; ZAWA 42% and communities 22% (Chidumayo et al. 2005). Similar approaches are being used by the National Parks and Wildlife Authority, in Zimbabwe, Uganda Wildlife Authority in Uganda and Kenya Wildlife Services and have contributed significant resources to the management of forests in protected areas.

Conservation conservancies

This is an approach pioneered by Conservation International, which has been implemented in a number of countries especially in Latin America. The general idea of a conservation concession is modelled on that of a logging concession. Under the latter approach, an area of land is allocated to a logging company which pays the government for the right to extract timber. The level of compensation for both the government and local communities is determined on the basis of forgone timber revenues. The funding for this comes from international investors, for example, investors in PES markets (Melham *et al.*, 2008). However, this approach has not been widely applied in east and southern Africa. A few conservation concessions have been recently granted in the Democratic Republic of Congo (DRC). Some of the concessions are exploring how to increase the value of forests by combining biodiversity conservation and carbon credits. Another example is an initiative in Sierra Leone where an international NGO, Royal Society for the Protection of Birds, and a local NGO Conservation Society of Sierra Leone are working towards securing a conservation concession for the Gola forest (Box 15).

Box 15 : The Gola forest conservation initiative

The Royal Society for the Protection of Birds (RSPB) and the Conservation Society of Sierra Leone have been managing the Gola Forest sustainably since 1990 but RSPB now intend to fund the conservation of the Gola Forest through a conservation concession. The RSPB and the Conservation Society of Sierra Leone will sign an agreement with the government to preserve the forest and provide an income stream to government and communities in lieu of income they might have received from logging. The forest will remain under the ownership of the government and the National Commission for Environment and Forestry which will lead on management activities. The RSPB and CCSL, in addition to providing finance will provide support with technical and educational issues and biological monitoring. The partners are working to raise US\$ 10 million to establish a dedicated endowment fund. The fund's annual interest payments will be sufficient to cover the conservation management costs for the forest and sustainable livelihoods projects for local communities in perpetuity.

Source Kamara, 2011; <http://www.cbd.int/doc/external/cop-08/ma-gola-2006-03-27.pdf>

Thus whilst conservation concessions are an attractive option for mobilising financial resources especially for forest conservation, their application in Africa remains limited.

5.4 Debt-for-nature swaps

Debt-for-nature swaps are a mechanism that provides bilateral resources, following negotiations and approval by the respective governments (debtor and creditor). The resources created by a debt swap are a way of providing compensation for environmental services (correction of the negative externalities generated by the payment of debt servicing on the environment) and in particular has beneficial effects on biodiversity protection, especially with regard to protected areas (Hoare, 2008). This approach has not been applied to any significant extent in the region unlike in other areas. One example was the attempt by IUCN to purchase a debt of \$985 986.00 from the Zambian government in return for capacity building of environmental organisations in Zambia. This was under the debt-for-development option under Zambia's debt reduction Programme. In Madagascar the mechanism was used to mobilise resources WWF in 1996 for the forestry support project through the conversion of a \$2 000 000.00 to \$1500000 conservation fund (WWF Conservation Finance, www.cbd.int/doc/external//wwf/wwwf-commercial-swaps).

5.5 Eco-securitization

Eco-securitization is a means of financing sustainable natural resource projects, including forestry. Finance is generated through the issuing of tradable bonds to investors. These bonds are supported (or securitized) by the cash flow from separate assets; these could include revenues from timber production in natural forests or plantations and also from ecosystem services. Bonds require lower returns on investment over longer investment periods than equity-type investments, and so they could be more appropriate for sustainably managed forests. They are distinguished from other forms of lending because security for the lender is provided solely by the cash flows from underlying assets and not by the credit-worthiness of the borrower. It is estimated that institutional investors, including pension funds and insurance companies currently own roughly 10% of the global forest investment (www.forestbonds.com). Historically capital has been allocated as long term through specialist Timberland Investment Management Organisations (TIMOs). Whilst TIMOs have proved effective as investment vehicles in low risk countries but their suitability for higher risk jurisdictions, where the majority of untapped and yet to be developed forest resources are located, is much less certain.

Forest bonds offer institutional investors an alternative route to TIMOs, swapping uncertain upside for lower risk and secure returns underwritten by new market-based incentives and risk mitigation mechanisms. The demand for green bonds, of which forest bonds are a variant, is demonstrated by the recent success of issues by SEB on behalf of the World Bank (www.forestbonds.com). Forest bonds deliver improved access to capital by leveraging the relatively predictable cash flows that sustainable forestry and forest related activities are capable of generating. Governments especially in Africa need to improve the investment climate by introducing enabling legislation, supporting the development of infrastructure especially roads, communication and energy, and facilitating the development of local environmental markets to attract long term private sector investment. Generally, for forest bonds to be successful, the underlying assets should have two attributes: they should generate stable cash flows which can be readily forecast; and they must carry a low level of risk. At present, the latter condition not met in most African countries due to factors such as political instability, unclear forest ownership and limited banking infrastructure.

5.6 Bio-prospecting

Under the Convention on Biological Diversity (CBD) countries have sovereign rights over their resources, and any benefits arising from the use or commercialization of these resources must be shared with the source country (Hoare, 2008). The wealth of biodiversity in most African countries offers great potential for research and bio-prospecting. One well-known African example is the experience of Shaman Pharmaceutical in Nigeria which invested heavily into evaluating some biological materials in partnership with Development and Traditional Medicine (FIRD-TM). Unfortunately the experience did not come to fruition as after 10 years and \$170 million invested, Shaman Pharmaceuticals in early 1999 abandoned attempts to take any of its discoveries through the Food and Drug Administration regulatory process, as future time and costs for additional clinical trials proved prohibitive; (Moran, 1998 and Kamara, 2011). Similarly, experience from other parts of the world has shown that the chances of such activities leading to the development of new commercially valuable products are very low. While it is unlikely that bio-prospecting will generate significant income for most African countries, research activities and research centres can provide an additional source of income for protected areas and can also be of value in building local capacity and expertise. However, to ensure that such activities are beneficial to the countries, an important prerequisite is that legislation on intellectual property rights and benefit-sharing should be in place. This is not yet the case in most African countries and must be addressed to provide a framework for such activities. Only a few countries in Africa e.g. Zimbabwe have enacted legislation for guiding and regulating access to genetic resources. Bio-prospecting is also likely to benefit countries that have a strong biotechnology industry and infrastructure (Kamara, 2011), which very few African countries have.

CHAPTER 6: Successful Country Experiences and Initiatives

6.1 Introduction

The preceding sections have provided an account of the various forest financing sources and financing mechanisms that are available globally with special emphasis on their Application in Africa as countries try to mobilise financial resources for sustainable forest management. This section gives examples, in brief, of some successful country approaches and experiences in mobilising financial resources from which lessons could be drawn.

6.2 Burkina FASO- Mobilising Local forest funds

The process of decentralisation in Burkina Faso was initiated in 1991 but it was in 2004 that the Ministry of Environment, with assistance from FAO, initiated the development of a plan to decentralise forest management (MECV, 2006). The objective was to reduce pressure on the forests and improve productivity of the forests through improved management and controlled harvesting especially of firewood. The community members are organised into forest management groups that in turn join up to form a Union of forest management groups. A union is granted the authority to manage a forest management unit for the benefit of its members. The forest management units are divided into forest management plots from which woodfuel is harvested on a rotation basis. Woodcutters from the union's members are paid, under the supervision of the Union per m³ sold. The woodfuel merchants pay taxes and fees to two community funds namely the forest management fund and the village development fund. For every m³ of wood sold 600CFA is paid to the local forest management fund. This money is used for investment in the management of the forests and other investments in the forest e.g. reforestation, and road construction or maintenance. 200CFA per m³ of wood sold is paid into the village development fund. This money is used for community development projects as desired by the communities. Some of the projects include construction of schools, health centres and water points. They are also used to provide loans to members of the community although these are limited. The two funds have helped to raise financial resources for supporting community forestry management as well as meeting some of the livelihood needs of the communities. Whilst implementation of this approach may face some challenges e.g. from corrupt officials the system itself works very well.

Burkina Faso is one of the countries selected by the FIP, because of its involvement in improving a sector (forestry) which provides a means of livelihood for a large part of the population. The country is endowed with savannah and dry forests that are representative of resources on which many people in West Africa depend for their livelihoods. Since Burkina Faso was approved as one of the pilot countries under the FIP, the expert group has noted that the community forest management system provides the country with a strong institutional capacity for handling issues of rural development, forests and environmental management which could provide a good basis for an effective REDD+ benefit sharing scheme.

6.3 Ghana: Increased government support after demonstrating the importance of implementing the NLBI

In April 2007, the United Nations Forum on Forests (UNFF) adopted the "Non-legally Binding Instrument on All Types of Forests" (NLBI).-This significant international consensus was reached to boost sustainable forest management, and thus to maintain and enhance the economic, social and environmental values of all types of forests for the benefit of present and future generations. The NLBI, also known as the Forest Instrument provides a framework for this. In 2008 Ghana became the

first country to systematically implement the Forest Instrument, with technical support from the Food and Agriculture Organization of the United Nations (FAO) and the German Agency for Technical Cooperation (GTZ) and funding from the German Federal Ministry for Economic Cooperation and Development (BMZ). Awareness of stakeholders in Ghana about the Forest Instrument and its significance for the country and to carry out an assessment of the current situation in the country vis-à-vis its implementation. Using the national and regional multi-stakeholder for a established through Ghana's national forest programme as a basis, the Ghana Forestry Commission conducted three regional workshops and one national workshop with the participation of a wide range of stakeholders.

The stakeholders through various consultations used assessed the effectiveness of the national forestry programme using the 25 national policy measures of the NLBI as an assessment tool. The result was that they identified four areas as priorities that needed to be addressed to improve sustainable forest management and mobilisation of adequate financial resources for the country. The priority areas were:

1. Promote cross-sectoral coordination for sustainable forest management
2. Strengthen law enforcement
3. Develop effective financial strategies for sustainable forest management; and
4. Further develop and implement the national forest programme and ensure its integration into the national development programmes.

The processes followed helped to highlight and demonstrate the contribution to the national economy and the need to integrate the national forest programmes into the national development plans. The assessment of the existing financing strategies and their effectiveness helped to demonstrate the financing needs for sustainable forest management and the existing financing gaps and opportunities for increasing financing to the sector. The government has since responded positively and initiated measures to increase financing to the sector. Three of the measures adopted to-date are enhanced integration of forestry programmes into District Assemblies development plans; allocation of at least 1-2% of the District Assemblies Common (Development) Fund to forestry investments by local communities and increased budgetary allocation to the Forestry Commission (Forestry Commission, 2011).

6.4 South Africa: Private sector engagement in forestry research and commercial forestry production

South Africa has a well-developed and organised industrial forestry sector that is mainly based on forest plantations. Most of the plantation forest owners and processing companies are members of Forestry South Africa (an association of the forestry players). The association raises funds from its members through a levy on forestry products sold. Some of these funds are used to support forestry research activities conducted by the Industrial Forestry Research Centre. The association provides up to 80% of the ICFR funding. For example in 2009 FSA provided R 9.8billion for research (R8.65billion to ICFR), in 2010 provided R10.3billion (9.3 billion to ICFR). Some members also conduct their own research and FSA also supports research conducted by the state.

Some of the financial institutions in South Africa have also developed financing products that are tailored to the needs of the forest sector. For example CDC provides loans for different types of forestry enterprises from plantation establishment to processing with the repayment periods and interest rates linked to when the enterprise will start generating revenue. Thus the institution provides loans with repayment periods of up to 25years (e.g. for saw-log production). Currently the minimum loan size is R1mill–on -about US\$140 000.00. This has provided good access to credit for some medium to large scale enterprises.

6.5 Ethiopia: Smallholder funding

In Ethiopia most forests are owned by government but are utilised by local communities to meet their livelihood needs. Participatory forest management (PFM) was introduced in the 1990s to promote effective forest management through the participation of local communities who depended on the forests. The main participatory forest management approaches promoted involve communities and other stakeholders establishing fair partnerships with the forest administration (Amente and Tadesse, 2004). One of the major successes of the PFM initiatives has been the establishment of fair and equitable benefit sharing mechanisms based on the level of investment and effort in the management of the forest resources. For example in Oromiya, the Forest and Wildlife Enterprise (OFWE) and the communities, represented by their Cooperatives or Unions agree on tasks and the associated investments to be undertaken by each party based on their capacity. The benefits accruing e.g. from the sale of forest products are then shared proportionally according to each party's contribution and effort. The allocation of responsibilities is reviewed periodically to take into account changes in the capacity of the communities.

A second aspect that has helped local communities increase their capacity and investments in forest management is access to credit through the Cooperative Promotion Agency and the Credit Union Bank which offer loans to the cooperatives and unions. This has resulted in some Unions such as Chilimo Gaji investing in plantation establishment and management and forest products processing in partnership with OFWE (Johansson et al, 2012). Such initiatives are contributing to the expansion of smallholders' investment in sustainable forest management activities

6.6 Niger and Mali: Community involvement in forest management for carbon

The K – TGAL project implemented in Senegal, Mali and Guinea-Bissau is another example of an innovative REDD project. The project has been implemented in Mali in the 11 villages (8,603 inhabitants) in the rural area of Bougoula, in the Koulikoro region¹⁷, with the aim of reducing emissions caused by deforestation and the degradation of forests by involving local populations in environmental protection initiatives by means of financial payment for emission reductions. The resource in question is a savannah of around 226ha. Thanks to the involvement of local populations in the management of this forest, the CO₂ sequestration potential has been estimated as 8.3 tonnes/ha/year and the estimated amount of CO₂ saved through the degradation which will have been avoided as 2.5 tonnes/ha/year. This carbon sequestration will therefore result in an annual gain of 6,102,000 FCFA, or 12,204 US\$. This experience also proves that the management of forests by local populations can be a source of revenue which will undoubtedly prove useful in the quest to reduce poverty in an environmentally-friendly manner.

6.7 Tanzania: National REDD Strategy-Building on Participatory forest management approaches

Tanzania has a well-developed REDD National REDD strategy that was developed through an extensive consultative process. The strategy provides a framework for guiding implementation and coordination of carbon trading activities based on demonstrated emission reductions from deforestation and forest degradation. Specifically the strategy intends to:

- Establish a robust baseline scenarios and an effective MRV system for determining forest carbon changes
- Establish and operationalize a fair and transparent REDD+ financial mechanism and incentive schemes
- Engage and enhance active participation of stakeholders in REDD+ processes

- Strengthen a national system of governance and coordination of REDD+ processes
- Build capacity in terms of training, infrastructure, systems and equipment to support the REDD+ policy
- Generate knowledge and promote scientific understanding on REDD+ issues through research
- Strengthen public awareness, communication and information sharing systems on REDD+ issues
- Strengthen mechanisms to address drivers of deforestation and forest degradation in various ecological zones.

Participatory forestry management (PFM) is one of the main strategies used in Tanzania for forest management and conservation (United Republic of Tanzania, 2011). Tanzania has a long standing tradition of PFM and has an advanced PFM legislative framework which encourages local forest management and clear rights and responsibilities for local forest managers. In addition Tanzania has a decentralised national governance system that provides for strong local institutions. PFM structures and institutions have been identified as a major part of the forest governance system for REDD+. Since its REDD+ planning began in 2008, Tanzania has developed a National REDD framework document and a national REDD strategy and Action Plan. The Tanzanian REDD Readiness Preparation proposal (R-PP) of October, 2010 states that PFM will be the cornerstone of the national REDD+ programme (Costenbader, 2011). In this regard the government recognises the need to build the capacity especially of village institutions in planning, finance management and good governance. To-date seven pilot projects (table--) are already developing REDD+ benefit sharing mechanisms that build on the PFM systems. In addition the use of PFM allows for the integration of carbon incomes with other revenues and benefits derived from other community based forest activities such as eco-tourism, sale of valuable timber and non-timber forest products. Thus by combining other sustainable forest management benefits with the additional revenues from REDD+ the strategy envisages increasing the profitability of SFM to communities. However as the country continues to refine its REDD+ mechanisms, there is need to take into account some challenges and weaknesses that have affected PFM initiatives in the past such as low level of benefits to communities especially under Joint Forest Management (JFM) and elite capture especially under the Community Forest Management (Costenbader, 2011)

6.8 Uganda: Effective Public-Private Community partnership for mobilizing forest finance

Uganda is one of the countries in Africa that have experienced a major loss of its forests through deforestation and forest degradation. It is estimated that the Uganda's forests have shrunk from 45% in 1890 to just 15% in 2010 of the country's total land area (FAO). This has prompted the government and other key stakeholders to respond and find solutions for achieving sustainable forest management in the country. This has seen various government agencies, the private sector and local communities establish a wide range of partnerships to mobilise forest financing from different sources. One example of this partnership is demonstrated by the project on the restoration of the Kibale National Park. Since 1990, the Uganda Wildlife Authority has been working with Face the Future, a global carbon projects developer, and the local communities to restore and protect the national park through protection and extensive afforestation.

The main interventions that are being implemented by the local communities through a participatory forest management approach include replanting in degraded sites with native species and fire protection. The tree planting is around the edges of the forest to create a buffer and allow the rest of the forest in the inner zones to regenerate naturally. To meet the socio-economic needs of the communities the local communities have received support to initiate small-scale forest enterprises such as nurseries, and harvesting and processing of non-timber forest products as well as ecotourism.

Kibale National Park has now attained registration and carbon issuance under the Verified Carbon Standard (VCS), resulting in the issuance of approximately 370,000 carbon credits in September 2011. Recently, Nedbank joined the partnership and has since provided additional funding through the purchase of 50000 of the verified carbon units ([www.face the future.com](http://www.face.thefuture.com)).

Uganda has other carbon financing initiatives such as the Nile Basin being implemented by the National Forest Authority in partnership with local communities and support from the World Bank. The country has also been implementing the sawlog production scheme (Gondo, 2010) which has been supporting the establishment of forest plantations for the supply of sawlogs with financial resources from donors and private investors especially individuals and small and medium forest enterprises who provide 50% of the establishment capital. This has helped to mobilise massive investment especially from private individuals spurred on by the growing demand for industrial roundwood in the country. All this has been made possible by a favourable policy environment and government leadership.

Chapter 7: Proposals for Strengthening Financing for Sustainable Forest Management in Africa

7.1 Introduction

The growing recognition of the multiple values and functions of trees and forests has resulted in many initiatives aimed at identifying the financial and other requirements for achieving sustainable forest management. In response to these requirements there have also been several initiatives, at the global and national levels to devise strengthen mechanisms for mobilising financial and other resources for SFM at the different levels. In the last decade these initiatives have been dominated by the development of innovative financing mechanisms related to the carbon sequestration role of forests and payments for environmental services. Despite these efforts the financial resources required for SFM especially in developing countries, where the bulk of the natural forests are found (and where there are high rates of deforestation) remain insufficient. The situation is particularly critical in Africa where the new innovative financing mechanisms have had little impact due to a number of limiting factors. Some of these include weak institutional capacity, poverty and generally low levels of socio-economic development, unstable political and economic environments and unfavourable national policies and legislation. In this regard new financing systems that address the financial needs of different actors, and for different management objectives taking into account the special conditions of different forest ecosystems and socio-economic conditions of each country are required. Current forest financing systems in African countries are still mobilising insufficient resources to support the necessary activities for halting deforestation and forest degradation, promoting rehabilitation and afforestation/reforestation, and expanding forest areas under sustainable management. Some suggestions for improving resources mobilisation at different levels are presented in the following sections.

7.2 National level

National public and private investments remain the most critical sources of financial resources for sustainable forest management. However as indicated in preceding sections, in Africa, the resources from these sources are generally low and inadequate. However, there are several measures that national governments can take to improve the mobilisation of resources for forest management.

a) National Forest Financing Strategies

National forest financing strategies are defined as the combination of measures and arrangements for the creation of an institutional, political, legal, socio-economic and financial framework (the enabling environment) agreed upon with those most closely involved within and outside the forest sector (Djik and Savenije, 2009). They establish the criteria and guidelines for obtaining financial resources from different sources and channelling them to various forest development activities. Emphasis is placed on mobilising financial resources from all possible sources and ensuring that key activities necessary for the achievement of sustainable forest management are supported. Financing mechanisms are identified, coordinated and implemented with a view to promoting investments in, and payments for, forest goods and services. In most cases the national financing strategies encompass the public and private sectors, the local, regional, national and international levels, and measures that are pursuant to the attainment of the objectives of the national forest programme and forest management of the various target groups in a sustainable manner. The purpose of an

NFFS is to create the mechanisms and conditions for expanding and diversifying the financial base for SFM, making the existing financing system more efficient, and complementing it with new and/or innovative opportunities. Thus the NFFS provides an overall framework comprising agreed guidelines, specific elements such as policies and legislation, resources and mechanisms. There is need to underpin financing strategies with robust, equitable and enforceable policies, strategies, laws and regulations to ensure transparency and accountability. It is important to ensure that the NFFS is implemented and enforced by competent national and/or regional institutions. If not, the much sought after additional financing may lead to increased deforestation, forest degradation and forest conversion for short-term profit, and further marginalization of forest-dependent communities. Examples of countries that have developed and implemented national forest financing strategies as part of their national forest programmes are Tanzania and Uganda.

b) National Forest Funds

In the last decade, the development and incorporation of national forest funds into the national forest programmes and forest legislation has become very common as countries in Africa try to strengthen their resources mobilisation for SFM. For example the Tanzania National Forest Fund as launched recently in July, 2011. However some were launched earlier but have been revived or strengthened in recent years in a bid to improve resource mobilisation for forest management.

Most of the funds are populated by revenues from different sources including government budgetary allocations, revenues generated from sell of forest products and services, taxes, fees, fines, donations etc. The exact situations vary from country to country. Another emerging feature is the decentralisation of the funds or establishment of decentralised forest funds especially at local authority level and community levels. For example, in Burkina Faso there are village development and village forest funds that are financed from a proportion of the revenues from the sale of forest products. The revenue from these funds is used for community development projects whilst a proportion is re-invested into forest management. The major advantage of forest funds is that they help to meet long term strategic forest investment and development plans and also improve the predictability of available funds for forestry development in a country. However their effectiveness depends on good governance, accountability and transparency.

c) Enabling environment

Perhaps the most constraining factor to mobilisation of adequate financial resources, especially from the private sector and international sources is the non-existence of an enabling environment in the form of enabling policies and legislation as well as a stable political and economic environment. Essentially, financing mechanisms work better when they are set within an enabling environment of political, institutional and socio-economic conditions, and also form part of a set of complementary political and/or legal measures to foster SFM. In this regard national forest financing strategies must be integrated within, or be closely linked to, the nfp and other national development strategies and programmes. The key elements of an enabling environment for the financing of both investments and payments are:

- Up-to-date policies operating in

- A stable political context
- Clear legislation
- Existence of appropriate and effective institutions and governance
- The overall national economic and financial environment
- Social, cultural and environmental aspects
- The international environment.

Most of the African countries have reviewed and updated their forest policies and legislation to take into account the multiple values and functions of forests, in the last two decades. However there are challenges of conflicting policies and legislation arising largely from separate government agencies dealing with, forests, tourism, wildlife and the environment. Furthermore due to major challenges of poverty, food insecurity and other socio-economic challenges forests and forest management are relegated to low priority issues. This is generally exacerbated by the failure to integrate or incorporate national forest strategies into overall national development strategies and frameworks. For example most poverty reduction strategies in Africa do not incorporate forestry strategies despite the fact that forests make significant contributions to the national economies. The result is the lack of government investment to promote and develop sustainable forest management. This is however changing as some countries, e.g. Uganda have now recognised forestry as a key economic development driver for national development and incorporated national forestry development into their national development plans. Many parts of the continent have been ravaged by the scourge of political instability and conflict which do not attract investment in the forest sector especially given the long term nature of forestry. Thus there is need for governments to create a stable economic and political climate for encouraging investment (note that this is generally beyond the control of the forestry sector).

Legislation may need to be adjusted to ensure it enables, rather than constrains, investment in forestry, particularly in plantations. Legislative constraints are often related to specific controls, designed to govern aspects of land-use or forestry, but are inappropriate for forestry development activities. The governments must sufficiently differentiate between natural and plantation forest management requirements and practices; address land use planning regulations to provide for forestry as a land use in a manner that prevents arbitrary conversion of forests to other land uses; review levies and bans timeously; and put in place a good incentive package for forestry development. For example Kenya banned the logging of timber from public plantations in 1999 and is yet to lift the ban. This has resulted in the closure of many wood processing industries and uncertainty with regards to future forestry development. At the same time there were restrictive measures on harvesting trees from private land which sometimes acted as a disincentive to private growers. However since the removal of these measures and the recent provision in the constitution to have 10% of all land under forests, there has been a rapid growth in private sector investment in tree planting especially by smallholder farmers.

There is also urgent need to apply existing legislation and consolidate the legal framework concerning land tenure and allocation. Insecurity of land tenure is a key factor hampering the

obtaining of finance and the application of financing instruments in many countries in Africa. Thus there is need for national governments to clearly define forest-land tenure and rights and ensure they are applied and are functioning so that some of the major impediments to investment in the forestry sector are addressed. This is particularly important for the development and application of innovative financing mechanisms that are related to payment for environmental services such as carbon trading including REDD+ and payments for watershed and biodiversity conservation services. Good governance, based on the principles of enhanced law enforcement, transparency, accountability and integrity also need to be promoted and practised not only in the forest sector but in all aspects of national governance as a whole to attract investment and instil investor confidence. The governance system should be kept free of the bad influence of short-term politics and vested interests.

Another major problem is that forestry staff have little financial knowledge including financial legislation as well as opportunities in the financing sector (while those in the financial sector know little about forest legislation), so that they lack instruments that would enable them to promote forest activities. The insufficient dissemination of information on financial legislation among actors in the forest sector results in extensive ignorance about its existence and application of various financial products. For example there are many micro-financing products such as leasing and out-grower schemes that have just been introduced to the forest sector but have been widely applied for a long time in other sectors such as agriculture.

d. Effective institutional framework

The existence of strong, transparent and effective public forest institutions is also critical as they encourage broad participation and coordination among the institutions of the sector and with other sectors, so that their practices can be directed towards sustainable forest management. Strong institutions are not only limited to public forest agencies but include the existence and functioning of private and civic institutions within and outside the forest sector as well, and whether these institutions are efficient and well organized at both central and local levels. Whilst in many countries these institutions exist, their level of organization and coordination is quite low (Owino, 2008). Other weaknesses, including excessive bureaucracy, corruption, lack of transparency and participation, low legitimacy and lack of public confidence, increase the risk and uncertainty in the forestry sector and the associated financing requirements.

A major issue of concern is that public forest agencies (PFAs) are generally lowly ranked and poorly positioned in the hierarchy and system of government.. There are many countries where PFAs are at such low levels they do not contribute to the strategic direction of their ministries. An example is the location of the institution responsible for forestry in Ethiopia at the federal level which is a section under the watershed and natural resources department. In addition, they are negatively affected by inefficient internal bureaucracy, lack of sufficient human, technical and financial resources. Governments must therefore strive to ensure that the respective public forestry institutions are strong and provide the necessary leadership required to drive SFM forward.

e) Effective institutionalisation of community based forest management (CBFM)

Devolution and decentralization processes have been launched in almost all the countries in Africa. This has been driven in the last two decades by the growing promotion and adoption of decentralized approaches to natural resources management. This has seen a growth and proliferation of various forms of community-based forest management. Unfortunately decentralization and devolution have not been accompanied by systems for the mobilization and provision of the requisite and resources (especially human and financial) to facilitate the efficient and effective functioning of the local institutions. Where revenue sharing schemes, between the central government and local institutions, have been put in place, the sharing is not based on the level of responsibilities but determined by the central government. There is need for equitable resource sharing mechanisms based on the level of effort and investment in forest resources management between government, local institutions and local forest managers. A good example is the benefit sharing system devised and implemented by the Oromiya Forestry and Wildlife Enterprise (OFWE) of Ethiopia where benefits are shared according to effort and investment into the management of jointly managed resources. This is going to be critical especially for the several carbon finance schemes and instruments such as REDD+.

7.3 Improved private sector engagement

Most of the forests in Africa are outside public forests under the ownership and use of individual smallholder farmers or under community ownership. Thus the mobilisation of forest investments from the smallholder sector has the potential to harness significant resources for forest management. This has already been amply demonstrated by some smallholder farmers especially in east Africa who are investing in woodlots and small plantations. For example 55000 farmers in Western Kenya have invested about \$16.5million in one season, planting a total of 27 500ha (in 0.5ha plots at an average cost of \$600/ha). In Niger farmers have rehabilitated more than 5million ha of woodland through assisted natural regeneration in about 10years at an investment worth more than \$1.5billion (at an average cost of \$300/ha). These investments are made possible by the adoption of favourable policies and legislation that allow smallholder farmers to benefit from the forests and trees that they plant and manage. Favourable trade and industrial policies that allow for the growth of forest industries and markets for forestry products are also critical. In addition it is important to improve access to finance especially credit for the smallholder farmers to be able to augment their own savings and invest in forestry activities. The saw-log production scheme and the financing products provided by CDC in South Africa provide good examples. Policies that support out-grower schemes (e.g. policies providing security of tenure) are also important for mobilising resources for smallholder farmers.

In terms of attracting foreign direct investments and investments by large local companies, governments in Africa need to create enabling conditions for investment through policies and legislation that provide security of tenure. They also need to create and maintain stable macro-economic conditions that ensure security of investments such as stable political conditions and effective forest law enforcement and governance. This is clearly illustrated by the investments that are taking place in Liberia and Mozambique following the stabilisation of the political and macro-economic conditions following decades of civil war. Furthermore more new and additional financial

resources can be mobilised through improved partnerships between financial institutions and the private sector.

7.4 Sub-regional Level

In Africa, there is also a growing trend towards sub-regional forest coordination and cooperation, for example within the framework of ECOWAS forestry programme, SADC Protocol on Forests and Great Green wall and the COMIFAC convergence plan. This approach has been instrumental in mobilising financial resources for forest management in some of the regions. Perhaps the most notable of these approaches is the Congo Basin Forest Fund which is hosted by the African Development Bank. The fund has been able to mobilise significant resources for forest for the region (Table---). It is recommended that a similar approach be adopted for other regions based on regional economic commissions or major ecosystems (e.g. miombo ecozone). There are some budding initiatives on the continent such as s the COMESA forestry strategy and the ECOWAS Forestry programme which could strengthen their financial resources mobilisation through stronger partnerships with regional development banks such as the AfDB, Development Bank of Southern Africa (DBSA) and the PTA bank.

7.5 International level

The discussion on how to mobilise sufficient funding for sustainable forest management and the achievement of the Global objectives on Forests has been going on well before the adoption of the Forest Instrument. Whilst many developing countries especially African countries have been supporting the establishment of a Global Forest Fund many developing countries have opposed this arguing that enough resources are available or can be accessed through existing sources. It has been further argued that limited forest financing is often less about money availability than about poor access to existing sources of funds due to mobilisation and channelling barriers at both national and international levels. These effectively hamper access to existing sources of finance, most of which are said to be underutilised (FAO, 2011). This resulted in the adoption of the Facilitative Process (FP) during the special session of the 9th session of the UNFF held in late 2009. The focus of the FP is to mobilise new and additional resources and to mobilise and make effective use of existing financial resources. This includes identifying and documenting existing funds and making this information available to developing countries. Information on international sources of finance is generally available on internet, especially in the CPF Sourcebook and the Global Mechanism's "Financial Information Engine on Land Degradation" (FIELD. This entails the removal of barriers to accessing funds from existing sources and building the capacity of developing countries to be able to access the existing funds. Although this task was supposed to be spearheaded by members of the Collaborative Partnership on Forests (CPF), only a few of these institutions, mainly the United Nations on Forum on Forests Secretariat (UNFFS), FAO and the National Forests Programme Facility are deliberately and systematically attempting to implement the FP. In the majority of cases, implementing the FP is by default as part of a wider programme. This is tantamount to business as usual and there is no reason to believe that this will change in the short to medium term is deliberately and/or systematically implementing. As a result there has been no significant change in financial resources mobilisation since the adoption of the FP.

The majority of innovative attempts and activities to mobilise additional financial resources for forest management have been initiated in the context of climate change mitigation and adaptation. For

example the Global Environmental Facility (GEF) has created an SFM/REDD funding window during the fourth funding cycle. The funding under this window has been increased under the fifth replenishment to about \$1 billion. The World Bank has also established a number of Carbon funds which have support for REDD+ activities. While climate change funding presents new financing opportunities, the existing mechanisms are unlikely to address the full scope of financing for sustainable forest management. None of them has the capacity to finance all the activities implicit in the implementation of the NLBI. Instead, the available funding from the existing funding mechanisms is inadequate for SFM mainly because of limitations in focus/scope, availability, accessibility, eligibility criteria and volume of finance. Trends in bilateral ODA show a decline in Africa's share of forest-related finance and a move away from sectoral to budgetary support and broader development strategies that respond to the MDGs. Many activities related to the implementation of the NLBI are expected to be executed by national forestry sectors and relevant agencies (UNFF, 2007), but these tend to be accorded low priority by most developing countries and are not likely to get adequate resources through this mechanism. Furthermore many governments in Africa continue to decentralize forest management responsibilities to the private sector and local communities, among other stakeholders. However, many issues identified in the NLBI are related to the sustained provision of international public goods and services, which cannot be adequately financed through these two sectors.

Global Forest Fund

Since existing funding sources can only address part of the funding needs of SFM and NLBI implementation, the international community should consider the establishment of a specific SFM/NLBI-targeted instrument or mechanism to increase financial resources in a systematic and predictable manner. In this regard it is imperative to establish a targeted Global Forest Fund that will provide dedicated resources, over and above those from existing sources, to ensure that sufficient resources are available to all types of forests for achieving sustainable forest management and the Global Objectives on Forests. Such a mechanism or fund should give priority to the thematic and geographical areas that have been identified as having major financing gaps as well as to important upfront financing required for creating an enabling environment for attracting funds from other sources. Some of the key areas the fund could support include management of trees and forests outside public forest areas, forest inventories and other forest assessment activities; forest research education and extension, rehabilitation and restoration of degraded lands especially in low forest cover countries and monitoring and reporting on progress in implementation of the NLBI. Given the advances in the development of funding mechanisms for climate change, should focus on other aspects of sustainable forest management that will ensure comprehensive support to all aspects of SFM.

The fund should be based on a simple direct access mechanism using simple administrative procedures that ensure quick access but without compromising on accountability and focus. This fund should be directly administered by the UNFF. Alternatively it could be administered by the GEF on behalf of the UNFF by hiving off and/or strengthening the SFM window. However there would be need for an administrative arrangement that gives approval authority to the UNFF and not the GEF Council, This will be a more difficult approach to achieve but could be considered a feasible alternative.

BIBLIOGRAPHY

Adams, M. and Castaño, J. 2000 World Timber Supply and Demand Scenario, Government Interventions, Issues and Problems. Paper presented in International Conference on Timber Plantation Development, November 07-09, 2000, Manila, Philippines. 24 pp.

AfDB. 1995. *Funding forestry development in Africa: The African experience and future outlook, October 1995*. Abidjan, Côte d'Ivoire.

African Climate Policy Centre, 2011. Climate Financing: Global Imperatives and Implications for Sustainable Climate Resilient Development in Africa. United Nations Economic Commission for Africa. Working paper No.16.

African Forest Forum, 2011. Forest Plantations and Woodlots in Rwanda. African Forest Forum Working Paper Series. Volume 1, No 14. Nairobi, Kenya.

Reddy, T. 2011 Carbon Trading in Africa: A Critical Review. ISS Monograph No. 184. Institute for Security Studies, Pretoria, South Africa

Allen J. and B. Douglas: (1985) "The causes of deforestation in Developing countries." *Annals of Association of American geographers*, Vol.75, No. 2, pp.163-184.

Amanor K.J., 2003. "Natural and Cultural Assets and Participatory Forest Management in West Africa", International Conference on Natural Assets, Conference Paper Series n°8

<http://www.wrm.org.uy/countries/Africa/west.pdf>

Amente, G. and Tadesse, T. 2004. The contributions of participatory forest management (PFM) towards good governance: the case of Wajib approach in Ethiopia.

Balmford, A., Gaston, K.J., Blyth, S., James, A. and Kaposl, V. 2003. Global variation in terrestrial conservation costs, conservation benefits, and unmet conservation needs. *Proceedings of the National Academy of Sciences* 4. 100(3): 1046-1050.

Barbier, E.B and Burgess J.C: (2001) "The Economics of Tropical Deforestation." *Journal of Economic Survey*, Vol.15, No 3, pp.412-433

1. Basu, A., Blavy, R and Yulek, M. 2004. Microfinance in Africa: Experience and Lessons from selected African countries. IMF Working Paper No. 04/174. International Monetary Fund

Bass, S., K. Thornber, M. Markopoulos, S. Roberts and Grieg-Gran, 2001. *Certification's impacts on forests, stakeholders and supply chains*. Instruments for sustainable private sector forestry series. IIED, London

Blaser, J., and Robledo, C. 2007. Initial Analysis of the Mitigation Potential in the Forestry Sector.

Calder, I.R. 1996. "Water Use by Forests at the Plot and Catchment Levels," *Commonwealth Forestry Review* 75: (19).

Blaser, J., Sarre, A., Poore, D. & Johnson, S. (2011). *Status of Tropical Forest Management 2011*. ITTO Technical Series No 38. International Tropical Timber Organization, Yokohama, Japan.

Boyle, T and Gari, J. 2010. Supporting REDD+ Readiness in UN-REDD Partner Countries. http://www.un-redd.org/Newsletter9_Support_to_partner_countries/tabid/4670/language/en-US/Default.aspx

Burkina Faso, 2010. (Confirmation of Government's interest in participating in the Forest Investment Programme: Climate Investment Funds.

Camargo, M. (2008) Study Case: Nhambita, a Community Afforestation/Reforestation Project in Mozambique. PROFOR, Indufor

CARPE, 2005. The Forests of the Congo Basin-A Preliminary Assessment. Central African Regional Program for the Environment.

Chandrasekharan, C. 1996. *Status of financing for sustainable forestry management programs*. Draft report prepared for UNDP Workshop on Financial Mechanisms and Sources of Finance for Sustainable Forestry, 47 June 1996, Pretoria, South Africa.

Choge, S. K., Cunningham, A., and Ellery, W (2005). Chasing the Wooden Rhino: the case of Woodcarving in Kenya. In A. Cunningham, B. Belcher and B. Campbell (eds). Carving out a future: forests livelihoods and International woodcarving trade. Earthscan. London, UK

Climate Policy Initiative (CPI), 2011. The Landscape of Climate Finance. CPI, Venice.

COMESA 2008, COMESA Common strategy for sustainable forest management and trade (Draft). COMESA. Lusaka

Costenbader, J. 2011. REDD+ benefit Sharing: A comparative Assessment of three National Policy Approaches

Desmond, H. and Race, D. 2000. Global Survey and Analytical Framework for Forestry Out-grower Arrangements. Study for Project Timber Production from Hardwood Plantations in the Tropics and Sub-tropics: FAO GCP/INT/628/UK (*unpublished*). 53 pp.

Eliasch, J. 2008. The Eliasch Review – Climate change: Financing global forests. Commissioned by the Office of Climate Change, Government of the United Kingdom. Available at: www.occ.gov.uk/activities/eliasch.htm.

Ellison, K (2003). Renting biodiversity: Conservation Concessions Approach. *Conservation in Practice* 4(4): 20-29

El Lakany, H., Jenkins, M. and Richards, M. 2007. Background paper on means of implementation. Contribution by PROFOR to discussions at UNFF-7, April 2007. Available at: www.fao.org/forestry/media/14704/1/0/.

FAO, 1995. *Review of official development assistance in the forestry sector in 1993*. Information Note. TFAP, March 1995. Rome.

FAO, 1996. *Report on the In-Session Seminar on Funding for Forestry Development in Africa*. Tenth Session of the African Forestry and Wildlife Commission, Sanbonani, South Africa. Document FO:MISC/96/1. Rome.

FAO, 2001. Global Forest Resources Assessment 2000 Main Report. FAO Forestry Paper vol. 140. Food and Agriculture Organization of the United Nations, Rome. 479 pp.

FAO, 2005. State of the World's Forests. Report of the *Food and Agriculture Organisation of the United Nations*.

FAO, 2005. Microfinance and forest-based small scale enterprises. FAO Forestry Paper, 146, FAO.Rome

FAO, 2009. State of the world's forests 2009

FAO, 2010. State of the World's Forests. Report of the *Food and Agriculture Organisation of the United Nations, Rome..*

FAO, 2011. State of the World's Forests. Report of the *Food and Agriculture Organisation of the United Nations, Rome.*

FBD - MNRT (2007). **National Forest and Beekeeping Programme Joint Sector Review 2007. Final Report.**

FERN, 2006. "Forest Governance in Ghana – An NGO perspective", Prepared by Forest Watch Ghana. www.fern.org/media/documents/document_3643_3644.pdf

FORM international. 2005. Certification and implementation, Presented by Paul Hol at the *ATIBT Forum 2005*, Shanghai, China.

Forestry and Beekeeping Division (2008). Participatory Forest Management in Tanzania Facts and Figures. The United Republic of Tanzania Ministry Of Natural Resources And Tourism, Dare salaam

FRM. 2005. Sustainable forest management in tropical forests, Presentation by Dr Bernard Cassagne at the *ATIBT Forum 2005*, Shanghai, China.

Gafaar, A, 2011. Forest Plantations and Woodlots in Sudan. African forest Forum Working paper Series, Volume 1, No.15.

GEF. 2005. GEF Activities Related to Forests. GEF Council. GEF/C.27/14. Global Environment Facility. 8–10 November 2005.

GEF. 2007. Programme Framework for Projects Falling under the GEF Strategy for Sustainable Forest Management. 24 July 2007.

GEF, 2009. GEF Portfolio Evaluation: Cameroon (1992-2007). Evaluation report No.45. Global Environment Facility Evaluation Office.

GEF, 2011. Report to the Seventeenth Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change. FCCC/CP/2011/7

Geschiere P., 2004. "Ecology, Belonging and Xenophobia: The 1994 Forest Law in Cameroon and the Issue of 'Community'", in England H., Nyamnjoh F. (eds.), *Rights and the Politics of Recognition in Africa*, Palgrave Macmillan Ltd (series: Postcolonial Encounters), New-York

Gerster, R and Mutakyahwa R. (2006). **Annual Review 2006 of General Budget Support in Tanzania: Learning Assessment.** Report to the Government of Tanzania and The Development Partners' Group

Gondo, P. (2010). Financing Sustainable Forest Management in Africa: An overview of the current situation and experiences.

Gondo, P. (2007). The Role of Micro-financing in Sustainable Forest Management.

GOT, Forestry and Beekeeping Division (2008). **Participatory Forest Management in Tanzania Facts and Figures**. The United Republic of Tanzania Ministry Of Natural Resources And Tourism, Dare salaam

Government of Mozambique, (2011) Unpublished. **Trends in Revenue from Forestry and Wildlife Government of Mozambique Receipts**. Data sets availed by the DNTF Planning Unit, 2011

Government of Mozambique (1999). The Forest Law of Mozambique 10/1999 article 36, 1E
Green Resources, (2010) Directors' Annual Report.

Gregersen, H. and A. Contreras-Hermosilla. 2001. Investing in the Future: The Private Sector and Sustainable Forest Management. U.S.A.

Gutman, P. and Davidson, S. (2007). A review of innovative international financial mechanisms for biodiversity conservation with a special focus on the international financing of developing countries' protected areas. A contribution to the COP9 of the Convention on Biological Diversity, World Wide Fund for Nature-Macroeconomics Programme Office: Washington, D.C.

Hatcher, J. and L. Bailey, 2009. Forest Tenure Assessment Trends, Challenges and Opportunities Rights and Resources Initiative and International Tropical Timber Organization, Prepared for the International Conference on Forest Tenure, Governance and Enterprise: New Opportunities for Central & West Africa May 25 – 29 2009, Hôtel Mont Fébé, Yaoundé, Cameroon;

Hamilton, K., Bayon, R., Turner, G. and Higgins, D. 2007. State of the voluntary carbon markets 2007: Picking up steam. Ecosystem Marketplace and New Carbon Finance, Washington, D.C. and London.

Hamilton, K., Sjardin, M., Marcello, T. and Xu, G. 2008. Forging a frontier: State of the voluntary carbon markets 2008. Ecosystem Marketplace and New Carbon Finance. Washington, D.C. and London.

Hamilton, K., Sjardin, M., Marcello, T., and Xu, G. 2008. Forging a Frontier: Status of Voluntary Carbon Markets 2008. Katoomba Group's Ecosystem Marketplace and New Carbon Finance. 8 May 2008.

Heathcote, R. 1998 Case study of long rotation eucalypt plantations in New South Wales: Case Study for Project Timber Production from Hardwood Plantations in the Tropics and Subtropics: FAO GCP/INT/628/UK (*unpublished*). 19 pp. International Fund for Agricultural Development, 1992. The State of World Rural Poverty. London: Intermediate Technology Publications.

Hoare, A. 2008 The Search for Innovative Options for the Forests of the Democratic Republic of Congo. Report of a Roundtable Process. Energy, Environment and Development Programme paper 08/03. Chatham House. UK

- Indufor, S. 2006. Study on international financing mechanisms for sustainable forest management. Report for the Ministry of Foreign Affairs of Finland, September 22, 2006. Helsinki.
- International Monetary Fund. 2003. External debt statistics: Guide for compilers and users. Washington, D.C.
- International Tropical Timber Organisation (ITTO) (1998) – *Criteria and Indicators for Sustainable Management of Natural Tropical Forests*. Policy Development Series 7. Yokohama, Japan: ITTO
- International Tropical Timber Organisation (ITTO), 2011. Status of Tropical Forest Management, 2011.
- Jindal, R., Swallow, B and Kerr, J. 2008. Forest-based carbon sequestration projects in Africa: Potential benefits and challenges. *Natural Resources Forum* 32 (116-130)
- Kamara, Y, 2011. Existing and Potential Forest Financing Mechanisms for Smallholders and Community Forestry in West Africa. FAO, Rome.
- Karsenty A., 2006. « Adjudication des concessions, rente économique et risque financier : le débat sur la fiscalité au Cameroun et en Afrique centrale », *Bois et Forêts des Tropiques* n° 287, CIRAD, Montpellier, France.
- Karsenty, A. (2007). Overview of Industrial Forest Concessions and Concession-Based Industry in Central and West Africa, and Considerations of Alternatives, CIRAD-RR1 Working paper.
- Karsenty A., Roda J.-M., Fochivé E., Milol A., Kuetche M., 2006. « Audit économique et financier du secteur forestier au Cameroun », MINEFI, Yaoundé, Cameroon. Unpublished.
- Katerere, Y., Minang, P., and H. Vanhanen (2009). **Making sub-saharan African forests work for people and nature: Policy approaches in a changing global environment**. Special Project on World Forests, Society and Environment (WFSE) of the International Union of Forest Research Organizations (IUFRO), World Agroforestry Centre (ICRAF), the Center for International Forestry Research (CIFOR) and the Finish Forest Research Institute (METLA). Nairobi, Kenya
- Kimmins, H. 1997. *Balancing Act: Environmental Issues in Forests*. UBC Press, Vancouver.
- Odoom, F. 1998 Hardwood plantations in Ghana: Case Study for Project Timber Production from Hardwood Plantations in the Tropics and Sub-tropics: FAO GCP/INT/628/UK (*unpublished*). 79 pp.
- Kufakwandi, F. S. (2000). Consortium Funding for Sustainable Forest Management: African Perspectives and Priorities. African Development Bank, Abidjan, Ivory Coast.
- Landell-Mills, N., and Porras, I. T. 2002. Silver Bullet or Fools' Gold: A Global Review of Markets for Forest Environmental Services and Their Impact on the Poor. IIED. London.
- Landrot, J. L. and Speed, S (2000). Private-Sector Investment in Sustainable Forest Management in Humid Tropical Africa. Inter-African Forest Industries Association, Abidjan and Paris
- Lawson, A., Booth, D., Msuya, M., Wangwe, S. and Williamson, T. 2005. Does general budget support work? Evidence from Tanzania. Overseas Development Institute, London, and Daima Associates, Dar es Salaam.

- Lebedys A., 2004. "Trends and current status of the contribution of the forestry sector to national economies", Forest Finance Working paper: FSFM/ACC/07, FAO.
www.fao.org/docrep/007/ad493e/ad493e00.htm
- Lohmann, L. and Carrere, R. 1996. *Pulping the South: Industrial Tree Planting and the World Paper Economy*. Zed Books, London
- Lundgren, B., C.T.S. Nair & P.N. Sall, 2004. *Lessons Learnt on Sustainable Forest Management in Africa*. Briefing on the Initiative/Project (AAS, KSLA & FAO).
- Marunda, C. and Henri-Bouda, 2010. Environmental services from the dry forests of Africa. In press.
- Mayers, J. (2007) *Poverty Reduction through Commercial Forestry. What evidence? What prospects?* The Forests Dialogue, New Haven, US.
- Melham, P, Rice, D., Niesten, E., Coxe, S., Hurley, M., Scherlis, J., and F. Hawkins (2008) Pilot Conservation Agreement: The Bonobo Conservation Concession Project Equateur, Democratic Republic of Congo. Conservation International
- Milledge, S.A.H., Gelvas, I. K. and Ahrends, A. (2007). **Forestry, Governance and National Development: Lessons Learned from a Logging Boom in Southern Tanzania**. TRAFFIC East/Southern Africa / Tanzania Development Partners Group / Ministry of Natural Resources of Tourism, Dar es Salaam, Tanzania. 252pp.
- National Board of Trade (2009). **A Case Study of Zambian Honey Exports**. Available on <http://www.opentradegate.se>.
- Nhancale et al (2009). **Small and Medium Forest Enterprises in Mozambique**. IIED Small and Medium Forest Enterprises Series No. 25. Centro Terra Viva and International Institute for Environment and Development, London, UK
- Nanasta, D., 2007. CDM in Africa and the Nairobi Framework of Action. In: 'Climate and Development' Week, CCS and CDM: A Capacity Building Effort in Africa Workshop, 6–7 September 2007.
- Naoto, Jinji: (2006) "International trade and terrestrial open-access renewable resources in a small open economy." *Canadian Journal of Economics*. Vol. 39, No.3, pp.790-808
- OECD. 2000. Official Development Assistance to Forestry 1973–1998. Organisation for Economic Co-operation and Development. Paris. January 2000.
- OECD-DAC, 2008. Measuring Aid to Forestry. www.oecd.org/dac/stats/agriculture
- Oyono P.R., Ribot J.C, Larson A.M., 2006. "Green And Black Gold In Rural Cameroon: Natural Resources For Local Governance, Justice And Sustainability". Environmental Governance in Africa, Working Papers # 22, WRI – CIFOR.
- Pandey, D. 1998. Forest plantation areas, 1995. November 1997, revised July 1998. Report to the FAO project GCP/INT/628/UK (unpublished)

Peskett L., Huberman D., Bowen-Jones E., Edwards G. and J. Brown. (2008). Making REDD work for the Poor. A Poverty Environment Partnership (PEP) Report.

Prabhu, R., Colfer, C. J. P., Venkateswarlu, P., Tan, L. C., Soekmadi, R. and Wollenburg, E. (1996) – *Testing Criteria and Indicators for the Sustainable Management of Forests: Phase I Final Report*. CIFOR Special publication. Bogor, Indonesia: Center for International Forestry Research

Putz, F.E. and R. Nasi. (2009). Carbon benefits from avoiding and repairing forest degradation. In A. Angelsen (ed). *Realising REDD+: national Strategy and policy options*. CIFOR, Bogor Indonesia

Rice R.E., Sugala C.A., Ratay S.M., Fonseca G.A., 2001, "Sustainable forest management: A review of conventional wisdom", *Advances in Applied Biodiversity Science* 3, Washington, DC: CABS/Conservation International, Rome.

Ribot J., 1999. "Framework for environmental governance", *Présentation à l'atelier Environmental Governance in Central Africa*, Washington D.C., 16-27 avril, WRI.

Salmi, J., and Monela, G. C. 2000. Study on Forest Financing. Ministry of Lands, Natural Resources and Tourism, Forestry, and Beekeeping Division. Formulation of National Forest Programme in Tanzania. Dar es Salaam.

Scurrah-Ehrhart, C., 2006. *Tanzania inventory of payments for ecosystem services*. Forests Trends: Washington DC.

Sharma, N., Binkley, C., and Burley, J. 1992. "A Global Perspective on Forest Policy," in *Managing the World's Forests*. The World Bank, Washington, DC

Shandra, J.(2007) "International Nongovernmental Organizations and Deforestation: Good, Bad or Irrelevant?" *Social Science Quarterly*, Vol. 88, No3, pp. 665-689

Scherr, J.S., Buck, E.L., Majanen, T. and Shames, S. (2011) Scaling up Landscape Investment Approaches in Africa: Where do Private Market Incentives Converge with Landscape restoration Goals? In proceedings of the Investment Forum on Mobilising Private investment in Trees and Landscape Restoration. PROFOR.

Stern N et al. 2006. Stern Review Report: The Economics of Climate Change. London, UK: Her Majesty's Treasury.

Simula, M. 2008. Mapping of existing and emerging sources of forest financing
Markku Simula. 2008. Financing Flows and needs to implement the Non-Legally Binding Instrument on all Types of Forests http://www.un.org/esa/forests/pdf/ahg/finance/AGF_Financing_Study.pdf.

UNDP. 1996. *Financial mechanisms and sources of finance for sustainable forestry*. 4-7 June. Pretoria, South Africa. Workshop proceedings. New York.

Tainter, J. A. (2001) – Sustainable Rural Communities: General Principles and North American Indicators. In: Pierce Colfer, C.J. and Byron, Y. (eds.) *People Managing Forests: The Links between Human Well-Being and Sustainability*. Washington D.C.: Resources for the Future

Thoma, W., and K. Camara. 2005. Community Forestry Enterprises – A Case Study of the Gambia, ITTO, Forest Trends, RRI.

Tomaselli, I. (2000). The Private Sector and Sustainable Forest Management – South America Perspective. STCP, Brazil

Tomaselli, I. (2006). Creating a new business model for forestry investments. International Tropical Investment Forum: Issues and opportunities for investment in natural tropical forests. Cancun, Mexico. April 26-27, 2006.

United Nations. 1992a. Chapter 11: Combating deforestation. In *Agenda 21*. United Nations Conference on Environment and Development, Rio de Janeiro, Brazil, 3–14 June 1992. New York. Available at: www.un.org/esa/sustdev/documents/agenda21/english/agenda21chapter11.htm

United Nations. 1992b. Non-legally binding authoritative statement of principles for a global consensus on the management, conservation and sustainable development of all types of forests. In *Report of United Nations Conference on Environment and Development*, Rio de Janeiro, Brazil, 3–14 June 1992, Annex III. New York. www.un.org/documents/ga/conf151/aconf15126-3annex3.htm

United Republic of Tanzania - URT, (2007a). **Budget Speech** 2007/2008.

UNFCCC. 2007. Investment and Financial Flows to Address Climate Change. Bonn.

UNFF, 2007. Report of the Seventh Session (24th February, 2006 and 16-27 April, 2007). Economic and Social Council. Official records, 2007. Supplement No.22. UN. New York

UN-REDD, 2010. : http://www.un-redd.org/Newsletter9_Support_to_partner_countries/tabid/4670/language/en-US/Default.aspx

United Republic of Tanzania, 2011. National Strategy for Reduced Emissions from Deforestation and Forest Degradation (REDD+).

van Dijk, K and Savenije, H 2009. Towards National Financing Strategies for Sustainable Forest Management in Latin America: *Overview of the present situation and the experience in selected countries*. FAO.Rome

Victurine, R (2001) Maximising Conservation Benefits : Grant Programmes and Sustainable Financing. Symposium on Sustainable Financing for Protected Area and other Environmental Programmes, Madagascar, 15-18 May 2001.

Whiteman, A. and A. Lebedys (2006) The contribution of the forestry sector to African economies. *International Forestry Review Vol.8(1): 31 - 43*,

World Bank. 1994. A strategy for the forest sector in sub-Saharan Africa. World Bank Technical Paper No. 251. Washington, DC.

World Bank. 2007, Carbon Finance for Sustainable Development 2007. Washington, D.C.

World Bank. 2008. Climate Investment Funds: Mapping of existing and emerging sources of forest financing,(CIF/FDM.1/ 2, October 7, 2008). First design meeting on the Forest Investment Program, Washington, D.C., October 16-17. Available at: http://siteresources.worldbank.org/INTCC/Resources/Mapping_study_Final_for_FIP_Design_Meeting_Oct_16-17_08.pdf

World Bank, 2010. **Enabling Reforms: A Stakeholder-Based Analysis of the Political Economy of Tanzania's Charcoal Sector and the Poverty and Social Impacts of Proposed Reforms**
World Commission on Environment and Development, 1987. *Our Common Future*. New York: Oxford University Press.

World Commission on Forests and Sustainable Development, 1995. *Activities of the WCFSD in the Areas of Conflict Resolution, Policy Reform and Strengthening of Scientific Research*. Geneva: WCFSD.

<http://onlinelibrary.wiley.com/doi/10.1111/j.1477-8947.2008.00176.x/pdf>

Annex 1: Production, Consumption and Trade in Woodfuel, Roundwood and Sawnwood in 2008

COUNTRY	Woodfuel (1000m3)		Industrial roundwood (1000m3)				Sawnwood (1000m3)			
	Production	Consumption	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption
Burundi	8 965	8 965	333	0	3	330	83	0	0	83
Cameroon	9 733	97333	2 616	0	157	2459	773	0	258	515
Central African republic	6017	6017	841	0	57	784	95	0	11	84
Chad	6830	6830	761	1	0	762	2	0	0	2
Republic of Congo	1295	1295	2431	1	251	2180	268	0	40	228
DRC	74315	74315	4452	5	156	4301	15	17	29	3
Equatorial Guinea	189	189	419	0	82	337	4	0	1	3
Gabon	534	534	3400	0	2178	1222	230	0	62	169
Rwanda	9591	9591	495	6	0	501	79	9	0	97
Sao Tome and Principe	0	0	9	0	0	9	5	0	1	5
Total Central Africa	117469	117469	15757	13	2884	12886	1595	26	402	1179
Comoros	0	0	9	0	0	9	0	1	0	1
Djibouti	0	0	0	3	0	3	0	1	0	1
Eritrea	2565	2565	2	1	0	3	0	1	0	1
Ethiopia	98489	98489	2928	3	0	2931	18	14	12	20
Kenya	21141	21141	1246	11	2	1256	142	14	0	155
Madagascar	11910	11910	277	16	16	277	92	1	35	58
Mauritius	7	7	9	3	0	11	3	25	0	28
Reunion	31	31	5	1	2	3	2	85	0	87
Seychelles	0	0	0	0	0	0	0	0	0	0
Somalia	11807	11807	110	1	0	111	14	11	0	25
Uganda	38468	38468	3489	1	19	3471	117	4	1	121
Tanzania	22352	22352	2314	0	6	2308	24	4	22	6
Total East Africa	206 769	206 769	10 389	41	46	10 384	412	162	71	503
Algeria	7968	7968	103	35	1	136	13	802	0	815
Egypt	17283	17283	268	116	0	384	2	1911	0	1913
Libya	926	926	116	8	0	124	31	202	0	232
Mauritania	1747	1747	3	0	0	3	14	2	0	16
Morocco	339	339	577	407	3	981	83	723	92	714
Sudan	18326	18326	2173	1	2	2172	51	91	0	142
Tunisia	2170	2170	218	18	1	235	20	278	0	298
Total Northern Africa	48 759	48 759	3458	585	7	4 035	214	4010	93	4 131
Angola	3828	3832	1096	2	6	1092	5	3	0	8
Botswana	674	674	105	0	0	105	0	15	0	15
Lesotho	2076	2076	0	0	0	0	0	0	0	0
Malawi	5293	5291	520	0	9	511	45	0	45	0
Mozambique	16724	16724	1304	10	14	1300	57	13	47	23
Namibia	0	0	0	0	0	0	0	0	0	0
South Africa	19 560	19 561	19 867	60	273	19 654	2 056	488	55	2 488
Swaziland	1028	1028	330	0	0	330	102	0	0	102
Zambia	8 840	8 840	1325	4	5	1 324	157	5	25	137
Zimbabwe	8 543	8 543	771	2	3	720	565	1	54	512
Total Southern Africa	66567	66570	25 318	79	311	25 086	2 986	526	227	3 285
Benin	6184	6 184	427	0	51	377	84	0	4	80

Burkina faso	12418	12 418	1 171	2	3	1170	5	4	0	9
Cape Verde	2	2	0	4	0	3	0	17	0	17
Cote d'Ivoire	8835	8 833	1 469	11	59	1422	456	0	279	177
Gambia	675	675	113	0	0	113	1	1	0	2
Ghana	35363	35 363	1392	3	1	1393	513	0	192	322
Guinea	11846	11 846	651	0	18	633	30	0	25	6
Guinea-Bissau	422	422	170	0	2	168	16	1	0	16
Liberia	6503	6 503	420	0	1	419	80	0	0	80
Mali	5203	5 203	413	0	0	413	13	22	1	34
Niger	9432	9 432	411	1	0	411	4	8	0	
Nigeria	62389	62 387	9 418	1	40	9 379	2 000	2	8	1 994
Senegal	5366	5 366	794	13	0	807	23	81	2	103
Sierra Leone	5509	5 509	124	0	2	122	5	0	1	4
Togo	5927	5 927	166	1	23	144	15	0	1	14
Total West Africa	176073	176 069	17 138	36	201	16 974	3245	138	514	2869
Total Africa	615 636	615 636	72 059	754	3449	69 365	8 412	4 862	1 307	11 967

Annex 2: Total Value of African Forest Products Exports in 2007

Country/Area	Export value of pulp & paper 2007	Export value of wooden furniture 2007	Export value of forest products 2007	Total
	(million USD)	(million USD)	(million USD)	(million USD)
Algeria	5	0	14	19
Angola	0	0	3	3
Benin	1	0	23	24
Botswana	11	1	11	23
Burkina Faso	0	1	8	9
Burundi	0	0	6	6
Cameroon	1	0	450	451
Cape Verde	0	0	1	1
Central African Republic	0	0	59	59
Chad	0	-	2	2
Comoros	0	0	0	
Congo	0	0	269	269
Cote d Ivoire	44	0	456	500

Annex 2: Total Value of African forest products exports in 2007

Country/Area	Export value of pulp & paper 2007	Export value of wooden furniture 2007	Export value of forest products 2007	Total
	(million USD)	(million USD)	(million USD)	(million USD)
Democratic Republic of the Congo	0	0	137	137
Djibouti	0	0	0	0
Egypt	52	191	101	344
Equatorial Guinea	0	-	171	171
Eritrea	1	0	1	2
Ethiopia	0	1	10	11
Gabon	0	0	983	983
Gambia	0	0	0	0
Ghana	1	0	229	230
Guinea	0	0	14	14
Guinea-Bissau	0	-	1	1
Kenya	55	3	79	137
Lesotho	0	0	0	0
Liberia	0	0	0	0
Libyan Arab Jamahiriya	2	0	3	5

Annex 2: Total Value of African forest products exports in 2007

Country/Area	Export value of pulp & paper 2007	Export value of wooden furniture 2007	Export value of forest products 2007	Total
	(million USD)	(million USD)	(million USD)	(million USD)
Madagascar	0	1	21	22
Malawi	1	1	9	11
Mali	1	0	1	2
Mauritania	1	-	2	3
Mauritius	11	1	13	25
Mayotte	0	0	0	0
Morocco	122	13	240	375
Mozambique	2	0	38	40
Namibia	4	16	11	31
Niger	0	0	0	0
Nigeria	1	0	52	53
Reunion	1	0	2	3
Rwanda	0	0	2	2

Annex 2: Total Value of African forest products exports in 2007

Country/Area	Export value of pulp & paper 2007	Export value of wooden furniture 2007	Export value of forest products 2007	Total
	(million USD)	(million USD)	(million USD)	(million USD)
Saint Helen	0	-	0	0
Sao Tome and Principe	0	0	0	0
Senegal	15	1	24	40
Seychelles	0	0	0	0
Sierra Leona	2	-	8	10
Somalia	0	-	7	7
South Africa	1.277	41	1.781	44.058
Sudan	1	0	70	71
Swaziland	46	3	72	121
Togo	0	0	3	3
Tunisia	161	14	188	363
Uganda	5	1	10	16
United Republic of Tanzania	13	0	48	61
Western Sahara	0	-	0	0
Zambia	2	0	8	10
Zimbabwe	24	18	49	91
Total Africa	1.862	313	5.691	320.553

Annex 3: Some Examples of REDD Projects in Africa

COUNTRY	PROJECT	LOCATION	SPONSOR	LEAD IMPLEMENTER
Cameroon	Building Foundations for Success: Community Participation is Central to REDD (capacity building and advocacy)	Transboundary (Cameroon, the Central African Republic, the Republic of Congo and Gabon)	Congo Basin Forest Fund (CBFF)	FERN, Belgium
	Conserving the Cross River Gorilla Landscape: piloting a landscape-scale approach to Reducing Emissions from Deforestation and Forest Degradation (REDD)	Gulf of Guinea, Takamanda-Mone Technical Operations Unit (TOU)	Spain-UNEP Partnership for Protected Areas, in support of LifeWeb; USAID	Wildlife Conservation Society (WCS)
Ghana	Carbon Finance to Improve Sustainable Cocoa Production	Bongo, Bonzambepo Landscape	Katoomba Group; NCRC; Farmer organisations and Cocoa buyer organisations	
Kenya	Kasigau Corridor REDD Project (phases I and II)	South East Kenya		Wildlife Works
Madagascar	Andasibe-Mantadia Biodiversity Corridor		World Bank BioCarbon Fund, GEF	ANGAP; Conservation International; Ministry of Environment

	Fandriana-Vondrozo Corridor REDD Project	East-central Madagascar	Conservation International	Madagascar Ministry of Environment, Forests and Tourism; Conservation International;
Mozambique	Quirimbas Carbon Livelihoods	Quissanga	Envirotrade (UK)	Quirimbas National Park
Niger	Carbon Sequestration and Rural Livelihoods Improvements through Acacia Plantations		World Bank BioCarbon Fund	Achats Services International (ACI); and ICRISAT; Ministry of Agricultural Development
Senegal	Participatory Rehabilitation of Degraded Lands21		GEF; AfDB; UNDP; National Governments	Governments and United Nations Office for Project Services (UNOPS)
Sudan	Community-based Rangeland Rehabilitation for Carbon Sequestration		GEF	National Government (Environmental Ministry)
Uganda	Budongo-Bugoma Landscape Project	Budongo and Bugoma forest reserves (Hoima, Kibale, Kyenjojo and Masindi districts)		NFA; Jane Goodall Uganda; WCS; and Nature Harness Initiatives
	IUCN pro-poor REDD Project		DANIDA	IUCN

Annex 4: Examples of other Carbon Projects in Africa

Initiative	Donors	Other organization involved	Type	Forest type	Investment sum
Benin		World Bank GEF		Savanna woodland	
Burkina Faso		World Bank Norwegian Government	Readiness	Dry forests, savanna	
Cameroon					
REDD COMIFAC pilot project	KfW	.COMIFAC .GTZ .GMES .FAN (Bolivia) .WWF .World Bank	Demonstration Activity	tbd	tbd
FCPF	World Bank	. World Bank	Readiness	Closed evergreen rainforests	Estimated budget requirement \$1 000 000
CBFF	DFID and Norwegian government	AfDB .COMIFAC .NGOs	Readiness	Closed evergreen rainforest	\$100 million (as part of Environmental Transformation Fund) initiative fund and another \$1.5 billion is to be committed from the British Government
Enhancing Institutional capacity on REDD issues for sustainable Forest Management in the Congo Basin	. World Bank .AfDB .WWF,WCS, CI	. World Bank .AfDB, CIRAD COMIFAC, WWF,WCS, ONFI, FRM	Readiness	Savanna, Closed evergreen rainforests	Co-financing (Congo Basin Countries, Bilateral Aid agencies, Multilateral agencies, NGOs, Others): \$13 180 000 World Bank \$15 000 000
Reduce emission for Deforestation and Degradation (REDD+) in Congo Basin	.WWF		Readiness	tbd	tbd
Initiative	Donors	Other organization involved	Type	Forest type	Investment sum

Central Africa Republic					
FCPF	. World Bank		Readiness	Tropical forests Bush covered savannahs	tbd
Enhancing Institutional capacity on REDD+ issues for sustainable Forest Management in the Congo Basin	. World Bank .AfDB .WWF,WCS, CI	. World Bank .AfDB, CIRAD COMIFAC, WWF,WCS, ONFI, FRM	Readiness	Savanna	Ongoing
Reduce emission for Deforestation and Degradation (REDD+) in Congo Basin	.WWF		Readiness	tbd	tbd
DR Congo					
FCPF	. World Bank		Readiness	Charcoal wood forest, Savanna	Estimated budget requirement \$6.5 million
Enhancing Institutional capacity on REDD+ issues for sustainable Forest Management in the Congo Basin	. World Bank .AfDB .WWF,WCS, CI	CIRAD COMIFAC, ONFI, FRM	Readiness	Tropical rainforests	Co-financing (6 Congo Basin Countries, Bilateral Aid agencies, Multilateral agencies, NGOs, Others): \$13 180 000 World Bank \$15 000 000
Initiative	Donors	Other organization involved	Type	Forest type	Investment sum
UN-REDD	UN-REDD Fund	.UNDP .UNEP .FAO	Readiness	Tropical rainforests	Approved budget of \$1 883 200
Reduce emission for Deforestation and Degradation (REDD+) in Congo Basin	.WWF	.WWF	Readiness	tbd	tbd
FCPF	. World Bank	. World Bank	Readiness	Closed canopy Wet forest,	tbd

				Tropical forest Alpine and sub-alpine forest Mangrove forest	
Ethiopia					
FCPF	. World Bank	. World Bank	Readiness	Dry forests	tbd
Gabon					
CBFF	.DFID and Norwegian government	.AfDB .COMIFAC .NGOs	Readiness	Closed evergreen rainforest	\$100 million (as part of Environmental Transformation Fund) initiative fund and another \$1,5 billion is to be committed from the British Government
FCPF	. World Bank	. World Bank	Readiness	tbd	Estimated budget requirement \$6 000 000
Enhancing Institutional capacity on REDD+ issues for sustainable Forest Management in the Congo Basin	. World Bank .AfDB .WWF,WCS, CI	. World Bank .AfDB, CIRAD COMIFAC, WWF,WCS, ONFI, FRM	Readiness	tbd	Co-financing (6 Congo Basin Countries, Bilateral Aid agencies, Multilateral agencies, NGOs, Others): \$13 180 000 World Bank \$15 000 000
Reduce emission for Deforestation and Degradation (REDD+) in Congo Basin	.WWF	.WWF	Readiness	tbd	tbd
Ghana					
FCPF	. World Bank	. World Bank	Readiness	Savanna and High forest	Estimated budget requirement \$1 200 000
Guinea					
Enhancing	. World Bank	. World Bank	Readiness	Low-and	Co-financing (6

Institutional capacity on REDD+ issues for sustainable Forest Management in the Congo Basin	.AfDB .WWF,WCS, CI	.AFD, CIRAD COMIFAC, WWF,WCS, ONFI, FRM		medium-altitude closed rainforests, Savannah Evergreen forest	Congo Basin Countries, Bilateral Aid agencies, Multilateral agencies, NGOs,); \$13 million World Bank \$15
CBFF	.DFID and Norwegian government	.DFID and Norwegian government (donors) .AfDB .COMIFAC .NGOs	Fund related to REDD+	Low and medium-altitude closed rainforests, Savannah, evergreen forest	\$100 million (as part of Environmental Transformation Fund) and another \$1,5 billion is to be committed
Initiative	Donors	Other organizations involved	Type	Forest type	Investment sum
Kenya					
FCPF	World Bank		Readiness	Nature high forest, dry land forest (woodland) , Forest plantation	tbd
The International Small Group and Tree Planting Program (TIST) Carbon (CO2) Sequestration Project	World Bank BioCarbon Fund, USAID, Dow Chemical Company		Voluntary carbon market		
Liberia					
FCPF	World Bank	World Bank	Readiness	Low land tropical forest	Estimated budget requirement \$650 000
Madagascar					
Ankeniheny-Zahamena-Mantadia Biodiversity Conservation Corridor and Restoration	World Bank Conservation Initial	.GEF, BioCF .Ministry of the environment of Madagascar . World Bank .Conervation International	Demonstration activity	Rainforest	Part of \$150 million of the national environmental protection program

Project		.ANAE(local NGO)			
Vohidrazana-Mantadia Corridor Restoration and Conservation Carbon Project	Multilateral donor	. World Bank (BioCF) .Madagascar's Government .GEF .USAID .CI-GCF Climate Trust DYNATEC	Demonstration activity	Rainforest	Carbon Fund \$1 500 000
REED+ COMIFAC pilot project	.KfW	.KfW .COMIFAC .GTZ .GMES .FAN (Bolivia) .WWF .World Bank	Demonstration activity	tbd	tbd
FCPF	.EB		Readiness	Eastern rainforest, dry western forest and southern spiny forest.	tbd
Initiative	Donors	Other organizations involved	Type	Forest type	Investment sum
Makira Forest Area Conservation project	Mitsubishi Group, NavTech and the music group Peal Jam	.WCS, CEPE, CI-GCF (fund) .Maakira carbon company .Malagasy Government .Mitsubishi Group, NavTech and the music group Peal Jam (carbon credit buyers)	Demonstration activity	Rainforest	WCS \$70000 a year (ongoing) Tany Meva Foundation \$80 000 (1 year, beginning in 2006) Imperial Tabacco \$120 000 (3 years beginning 2006) CI \$110 000 (ongoing) MacArthur Foundation \$90 000 (3 years beginning in 2005)
FORECA pilot project	.SDC and BMZ	.Intercooperation .GTZ .SDC and BMZ	Readiness	tbd	tbd
Mali					
Acacia community plantations		World bank Biocarbon fund		Dry forests	
Mozambique					

FCPF	. World Bank	. World Bank	Readiness	Dense and open forests	tbd
Nhambita Community Carbon Project	.DFID and the European Commission	.local community Sofala Provincial Government .DFID and the European Commission (donors) .ODA .Envirotrade Ltd. .WWF, GTZ, ORAM and other NGOs	Non-explicit carbon goals	Tropical savanna	.1.13 million Euro from EU commission .In 2004, farmers that plant 1 hectare of trees receive around \$100 and another \$25 is paid into s community fund
Initiative	Donors	Other organizations involved	Type	Forest type	Investment sum
Republic of Congo					
FCPF	. World Bank		Readiness	Dry forest, Flood forest, Shrub savanna	Estimate budget requirement \$4 5000 000
Enhancing Institutional capacity on REDD+ issues for sustainable Forest Management in the Congo Basin	. World Bank .AfDB .WWF,WCS, CI	CIRAD COMIFAC, WWF,WCS, ONFI, FRM	Readiness	Dry forest, Flood forest, Shrub savanna	
Tanzania					
UN-REDD	UN-REDD Fund	.UNDP .UNEP .FAO	Readiness	Montane and Submontane forests, Lowland Forests and groundwater forests	Approved budget of \$4 280 000
FCPF	. World Bank	. World Bank	Readiness	Miombo Woodlands	tbd
Uganda					

FCPF	. World Bank		Readiness	Grassland. Tropical	tbd
Kibale national Park	Climate Care (UK) Uganda Wildlife Authority			Tropical	
Zambia					tbd
UN-REDD	UN-REDD Fund	.UNDP .UNEP .FAO	Readiness	Swamp forests, Lowland forest	tbd