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Forestry and Beekeeping Division

Participatory Forest Management in Tanzania:

1993 – 2009

Lessons learned and experiences to date

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ABBREVIATIONS AND ACRONYMS

CARE	Cooperative for Assistance and Relief Everywhere
CBFM	Community Based Forest Management
CBO	Community Based Organisation
CDD	Community Driven Development
CFRs	Community Forest reserves
CPR	Common Pool Resource
CVL	Certificate of Village Land
Danida	Danish Agency for International Development
DED	District Executive Director
DCFO	District Catchment Forest Officer
DFO	District Forest Officer
DLNRO	District Lands and Natural Resources Officer
DNRMP	District Natural Resources Management Project
DNRO	District Natural Resources Officer
EUCAMP	East Usambara Conservation Area Management Project
FAO	Food and Agriculture Organisation of the United Nations
FBD	Forestry and Beekeeping Division
GDP	Gross Domestic Product
GTZ	Deutsche Gesellschaft fur Technische Zusammenarbeit (German Development Agency)
ha	hectare
HASHI	Hifadhi Ardhi Shinyanga
HIMA	Hifadhi Mazingira
IFM	Independent Forest Monitoring
IGAs	Income Generating Activities
JFM	Joint Forest Management
JMA	Joint management Agreement
LAFRs	Local Authority Forest Reserves
LAMP	Land management Programme
LGDG	Local Government Development Grant
MEMA	Matumizi Endelevu ya Misitu ya Asili
MFA	Ministry of Foreign Affairs
MJUMITA	Mtandao wa Jamii ya Usimamizi wa Misitu Tanzania
MNRT	Ministry of Natural Resources and Tourism
MNRP	Management of Natural Resources Programme
NAFOBEDA	National Forest and Beekeeping Database
NFBKP	National Forest and Beekeeping Programme
NFRs	National Forest Reserves
NGOs	Non-Governmental Organisations
NORAD	Norwegian Agency for Development Cooperation
NSGPR	National Strategy for Growth and Poverty Reduction
NTFPs	Non Timber Forest Products
PFM	Participatory Forest Management
PFRs	Private Forest Reserves
PMO-RALG	Prime minister's Office-Regional Administration and Local Government
PRA	Participatory Resource Assessment
PWS	Payment for Water Services
REDD	Reduced Emissions from Deforestation and forest Degradation
Sida	Swedish Agency for International Development
SULEDO	Sunya, Lengatai and Dongo
SWAp	Sector Wide Approach
TASAF	Tanzania Social Action Fund
TFCMP	Tanzania Forest Management Project
TNRF	Tanzania Natural Resources Forum
TSED	Tanzania Socio-Economic Database

TZS	Tanzania Shilling
UK	United Kingdom
URT	United republic of Tanzania
USD/US\$	United States Dollar
UTUMI	Utunzaji wa Misitu
VECs	Village Environmental Committees
VFMA	Village Forest Management Area
VNRCs	Village Natural Resources Committees
VLFRs	Village Land Forest Reserves
WMA	Wildlife Management Area

Foreword

Tanzania was one of the first countries on the African continent to formally recognise the role of communities in managing and owning forests. A number of pilot activities implemented in the early 1990s under the Sida-funded LAMP project in the well-known forests of Duru-Haitemba, Mgori and SULEDO paved the way for important changes in our forest policy and legislation. Tanzania is now considered a leader on the continent with regard to PFM implementation. A report published by the Forestry and Beekeeping Division (FBD) in 2008 confirmed this, stating that now PFM is either being established or operational in over 2,300 villages and covering over 4 million hectares of forest land. PFM is operational in all major forest types: montane, miombo, coastal, mangrove or acacia woodlands and in all regions of the country. The efforts of the government are supported by NGOs and development partners who provide an important contribution to the overall development of PFM in the country.

This publication was commissioned by FBD, with the objective of reviewing the past 15 years of experience in PFM in Tanzania and asking critical questions about the degree to which it has met its objectives of restoring forests and improving livelihoods. The report draws upon a range of studies and on going research initiatives. The two authors, Professor Said Iddi and Tom Blomley, were uniquely placed to undertake this assignment. Professor Iddi was Director of FBD between June 1996 and January 2005 and throughout his period of leadership he was a consistent champion of community involvement in forest management, overseeing the important legal and policy changes that made PFM possible. Tom Blomley was an adviser to FBD between 2003 and 2008, and facilitated the establishment of the national PFM programme together with colleagues from the Ministry of Natural Resources and Tourism (MNRT) and Prime Minister's Office, Regional Administration and Local Government (PMO-RALG).

It gives me great pleasure to introduce this review of lessons learned in PFM and would like to extend my thanks to the Danish government and the World Bank for making this publication possible. It is my hope that it will be widely read, both inside and outside Tanzania and that many of the challenges posed in this report can be addressed jointly by government, Non Governmental Organisations (NGOs) and most importantly the rural communities which depend heavily on our forests as a source of livelihood and income.

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Chapter 1: The legal and institutional setting for PFM

1.1 Background and introduction

1.1.1 Forest Resources

It is estimated that in 2005, Tanzania mainland had 35.3 million ha of forests, representing 39.9% of total land area (FAO, 2009). The main forest types are the extensive miombo woodlands in lowland areas across the central and southern parts of the country, the acacia woodlands in the northern regions, the coastal forest/woodland mosaic in the east, mangrove forests along the Indian Ocean coast, and closed canopy forests on the ancient mountains of the Eastern Arc in the east, on the Albertine Rift and Lake Tanganyika in the west, and on the younger volcanic mountains in the north

Of these various forest types, 14.3 million ha are found within gazetted Forest Reserves, 2.5 million ha are proposed Forest Reserves and around 2 million ha are in Game Reserves or National Parks. Forest Reserves fall under the legal authority of central government (National Forest Reserves-NFRs), District Councils (Local Authority Forest Reserves-LAFRs) or village government (Village Land Forest Reserves-VLFRs, Private and Community Forest Reserves) and are either designated for production (managed for timber production and other productive uses) or protection (managed for water catchment and/or biodiversity conservation functions). The remaining 16.5 million ha of forests, found outside the reserve network, lie on village and general land. While most of these unreserved forests are poorly managed, traditional and customary management practices have supported the conservation and maintenance of forest cover for sacred, religious or social purposes in numerous localities across the country.

Forests supply a variety of wood and non wood products, offer employment, are a source of revenue through sale of wood and non wood products and services, conserve soils, mitigate climate through sequestering carbon, are a source of water for domestic and industrial use, irrigation agriculture and power generation and have aesthetic, recreational, cultural, spiritual, medicinal and scientific value. The forests also have high biodiversity value and contribute to agricultural stability by protecting the soil and contribute to poverty reduction. The majority of rural communities depend heavily on forest products including firewood and charcoal (bio-energy) for their livelihoods. These communities and a large proportion of urban dwellers depend heavily on bio energy. This is the main source of energy for the rural population and accounts for about 90% of the total energy consumption in the country. Also, through the intercropping of trees with crops (“Taungya”) which is practiced in most forest plantations, the forest sector is contributing significantly to food production. The major crops grown under taungya are maize, carrots, cabbages, potatoes, beans and peas.

The annual value of forest goods and services is estimated at USD 2.2 which is equivalent to 20.1% of Gross Domestic Product (GDP) based on 2006 prices (MNRT, 2008a). The sector provides about 3 million person-years of employment (MNRT, 2008a). Employment is provided through forest industries, government forest administration and self-employment in forest related activities.

Tanzania’s forests however face many challenges including deforestation. Deforestation was estimated at 412,000 ha per annum between 1990 and 2005 (FAO, 2009). This is equivalent to 1.1% of the country’s total forest area. The main direct causes of deforestation are clearing for agriculture, overgrazing, wildfires, charcoal making, persistent reliance on wood fuel for energy and lack of efficient production and marketing, over-exploitation of wood resources and lack of land use plans and non adherence to existing ones.

The underlying causes of deforestation are rapid population growth, poverty, policy and market failures. Population growth, expanding need for industrial and residential sites, unemployment, search for farmland and general social economic needs for forest products

lead to increased deforestation and forest degradation. Policy failures include lack of financial incentives and government inability to institute effective management. Market failures include open access exploitation of forests, incomplete information and imperfect competition. Markets are also unable to ensure equitable resource distribution.

Deforestation is taking place in both reserved and unreserved forests but more so in the unreserved forests. Due to inadequate resources to implement active and sustainable forest management, deforestation through encroachment and over-utilisation has also been taking place in forest reserves which are under the jurisdiction of the central or local governments.

Since early 1990s, Tanzania has made significant steps towards improvement of management of its forest resources. The steps have included implementation of Community Based Forest Management (CBFM) and Joint Forest Management (JFM). The two approaches are commonly referred to as Participatory Forest Management (PFM).

1.2 The development of CBFM in Tanzania

1.2.1 Duru Haitemba Forest

The pioneering development of CBFM in Tanzania is traced to the case of the Duru-Haitemba forest in Babati district that had been earmarked for reservation in 1990/91. Failure of the “command and control” forest management system and the restricted access to forests under state ownership, had led communities of Duru-Haitemba to oppose gazette of the 9,000 ha forest dominated by *Brachystegia* and *Julbernardia species*. At the time, only 3,000 ha were covered with forests, the rest of the area was degraded through non-sustainable use. The people resented gazette of the forest as a state forest reserve preferring to gazette it themselves. After protracted negotiations with the government, gazette was abandoned in favour of assisting each of the eight villages namely Duru, Riroda, Endagwe, Hoshan, Endanachan, Gidas, Bubu and Ayasanda to reserve its forest under the District Council. Encouraged by the handing over of forests into their hands, the eight villages around Duru-Haitemba mobilized themselves into an assembly of members.

Each village constituted a management institution of the part of the forest reserve adjacent to it, surveyed and reset the forest boundaries with the assistance of FBD and a Sida-funded project under its Land Management Programme (LAMP) which provided technical inputs. Each forest was then zoned according to its land use potential, namely a crop use zone, grazing zone and a core protected area excluded from use. A manual was later prepared to assist local forest officials and the community to draw up maps, develop work plans and initiate forest operations. Forest use except grazing, was restricted to the members. The community proceeded to draw simple management plans and determined which areas of forest to be looked after by each adjacent village. The eight villages have obtained title deeds, and according to statutory local government regulations, making them legal owners and managers of the forest reserve under the various new policies and laws. The law allows villages to exist as formal government structures and legal corporate entities with the ability to sue and be sued and to own property as a local community (Wily 1996 in Odera, 2004). Prior to handing over the Duru-Haitemba forest to the community, the villagers were overexploiting the forest as fast as possible, ahead of its gazette. It is noteworthy that by establishing secure ownership rights and providing the community with authority and management responsibility, the then prevailing trend of forest degradation was reversed and villagers soon began implementing the management plans and enforcing rules prohibiting uncontrolled use. This is further enhanced by accompanying security of tenure that is necessary for the development and survival of Common Property Resource (CPR) institutions.

The village forest management rules were subsequently accorded a legal authority as bylaws following their endorsement by the legal District Council. Consequently, the village forest reserves management rules gained a clear legal recognition and backing with judicial authority. This is consistent with Ostrom's (1996) view that if a CPR can be destroyed by the action of others, no matter what local proprietors do, even those who have constrained their harvesting from the CPR for many years will begin to heavily discount future returns. Marrow and Hull (1996) in Odera (2004) had also observed that having a legal title to land is a prerequisite for the villagers to define their forest boundaries as well as their legal rights to defend those forests.

1.2.2 Mgori Forest

Mgori forest is a 44,000 ha woodland managed as five VLFRs with each village recognised as the owner and manager of their respective reserve. Before 1995, Mgori forest was administered by central government. When the FBD was demarcating the forest for gazette, the community demanded that the western part be excluded for their use. This was granted but it was soon realised that neither the FBD nor the Singida District Council could manage the reserve. The government consequently allowed the communities in the five villages and Singida District Council to manage the whole forest. Between 1995 and 1997 the forest was managed using a joint management approach. The community around Mgori comprising Pohama, Ngimu, Unyampana, Mughunga, and Nduamughanga villages later followed/emulated the management approach used in Duru-Haitemba, namely apportioning individual shares of the forest to individual village governments.

1.3 The development of JFM

JFM was conceived largely as a means to secure local support for forest conservation and followed similar strategies in other parts of the world such as India and Nepal. Gologolo and Kipumbwi Forest Reserves in Tanga Region and Udzungwa Forest Reserve in Iringa Region were some of the early initiatives of JFM development (Wily and Mbaya 2001, Iddi, 2002). These initiatives were extended to catchment forests in Tanga, Arusha, Morogoro and Kilimanjaro regions and mangroves along Tanzania's coast from Tanga to Mtwara as part of implementation of the Management of Natural Resources Programme (MNRP). The MNRP was funded by the Governments of Norway and Tanzania, and implemented by MNRT based on a Sector Agreement between Tanzania and Norway signed in 1994. The goal of MNRP was: 'Natural resources contributed on sustainable basis towards reduced income poverty, vulnerability amongst the poorest groups and improved quality of life and social well-being in Tanzania.' The objective was: 'Increased benefits to rural communities based on sustainable natural resource management in Tanzania.' A number of other donor funded projects started in the 1990s, continued to support the establishment and expansion of JFM around high biodiversity forests including the East Usambara Conservation and Management Project (EUCAMP) funded by the government of Finland and the Hifadhi Mazingira (HIMA) and Matumizi Endelevu ya Misitu ya Asili (MEMA) projects (working in Iringa Region) funded by the government of Denmark.

1.4 Policy and legal setting of PFM

In 1998, Tanzania approved a National Forestry Policy, the first new forest policy since 1963 which promoted substantial change in the way forests are managed (MNRT, 1998a). The policy aims to promote participation in forest management through the establishment of VLFRs, where communities are both managers and owners of forests, as well as through JFM, where local communities co-manage NFRs or LAFRs with central and local government authorities. Furthermore, the policy recognises the substantial area of forest that lies outside the formal forest reserve network and the levels of deforestation and degradation that takes place in these areas due to poor management and uncertain tenure. Ascribing clear

and legally mandated tenure for these forest areas to Village Councils was considered a rational way in which overall management levels could be improved.

The policy was followed by the enactment of the Forest Act in 2002, which provides the basis in law for communities to own, manage, or co-manage forests under a wide range of conditions and management arrangements. The Forest Act is notable in embracing the principle of subsidiarity, stating its aim as “to delegate responsibility for the management of forest resources to the lowest possible level of local management consistent with the furtherance of national policies” (URT, 2002).

The Forest Act provides for four types of forests [Part II Section 4]:

1. NFRs managed by Central Government which consist of:

- (i) NFRs managed for protection (such as catchment forests)
- (ii) NFRs managed for production (such as plantations, mangroves or some miombo woodland reserves)
- (iii) Nature forest reserves (such as Amani Nature Reserve and recently gazetted Uluguru Nature Reserve)
- (iv) Forests on general lands which are managed by central government

2. LAFRs which are reserved by local government and consist of:

- (i) LAFRs managed for protection (such as catchment forests)
- (ii) LAFRs managed for production (plantation and natural forests)

The Minister may declare, by order (published in the national gazette) any area of land to be a NFR or LAFR (Part V, Section 22).

3. Village forest reserves which consist of:

- (i) VLFRs;
- (ii) Community forest reserves (CFRs)
- (iii) Forests which are not reserved, are on village land and of which the management is vested in the Village Council;

4. Private forests which are:

- (i) Forests on village land held by one or more individuals under a customary right of occupancy
- (ii) Forests on general or village land of which the rights of occupancy or a lease have been granted to a person or persons or a partnership or a corporate for the purpose of managing the forest.

The Forest Act and national Forest Policy do not define PFM as such. It is a general, umbrella term developed by Tanzanian practitioners that describes different approaches to involving community members in the management of forests, both through community management as well as co-management approaches.

The Forest Act supports PFM in two ways, namely:

- (i) Enabling local communities to declare and ultimately gazette Village, Group or Private Forest Reserves
- (ii) Allowing communities to enter into agreements with government and other forest owners for joint forest management agreements

These different management approaches and the degree of control delegated to community bodies are described in Table 1.

Table 1: Different PFM models and role of communities in management

Legal Description	Role of Community / Individual in Management	Common Name
VLFRs managed by the entire community	Owner and manager	Community Based Forest Management
Community Forest Reserves (CFR) managed by a particular designated group in the community, authorized by the Village Council	Owner and manager	Community Based Forest Management
Private Forests (PF) managed by individual designated households.	Owner and manager	Private Forest Management
JMA where management responsibility is shared between either central / local government and forest adjacent communities or transferred completely.	Co-manager	Joint Forest Management
	Designated Manager	Joint Forest Management (although this form is rarely practiced)

1.5 Forest legislation and its links to local government and land laws

In 1975, at the height of Tanzania’s “villagisation” (*Ujamaa*) process, the government passed legislation providing for the creation of Village Assemblies, which comprise all the adults in a village, and Village Councils, which are elected bodies of 15 to 25 representatives headed by a Village Chairman. Village Councils, numbering over 10,500 across mainland Tanzania, are corporate bodies capable of owning property and entering into legal contracts with other parties. Initially, these village level institutions were intended mainly as mechanisms for organising rural populations according to the radical objectives of *ujamaa* and for transmitting central development plans to the grassroots, particularly with regards to the state’s vision of collectivist agricultural production. At the district level, elected District Councils were abolished in 1972, and central government functions were decentralised to the district level. In 1982, local government reforms were passed and led to reintroduction of elected District Councils and strengthening the corporate powers of elected Village Councils. These reforms also empowered Village Councils to propagate their own legally binding by-laws, subject to approval by the District Council. The Forest Act No. 14 of 2002 (URT, 2002) makes explicit reference to the development of forest management by-laws by Village Councils, through the legal provisions provided for under the Local Government Act No. 7 of 1982 (URT, 1982). The Forest Act reinforces the role of the Village Councils through the formation of Village Forest Committees (which are generally now known as either Village Environmental Committees (VECs), or VNRCs. These elected bodies are defined as accountable sub-committees of the overall Village Council and wider Village Assembly.

The importance of village government institutions for managing natural resources is enhanced through their legal responsibility for management of village lands according to the Land Act No. 4 of 1999 and Village Land Act No. 5 of 1999 (URT, 1999). Village Councils manage land on behalf of the Village Assembly, and this includes demarcating land that is to be allocated to individuals and land which will remain under communal use and management for purposes such as forest management and conservation.

The result of this local governance and land tenure structure is that the boundaries of common property regimes both with respect to the community, as defined by the membership of the Village Assembly, and the physical resource base as defined by the area of a given village’s lands, are relatively clearly defined in rural Tanzania. Consequently, Tanzania now has one of the strongest local institutional frameworks for community-based natural resource management in sub-Saharan Africa.

1.6 CBFM

1.6.1 *Background and context*

As discussed in the preceding section, The Village Land Act (1999), The Local Government Act (1982) and Forest Act (2002) together provide the legal basis for villages to identify, declare, own and manage forest resources on village land in ways that are both sustainable and profitable. The Forest Act further provides tangible incentives to rural communities to progressively “reserve” large areas of unprotected miombo and coastal woodlands currently on general land, estimated to be about 17 million ha. The popular term for delegated management of forest resources on village land is CBFM, and as of 2008, over 2.2 million ha have been placed under local management in over 1440 villages on mainland Tanzania (MNRT, 2008b).

1.6.2 *Legal requirements for establishment of VLFRs*

The most common form of CBFM is the establishment of VLFRs. The minimum legal requirement for this to occur is as follows:

1. Villagers must have legal tenure over their land. In other words it must be classified by the Ministry of Lands and Human Settlement as “Village Land” (and not “general land”. Section 7 of the Village Land Act provides a range of ways in which villages may define (or redefine) the limits and status of their village area/village land. This may be based one or more of the following:
 - (i) the area described when the village was first registered
 - (ii) the area designated as village land under the Land Tenure (Village Settlements) Act of 1965
 - (iii) the area demarcated under any procedure or programme since then, and irrespective of whether this has been formally approved or not
 - (iv) the area as agreed between the Village Council and neighbouring Village Councils
 - (v) the area as agreed by the Village Council with the Commissioner of Lands, the District Council, the Town Council or FBD/Wildlife Division or any other body in charge of land which borders the village land.
 - (vi) the Ministry of Lands has issued a “Certificate of Village Land” (CVL) and the village area is clearly described in the District Register of Village Land¹

More details on legal tenure over land by villagers are provided in the Village Land Act No 5 of 1999.

2. The villagers must then describe the boundaries of the forest. This includes both external boundaries – and where villages share forest land, the internal boundaries within the forest owned by each village
3. The villagers must then develop a management plan for their village forest land. This management plan describes how the forest is used, managed and protected. Where there are opportunities for utilization of the forest, it will describe how much timber or forest products can be harvested and from which areas. According to the Forest Act (2002) (Part III, Section 14), the management plan shall be forwarded to the District Council for comments. In addition, the plan shall be forwarded to the Director Forestry for “Comments and consideration”. The management plan must contain a map. The Forest

¹ Note: Village Councils do not need to wait for issue of a CVL in order to start managing land. Any village that has already agreed boundaries with its neighbours or has a document such as Village Title Deed which describes the boundary may be regarded as already having received CVL.

Act provides a degree of flexibility in this regard by stating that the map shall be “an official map, or other documentary evidence sufficiently clear to identify:

- (i) the village land
- (ii) the area to be established as a VLFR within the village land
- (iii) the location of other villages bordering the property” (Section 35 (2)(c)).

The final plan must then be presented to the Village Assembly for approval.

4. The village must elect a Village Forest Management Committee or more usually a Natural Resources Committee which is a sub committee of Village Council. The VNRC must be elected by the Village Assembly (all the village members) and not appointed by the Village Council. The committee must take account of gender considerations. The VNRC is the principal body concerned with the management of the VLFR (Section 33 (1, 2)).
5. The village must prepare bylaws that support the management plan (fines, sanctions, etc) and these must be approved by the full Village Assembly too (Section 34 (4)).
6. The management plan, the bylaws, the minutes and membership details of the VNRC, must then be forwarded to the district for ratification by the District Council. Once this has been passed, the VLFR is then “declared”. Following declaration by Village Assembly and District Council, the VLFR will be managed in accordance with the forest management plan, bylaws and normal rules governing local governments (Forest Act Section 34 (4)). This means that:
 - (i) villagers can enforce rules and bylaws to protect the forest
 - (ii) villagers can levy fines and retain them at village level
 - (iii) villagers can harvest forest produce for their own use (in line with management plan)
 - (iv) villagers can sell forest produce to outsiders and retain 100% of revenue at village level
7. If after three years, the villagers have managed the forest reserve in accordance with the management plan, they may request (through the District Forest Officer) for formal “gazettement” of a village forest reserve by central government. This is done by Director of Forestry and is optional. The Forest Act provides the requirements for gazettement applications in Section 35. In real terms it does not give any more or less security of tenure, but many villagers like it as it is signed by central government. If villagers wish to apply for gazettement of the their VLFR they must submit the following to the Director of Forestry:
 - (i) A copy of the resolution by the Village Council
 - (ii) List of names of the members of the Village Council committee allocated the responsibility of managing the forest
 - (iii) An official map or documents describing the village land, the boundaries of the VLFR and the names of other villages surrounding.
 - (iv) Management plan
 - (v) Statement of the reasons for application
 - (vi) Financial management arrangements
 - (vii) Statement from the staff employed by the Village Council describing reasons for gazettement.
8. The Forest Act (Section 32(3)) allows for a number of villages to own and manage a VLFR. In such cases, villages may chose to establish a “joint village forest management committee” (Section 38 (3)), comprising not more than five persons elected from each Village Council, which then assumes overall management responsibility for the forest

area. This joint committee does not need to be registered as an association or co-operative but can be a “Union” (*muungano*) which is defined under the Local Government Act to be made up of government staff from different administrative units who come together to form a higher level committee for issues of shared interest.

9. Timber harvested, sold and transported from village forest reserves shall be marked with a “registered mark” (hammer) which shall be issued by Local Authority for that respective village, and registered and gazetted by the Director of Forestry (Forest Act Regulations, Part XII)
10. Where villages have had Village Forest Reserves before the legalization of the Forest Act, they shall be automatically converted into Declared Village Land Forest Reserves (Section 32 (2))
11. Where the villagers fail to manage the forest in line with their management plan, the Director of Forestry can remove the rights of villagers to manage their own gazetted VLFR. The relevant District Council also has this power under declared VLFRs (Section 41 (2))

1.7 Joint Management Agreements

JFM is different from CBFM in that it takes place on forest land owned usually by either central or local government. Communities living around the forest can enter into Joint Management Agreements (JMAs) with either central or local government regarding the use and management of the forest. Under such arrangements, each village defines an area within the forest that it will jointly manage with government. Such areas are called Village Forest Management Areas (VFMA) (Section 39 (2)).

The steps required to implement JFM are very similar to those in CBFM and include:

- (i) Formation of Village Natural Resource Management Committee;
- (ii) Mapping of forest boundary and Village Forest Management Areas;
- (iii) Assessing forest uses and resource availability;
- (iv) Undertaking a Participatory Forest Resource Assessment (if utilization of forest produce is allowed);
- (v) Developing draft management (and utilization) plan and discussing with Village Assembly;
- (vi) Developing forest management bylaws; and
- (vii) Signing of JMA by village and forest owner (either central or local government or other body owning the forest).

The amount of guidance provided by the Forest Act on JMAs is much less than under CBFM. The Forest Act (Section 16) states that a JMA can be made between:

- (i) the Director and any person or organisation in the public or private sector providing for the management within the vicinity of that NFR;
- (ii) community groups or other groups of persons living adjacent to and deriving the whole or a part of their livelihood from that NFR;
- (iii) a District Council and a Village Council, a community group or any person or organisation in the public or private sector providing for the management by that Village Council or community group or organisation in the public or private sector within a LAFR;
- (iv) a Village Council and a community group providing management within a VLFR
- (v) the manager of a private forest and community groups or other groups of persons living adjacent to and deriving the whole or a part of their livelihood from or adjacent to the private forest.;

A JMA shall include the following:

- (i) A description of the forest reserve or the area of the forest reserve covered by the agreement (usually in the form of a map);
- (ii) A description of the matters which are the subject of the agreement;
- (iii) A statement of the objectives of the agreement;
- (iv) The names of and the officers of the organisations that are making the agreement and a brief statement of the powers and authority of the organisations to make any such agreement;
- (v) A description of the management activities agreed to be undertaken by the manager;
- (vi) The rules governing and regulating the use of, access to the forest reserve and the sources of the rules concerning the powers and duties of persons from a local community appointed to act as guardians of the reserve;
- (vii) A description of the existing rights of right-holders within the forest reserve who are not parties to the agreement and procedures for resolving any disputes between them and the parties to the agreement;
- (viii) Rules regulating access to, use and division of, and management and audit of any funds which may be made available for, or are generated by, the implementation of the agreement;
- (ix) Procedures for resolving disputes which may arise between the parties to the agreement;
- (x) The duration of the agreement;
- (xi) Revision of the agreement; and
- (xii) Penalties on violation of rules, expulsion from occupation or limiting or preventing use of or access to the forest reserve or produce therein.

A map must also be drawn, although the Forest Act provides a degree of flexibility in this regard by stating that the map shall be “an official map, or other documentary evidence sufficiently clear to identify:

- (i) the area of the NFR or LAFR in respect of which the Village Council is submitting an application; and
- (ii) the location of any villages bordering the national or local authority forest reserve.

1.8 Policy gaps and challenges

The forest legislation provides a clear and unambiguous legal basis for the management of forests on village lands at individual, group and community levels. However, the implementation of JFM, legalized through the signing of JMAs, has been more uncertain. While the law allows for a wide range of partnerships within a JMA, as well as the option for delegated management where management rights can be devolved from government to a third party agency (such as an NGO, a community group, a private company or a local government body), there are no known cases of this happening on the ground.

In addition, while several hundred villages have been supported to develop JMAs around a range of forests managed by central or local government, only a limited number of these agreements have been signed by the government, particularly those relating to NFRs. This is largely because of the fact that the law remains silent on how the benefits of forest management particularly in forest reserves managed for timber production purposes can be equitably shared with participating communities. In many cases, benefit-sharing arrangements remain in a legal limbo with *de facto* management at the local level taking place, in return for vague promises about benefits at a later date. Clearly, this is a situation that cannot be sustained indefinitely. Without benefits reaching a level that equal or exceed the costs being borne, in terms of local forest management, the long term future of JFM remains uncertain. With the increased discussion in Tanzania over revenues from carbon financing, particularly

under REDD (Reduced Emissions from Deforestation and Degradation), the question of sharing of these revenues is likely to be rekindled.

What is needed if JFM is to have a long term future is legally binding mechanisms that allow communities with signed agreements to capture significant benefits from the management of forests. A number of proposals have been raised by the MNRT and are summarized as follows:

- (i) Any revenues arising from forest management (in the form of levies, fees and royalties) will be shared 40% to the village government and 60% to either the District Council (if it is a LAFR) or Central government (if it is a NFR);
- (ii) Fines imposed by village forest management committees implementing a signed JMA on individuals undertaking illegal activities inside NFR or LAFRs should be fully retained (100%) by the village government; and
- (iii) Forest products or equipment used to harvest that is confiscated by village governments undertaking routine patrols in all or part of a forest covered by a signed JMA shall be sold and 100% of the revenue retained by the village government.

The second and third proposals are designed to assist communities living around forest reserves where there is little or no harvesting (either due to over-harvesting in the past, or because the reserve status does not allow harvesting). In such cases, there are few economic benefits that can be realized by communities living around the forest, other than from controlling illegal activities.

Finally, the following proposals have been made regarding how benefits could be shared:

Forest Harvesting Concessionaires will be required to make two payments when obtaining a license to harvest timber from an area of forest covered by a signed JMA:

- (i) One payment (Timber Royalty) will be made to FBD or the District Council (depending on whether it is a NFR or LAFR) at 60% of the current Royalty rate); and
- (ii) A second payment (Local Management Fee) will be paid to a village account (the village responsible for the management of that forest, or part of forest where the trees are harvested) at 40% of the current Royalty rate.

At the time of writing this document, the Ministry of Finance and Economic Affairs has argued that the Forest Sector already receives significant funding through its national “retention fund”, a mechanism by which a share of all forest revenues are channelled back to the FBD. However, MNRT has been advised to prepare a Cabinet Paper on the proposal for consideration and decision by the Cabinet.

A second major weakness of the current legislation regarding PFM in Tanzania, is that it is highly sectoral in nature, and gives little regard for other natural resources available at the community level. Although both the National Forest Policy and the Wildlife Policy of Tanzania were approved in March 1998, which would suggest some degree of parallel evolution, the sectors have developed divergent ideas about how to devolve management to the village level. The forestry sector, in its provisions for PFM builds on Tanzania’s structures of local government and customary village-based land tenure. The key institutions for PFM are the Village Council, Village Assembly, and VNRC. The basic management tools are village by-laws and land use plans, which are legally grounded in the Local Government Act and Village Land Act, respectively. One of the reasons why CBFM has taken off easily in Tanzania, with over 1,400 villages establishing their own village forest reserves, is that this framework is relatively simple and based on existing local institutions, such as village and district governments.

The wildlife sector's provisions for local management, through establishment of Wildlife Management Areas (WMAs), contrastingly require new community level institutions. Specifically, forming a WMA requires communities, through their village assemblies, to elect a 'community-based organization' (CBO), which can manage the WMA belonging to several villages and be granted 'authorized association' status by the Director of Wildlife. This 'authorized' status simply means that the CBO is given user rights to the wildlife in the WMA, including limited rights to sell those user rights to third party investors (e.g. safari hunting companies). Prior to becoming 'authorized', the CBO must be registered with the Ministry of Home Affairs. The Village Councils have a relatively limited role in directly managing the WMA, except to receive revenues earned from the CBO and then, through normal village government procedures, budget and use those earnings. A major challenge for communities in forming WMAs is creating this new CBO institution, which will have considerable power over village lands and resources as the manager of the WMA. Agreeing on a constitution, membership, and leadership can be time-consuming and requires a great deal of grassroots engagement if the CBO is to be an accountable and effective organization.

The institutional mismatch between the WMA process and CBFM has impeded sectoral integration, as communities and donors have generally supported implementation of one or the other sector's procedures. It remains unclear if, for example, the same area of village land can be legally gazetted as both a WMA and a VLFR. From the village perspective, however, obtaining legalised flows of both wildlife and forest products would substantially improve local incentives for forest and wildlife management. The legal uncertainty caused by the parallel and disconnected development of wildlife and forest policies and laws results in inefficiencies and wasted opportunities for poverty reduction and sustainable land management. This is one of the key factors behind recent discussions amongst donors and government on the development of a national natural resource management grant that would replace sub-sectoral support to wetlands and forestry (See Section 4.7)

1.9 Conclusions and lessons learned

Tanzania's legal and policy framework with regard to the management and ownership of forests by rural communities is one of the most advanced in Africa. Reforms introduced in the late 1990s and early 2000s provide the legal basis for communities to own and manage forest resources on village lands (CBFM) or jointly manage forest resources within government forest reserves (JFM).

The underlying reasons for Tanzania's progressive laws and policies relating to PFM appear to be related to Tanzania's socialist past and the strong power vested in village governments. Villagisation ("*ujamaa*"), although largely unpopular at the time, created the basis for later revisions in law under the Local Government Act of 1982, empowering and recognising Village Councils as independent and fully functional governments. Further revisions in legislation relating to land tenure, vested the power to manage and adjudicate local land rights in village governments (including communally managed areas such as forests and rangelands). The forest policy of 1999 recognised the significant areas of forest land outside government forest reserves, the poor overall levels of management in these areas as well as the significant powers vested in village governments. The policy directed law makers to devolve the management of unreserved forests to village governments as a means to improve management. This was achieved in law, by the passing of the Forest Act of 2002. The pioneering work of particular area-based projects, such as the Sida-funded LAMP project helped to inform law makers on suitable and workable models that could be incorporated into the legal and policy framework.

The rights and responsibilities of local level forest managers under CBFM are clear and unambiguous. Under CBFM villagers retain all rights to use, harvest and sell forest products within their forest reserve in line with their approved management plan. In return, they must

demonstrate the ability to manage and protect their forest over the long term, and to the benefit local people.

Although the legal basis for JFM is clear, uncertainty regarding benefit sharing as well as the low level of overall benefits available is undermining its viability in the long-term. With regard to JFM, the law clearly states that forests may be managed through a range of partnership arrangements between a wide range of players within government, the NGO and private sectors and community groups. To date however, the vast majority of JMAs have been developed between villages and central government and cover montane catchment forests with high biodiversity and other ecosystem-service values. Despite the major efforts of government to support JFM over the past 15 years, its long term viability remains in the balance. Firstly, given the high conservation status of many of the forests under joint management arrangements, the total level of permitted benefits that may be legally harvested from the forests is very low (and may be significantly less than the range of benefits people obtained prior to JFM being established, albeit illegal in nature). Secondly, even where opportunities exist for extractive use of forest reserves (such as in production forests where timber harvesting is permitted), the relative share (and type) of benefits that can be captured by communities has yet to be agreed on and the mechanism for sharing of benefits is not yet in place.

The highly sectoral nature of natural resource legislation constrains opportunities for communities to obtain multiple benefit streams from the management of forest and wildlife resources on village land. The highly sectoral nature of forest and wildlife laws means that the process for establishment of community based forest and community based wildlife management differs markedly. Although they do not necessarily conflict, a number of legal “grey areas” constrain community level managers wishing to manage both forest and wildlife resources in a given area of village land. As a result, the possibility of obtaining multiple revenue flows from wildlife and forest harvesting is being lost, which significantly reduces local incentives for long term natural resources management.

Chapter 2: PFM Impact and spread

2.1 Spread and adoption of PFM to date

A number of rather *ad hoc* surveys were carried out during the late 1990s and early 2000s to attempt to establish the overall adoption of PFM across mainland Tanzania. Many of these surveys were incomplete and had substantial gaps in data. In 2006, a fresh attempt was made by FBD to obtain a more complete assessment of how PFM had spread by soliciting data from a range of sources: from NGOs and donor funded projects, from District Councils known to be active in PFM and from central government records and reports. This survey was updated in 2008 and the main findings are presented below in Table 2.

Table 2: Current coverage of CBFM and JFM across mainland Tanzania (Source MNRT, 2008)

Joint Forest Management		Community Based Forest Management	
Area of forest under JFM	1.77 million ha	Area of forest under CBFM	2.35 million ha
Number of Forest Reserves under JFM	246	Number of declared or gazetted village land forest reserves	395
Number of villages engaged in JFM	863	Number of villages engaged in CBFM	1,460
Number of villages with signed JMAs	155	Percentage of villages on mainland Tanzania engaged in CBFM	14%
Number of districts engaged in JFM	58	Number of districts engaged in CBFM	63
Most common forest type under this management regime	Montane forest and mangroves	Most common forest type under this management regime	Miombo, acacia and coastal woodlands
% of forest reserved by central or local government under JFM	13%	% of unreserved forests now under CBFM	12%

Figure 1 illustrates the relatively rapid spread of both CBFM and JFM over the past decade. Until about five years ago, the area of forest under the two management approaches was fairly evenly matched. However, given the growing interest in CBFM coupled with some of the administrative obstacles associated with the formalisation and benefit sharing in JFM, CBFM has now overtaken JFM in terms of forest coverage.

Figure 2 illustrates how the number of participating villages has expanded over the past decade, reflecting the continuing investments being made by government and development partners community alike. Once again, the bias towards CBFM is clearly visible.

When the type of forests that are covered by the different models of PFM is analysed, some interesting differences appear (Figure 3). CBFM appears to be mostly covering miombo, coastal and acacia woodlands. There is almost no coverage of CBFM in montane evergreen forests or mangroves.

This is largely because the majority of forests in these areas are now reserved by central or local government and could only be managed through JFM arrangements. CBFM, on the other hand is mostly concentrated in miombo woodlands, acacia woodlands and coastal forests. It is in these forest types that the majority of unreserved forests can be found, making them suitable for management by village governments.

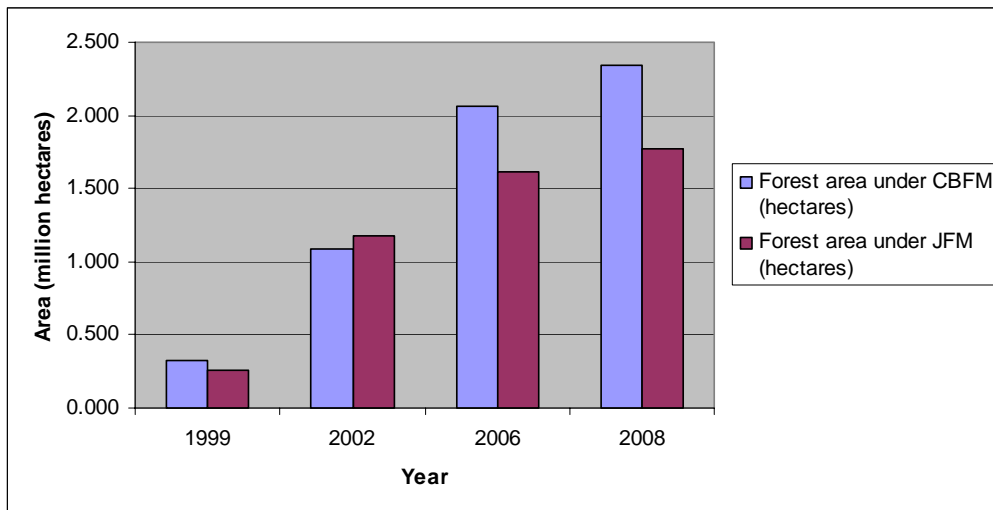


Figure 1: Spread of CBFM and JFM from 1999-2008

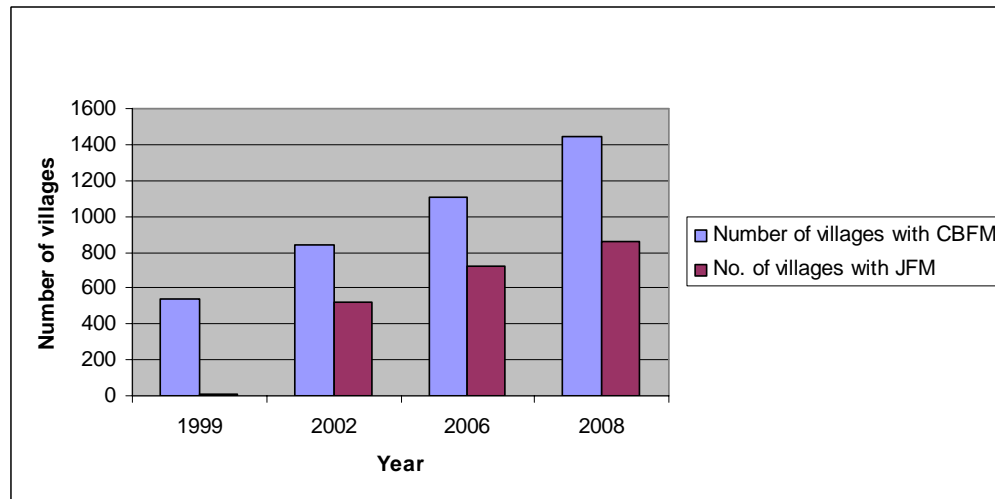


Figure 2: Number of villages participating in PFM during the period 1999-2008

Although the results of the national assessment of PFM show that the spread of PFM across the country has increased rapidly in recent years, it is far from even. Given that PFM is primarily defined by central government as a strategy for sustainable forest management, it is perhaps not surprising that much of the resources directed towards PFM have been targeted at the forest resources with the highest national values, at least from biodiversity and water catchment perspectives. The Eastern Arc Mountains forests feature heavily in the list of sites where PFM (primarily JFM) has been implemented, as do the lowland coastal forests and mangroves along the coastal strip. Less effort has been put into establishing PFM in forests and woodlands with lower biodiversity and water catchment values, but with a higher utilisation potential for local communities.

The more recent expansion of PFM into miombo and acacia woodland habitats may have been due to the increased emphasis placed by both the government of Tanzania and its development partners on achieving poverty reduction objectives. It might also be due to concerns being voiced on the very limited community benefits in some of the existing JFM schemes in the Eastern Arc Mountains forests

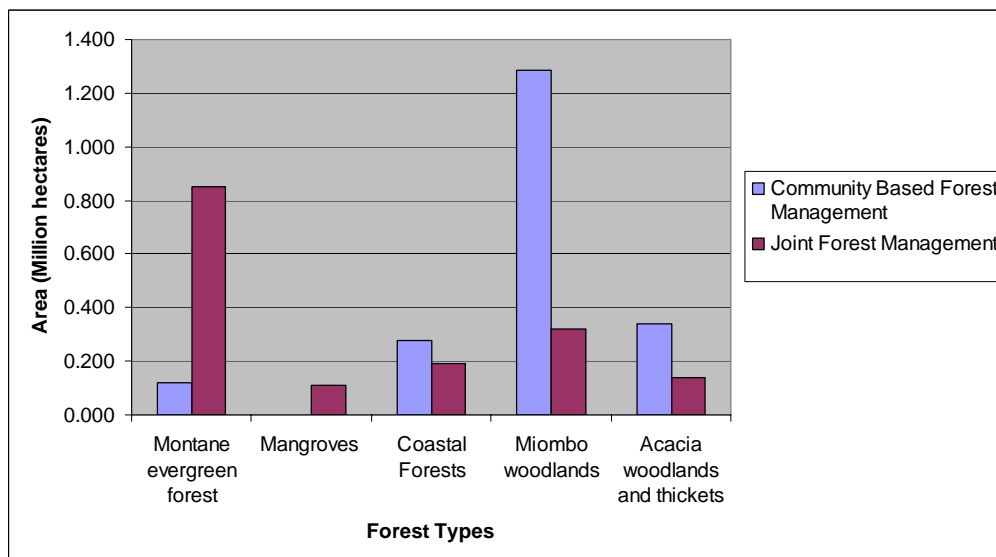


Figure 3: Types of forests under JFM and CBFM

2.2 The impact of PFM on forest condition and disturbance

PFM is first and foremost a forest management strategy, promoted by FBD and supported by a range of bilateral donors and NGOs. Behind the strategy lies an assumption that forest areas that are managed by or together with rural communities are likely to have lower levels of forest disturbance and improved forest condition than areas that are either under exclusive state management or under open access regime. Interestingly, despite the rather considerable investments in PFM both from the government of Tanzania and its development partners, there have been remarkably few studies that have attempted to independently assess the impact of PFM under different conditions. The following section tries to draw together what is known on this subject from a range of studies undertaken in the country over the past ten years.

Data from a number of similar but separate studies undertaken by Tanzanian researchers over the past decade was compiled and consolidated in a recent study and the results are presented in this section. A total of 13 forests were sampled and showed increases in basal area and volume in sites managed under both joint and community-based forest management, and declines for both of these variables in forests under government or open access management (Figure 4 (a) and (b)). There were also declines in number of stems per ha in forests managed under CBFM, and increases in JFM areas and forests under exclusive state management (Figure 4 (c)). Although the data comes from different areas of Tanzania and different ecological conditions, they tend to suggest that forest areas managed under JFM and CBFM are recovering compared with forests managed by government alone, or under open access regimes.

Community based forest monitoring scheme introduced in 17 forest areas managed under various models of PFM in Iringa and Kilolo Districts since 2002 recorded incidences of unregulated activities such as unlicensed charcoal making and pit-sawing. Villages engaged in the joint management of the New Dabaga/Ulongambi Forest Reserve in Kilolo district documented a reduction in the frequency of traps by 50% between 2002 and 2004. In addition, encounters with wildlife were reported to occur more frequently. Although it is unlikely that populations have increased so much over so short a time, it may indicate a change in behaviour by the wildlife through a reduction in hunting effort (Topp-Jørgensen 2005).

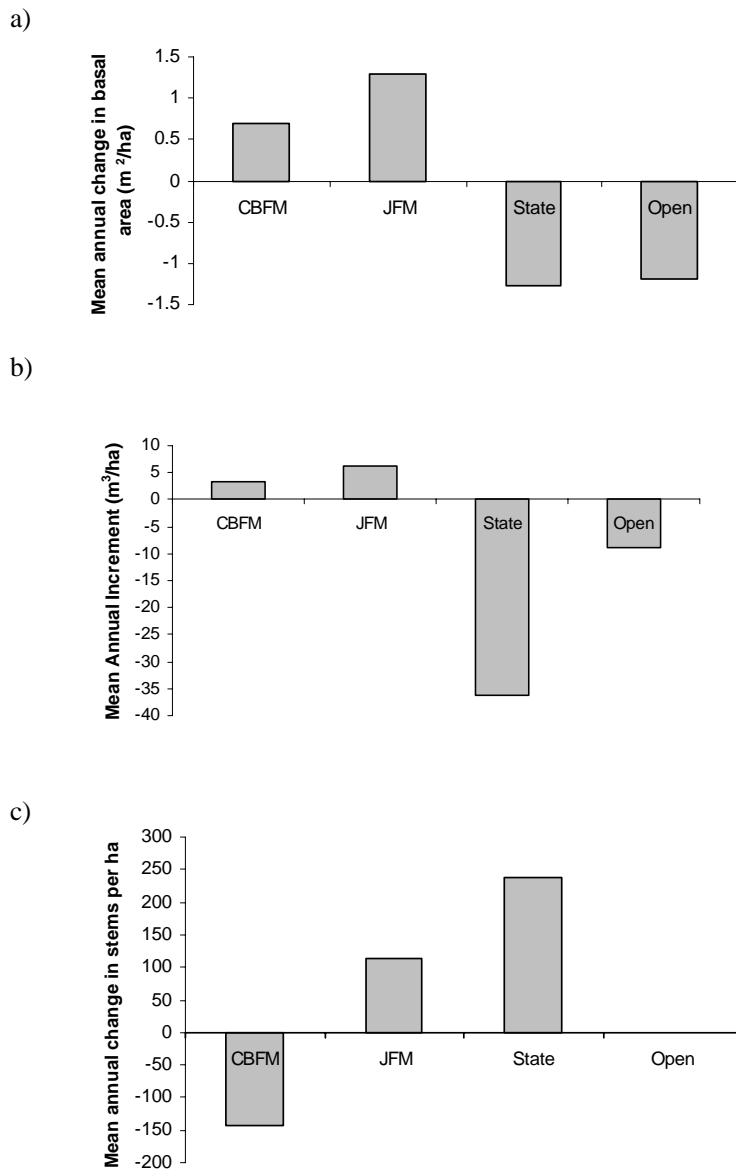


Figure 4: Mean annual changes in growth characteristics in 13 forests under different management and ownership regimes: (8 CBFM, 2 JFM, 1 Local Government management and 1 open access areas). (a) Mean annual change in basal area (b) Mean annual volume increment, (c) Mean annual change in stems per ha (Source: Blomley *et al.*, 2008)

Pfliegner and Moshi (2007) compared three matched pairs of similar forests under JFM and state management. Results showed that forests under JFM have higher numbers of live and naturally dead trees, poles, or withies, and fewer cut timber trees, compared with forests managed exclusively by the state (Figure. 5(a) - (c)). The average number of trees was 13.8 and 9.2 in joint and non-joint forest management plots, respectively, average diameter of standing trees was 28.4 and 22.9 cm, respectively, and average height of standing trees was 13.3 and 9.9 m, respectively (Figure 5(a) –(c)). Forests under joint management also had 68% fewer freshly cut timber trees than in non-joint forest management areas, whereas incidences of freshly cut trees for poles was 70% less frequent in the former than in the latter. Similarly, there were almost 34% more live timber trees, 45% more live poles, and more than 55% more withies recorded in JFM areas, and lower incidences of freshly cut poles and withies.

A study carried out in the West Usambara Montane forests of Lushoto district in Tanga region compared human disturbance, forest structure and species composition among 3 neighbouring montane forests under varying forms of centralized or devolved management (Blomley and Persha, in press). The communal forest, operating outside of state-sponsored devolution reforms, showed greater institutional autonomy and tenure security, significantly less recent illegal logging, and marginally more effective monitoring and rule enforcement than both the co-managed and centrally-managed forests. Significant differences in relative abundance and diameter distribution of targeted species among forests corresponded to harvesting intensity and disturbance legacy. However, in a departure from the results reported in the two studies, the most disturbed forest area was managed through a JFM approach, and was significantly degraded compared to the ecological reference forest, as were peripheral areas of the larger centrally-managed forest. This general trend is illustrated in Figure 6 (a) and (b).

Kajembe *et al.*, (2009) analysed the performance of PFM regimes with respect to forest condition across a range of carefully selected sites. Biophysical data were collected and analysed from eight research sites covering two distinct ecological zones. The sites were Kidundakiyave, Kiwele, Gangalamtumba and Mfyome villages (CBFM) and Itagutwa village next to Kitapilimwa forest reserve (JFM), all in southern highlands; Ayasanda village (representing CBFM) and Bereko village (representing JFM) were selected in the northern highlands. Lugala mountain forest in Ikuvalo (non-CBFM) in southern Tanzania serves as a control. Results showed a general trend of decreasing gradient of stem density while at the same time increasing gradient of basal area and standing volume from non-CBFM to CBFM regimes. This may be due to more disturbance in non-CBFM which is basically open access regime compared to CBFM where there are institutions mandated to monitor forest resources. Comparison between CBFM and JFM showed that there was a decreasing gradient of stem density, basal area and standing volume from CBFM to JFM. According to these researchers, this may be due to the governance structures in CBFM which seem to be more functional as compared to JFM. Likewise, CBFM seems to have more functional incentive mechanism as compared to JFM. The researchers conclude that CBFM seems to perform better than non CBFM and JFM regimes.

Nuru *et al.*, (2009) conducted a socio economic survey coupled with participatory resource assessment (PRA) and forest inventory in Urumwa Forest reserve to (i) determine the governance set up of the forest management authorities and its effectiveness in JFM implementation, (ii) investigate stakeholders' perception on applicability and viability of JFM and (iii) determine health status of Urumwa Forest Reserve in terms of stocking, basal area/ha, volume/ha, species distribution and composition and (iv) assess the extent of forest disturbance. Results showed the high extent of illegal logging and deforestation within the reserve. Weak forest governance was evidenced by low participation, lack of voice and transparency, low accountability, limited rule of law, all of which appear to have combined to create forest degradation. Involvement of local communities in forest management was restricted to few village forest committee members. Forest health had declined during JFM implementation, suggesting poor management. Improper management was indicated by illegal pit sawing, charcoal making and unauthorised grazing. The forest was characterised by intermediate stocking density (642 stems/ha), basal area (8.4m²/ha) and volume of 57.7m³/ha. Thus, JFM in Urumwa Forest Reserve is characterised by poor governance despite the presence of a JFM structure.

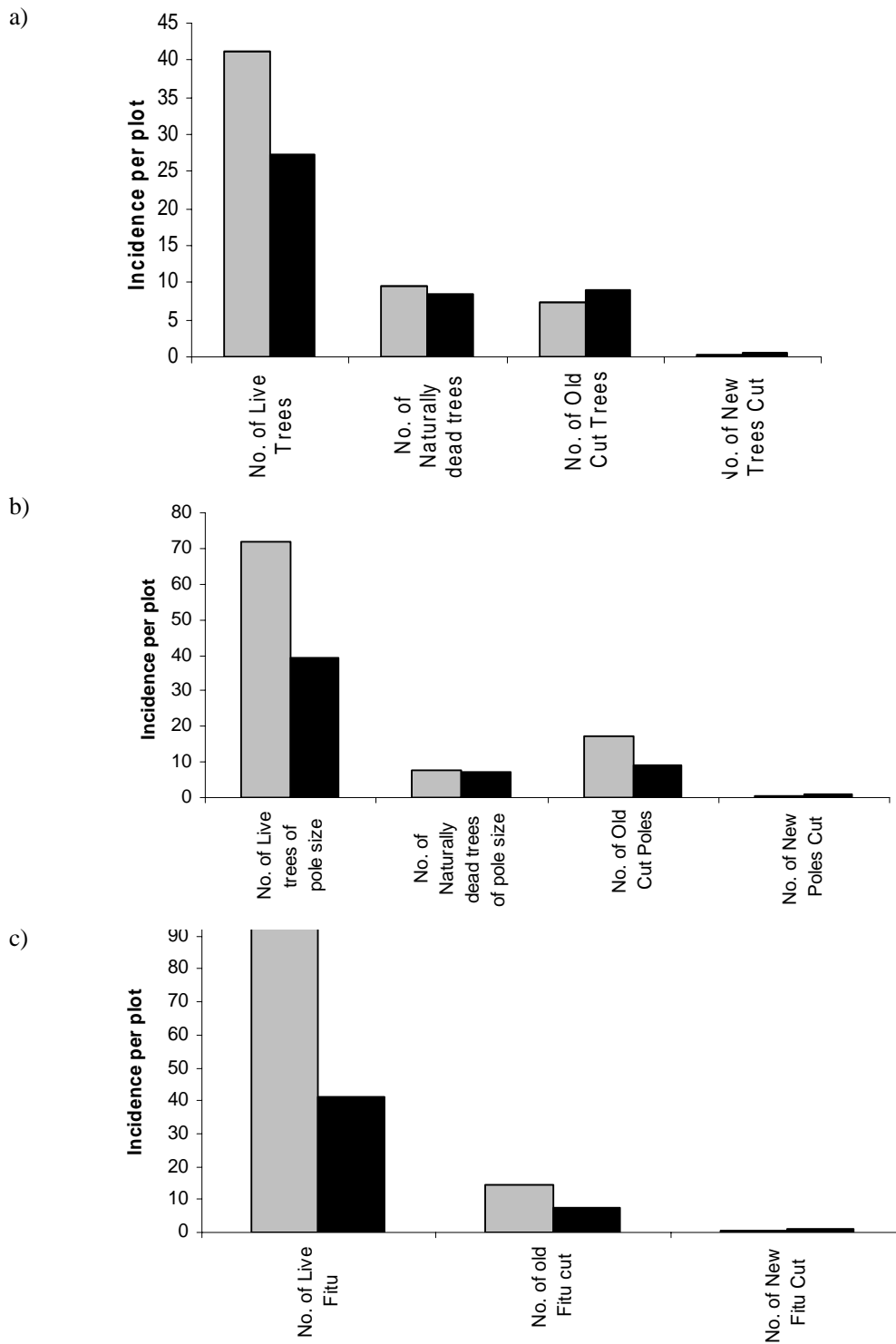


Figure 5: Disturbance characteristics for three JFM and three non-JFM forests in Morogoro Rural District. (a) cutting of trees suitable for timber, (b) cutting of trees and shrubs suitable for poles and (c) cutting of shrubs suitable as withies. Grey bars = JFM forest sites. Black bars = non-JFM forest sites (Source: Blomley *et al.*, 2008).

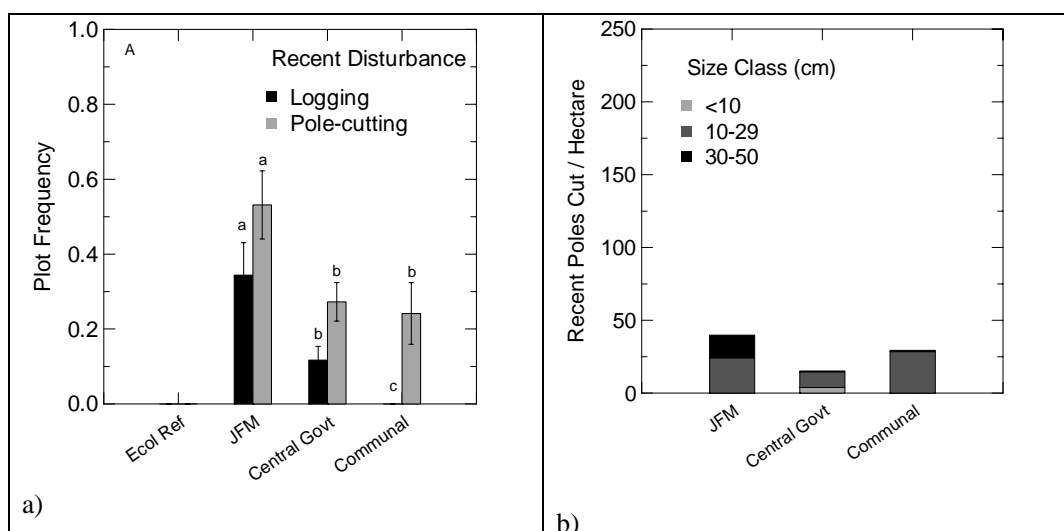


Figure 6: Frequency of plots showing recent logging and pole-cutting by forest type (a) and density of recent poles cut per hectare, grouped by pole size (b). Overall density of recent poles cut per hectare is significantly higher in the JFM transition forest compared to the centrally-managed forest (Source: Persha and Blomley, in press)

There appears to have been surprisingly little attention given to the impacts of improved forest management on neighbouring forest areas, whether reserved or open access. In their review of the impacts of PFM in the Eastern Arc Mountains forests of eastern Tanzania, Vyamana *et al.*, (2008) established that bylaws established for JFM in Change village, Morogoro district appear to have been applied within the forest area under joint management but no similar management practices were introduced into other forests on village land. The net result of this is simply a displacement of harvesting from one area of forest to another. This phenomenon, known as “leakage” when applied to the management of forest carbon, has important ramifications for the planned projects designed to reduce deforestation and degradation (REDD) in government managed forest reserves. With regard to CBFM, Vyamana *et al.*, (2008) found that the problems of leakage were less significant as bylaws developed for a given area of forest within the VLFR were generally applied to other areas of forest on village lands.

Overall, drawing on these studies, the evidence would suggest that when forest management responsibilities are fully devolved (as with CBFM), current evidence would suggest that there are substantial improvements in forest condition and reduced forest disturbance. The conclusions from the studies reviewed above are less clear regarding the effectiveness of forestry co-management (or JFM) in terms of delivering improved forest management. This is an area that will require further study in the future.

2.3 The impact of PFM impact on livelihoods and poverty reduction

In addition to improving the overall management of forests in Tanzania, a key policy objective of PFM is to improve the livelihoods and wellbeing of poor rural communities who live close to, or inside forests and woodland areas. Unfortunately, the availability of research on linkages between PFM and livelihoods is fairly limited. In this section, the available information is presented and reviewed.

Given the fact that CBFM management approaches emphasise on the full delegation of management rights, responsibilities and returns to village level institutions and below, it would be expected that CBFM would provide greatest opportunities for generating tangible and sustainable livelihood impacts.

One area that provides useful results in this regard is Iringa District, being one of the areas where CBFM models were piloted in the late 1990s, before the enactment of the Forest Act in 2002. Fourteen villages were assisted by a Danida-funded project, MEMA to reserve small to medium sized areas of miombo woodlands averaging 2,600 ha on their village land. An assessment of village forest incomes showed annual revenues of around USD 540 per year in 2002, rising to around USD 720 per year by 2005.

MNRT (2005) assessed the impact of the *Hifadhi Ardhi Shinyanga* (HASHI) project that worked in Shinyanga Region with the objective of restoring “*ngitili*”(enclosure), a traditional system of reserving pasturelands and dry season grazing areas by Wasukuma pastoralists that results in a rapid regeneration of trees. This system of land management, which is managed at individual, group and village level, resulted in the regeneration and re-establishment of large numbers of small acacia woodland patches of between 378,000 and 472,000 ha of degraded land across the region. The study showed further that the total monthly value of benefits from the re-establishment of *ngitili* per person was USD 11.7, a figure higher than the average consumption per person of USD 7.1 per month in the rural areas of Tanzania at that time. In addition to cash returns from the sale of *ngitili* products (grazing rights, firewood and poles), *ngitili* restoration has considerably reduced effort for collecting various forest products in all districts of the region. Significant gains in reduced effort have been made in the collection of fuel wood, thatch grass, poles, fodder and water. The monetary value per household per day for the reduced effort in collecting various *ngitili* products was found to be USD 0.7 for firewood collection, USD 0.5 for collecting poles, USD 0.8 for collecting fodder, USD 0.55 for thatch materials collection, USD 0.3 for collecting withies, USD 0.3 and USD 0.34 for domestic and livestock use of water respectively. The study further showed that the proportion of households whose economic well being at the family level had increased and improved as a consequence of values of benefits from *ngitili* are as high as 64%.

One factor that has contributed to minimising the flow of benefits from CBFM to forest users is that much of the early CBFM was carried out on degraded forest land that had little merchantable timber left. Duru Haitemba and Mgori forests, some of the first forest areas placed under community stewardship were originally earmarked as NFRs and had been surveyed and even demarcated by the government. However, chronic shortage of funds coupled with rampant and unregulated use in the late 1980s and early 1990s resulted in the forests being heavily degraded and much of the standing timber values being lost. The low economic value of the forest areas, coupled with strong and persuasive lobbying by the Sida funded LAMP project, resulted in government agreeing to a trial process of community based management., After 11 years of community management, it is only now Duru-Haitemba forest that is being considered for low level commercial harvesting.

As illustrated by the examples cited, forest areas managed by communities to date tend to be rather small (rarely exceeding a few thousand ha), with long lead times needed before sustainable use can be considered and consequently the revenue generation potential from harvesting remains rather low. There are, however, still vast areas of unreserved woodlands, with significant timber values that could be transferred to village management with the potential to generate important local revenue streams. Although of varying condition, estimates would suggest that up to 17 million hectares of unreserved forests exist that could be brought into CBFM arrangements. Interestingly, much of the unreserved forestland with remaining timber stocks is found in some of the most remote and consequently underdeveloped parts of the country, where other economic opportunities are severely limited. Figure 7 illustrates this by comparing regional poverty rankings (a) and the area of unreserved forest per square kilometre of land area (b).

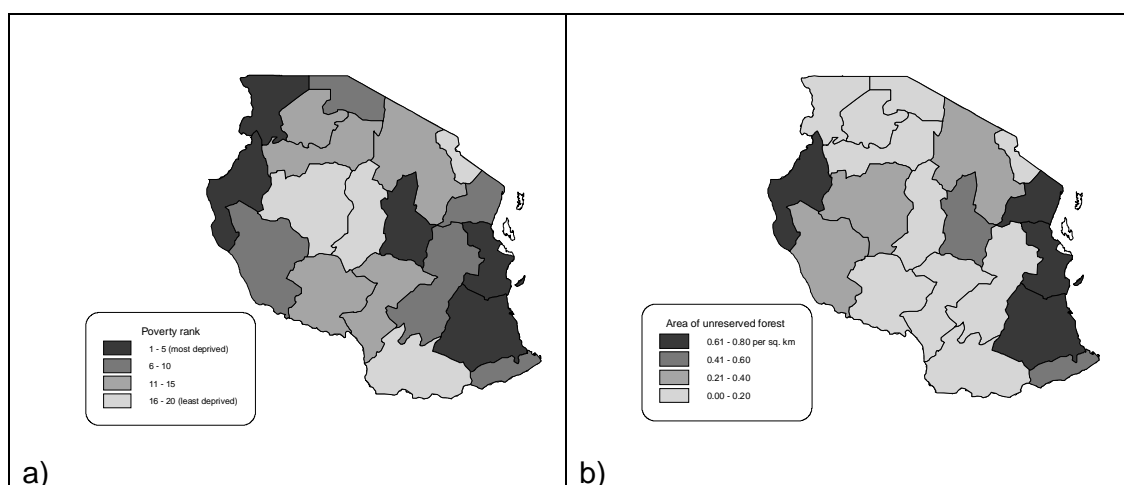


Figure 7: (a) Regional poverty rankings and (b) Area of unreserved forest per square kilometre by region.

Clearly, forest resources on village land, available to local communities through CBFM, represent an exciting investment opportunity, with a potential to generate sustainable flows of revenue in areas where other forms of economically productive activities may be severely limited. Table 3 provides an illustration of a sample of four forest areas currently either under, or in the process of being transferred, to community stewardship with significant potential for local revenue generation from sustainable forest management.

Table 3: Selected areas of forest under village management and their revenue generation potential (Source: Blomley *et al.*, 2009)

Forest Name and location	Size (ha)	Status	Estimated annual revenue from sustainable harvesting	Number of villages managing forest	Potential revenue per village/annum
Angai Forest, Liwale District	141,000	Management plan being developed	USD 784,000	13	USD 60,300
SULEDO Forest, Kiteto District	164,000	Village land forest reserve	USD 213,000	9	USD 23,700
Mtanza Msona Forest, Rufiji District	10,713	Village land forest reserve	USD 57,900	2	USD 28,950
Ipole Wildlife Management Area, Sikonge District	247,500	Wildlife Management Area	USD 730,000	4	USD 182,500

The trade in forest products in Tanzania is thriving, driven by an ever-increasing demand for timber from south Asia. China has rapidly emerged as the fastest growing importer of hardwoods from Tanzania and represents a major shift in trade dynamics when compared to the 1980s, when 82% of sawn hardwood exports were destined for Western Europe. By 2005, 66% of all containers carrying timber products exported from Dar es Salaam harbour were destined for China. This increase in demand has coincided with improved road networks such as the opening of the Mkapa Bridge over the Rufiji River that greatly increased access to Mtwara and Lindi regions, both suffering from high levels of poverty and with some of the largest areas of unutilised coastal forests and miombo woodlands in southern Tanzania.

JFM, in contrast to CBFM, divides management costs and benefits between local communities and the forest owner (usually either central or local government). As illustrated in Figure 3, the majority of JFM initiatives to date have been concentrated in NFRs managed for water catchment and/or biodiversity objectives, and where local use options are severely limited. Consequently, forest managers have tended to concentrate on offering “alternative livelihood options” taking place outside the forest which are designed to “reduce pressure” on current forest use. Fish farming, beekeeping, on-farm tree planting, rearing of small livestock,

agroforestry and eco-tourism have all been promoted by various initiatives with somewhat mixed success. While they may generate a positive livelihood benefit to beneficiaries, the overall impact on forest management and condition is rather more open to debate.

Fines collected by local patrols from illegal activities occurring within the forest represent an important income source for villagers embarking on JFM, particularly where the forest status precludes many economically productive activities such as timber harvesting. As forest areas are brought under effective village control and incentives for open access harvesting decline, so illegal activities drop and income from fines tends to decline. In many cases, this has resulted in revenues to village forest management committees declining to a dangerously low level, to the point where they now jeopardise the viability of maintaining even skeleton village forest management costs.

A further compounding problem is that of crop raiding. As forest condition improves and disturbance declines due to improved protection measures, wildlife populations tend to increase and re-colonise from surrounding areas. The ability of villages to cash-in on this new-found resource remains limited due to the restrictive and bureaucratic rules and regulations regarding community wildlife management in Tanzania. Consequently, increase in wildlife numbers in JFM areas often represents an unwanted and growing cost due to crop raiding and damage to property. This is particularly an issue with regard to larger mammals such as elephants and buffaloes, which threaten life and property.

Nshubemuki (2009) investigated the impact of JFM in Ruvu North Forest reserve on the livelihoods of participating communities, who are allocated plots in the degraded part of the forest where they practice agroforestry, by planting trees suitable for firewood, timber and charcoal. The aim is to reduce pressure on forests in the relatively less degraded part of the reserve. Results showed that each household in communities in four villages (Kongowe, Mwendapole, Msangani and Mkuza) around the reserve earned a total of TZS 310,329 in 2007 from selling charcoal, firewood, poles, agricultural crops and tree seedlings from JFM plots. This income, originating from JFM plots in the forest reserve, contributed significantly to total household income.

Ngaga *et al.*, (2009), working on the same study described in Section 2.2 reviewed the livelihoods impacts of PFM across the same 8 villages in the northern and southern highlands (5 where CBFM is implemented, 2 JFM and 1 non-PFM control site). Table 4 illustrates the average annual gross cash income per household by income source and research site. It seems that there is great variation among the eight sites and that generally speaking, forests managed through CBFM are not great sources of cash. Analysis of data by wealth category and income source reveals a clear pattern showing that all household categories depend mainly on agriculture and business for cash incomes. Rich and middle income households derive significantly higher cash earnings from livestock than poor households who depend much more on wage labour (Tables 5 and 6). One possible explanation for the relatively low contribution of CBFM to household income is that in general, harvesting revenues through CBFM are captured at the community, rather than the individual levels and used to sustain active forest management, and for public-good investments through the Village Council (such as contributing to school structures, water systems and so on).

Table 4: Average annual gross household cash income (TZS) from agriculture, livestock, forest (products from the wild), business activities and wages. Source: Ngaga *et al.*, (2009)

Village	Type	Agriculture	Livestock	Forest	Business	Wage	Total	N
Ayasanda	CBFM	360,000	310,000	10,000	200,000	70,000	940,000	40
Kijango	CBFM	80,000	30,000	10,000	60,000	50,000	230,000	39
Kiwele	CBFM	210,000	20,000	20,000	380,000	40,000	660,000	38
Mfyome	CBFM	240,000	40,000	30,000	80,000	20,000	420,000	40
Sunya	CBFM	620,000	210,000	5,000	510,000	10,000	1,350,000	39
<i>Mean</i>	<i>CBFM</i>	<i>287,500</i>	<i>75,000</i>	<i>16,250</i>	<i>257,500</i>	<i>30,000</i>	<i>665,000</i>	<i>196</i>
Boay	JFM	80,000	70,000	20,000	120,000	70,000	360,000	40
Itagutwa	JFM	110,000	50,000	2,000	150,000	20,000	340,000	39
Ikuvilo	Non-PFM	50,000	70,000	5,000	90,000	20,000	240,000	40

Table 5: Average annual household cash income (TZS) from agriculture, livestock, forest (products from the wild), business activities and wages. Results based on the five CBFM sites. Source: Ngaga *et al.*, (2009)

Wealth rank	Agriculture	Livestock	Forest	Business	Wage	Total	Number
Rich	850,000	420,000	10,000	510,000	40,000	1,820,000	29
Middle	270,000	130,000	20,000	280,000	50,000	750,000	72
Poor	80,000	20,000	10,000	70,000	40,000	220,000	111
Un-ranked	400,000	170,000	10,000	400,000	40,000	1,030,000	24
All	270,000	110,000	10,000	220,000	40,000	660,000	236

Table 6: Percentage contributions to average annual household cash income of agriculture, livestock, forest (products from the wild), business activities and wages/salaries. Results based on the five CBFM sites. Source: Ngaga *et al.*, (2009)

Wealth rank	Agriculture (%)	Livestock (%)	Forest (%)	Business (%)	Wage (%)	Total (%)	Number
Rich	47	23	0	28	2	100	29
Middle	36	17	3	38	7	100	72
Poor	37	7	6	32	17	100	111
Un-ranked	39	16	1	39	4	100	24
All	40	17	2	34	6	100	236

When the costs of inputs and the value of products consumed by households are deducted, the relative importance of income sources changes dramatically. As Tables 7-10 show, forests account for more income than wage labour in all sites and across all wealth classes, but with considerable variation. In absolute terms, the rich households derive more value from forests than the middle income and poor households (Table 9). Yet, in relative terms, forests account for 26% of poor households annual net income, such forest based incomes to these households clearly ranks as the second most important after agriculture (Table 10).

While in relative terms forests play a much more important role as sources of cash for poor than rich and normal households, in absolute terms richer households derive higher cash incomes from forest products. It may also be concluded that although forest products do not contribute much in terms of cash earnings to rural households, they deliver a significant and indeed for the poor a major part of their annual income. Another preliminary conclusion made by Ngaga *et al.*, (2009) is that all household categories depend on and derive significant values from forest resources. While forests supply firewood as the most important product to all wealth classes, they appear to be a main stay of poor households' incomes and an important element in normal and rich households' ability to keep livestock and thereby diversify their economies.

Table 7 Average annual net total household income (TZS) from agriculture, livestock, forest (products from the wild), business activities and wages. (Source: Ngaga *et al.*, 2009)

Village	Type	Agriculture	Livestock	Forest	Business*	Wage	Total	N
Ayasanda	CBFM	400,000	430,000	110,000	200,000	70,000	1,190,000	40
Kijango	CBFM	120,000	40,000	90,000	60,000	50,000	360,000	39
Kiwele	CBFM	500,000	20,000	70,000	380,000	70,000	1,040,000	38
Mfyome	CBFM	250,000	20,000	130,000	80,000	20,000	510,000	40
Sunya	CBFM	840,000	370,000	100,000	400,000	10,000	1,710,000	37
<i>Mean</i>	<i>CBFM</i>	<i>422,000</i>	<i>176,000</i>	<i>100,000</i>	<i>224,000</i>	<i>44,000</i>	<i>962,000</i>	<i>194</i>
Boay	JFM	170,000	180,000	80,000	120,000	70,000	620,000	40
Itagutwa	JFM	110,000	40,000	60,000	150,000	20,000	380,000	39
Ikuvalo	Non-PFM	130,000	60,000	30,000	90,000	20,000	330,000	40

Table 8: Percentage contributions to average annual household net total income of agriculture, livestock, forest (products from the wild), business activities and wages/salaries (Source: Ngaga *et al.*, 2009)

Village	Type	Agriculture (%)	Livestock (%)	Forest (%)	Business ² (%)	Wage (%)	Total (%)	Number
Ayasanda	CBFM	33	36	9	16	6	100	40
Kijango	CBFM	33	11	24	18	13	100	39
Kiwele	CBFM	49	2	6	37	7	100	38
Mfyome	CBFM	49	3	26	16	5	100	40
Sunya	CBFM	49	22	6	23	0	100	37
<i>Mean</i>	<i>CBFM</i>	<i>43</i>	<i>15</i>	<i>14</i>	<i>22</i>	<i>6</i>	<i>100</i>	<i>194</i>
Boay	JFM	28	29	13	19	12	100	40
Itagutwa	JFM	28	10	17	39	6	100	39
Ikuvalo	Non-PFM	40	17	10	26	7	100	40

Table 9: Average annual net total household income (TZS) from agriculture, livestock, forest (products from the wild), business activities and wages. Results based on the five CBFM sites. (Source: Ngaga *et al.*, 2009)

Wealth rank	Agriculture	Livestock	Forest	Business ³	Wage	Total	Number
Rich	1,280,000	600,000	170,000	500,000	80,000	2,630,000	31
Middle	350,000	230,000	70,000	220,000	60,000	920,000	68
Poor	120,000	10,000	80,000	70,000	40,000	320,000	111
Un-ranked	470,000	220,000	120,000	400,000	40,000	1,260,000	24
All	380,000	180,000	100,000	210,000	50,000	910,000	234

These results tend to agree with those generated by a similar study conducted by CARE International with support from the Overseas Development Institute (UK) (Vyamana *et al.*, 2008). In this study, the researchers aimed to identify whether PFM contributes to poverty reduction and if so how these benefits are distributed within participating communities. Looking first at the community level, the study concluded that the ability of PFM communities to generate income from their forest resources was in evidence in both JFM and CBFM forests but was more significant in those under CBFM where commercial use of products was permitted, thus providing the village government with a proportion of the permit fee. Other sources of community-level income included fines (but these were minimal in part due to effective patrolling) and tourism and researcher fees (restricted to JFM forests with more interesting biodiversity). Overall, community-level income from all PFM sources combined was very low and just sufficient to cover the costs of boundary clearing and meetings of the VNRCs. Those communities that generated additional income from PFM

² / ³ Values for business are gross equalling annual turnover, so the net income is likely to be considerably smaller

consistently used the income for improving community level infrastructure, notably the construction of classrooms for community schools. Control communities had no forest-based income at community level.

Table 10: Percentage contributions to average annual household net total income of agriculture, livestock, forest (products from the wild), business activities and wages/salaries. Results based on the five CBFM sites. (Source: Ngaga *et al.*, 2009)

Wealth rank	Agriculture (%)	Livestock (%)	Forest (%)	Business* (%)	Wage (%)	Total (%)	Number
Rich	49	23	6	19	3	100	31
Middle	38	25	8	24	6	100	68
Poor	36	5	26	22	11	100	111
Un-ranked	37	17	10	32	3	100	24
All	42	19	11	23	5	100	234

At household level, although agriculture was the main source of income in all communities, forest products nevertheless contributed between 12 and 20% of household income. The dependency of poorer people on the forest (for firewood, poles, non-timber forest products (NTFPs), etc) is particularly strong given the small size of their private land holdings. The study also showed that regardless of forest management regime, forest-based incomes help to slightly reduce overall inequality within the community. The forest contribution was greatest in the control communities where a lack of restrictions means that households are able to extract all products freely. However, both JFM and CBFM also provided subsistence benefits for households, allowing for the collection of firewood and NTFPs. In the case of CBFM, other timber products (poles, charcoal) could also be collected for commercial sale with a permit issued by the VNRC (Vyamana *et al.*, 2008).

2.4 Traditional forest management – coverage and impact

Although the emphasis on the development of an enabling legal and policy environment that encourages the spread and adoption of PFM started fairly recently, many parts of Tanzania have a long and established history of sustainable CBFM. Forests have been reserved by rural communities for a range of objectives, including cultural, traditional, ceremonial and more utilitarian purposes such as the conservation of dry season grazing areas. There have been few attempts to document these traditional practises, or to assess their effectiveness in the light of growing demands for land and natural resources. One area of Tanzania that has been well documented is Shinyanga Region which was subject to an extended period of support from the Norwegian government, through the HASHI project.

Through this project, large areas of woodland have been recovered using traditional *Wasukuma*⁴ reserved areas called *ngitili* ('enclosure'). These *ngitili* are traditional dry season reserves where use of trees and other vegetation are regulated by either individuals or groups of people. Like traditional reserved forests in other areas, these *ngitili* are generally small (average 2.2 ha) but range up to 215 ha. By the late 1980s, many traditional *ngitili* had become degraded and traditional rules weakened by an array of factors, and there were only about 600 ha of *ngitili* remaining (Barrow and Mlenge, 2003). Since then, as a result of efforts led by district government, donors, and NGOs in collaboration with local communities, more than 350,000 ha of land in the region's 833 villages have been restored as *ngitili*. Many of these *ngitili* have now been formalized as private, community or village forest reserves, managed for both woodland products as well as livestock grazing pasture. This has re-vitalized traditional resource management practices by giving local people the statutory authority to protect and manage their resources.

⁴ An agro-pastoral group of people inhabiting much of western-central Tanzania.

In Handeni District and the North Pare Mountains, over 7,000 ha of forests have been protected by traditional and customary means. Most of these forests are between 125 and 200 ha, with about 25-30 different traditionally reserved forests per village in Handeni. These forests are maintained primarily for spiritual and cultural purposes, including as sites for traditional rites and ceremonies. In the North Pare Mountains, which are part of the high-biodiversity Eastern Arc Mountains forests, these forest patches are almost the only remaining natural forests, outside gazetted government forest reserves. The forests are subjected to increasing pressures as a result of population growth and associated land shortages, coupled with an inability of traditional institutions to enforce rules over forest reservation in the face of changing social values.

Other documentation of traditional forest reservation, protection and management in Tanzania includes a study comparing *Wanyamwezi* sacred groves, set aside as burial sites and ranging from 6 to 300 years in age with state-managed forest reserves in terms of plant composition. The study found greater species richness and plant diversity within these sacred groves as compared to NFRs and argues for the incorporation of these reserves into national biodiversity strategies.

2.5 Pre-conditions for achieving PFM impact

It is becoming increasingly clear that PFM is not a panacea, and does not perform equally under all conditions. Four key factors appear to influence the likelihood of PFM producing both economic and environmental returns. These are briefly presented below:

2.5.1 Environmental factors

As discussed in section 2.3, many of the earlier examples of PFM took place on highly degraded land (where community involvement was sought as a last resort rather than a strategy of choice) and consequently potential incentives, returns and incomes in the early stages were minimal. For many communities, faced with high levels of poverty, long term environmental rehabilitation is a cost they simply cannot afford, faced with potentially competing land uses such as small scale agriculture – or increasingly the sale of land to large scale commercial interests producing industrial crops such as sugarcane and *Jatropha* for bio-diesel and ethanol.

2.5.2 Economic factors

Market forces for forest products vary enormously across Tanzania and can both drive or over-power PFM processes. Where market forces are extremely high (such as near large urban centres) it may prove impossible for villages to prevent the relentless and illegal stripping of assets by outsiders, many of them desperately poor, for charcoal and timber, thereby undermining the whole PFM process. Where markets are weak (for example due to poor roads or large distances from centres of demand) villagers may be unable to sell their produce and become disillusioned, although forests remain largely in tact with abundant high value species. Where PFM areas are located adjacent to open access forest resources, illegal extraction of forest produce in non-PFM areas (and the subsequent low cost to producers) may undermine attempts by villagers to market their produce at a reasonable price.

2.5.3 Legal factors

As mentioned earlier, central government catchment forest reserves, while providing valuable services at the national and even international level (through provision of biodiversity, water catchment and carbon functions), generate few concrete financial returns to villagers. Under current arrangements, the long term viability of many JFM agreements in catchment forests seems questionable and alternative sources of income and benefits may have to be considered. Further legal challenges discussed in Chapter 1 (including the widespread failure to sign and

formalise JMAs as well as the conflicts between community based forest and community based wildlife management) appear to undermine the effectiveness of PFM in certain conditions.

2.5.4 Institutional factors

Under this broad heading, one particular issue stands out most strongly, namely capacity constraints at the local government level. Under local government reforms, District Councils are increasingly taking responsibility for PFM service provision. This is being reinforced by the availability of donor funding, which is increasingly being channelled directly to local governments, rather than Forestry and Beekeeping Division at the national level. PFM appears to perform best when there is an active and engaged focal person, who has a clear vision regarding the steps required to establish PFM. Such individuals are often found in districts where former district based PFM projects operated, such as Lushoto (GTZ) and Iringa, Mufindi and Njombe (Danida). Further enabling factors are a strong interdisciplinary team, good collaboration with District Catchment Forest Officers (who fall under central government authority but operate at the district level), the availability of suitable transport and strong support from the DED and other senior staff resulting in swift processing of payments and accounts and rapid approval of bylaws and management plans. Districts which are constrained by institutional and capacity issues tend to be those which are experiencing conflicts between the focal person and other local government staff (such as the District Natural Resources Officer, or District Treasurer, District Planners or even District Executive Directors). Districts that have focused more on the implementation of CBFM appear to be making faster progress than those who have concentrated on JFM due in large part to the legal constraints that hamper formalisation of the agreements and equitable sharing of revenues and benefits.

Table 11: Performance of selected supported under PFM Danida, 2003 - 2009

District	CBFM Villages	CBFM Stage	JFM Villages	JFM Stage	Total Impact Score	Funds Received (TZS)	Total Efficiency Score	Rank
Mbozi DC	17	0.75	21	0.66	27	250,000,000	9,394,964	1
Kilolo DC	17	0.88	18	0.36	21	221,000,000	10,307,836	2
Mufindi DC	9	0.66	12	0.78	15	288,000,000	18,823,529	3
Njombe DC	29	0.53	2	0.25	16	301,000,000	18,966,604	4
Lindi DC	8	0.88	4	0.71	10	190,000,000	19,230,769	5
Chunya DC	10	0.81	1	1.00	9	224,000,000	24,615,385	6
Kilosa DC	13	0.68	3	0.57	11	289,000,000	27,393,365	7
Kilombero DC	7	0.75	7	0.14	6	199,000,000	31,942,215	8
Iringa DC	14	0.15	1	0.42	3	87,000,000	34,523,810	9
Kilwa DC	7	0.58	1	1.00	5	232,000,000	45,849,802	10
Mvomero DC	8	0.46	3	0.28	5	227,000,000	50,221,239	11
Mbarali DC	13	0.22	1	1.00	4	232,000,000	60,103,627	12
Morogoro DC	13	0.21	1	1.00	4	264,000,000	70,777,480	13
Liwale DC	10	0.13	8	0.42	5	374,000,000	81,127,983	14

Key

CBFM Villages: Total number of villages supported in CBFM

CBFM Stage: A compound ratio that indicates the average progress in achieving the final stage of declaring a village forest

JFM Villages: Number of villages supported for JFM. (1 = No villages)

JFM Stage: A compound ratio for all villages supported that indicates average progress in achieving final stage

Total Impact Score: Score which reflects compound impact

Funds Received: Total funds disbursed from Danida between 2003 and 2009

Total Efficiency: Ratio of funds received / Impact score

Table 11 illustrates the different levels of performance of 14 district supported under Danida PFM programme between 2003 and 2009. It uses four simple indicators to provide a crude assessment of progress, impact and efficiency of CBFM and JFM processes supported, against which a final ranking is produced, based on the total funds received to date. Although this represents a very simplified and basic assessment of efficiency, it does show the wide degree of variation between districts, much of which can be explained by some of the institutional issues described above.

A three year applied research programme is currently being implemented through a partnership between the Sokoine University of Agriculture (Tanzania) and a consortium of international research bodies (including the Universities of Copenhagen, Cambridge and Manchester). This initiative, supported by Danida is seeking to assess how, and under which conditions PFM appears to be contributing to its three stated objectives of improved forest condition, increased livelihood security and strengthened local governance. Preliminary results from this study have been reported under Sections 2.2 and 2.3 (Kajembe *et al.*, 2009 and Ngaga *et al.*, 2009).

2.6 Conclusions and lessons learned.

Since PFM was introduced in Tanzania in the early 1990s, it has spread rapidly, to a level today where it covers over 4 million ha of forests and woodlands across the mainland. In general, forests managed under CBFM are mainly miombo or acacia woodlands as these constitute the largest ecosystem type of un-reserved forests. JFM has tended to be concentrated mostly in montane forests as well as mangroves, both of which are mainly located in forest reserves administered by the central government. In terms of coverage and levels of participation, CBFM appears to be the more widespread of the two forms of PFM.

Of the two models of PFM being promoted in Tanzania, CBFM appears to be the most effective in improving forest condition and reducing overall levels of disturbance. Many studies conducted over the past five to ten years all, all point to the fact that when rights and responsibilities are fully devolved (as under CBFM), incentives appear to be sufficient for communities to invest in forest restoration and long term management. This appears to be the case, even when the area under management is in a state of high degradation at the time that management begins, and a long period of recovery and regeneration is needed.

The evidence that JFM results in improved forest condition appears to be mixed. Research carried out to date would indicate that in some areas, JFM appears to be working as an effective management tool with which to restore and sustain forest condition while in others, it appears to be little better than when managed exclusively by the state. Clearly, more research is needed to establish the effectiveness of JFM to support improved forest management under different conditions. JFM, due to its rather restrictive management rules in protection forests, and due to the lack of clarity regarding the sharing of management benefits in production forests has limited opportunities for delivering long term and tangible benefits to poor families. As a result, its viability at the local level is questionable due to the disproportionate transfer of management costs to local managers and minimal transfer of benefits.

Displacement of forest harvesting from PFM areas to non-PFM areas appears to be undermining the effectiveness of PFM at a wider landscape or ecosystem level in some areas. Although there has been very little research conducted in this area, increased concerns about “leakage” under forest management programmes for avoided deforestation and degradation (REDD) has highlighted the importance of introducing safeguards in PFM activities to reduce the opportunities for displacement of harvesting to non-managed areas

The contribution of PFM to improved livelihoods and incomes at both community and household levels appears to vary greatly from site to site and depends largely on the degree to which forest management decisions are devolved (through CBFM) or retained at national or district level (through JFM). A number of studies point to the contribution of CBFM to improved household incomes, particularly where limited harvesting operations are ongoing (such as in Iringa district). Recent moves to transfer larger and more commercially important areas of forest hold the promise of generating significant revenues at the community level – but despite promising signs, at the time of writing this report these returns have yet to be realised.

Recent studies conducted with a view of assessing the contribution of PFM to livelihoods across different wealth classes indicates that in relative terms, forests play a much more important role as sources of cash for poor than rich and normal households, but in absolute terms middle-income households derive higher cash incomes from forest products. Two recent studies point to the fact that while agriculture provides the most important source of income to households within CBFM communities, forests and woodlands generate between 10 – 25% of annual income.

Traditional forest management plays an important but largely unrecognised in the management of forests and woodlands across many parts of Tanzania. Outside any legal or formal framework, small patches of forest are managed and conserved through the use of traditional management practises, enforced through customary or traditional institutions, such as elders or spiritual leaders. Given the growing pressures on land for agriculture caused by either in-migration or natural population growth, it is important to reinforce such traditional management with formal, legal recognition through the Forest Act to strengthen local forest management rights.

PFM appears to perform differently under different conditions and a range of inter-linked factors appear to influence its ability to deliver positive forest management, livelihood or governance outcomes. Perhaps the most important factor that determines the efficiency of PFM at the local level is related to capacity and governance issues at the local government level and the ability of the district staff to work effectively as a team.

Chapter 3: Cost – Benefit Sharing, Governance and Equity

3.1 The legal framework for the sharing of benefits in PFM

The legal basis for sharing of forest management benefits from CBFM differs markedly from that of JFM. With respect to CBFM, the Village Land Act No. 5 (1999), the Local Government Act No.7 (1982) and the Forest Act No. 14 (2002) provide the legal basis for villages to own and manage forest resources on village land in ways that are both sustainable and profitable. The Forest Act further provides tangible incentives to rural communities to “reserve” large areas of unprotected miombo and coastal woodlands. These incentives include the following specific measures:

- (i) *Waiving state royalties on forest produce.* This means in principle that villages are not bound by government timber royalty rates and can sell their produce at prevailing market rates (Forest Act: Section 78 (3));
- (ii) *Retaining 100% of revenue from sale of forest products.* Villagers can if they choose, retain 100% of the income derived from the sale of forest produce. In many cases, however, they have chosen to share a portion (10 – 15%) with the district in return for services rendered (such as extension, advice and technical support);
- (iii) *Levying and retaining fines.* Fines payable under the Forest Act in respect of NFRs and LAFRs are remitted to Treasury. Fines levied on village land in respect of VLFRs or CFRs will be retained by the Village so long as they are described in “Approved Village Bylaws”;
- (iv) *Exemption from the “reserved tree species list”.* This is a mechanism under the Forest Act which protects commercially important or endangered tree species on unreserved land, and entrusts their management to the District Forest Officer. Once under village management, decisions on harvesting such trees are transferred to the village administration (Forest Act, Section 65 (3)); and
- (v) *Confiscation of forest produce harvested illegally and equipment used in the process.* Any forest produce or equipment used to illegally harvest in a VLFR may be confiscated and sold by the “forest reserve manager” (Section 97 (1) (b)) which in this case is the Village Council and proceeds be used to the benefit of the village.

As a result of these deliberate policy incentives, demand for CBFM appears to be growing and has now surpassed JFM in terms of both area and number of participating communities.

As discussed in Chapter 1, for JFM the legal status regarding the sharing of costs and benefits is less clear. Section 16 of the Forest Act (2002) states that a JMA for the management of a forest may be made between various parties such as the Director of Forestry (for NFRs) or District Council (for LAFRs) and a local community (a village government). Section 16 (2) (h) states that the agreement shall include:

“rules regulating access to, use and division of, and management and audit of any funds which may be made available for, or are generated by the implementation of the agreement”

The Act, however, provides no guidance on how the benefits arising from forest management under JFM are to be shared or the preferred mechanism for doing so. The result of this policy omission has meant that the progress of negotiating and signing JMAs has slowed and currently the MNRT is reluctant to move forward with approving further agreements until this issue is resolved and formal guidelines issued.

MNRT has submitted a proposal to Ministry of Finance and Economic Affairs that would allow communities to get 40% of royalties paid for the harvest of timber in NFRs, while the remaining 60% would be paid to central government (or to local government, if the forest in

question is a LAFR). As reported under Section 1.6, MNRT is required to prepare a Cabinet Paper on this proposal.

3.2 Implementation challenges regarding cost-benefit sharing in JFM

The problem of sharing JFM costs and benefits is further compounded by the fact that JFM has been heavily promoted across Tanzania’s catchment forests – which are important biodiversity areas, with high conservation status. The protection status of a number of the most critical forests are now being upgraded to nature reserves, which provides them with additional protection. While these forests deliver a range of crucial environmental services to the nation (through conservation of water sources that provide water for drinking, industrial use, irrigation and power generation) and the global community (through conservation of biodiversity and carbon sinks) their contribution to local users is highly limited as consumptive use is highly restricted. Recent discussions regarding the development of avoided deforestation (REDD) and payment for water services (PWS) projects in high value conservation forests in the Eastern Arc Mountains and other areas might offer one potential solution to this dilemma. However, without a clear and legally binding agreement on how potential future carbon revenues will be shared between government (either local or central) and local community managers, it is likely that communities will continue to see limited real benefits from the management of catchment forests. In summary, the management costs placed on communities living around high conservation-value catchment forest reserves, outweighs the benefits gained locally. This is illustrated in Table 12, which shows how management costs and benefits are asymmetrically distributed between international, national and local stakeholder groups with regard to the management of high biodiversity forests under JFM arrangements.

Table 12: Overview of management costs and benefits for high biodiversity JFM forests as perceived by stakeholders at different levels

Stakeholder Group	Forest Management Benefits	Forest Management Costs
<i>International Interests</i>	High (Existence value) - High biodiversity in many of the Eastern Arc Forests - Carbon sinks	Low: - Limited support to financing of Joint Forest Management programmes through projects
<i>National Government</i>	Medium: - Water catchment functions are important but are rarely captured in economic terms and even when they are, they rarely come back to the relevant ministries responsible for their management. - Some benefits from tourism revenues	Medium: - Costs associated with management and protection of forest reserves - Costs associated with facilitating and monitoring Joint Forest Management Agreements
<i>Local Communities</i>	Medium to low - Limited access to non-timber forest produce, and water in some locations - Limited revenue from fines, confiscated goods and research fees	High (depends on location and stakeholder group): - Time spent planning for and establishing JFM - Undertaking regular patrols inside forest management areas - Co-ordination of forest management activities by VNRC - Crop raiding and damage to property by wildlife - Opportunity costs of alternative, productive land-use and forgone benefits (such as timber and poles)

A number of authors and commentators over the past decade have commented on the inherent inequity of poor communities undertaking forest protection and conservation, while most of the benefits are enjoyed at the national or global level. Under such circumstances, the contribution of PFM to local poverty reduction can be said to be highly limited.

In summary, Joint Forest Management in Tanzania is facing two key challenges.

- (i) Firstly there is no legal mechanism that provides the basis for sharing of management costs and benefits between government and participating communities
- (ii) Secondly, many of the forests being managed through JFM are high biodiversity forests where their protection status severely limits the availability of local benefits and therefore restricts any kind of local benefit streams – regardless of whether they are shared or not.

3.3 Implementation challenges regarding cost-benefit sharing in CBFM

In direct contrast to the legal challenges facing the implementation of JFM, CBFM is being implemented across Tanzania with relatively few problems and demand remains high. As discussed earlier in this review, the strong and enabling policy and legal environment provides strong incentives for local participation, which coupled with a thriving timber market has the potential to generate significant economic benefits at the very lowest levels of government. Despite this, the evidence to date suggests that these apparent opportunities have yet to be translated into substantial, secure and widespread economic benefits for forest dependent communities. Some of the possible explanations for this paradox are discussed below.

3.3.1 Institutional failures and governance shortfalls in the forest sector

At the national level, a range of factors combine to create a favourable climate for poor governance in the forest sector. Firstly, there is no up-to-date data regarding the extent and condition of forest resources in the country. Since the mid 1990s, there has been no national forest resource assessment despite major changes in forest cover, particularly outside forest reserves. Of over 700 forest reserves in the country, less than 10% have operational management plans (Akida and Blomley, 2006). Under such circumstances, making accurate assessments of sustainable harvesting is clearly impossible. Secondly, the real contribution of the forest sector to the national economy is highly underestimated. This means that the general public, decision makers and politicians are largely unaware of the considerable wealth that exists, and the potential value that this represents in terms of revenues and economic opportunities. Thirdly, the roles of central and local governments with regard to the collection and disbursement of forest revenues is unclear, contested and leads to great inefficiencies. Finally, given the massive growth in demand for timber from south-east Asia in the past five years, remaining forest resources are under significant pressure from harvesting. Collectively, these factors result in massive under-collection of forest revenues. Milledge *et al.*, (2007) estimated that only between 5-15% of actual forest revenues are collected amounting to an annual loss to the government of around USD 58 million. In addition, there is widespread harvesting of timber outside any agreed framework of what may constitute a sustainable harvest. Furthermore, illegal logging operations in many parts of Tanzania operate with the full support of highly placed staff within local and national government institutions who sustain a patron-client relationship between village leaders, logging operators and politically powerful individuals (Milledge *et al.*, 2007).

Under decentralisation policies, District Councils have the primary responsibility for delivery of services to their populations, who in turn are held accountable through elected councillors. While central government holds responsibility for the management and protection of NFRs, responsibilities for supporting CBFM lie with local governments. In recognition of this, increased amounts of funding are made available through conditional grants to local governments to drive and support this process.

The conversion and transfer of poorly managed forests on village lands to forests managed by mandated local institutions with clear roles and responsibilities may undermine such networks and displace or complicate illegal activities, leading to declining benefit flows to those higher up the chain. CBFM provides a legal framework for village governments to assume control

and management of forest areas, and has been shown to significantly reduce the effectiveness of uncontrolled logging and forest disturbance. In such cases, district staff and councillors find that they face a clear conflict of interest – over the continued benefits they enjoy from illegal harvesting in unreserved forests, but also their responsibilities to assist communities in securing tenure and forest management rights under CBFM. This conflict of interest often manifests itself through the slowing down (and often halting) of key stages in the legal process of CBFM establishment, such as approval of bylaws and management plans by the District Councils. Mustalahti and Lund (2007) argue that in spite of the existence of a relatively conducive legal framework and official support, administrative discretionary powers forged against PFM constitute a massive constraint to implementation, especially in areas where the government authorities and civil servants stand to lose control of financially valuable resources, where there seems to be very little interest to provide communities to access and capacity to utilise the resources legally. One example of delaying tactics that have frustrated efforts of communities to obtain legal title to forest land has been delays in the approval of village bylaws by some District Councils.

3.3.2 Limited capacity at local government level

Despite significant decentralisation reforms, many districts are still highly constrained by human and operational resources, which largely prevent them from effectively implementing the National Forest Policy and Forest Act at the local level. This capacity constraint at the local government level was exacerbated by retrenchment exercises under the public service and structural adjustment reform programmes over the past decade. At the level of the district natural resources office, this has often resulted in a handful of ill-equipped government officers being charged with implementing and managing activities ranging from wildlife, fisheries and forestry in districts that have populations of up to 300,000 people with areas in excess of 45,000 km². These capacity constraints still persist despite the fact that a Public Service Reform Programme has been implemented for many years and the government's recent efforts to recruit natural resource and forest officers at the district level.

An additional factor that appears to constrain the implementation of CBFM at village level is the limited knowledge and understanding of the legal provisions within key local government, lands and forestry legislation that provide for the transfer of management responsibilities downwards to lower level institutions. This manifests itself in a variety of ways such as poor advice to community groups and the establishment of CBFM arrangements that may be on a questionable legal basis. Unfortunately, some of the more remote districts, which ironically may have higher levels of forest cover and therefore highly suited to CBFM, are often poorly staffed and have poorly qualified employees.

Misinformation regarding CBFM procedures, legal requirements, steps and delegation of powers, compounded by more conservative views of community involvement in forest management leads to delays and in other cases obstruction. A recent study (URT 2007) analyzed a national sample of local authority by-laws related to natural resource management. It revealed at a more fundamental level that in many cases district authorities claim they are not aware of forest related legislation and they do not have copies of the Forest Act and regulations. The study noted that some of the by-laws do not comply with the provisions of principal and subsidiary legislation related to local governments, environment, land and forests. It also revealed that some village by-laws lack approval from relevant authorities and therefore do not have the force of law, while others contain gross violations of principal laws such as provisions for imprisonment. This means they can easily be contested in courts. In some cases, the environment and forest management committees that are required to be established by villages are not in existence. More recent research conducted by Vyamana *et al.*, (2008) suggests that some district staff are using changes in policies at the national level regarding the management of timber harvesting to impose additional costs and red tape on village governments regarding the harvest and sale of their timber in village forests, none of which have any legal basis in law. Whether these institutional failures are due simply to a lack

of knowledge on the part of district staff, or more sinister attempts to regain control over village forest harvesting by corrupt district staff and councillors is unclear. Whatever the motive, such moves tend to work against village level management and improved forest governance.

3.3.3 *Lack of knowledge among forest-dependent communities on CBFM opportunities*

Over a century of state management of forest resources dating back to the German colonial rule has left an enduring legacy among communities living close to forests across the country (Wily and Dewees, 2001). Despite the radical changes in policy and law that have been promulgated over the past decade, little impact has trickled down to remote rural communities. Districts with the lowest levels of adult literacy and education often tend to be the same districts that have greatest forest cover, particularly outside reserved forests, due to low population pressure and poor communication (Figure 7). Low levels of education, lack of knowledge of potential community benefits from sustainable forest management under CBFM make a fertile environment for illegal forest harvesting. Poverty drives “short-termism” and the tendency to cash-in on forest extraction benefits today, even though these benefits may constitute a fraction of their potential value under CBFM in the future.

Where communities are aware of their rights and returns available under CBFM, evidence suggests that they are ready and able to defend them, through active patrolling of forest areas, arresting and fining of illegal forest users and the confiscation and sale of forest produce and equipment. Similarly, attempts by government staff at higher levels to capture and monopolise forest benefits tend to be more strongly resisted in areas with higher levels of legal literacy.

3.3.4 *Concerns over loss of forest revenues to District Councils*

Box 1: Kilwa District, Eastern Tanzania

Kilwa is a large district with relatively low population density. It is covered with coastal forests and miombo woodlands covering 1,291,500 ha of which about 80 per cent are unreserved.

Revenue from forestry cess is an important source of revenue for the district, and is charged at a rate of 5% of the total royalty payment. In 2003 revenue from own sources made up approximately TZS 180 million (around USD 150,000) equivalent to six-seven per cent of the total recurrent and development budget of 2.6 billion TZS in 2003. Of the 180 million TZS collected by the District Council in local revenue and taxes, 33 million TZS were from forestry cess, which made this item the second most important source of revenue for the DC after agricultural cess.

Source: Danida (2004).

For District Councils administering large land areas with significant areas of unreserved forests, forest revenues, levies and taxes constitute an important source of local income which can be used without the sectoral conditionalities attached to much of central government funding (See Box 1). Despite this, the efficiency of collection remains rather low and in some cases it can be as low as 5% of the potential, going as low as 1% in the case of Iringa District. Research undertaken in Iringa District has shown, however, massive increases in efficiency of collection when forest revenue collection responsibilities are

devolved from district to village level (Lund, 2007b). The total revenue collected by 14 villages implementing CBFM exceeded by several times the amount collected by the District Council from forests covering the remaining 153 villages in the district.

Decentralisation of forest management rights through CBFM clearly leads to increased efficiency. If only a small proportion of this is remitted back to the District Council, it may represent a net increase in revenue to the district when compared with revenue collected by the District Council alone. However, one of the reasons underlying low revenue collection efficiency may well be the fact that staff and councillors within the District Council obtain personal benefits through graft and corruption, particularly in more remote districts where

supervision levels tend to be lower and diversion of revenues is justified by harsh conditions and low salaries.

3.3.5 Focus on conservation and protection rather than sustainable utilisation

Many of the early pilot sites at which CBFM was established were areas that were under threat from uncontrolled and unregulated harvesting. Efforts by local or central government foresters to manage the forests were often successful due to limited resources and in some cases, the direct involvement of foresters in the harvesting itself. This meant, in effect, that communities were given areas where natural resource values were almost negative. Considerable time and effort was required to patrol and protect the forests before any substantive capital (in the form of commercially useful timber) could be accumulated and harvested.

Secondly, experience from other districts where PFM has been introduced more recently is that CBFM, or forest protection in general may only become a viable management option when a sufficient number of local residents become sufficiently alarmed by local forest destruction and loss that it prompts some kind of management response (URT, 2003b). CBFM, therefore, is more often than not, a response taken by community members to concern caused by increasing and uncontrollable loss of forest cover in the local area, rather than a tool to capture economic returns from sustainable forest harvesting. Consequently, much of the management actions of community members (as detailed in management plans and bylaws) are focused on protection, conservation and restricted use in order to extend and consolidate control over the resource in question.

This trend which is supported by a general and prevailing narrative regarding the need for conservation and protection of natural forests appears to permeate many levels of the political and executive establishment in Tanzania. Much of this is driven by frequent reports in the press regarding uncontrolled and illegal logging in environmentally sensitive forest areas, declining water flows in rivers leading to power outages due to lowered levels in hydro dams, climate change, and continued encroachment of forest reserves by farmers searching for more land. However, much of it is driven by traditional and entrenched views of forest conservation and management among middle level forestry staff, coupled with a continued ethos of reducing forest dependency rather than seeing forests as a valuable asset in sustainable livelihoods (Springate-Baginski, 2007). This trend is mirrored by the community forestry experience in Nepal which appears to have taken a highly subsistence-based view of forest utilisation and when commercial exploitation of forest produce has been promoted it has tended to be concentrated on non-timber forest products rather than higher value timber produce (Pokharel *et al.*, 2006).

The natural reaction to such fears is to continually emphasise protection over sustainable management, despite the clear provisions provided by law under the Forest Act. Interestingly, this protectionist perspective is often reinforced by well-meaning outsiders. A former Tanzanian Ambassador to Sweden, who came to visit a large village forest that had been supported through a Swedish development programme told the villagers “Some selfish people will approach you with money and convince you to allow them harvest your beautiful forest, please avoid them and don’t allow your unique forest to be harvested” (LAMP, 2003).

3.4 Cost-benefit sharing within communities and the risk of elite capture

The preceding two sections have focused on overall operational and governance constraints that have impeded the successful diffusion of both JFM and CBFM at the national level. When the level of analysis is taken down one step further and the distribution of benefits within the community is analysed, a second problem arises, namely the question of intra-community equity.

In a study undertaken by CARE Tanzania, together with the Overseas Development Institute (UK), it was suggested that unless preventive measures are taken, there is a strong risk of the poorer members of a given community losing out from the direct benefits of PFM (Vyamana *et al.*, 2008). In particular, they identified the following constraints that either consolidated the position of richer and more influential members of the community, or conversely resulted in increased marginalisation of poorer members:

- (i) Licenses, fees and other upfront payments required to harvest products from village forests meant that it was only middle income and richer members of the community who could take advantage of the economic opportunities presented by CBFM. Licensing of forest use under PFM, even for domestic purposes, places prohibitively high costs on the poor;
- (ii) The chances of inequitable distribution of benefits within a given community (and the risks of elite capture) are higher in CBFM than in JFM. This is because under JFM many of the limited resources that can be harvested are done so without payment. Barriers to the participation of the poor are much less than in CBFM where harvesting permits and upfront payments are often required;
- (iii) The poor are rarely represented within forest management committees, and even when they are, their participation and voice is rather low;
- (iv) Opportunities for the VNRCs to provide feedback and solicit input from the wider community (through the Village Assembly) were rare. Furthermore, there are limited opportunities for the management committees to be held accountable for their actions to their constituents;
- (v) VNRCs, being essentially a government institution, are more upwardly accountable (to the village government), than downwardly accountable to the wider community
- (vi) Knowledge of forest management plans, bylaws and concepts outside the VNRC membership and among general community members was often low;
- (vii) Some District Councils had either deliberately or accidentally misinterpreted the FBD Forest Harvesting Guidelines and as a result were placing additional burdens, barriers or costs to villages regarding harvesting;
- (viii) Income generating projects tended to be more suitable for richer members of the community due to the investment of time and funds required to establish the projects. There was little attempt to design activities in ways that were acceptable to the poor;
- (ix) There is often a displacement of forest-based incomes among poor, forest-dependent users following increased protection and conservation measures from PFM;
- (x) Deliberate exclusion of the poor, fuelled by the widespread belief that the poor are responsible for forest destruction as well as a belief that the poor are unable to contribute in a useful or constructive manner;
- (xi) Seasonal forest users such as *Wamasai* or *Wasukuma* pastoralists may not be included in planning processes, either as they are not in the village at the time key decisions are taken, or because they are not viewed by the village as having a legitimate claim on forest use and management;
- (xii) Income Generating Activities (IGAs) tend to be provided on a demand-driven basis, or through existing groups which generally do not include the poor and rarely, if ever, are targeted towards the poor; and
- (xiii) Increased incidences in crop raiding and damage from wild animals, due to increases in wildlife following improved protection through PFM. This places additional costs on those living close to the forest who tend to be impacted most greatly.

In a study undertaken in Iringa by Lund and Treue (2008), it was shown that while overall revenues from forest management in Mfyome village had increased dramatically since the establishment of CBFM, poorer members of the community (who had previously been highly dependent on open-access harvesting of charcoal), were now becoming increasingly priced out of the market and becoming wage labourers to more established charcoal producers.

Meshack *et al.*, (2006) assessed the distribution of JFM costs and benefits in four villages in the East Usambara Mountains and established that the relative balance between costs and benefits varies between income groups as illustrated in Figure 8. Pfliegner and Moshi (2007), reviewing JFM in Kitulang’halo and Kimboza forest reserves, Morogoro District, established that poor information flow between the village environmental committee (with whom overall management responsibilities rest) and the wider community had resulted in an appropriation of forest management benefits (some of them illegal, such as charcoal making) by the VNRC.

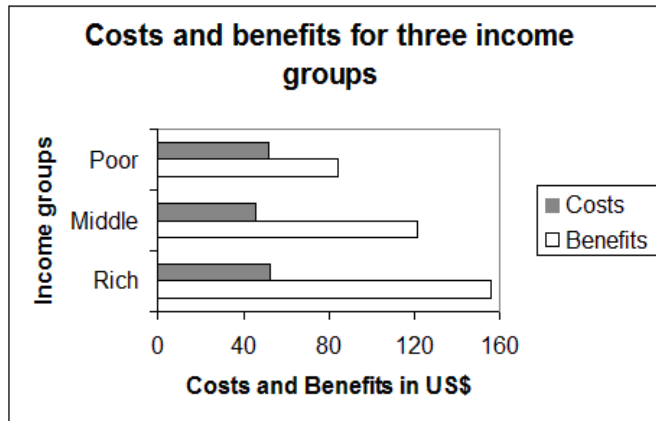


Figure 8: Costs and benefits for three income groups.
Source: Source: Meshack *et al.*, (2006)

Due to poor facilitation, and a tendency to focus extension efforts primarily on the VNRC, without attention to the wider community, to whom the committee is ultimately accountable, there is a common tendency towards elite capture. This can result in a small group of villagers (typically the VNRC or other village leaders) capturing and retaining benefits to the detriment of others. The same leaders ensure that the monopoly over benefit flows, such as illegal charcoal or timber harvesting, are

maintained through limited patrols and exclusion of other potential competitors.

The phenomenon of elite capture may be particularly acute when the total flow of local forest benefits is limited, such as under JFM in catchment forests. By concentrating these relatively small benefits within a few people, incentives may not be sufficient to maintain active management in the long term.

As a result, two different strategies are needed if PFM is to make an impact on the poorest. Firstly, there is a need to advocate for a greater share of the overall benefits of forest management to be devolved to the local level to avoid the inequitable distribution of the benefits. A number of NGO players are currently actively involved in this at national level. Secondly, and perhaps equally important, there is a need to advocate for more inclusive, equitable and pro-poor approaches to facilitating and establishing PFM at the community level in order to avoid a disproportionate share of the benefits of PFM being captured by a relatively small minority of richer community members.

3.5 Conclusions and lessons learned

Clarity regarding the legal basis for the sharing of costs and benefits among village governments and the state varies significantly between CBFM and JFM. Prevailing forest legislation provides important incentives to rural communities to manage forests on village land on a sustainable basis by ensuring that almost all forest management benefits are captured at the community or group level. As a result, CBFM adoption rates have been growing rapidly over recent years. Important gaps in the legislation regarding the ratio and mechanism for sharing forest management benefits under JFM have meant that many Joint Management Agreements have stalled and have not been signed by government, frustrating local efforts to manage these forest resources sustainably.

The intrinsic value of forest resources under JFM and CBFM regimes impacts heavily on the degree to which substantial local benefits can be obtained by local managers. Many of the

forests being managed through JFM are high biodiversity and catchment forests whose protection status severely limits the availability of local benefits and therefore restricts any kind of local benefit streams regardless of whether they are shared or not. Under CBFM, forests are generally of lower conservation status and located in miombo or acacia woodlands and restrictions regarding their use are minimal.

The distribution of forest management costs and benefits in high biodiversity forests is inherently inequitable and asymmetrical with management costs being borne by local people while benefits are enjoyed by people living distant from the forest. In general, those who benefit most from effective management of high biodiversity/catchment forests tend to live far from the forest itself. Those who are the primary managers of the forest resource namely local level community members ironically tend to benefit the least. Downstream, urban residents may benefit from the water catchment functions and electricity generated as a result of montane run-off, while frontline communities may lack both running water and power.

CBFM holds the key to sustainable forest management and significant contributions to rural livelihoods in some of the poorest and most marginalised parts of the country. Despite this, there is little evidence that the legal transfer of areas of forest has so far been accompanied by tangible local economic returns from sustainable forest harvesting and utilisation, much as the market for traded timber is growing and there is existence of a highly enabling legal and policy environment. One of the main underlying causes of this trend is weak forest governance, namely the creation of institutional incentives in central and local government that prevent local forest resources from being managed sustainably and returns generated being captured at the community level. This is reinforced by a very limited awareness of forest management rights, laws and opportunities among forest dependent communities and weak capacity within local governments.

In both forms of PFM, evidence collected so far would indicate that without deliberate and conscious efforts to avoid elite capture, poorer members of the community may receive minimal benefits from forest management and in some cases may end up negatively impacted. Such deliberate efforts include introducing safeguards for the poor, the waiving of fees and licenses for poorer members of the community and ensuring that the voice and concerns of the poor are heard and taken account of in village level forest management decision-making. If PFM is really to provide positive impacts on poor, forest dependent households and communities, firstly a greater share of the benefits from PFM need to be devolved down to the community level (particularly with regard to JFM) and secondly, PFM programmes must deliberately target the poor and marginalised in order to benefit them.

Chapter 4: Changing Approaches to Service Delivery

4.1 Introduction and background

During the 1990s and early 2000s, the primary modality for delivering PFM was through area-based projects. These projects generally worked in one or more district, and had project staff (local, international or both) who worked alongside local government officers and facilitated PFM with additional financing, transport and capacity building. In many cases, all project assets (including financing) were under the direct supervision of the project staff and advisers (although district staff were often co-signatories). Examples of such area-based projects are shown in Table 13.

Table 13: Area based, bilateral PFM support projects operational between 1993 - 2000

Project Name	District(s)	Donor	Main activities
MEMA	Iringa	Denmark	Facilitating CBFM in miombo woodlands and JFM in highland montane forests
LAMP	Babati, Kiteto, Simanjiro, Singida	Sweden	Piloting CBFM in dryland woodlands
DNRMP	Lushoto, Handeni and Mwangi	Germany	CBFM and JFM in both highland and lowland forests
EUCAMP	Muheza, Korogwe and Handeni	Finland	Supporting the conservation of high biodiversity forests
HASHI	Shinyanga	Norway	Supporting rehabilitation of dryland woodlands through restoring traditional <i>ngitili</i> practices of dry season reservation

Despite the obvious shortcomings of the project approach, all of these externally funded initiatives had important contributions to the evolution of PFM in Tanzania. These contributions are described in the following section.

4.2 The contribution of area based projects to PFM development

4.2.1 Policy change and reform

The Sida-financed LAMP, undertook a deliberate strategy of piloting new, innovative and participatory approaches to woodland management and at the same time, working at the national level to influence government policy and law. This proved to be a highly successful model. Pilot initiatives established in Duru Haitemba, SULEDO and Mgori forests were documented both in Tanzania and abroad and the experiences widely disseminated. These pilot activities coincided with staffing changes in the FBD. The former director, who had been known for holding traditional views regarding “command and control” of forest reserves was replaced in 1996 by an individual known for his commitment to participatory forestry and wider community involvement. Taking advantage of this positive change in leadership in central government, LAMP was able to work together with FBD to translate the field pilots into sweeping revisions of both the forest policy and law.

Similarly, the Finland-financed EUCAMP which worked for a number of years in Tanga region on the conservation of Eastern Arc montane forests devoted a considerable amount of resources to the process of documenting and disseminating lessons learned and engaging at national level with staff from the FBD. This increased emphasis on engagement at the national level eventually evolved into a new project that worked specifically at policy level, and contributed strongly towards the development of National Forest Policy of 1998 and the formulation of the National Forest Programme (2001 – 2010). Many of the experiences gained from EUCAMP with regard to participatory approaches, gender aspects, working in partnership with local governments and other stakeholders was reflected in these policy documents.

4.2.2 *Developing implementation guidelines, tools and models*

Strong technical capacity and the injection of ideas from other areas meant that many projects were able to develop strong field implementation models and tools. Following successful field implementation and the revision of the forest policy, the LAMP project was able to support the FBD to develop officially sanctioned CBFM Guidelines, published in 2001.

4.2.3 *Building a cadre of qualified and experienced Tanzanian facilitators*

Focused project support through area based projects and concentrated investment in capacity building in a given area has over the past decade produced a cadre of middle level field staff with an understanding and knowledge of PFM. Many of these staff were field facilitators and worked very much at the interface of projects with local communities. Projects frequently seconded government forestry staff as project managers or technical advisers, many of whom continue to work at the district level or above, either as District Forest Officers (DFOs), District Natural Resources Officers (DNRO), or Extension Officers within FBD. These staff have played a crucial role in facilitating PFM processes following the completion of their respective projects, and increasingly have been involved in national discussions around PFM models, guidelines and regulations. Although local level capacity remains one of the most critical constraints to scaling up of PFM, formal and informal networking of practitioners is having a positive impact on dissemination of village and forest level experiences and learning.

4.3 The Tanzania Social Action Fund

The World Bank has been supporting forest reforms in Tanzania since the mid 1990s through a number of projects implemented in the field and at the national level. In 2002, through an IDA Credit, the Bank launched a new project, the Tanzania Forest Conservation and Management Project (TFCMP) which included a significant contribution to the budget to supporting the scaling up of PFM across the country. After significant negotiations between the government and the World Bank country office, it was agreed that support to local level PFM initiatives would be achieved through the Tanzania Social Action Fund (TASAF) which was a national initiative that provided financial support to village governments across the country across a range of sectors, in line with the Community Driven Development (CDD) approach, favoured by the World Bank. The TASAF Project was requested to establish a ring-fenced fund for PFM that would be used to support PFM planning and implementation across 25 District Councils. Although this mechanism differed somewhat with what other development partners were planning at that time and represented something of a project-based approach, it had a number of important advantages namely:

- (i) funds are channelled directly to the community level based on priorities developed at the local level;
- (ii) 95% of the funds are directed to and used at the community level; and
- (iii) with funds at the community, rather than district level, District Councils need to ensure that demand exists for their services. This contrasts strongly with alternative models where funds are managed at the district level and support is offered to village governments.

Significant delays in operationalising this approach has meant that it is rather early to speculate on its achievements. One constraint that has persisted is that limited knowledge at the district and community level on opportunities under the new forest policy and law have meant that demand-driven project proposals from the community have not tended to be focused around PFM but reflect more traditional approaches to social forestry such as tree planting and tree nurseries. Given low rainfall and the wide availability of unreserved miombo woodland in many areas of the country, tree planting represents a less viable option

than CBFM. This has necessitated a process of raising awareness at the community levels on PFM opportunities to kick-start the flow of more PFM-focussed sub projects.

4.4 Integration with local government reforms: successes and challenges

The Danish and Finnish governments (along with many European bilateral donors), who have for decades championed and supported area based approaches began to appraise past experiences and review their overall approach from the early 2000s onwards. This has been for a range of reasons. Principal among these is the concern that projects, with their associated high levels of investment in a given area, create “islands of excellence” which cannot be absorbed, replicated or scaled up within the government system due to the prevailing lower levels of financing and capacity. In addition, there are concerns that projects create unwelcome distortions in local government institutions, as staff are taken out of their normal roles and spend all their time working on project activities. The creation of parallel financing, monitoring and reporting streams diverts resources away from supporting mainstream government processes and in some cases creates parallel institutions and power bases through the establishment of Project Management Units. The signing of the Paris Declaration on Aid Effectiveness in 2003 by all major European donors reflected this growing concern, by committing donors to aligning and harmonising external development assistance with the systems, structures and procedures of host governments as a means to reduce transaction costs, increase efficiency, as well as building ownership and sustainability. Moves within development assistance towards greater alignment and harmonisation have been mirrored in the forest sector, where bilateral donors supporting PFM such as Danida, MFA Finland and NORAD, are providing earmarked budget support to the FBD and project based support has almost completely stopped.

The following section describes how the PFM programme supported by Finland and Denmark, has sought to integrate itself within the emerging decentralization reforms, where financial, administrative and political decision making authority and responsibilities are being transferred from central to local government authorities. Responsibility for service delivery, previously the purview of central government is now increasingly being transferred to local governments, and the role of central government is being transformed into one of policy guidance, monitoring and capacity building. The different levels of local government in Tanzania and their respective roles in development are illustrated in Table 14.

Table 14: Local government structure and functions in mainland Tanzania

Administrative/ Political Level	Function	Number on mainland Tanzania
Village Government	Overseeing development activities at the local level, ensuring local law and order, enforcement of local bylaws co-ordination of local planning, overseeing land use planning and allocation	10,571 (registered)
Ward	Co-ordinates and supports village planning, supervises service delivery and ensures integration of priorities into district plans and budgets	1,756
District Council	Maintenance of law and order, and good governance, ensuring equitable and effective delivery of services to people in their areas, raising, receiving and disbursing funds in line with local development priorities	97
Regional Administrative Secretariat	Linking local governments to central ministries, advising local governments on planning, financial management and service delivery, monitoring and reporting local government activities to central government	21

4.4.1 Matching institutional mandates with appropriate roles

As in many countries, the institutional architecture of forest management in Tanzania is changing rapidly. Previously, the FBD had primary responsibility for all forests in Tanzania and worked through its staff posted within different levels of local government, but retaining vertical reporting lines to the parent ministry. Since the adoption of the Local Government Act No. 7 (1982), forest officers have been decentralised and are now entirely answerable to locally elected councils through the District Executive Directors. The matter is complicated, however, by the presence in many districts, of forest reserves, administered by central government with regional, national or even global interests due to their intrinsic biodiversity or water catchment values. Such areas fall outside the domain of local government and their management is vested in District Catchment Forest Officers (DCFOs) who work alongside DFOs but are answerable to central government. This division of roles is illustrated in Table 15.

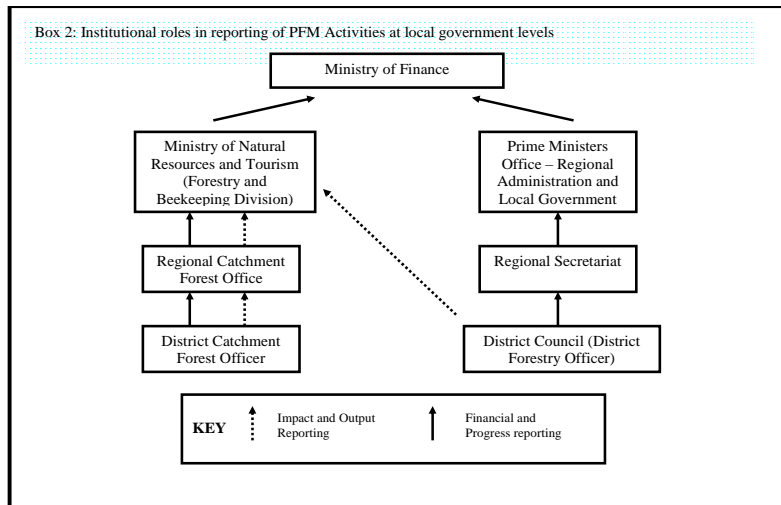
Table 15: Roles and responsibilities of central and local government staff in forest management

Role	Responsible Ministry	Officer, location and reporting line
Supporting CBFM on village land	PMO–RALG	DFO , based within District Offices and reporting to District Executive Director
Supporting JFM in LAFRs	PMO–RALG	DFO , based within District Offices and reporting to District Executive Director
Supporting JFM in NFRs such as Catchment Forests	MNRT (FBD)	DCFO , based outside District and reports to Central government

FBD staff at national level have no role in the direct implementation of CBFM at field levels. Their role is now defined as providing policy guidance, ensuring policy compliance and quality control, training and capacity building, raising awareness, monitoring and channelling funds.

Making this transition has been difficult and continues to present challenges. One example is the question of financial disbursements and reporting lines. Until very recently, funding from development partners was provided from MNRT directly to local government accounts. DFOs then reported their activities and expenditures back to the same ministry based on approved plans and budgets. This arrangement however, clearly contradicts the government’s stated policy of “decentralisation by devolution” and results in the somewhat confusing situation of one line ministry being financially accountable to another. This situation is now being rectified and funding lines are being matched with institutional responsibilities. From the 2006/07 Financial Year, for activities under the supervision of the District Councils (see Table 15) finances have been channelled directly from the Ministry of Finance and Economic Affairs to the appropriate district and do not feature in the annual budget of MNRT. Routine financial and administrative reporting takes place to the respective District Council, based on approved plans and budgets. The parent ministry, PMO-RALG is then responsible for compiling financial and activity reports across districts and regions and presenting consolidated results to the FBD at national level. FBD does retain responsibility for monitoring overall progress with regard to the implementation of forest policy and law and therefore impact and output monitoring takes place from local governments to FBD directly.

For activities supervised at the local level by MNRT (Table 15), funding remains within the Ministry and both financial reporting and impact monitoring take place vertically. This model is presented in Box 2.



This somewhat parallel system continues to present challenges with regard to the local co-ordination and harmonisation of plans for forestry when similar activities remain within the remit of two different ministries with different lines of

accountability for planning and reporting. Currently, the degree of co-ordination at local level between representatives of FBD and local government staff rests largely upon the relationship between the two officers and no institutionalised mechanism exists to ensure co-ordination on planning, allocation of resources, sharing of workload or reporting. In addition, compiling of national or regional data on the progress of PFM is hampered by the fact that impact and output monitoring reports flow to different staff members within the ministry.

The gradual shift of responsibility from FBD/MNRT to PMO-RALG has left some staff in the FBD feeling disempowered and unable to exercise what they consider their legitimate right to more directly guide and steer district based activities. Conversely, DFOs, often former employees of FBD, also feel that informal reporting lines to central government based on shared history should be allowed to continue. One important and legitimate role for central government in supporting PFM, however, is providing technical and policy guidance with a view to working towards greater standardisation, harmonisation and quality control in the wide array of approaches being implemented across the country. Local practitioners and facilitators often request policy guidance, implementation manuals and practical guidelines on “how to do” PFM. This legitimate demand from the field must be carefully balanced with the need for embracing innovation and local adaptation. Providing too many guidelines and too rigid an implementation framework can easily lead to suffocation and institutional paralysis. Providing too little guidance, on the other hand, can lead to PFM activities becoming blurred and largely unrecognisable on the ground.

4.4.2 Mismatches between administrative and ecological boundaries

Box 3: Angai Forest, Liwale District

13 villages in Liwale district collectively manage a single forest area of around 141,000 hectares called the Angai Forest. Management actions at the forest level are co-ordinated by the *Muungano wa Hifadhi ya Misitu wa Angai* – a “union” composed of representatives drawn from each village. A union of local governments is a recognised legal entity under the Local Government Act of 1982 and avoids the need for registration as an NGO.

The Forest Act directs that responsibility for the management of forest resources be delegated to “the lowest possible level of local management consistent with national policies” (URT, 2001). Numbering over 10,500, village governments constitute the lowest level of government in Tanzania and have significant powers to receive, raise and disburse funds based on local plans, enact bylaws and defend local interests

(see Table 14). In accordance with these provisions, PFM is largely a process that is driven and implemented by committees established under the Village Council and therefore firmly embedded within village government structures. Where forest resources are entirely within

the village land and are not contiguous with other forest areas outside the village, all forest planning and management decision making can be driven by local considerations and interests. However, when a contiguous piece of forest cuts across a number of village jurisdictions, there is clearly a need to go to a higher level to ensure that management activities and plans are harmonised across the resource and that mechanisms for inter-village conflict resolution are addressed. Where all villages appear within a single ward (the next highest administrative structure), the Ward constitutes a suitable institutional home for such discussions. However, more often than not, villages from different wards share a common forest. In such occasions, it is becoming increasingly common for villages to associate across the forest through an informal management system. Decisions relating to harvesting, licensing, fees and royalties and the sharing of benefits are often referred to such higher associations to ensure harmonisation and avoid conflict. The legal nature of such an institution however, becomes questionable and often remains simply a co-ordinating body with no executive powers or financial resources. If, however, it chooses to channel revenues (for example from harvesting revenues) through such a higher level organisation, it becomes essential to register it as a legal entity. In some cases this has been registered as a “union” of local governments (see Box 3), which is recognised under the Local Government Act for issues of mutual concern or interest while in other cases, they have been registered as NGOs and have sought to raise funds outside government.

At a higher level, forest areas (particularly large montane forests serving water catchment functions) may not only cut across different villages or wards – but cut across two or more different districts. This presents additional challenges in terms of planning and implementation. Capacities and interests vary significantly between districts and have significant implications for the adoption and diffusion of PFM. Mechanisms for inter-district co-ordination and alignment of management activities can nominally be undertaken at the regional level but where forests cut across different regions, inter-district co-ordination is often limited.

Long term financing of forest-wide, inter-village co-ordination costs also presents particular challenges. Village representatives are required to travel and may incur costs. Where revenue streams exist from forest management (for example where harvesting is taking place), a flat-rate percentage can be taken off gross revenues to cover costs related to forest-wide management. Where limited opportunities for local revenue generation exist (for example where forests have minimal local use options due to water catchment or biodiversity functions), forest-wide management is often only maintained under project conditions and has limited duration.

4.4.3 Developing rational allocation criteria for district forest grants

Given that most forested land falls under the authority of District Councils (on village land, on “general lands” or in LAFRs) with only around 8% in forest reserves administered by central government, the bulk of financing for PFM goes to local governments. Until recently funding for District Councils has operated on the basis of “ceilings” within which the Councils are required to plan and budget. These ceilings have been standardised across all participating districts. While simplifying overall administration, the use of flat rate ceilings masks the huge differences that exist between districts. Some districts are large, highly rural, heavily forested while others are smaller, more densely populated with limited forest resources. In addition to these natural considerations, differences exist in district capacity and engagement and their ability to report in an accurate and timely manner. Clearly, there is a need to develop mechanisms for allocating funding to areas where needs are highest and where the chances of success are greatest.

Other line ministries operating district based granting mechanisms have developed simple formulae for allocating resources. For example, the Ministry of Health and Social Welfare has developed funding criteria based on a formula that reflects local health statistics (such as the

under five mortality rates, and mileage covered for service supervision and distribution of supplies) as well as broader socio-economic conditions such as population size and district poverty levels.

Box 4: Allocation criteria used for district PFM block grants (FY 2008/09)

- Population size (30% weighting)
- Rural Poverty index (20% weighting)
- Area of forest reserved by local or central government (20% weighting)
- Area of forest outside forest reserves (30% weighting)

To develop forestry-related allocation criteria for PFM, however, poses a range of challenges, not least the availability of reliable data on forest cover, type, tenure and dependency. For such a system to work, data must be available from an independent source for the whole country and on a district-disaggregated basis. Currently, a formula has been developed for allocating forestry funding based on the indicators in Box 4, which has been used in the allocation and disbursement of PFM grants since

July 2007. Although the data regarding forest area is outdated (it comes from a survey conducted in 1996), it provides a more sensitive tool than the use of flat rates.

This debate triggers a wider discussion, however, regarding under which circumstances PFM can be considered to perform “best” (or to achieve its stated goals of sustainable forest management and sustainable rural livelihoods). Should funds be allocated to areas with large areas of unreserved intact forest (where opportunities are greatest) or areas where deforestation levels are highest (where threats are strongest)? Should funds be allocated to districts close to urban centres where markets for forest products are strongest or areas far from urban centres where markets are still emerging? Should funds be allocated to areas containing globally or nationally important forests (with potentially limited local use options) or to those areas with woodlands (such as miombo) with significantly higher potential for local revenue generation? These deeper questions can only be answered through a more focussed research initiative that would seek to investigate under which social, ecological, institutional and tenurial conditions PFM is meeting its policy objectives.

An additional challenge relates to linking financial disbursements to performance in previous years. Ideally, those districts that perform best should be given the chance to receive additional funding, while those that perform badly or mismanage their funds should be sanctioned. PMO-RALG has developed an annual performance assessment process that evaluates district performance in key functional areas such as financial management, development planning, transparency, accountability and procurement. A district score is given at the end of each financial year which in turn determines allocation of the subsequent year’s capital development grant, providing an indicative planning figure for forward budgeting. A high score brings a performance bonus, an acceptable score within the “minimum conditions” maintains grant at previous levels, while a low score results in a 20% reduction on the subsequent financial year’s disbursement (URT, 2004). Funding to districts in support of PFM has followed the same system from the start of the financial year 2007/08.

4.4.4 Increasing local revenue collection efficiency

In Chapter 3 it was pointed out that while forest revenues constitute an important source of local finance for local governments, levels of collection efficiency remain very low. The reasons for this are many, but poor governance, widespread evasion and corrupt networks that link business and political interests are common. Furthermore, current financial regulations mean that while districts may collect significant revenues from natural resources, much of this is returned to central government, thereby undermining local incentives to invest in collection. One source of revenue that is available to local governments to both collect and retain is known as “cess” or local tax on the transport of all forest products licensed at the local government level. These levies, while officially set at 5% of the royalty rates, they vary considerably from district to district. In some districts, local governments place a surcharge (which has been known to equal up to 50% of the royalty payment) on forest products

harvested from general lands. Although not permitted directly under the provisions of the Forest Act, these surcharges are legalised through the passing of bylaws, allowable under the Local Government Act of 1982. Despite the clear legal confusion and discrepancies that exist from district to district, forest revenues are important in many districts endowed with forest resources, as they constitute a local revenue that provides flexible funding for activities that are otherwise not covered from central government grants (that tend to be tied or ring-fenced to specific sectors). A study conducted in Kilwa district in 2004, showed that forest revenues accounted for approximately 20% of all local revenue collected, and was second only to agricultural cess in terms of ranked income sources (Box 1).

Despite the fact that districts may be collecting forest revenues, two further problems undermine its effectiveness. Firstly, given the pressing financial constraints faced by many districts, forest revenues are almost entirely used to cover those items that may not be funded from central government transfers (such as the costs of council meetings as well as allowances for district staff and councillors). As a result, very little of the forestry revenues collected and retained by local governments is reinvested into long term forest management. Secondly, much of the revenue collected and retained by both local and central government comes from fines and the sale of confiscated goods. In other words, the revenue base is constituted from illegal (and largely unsustainable) trade. Over the long term, if forest resources are to be managed on a long-term basis, forest revenues must be generated from management that is sustainable in nature, and it will be necessary to develop tools that can identify revenue streams from both sustainable and unsustainable sources.

A further weakness identified in the current PFM programme is that despite attempts to ensure that allocation of financing reflects local needs (see Section 4.4.3), no attempt has been made to link financial allocations with overall local government revenue collection performance targets. This is discussed in more detail in Section 4.5.

4.4.5 Harmonising development partners with local government reforms

The forest sector in Tanzania is supported by both bilateral and multilateral development partners and include Danida, MFA (Finland), NORAD and World Bank as well as funding from the government of Tanzania. Efforts have been underway in recent years to move towards the implementation of a Sector Wide Approach (SWAp) in Forestry in which a single forest sector investment plan is supported using common approaches to financing, reporting, monitoring and evaluation. Progress towards achieving greater harmonisation within the sector has been mixed, particularly with regard to the adoption by development partners of government systems and procedures such as budget and work plan formats, procurement rules, and monitoring systems and frameworks. Greatest progress towards alignment has been achieved with the bilateral development partners (including Danida, MFA Finland and also potentially NORAD) but much remains to be done with regard to multilateral funding such as that coming from World Bank in support of a multi-million dollar forest management project. Rather than integrating funding to PFM within the frameworks described above, World Bank has opted to mainstream local level support within TASAF. Procedures for planning, budgeting and disbursement of TASAF funds to local level activities are quite different from those being implemented by PMO–RALG as part of the ongoing local government reform process.

While this different approach does potentially provide an opportunity to test different models of supporting PFM at the very lowest levels of government through community driven planning processes, it clearly presents challenges with regard to harmonising approaches within given districts that have access to different sources of funding as well as leading to extended delays caused by the establishment of a parallel system.

4.4.6 Identifying opportunities for engaging with civil society and service providers

One of the key principles of local government reform in Tanzania has been the delegation of service provision responsibilities from central to local government. Local governments, in turn, have been encouraged to identify opportunities for out-sourcing of services to competent and locally based service providers. Some local government departments, such as roads, have gone relatively far with this approach, which routinely outsources almost all of its construction and maintenance operations to local or regionally based contractors. Because of the nature of PFM (much of which is concerned with negotiating the transfer of rights and resources from one level of government to another), certain key stages in PFM may never be possible to outsource. However, there is a long list of more technical or routine activities such as demarcating village forest boundaries, helping local managers undertake participatory forest resource assessments or the introduction of certain income generating activities that are highly suited to local service providers, either from private or non-governmental sectors. As a response to these opportunities, as well as the limited human resource capacity at local government levels, budgeting guidelines provided to local governments as part of the PFM programme supported by FBD, Danida and MFA Finland, introduced a system whereby a portion of funds within district budgets could only be used if they were outsourced to local service providers, as well as potential future budget increases for those districts that did successfully outsource key services. In addition, simple formats and agreements for outsourcing were prepared and included in the financial and administrative guidelines, prepared by PMO-RALG. Despite this, the overall level of outsourcing has remained low until present. Reasons for this have been difficult to establish but appear to revolve around a number of central issues namely:

- (i) The availability of local service providers with a demonstrated track record in facilitating and supporting PFM is limited, particularly in areas far from Dar es Salaam;
- (ii) Some service providers have expressed uncertainty regarding their willingness to enter into contracts with local governments, concerned that payments will either be delayed, subject to corruption, overly bureaucratic or non-existent - thereby exposing them to significant financial risk;
- (iii) Local governments lack expertise in the preparation of terms of reference and the development of contracts and are uncertain of the correct procedures to be followed; and
- (iv) Local government staff may perceive outsourcing as a loss of revenue which undermines their ability to benefit (either at the personal or institutional level) from PFM financing.

In addition to direct service provision, non-state actors play an equally important role in terms of raising awareness and understanding among local forest managers on their rights and responsibilities with regard to PFM, monitoring (and where necessary, checking) the actions of government, lobbying government at local and national level for more transparent and socially just laws and policies. Two national NGOs have been particularly active in this regard over the recent past. These are:

- (i) Tanzania Natural Resources Forum (TNRF). An initiative called “Mama Misitu” was launched in April 2008 to follow up on the findings and recommendations of a report on illegal logging in southern Tanzania, which called for greater engagement of civil society to monitor the use and harvesting of forest resources. This is being supported by a second initiative to develop a national system of Independent Forest Monitoring (IFM); and
- (ii) MJUMITA: (Mtandao wa Jamii ya Usimamizi wa Misitu Tanzania – Tanzania Network of Community Forest Managers) is a network of village level forest managers, representing over 160 groups, which are engaged in a series of advocacy campaigns designed to improve the legal framework for PFM. Although they have only recently begun to develop a national profile (with the national secretariat being formally established in 2008), it offers a promising forum through which the interests and concerns of local level forest managers can be channelled to the national level.

Given the fact that the actions of civil society actors such as TNRF and MJUMITA may not always be supported, or prioritised by government staff, it is important to develop funding flows for such initiatives that are independent of government. With increasing donor interest in supporting national and local government agencies, this is an issue that needs to be resolved.

4.5 Towards decentralised natural resources management?

Looking to the future, there has been recent debate, particularly among the development partners supporting PFM, regarding possible options for broadening the scope of district based interventions away from a single focus on PFM and identifying opportunities for a more integrated natural resource management grant mechanism that would support local communities to manage natural resources in a more integrated manner. An approach such as this could potentially help to address the highly sectoral nature of interventions being supported by central government and development partners at the district level and the very limited opportunities for horizontal linkages. Seen from the perspective of local government, where natural resources, lands and environment issues are all bundled into a single department, with one overall supervisor (the District Lands, Environment and Natural Resources Officer), such an integrated approach makes a great deal of sense as it allows a more rational use of staff resources within the department. Furthermore, it would allow local governments (and participating communities) the opportunity to decide whether resources should be allocated to fisheries, forestry or wildlife sectors depending on local opportunities and demands, rather than being driven by sector-specific funding priorities of the centre.

One option currently being explored is the integration of a national block grant mechanism within the local government development grant (LGDG) system, which is government's preferred modality for channelling conditional (sector specific) grants to local governments. The LGDG offers a nationally applicable, transparent and performance based framework for supporting local government service delivery. However, a number of key issues currently require clarification and agreement, if this wider approach to supporting natural resource management is to be established.

The grant design must recognise the revenue generation of potential of sustainable natural resource management. As indicated in Chapter 3 and earlier in this chapter, current indications are that districts are collecting a tiny fraction of the potential revenue from products such as charcoal, and this is leading to lowered revenues for local governments and increased dependency on central government for financing. Clearly, if the grant is to be effective, it must develop and support incentives for districts and villages to capture a greater share of potential sustainable revenues – so that long term investments in natural resources management can be sustained without external support.

A second key issue that will need clarification concerns the degree to which pre-determined allocations of funding can be allocated to specific sub-sectors (such as forestry, wildlife or fisheries) to ensure that national policy priorities such as the conservation of high biodiversity, watersheds and wetlands can be met. Viewpoints on this differ, with some arguing that pre-determining sub-sectoral allocations contradicts the principle of decentralisation and reduces the value of the more integrated approach which is meant to provide support based on the identification of locally available natural resource assets and endowments which vary significantly from district to district. Others argue that natural resources differ from other sectors and that it is critical to ensure that national priorities regarding the management of district natural resources also receive due attention.

4.6 Conclusions and lessons learned

Area-based PFM projects in the early 1990s played an important role in shaping the emerging legal and policy framework as well as building the capacity of local foresters. Between 1993 and 2003, the predominant model for supporting service delivery was the “area based programme/project”, typified by initiatives such as MEMA, EUCAMP and LAMP. These programmes/projects, working in a concentrated and focused manner generally supported a limited number of local governments to introduce and support PFM initiatives at the community level. Many of these projects were instrumental in developing workable models for both CBFM and JFM but they also contributed strongly to the development of a cadre of district-based staff with the skills to facilitate complex PFM processes. Some programmes/projects, most notably the LAMP programme, were able to support and inform national debates on forest policy and law, which resulted in the production of a new forest policy (in 1998) followed by a new Forest Act in 2002. The first set of comprehensive guidelines for facilitating PFM at the forest/community level was published by FBD in 2001, with significant support from the LAMP programme, and drawing heavily on experiences in establishing CBFM in Duru Haitemba and Mgori forests.

From 2003 onwards, development partners have sought to align and harmonise the delivery of development assistance and in the forest sector this has been manifested by mainstreaming PFM support through government systems and local government reforms. From 2003 onwards, in line with prevailing trends among development partners for alignment and harmonisation of development assistance, support to PFM was increasingly channelled through government channels, and increasingly directed towards local governments. Site based projects implemented using Danida support (which at that time included the MEMA and UTUMI projects) were “mainstreamed” into a single, national PFM support programme. MFA Finland also followed suit through their overall support to the National Forest Programme. Although deliberate efforts were made to integrate PFM support within the framework of emerging decentralisation reforms, support from donors was still channelled through parallel systems.

Redefining the role of central and local government within the context of supporting forest management at the local level is a process that takes time and continues to be resisted by some staff. In line with local government reforms and the government’s stated goal of supporting decentralisation, the role of FBD is increasingly moving towards one of regulation, policy formulation, monitoring and capacity building, while the role of local governments is increasingly moving towards service delivery. This has necessitated a transfer of financial resources away from central government to local government and an increased role for local government staff in supporting local forest management.

A broader programme of support towards natural resources management at district and village level has the potential to unlock some of the policy barriers to integration of forestry and wildlife management at the local level. Discussions held at the time of preparing this review indicate that a third model of service delivery is now under consideration and being strongly championed by a number of the bilateral donors with a background in supporting natural resources management at the local levels. This would operate through the mechanism used by government and donors to support District Councils in the agriculture, water and roads sector, through the LGDG. The LGDG provides a nationally applicable, transparent and performance-based system for channelling development grants to local governments. Rather than supporting forestry investments alone, proposals are focusing on broadening the potential range of investments eligible under this grant, including forestry, wildlife, fisheries and wetlands and ensuring joint financing by both donors and government. This is in recognition of the fact that to date, government and donors alike have tended to support specific sub-sectors (such as forestry) and operate through parallel delivery mechanisms, as well as supporting particular, identified districts or regions, rather than adopting a national approach. This has created inefficiencies and has increased transaction costs for district

governments and rural communities alike while opportunities for integrating multiple benefit streams from the integrated management of natural resources have been missed.

Chapter 5: Monitoring and Evaluation

5.1 Locally based monitoring in Iringa Region⁵

One of the key elements of successful and sustainable PFM, is the development of local skills to monitor and evaluate the forest resource, to guide sound decision making. However, there have been relatively few experiences to date in Tanzania which have deliberately aimed to achieve this. One project that pioneered locally based monitoring approaches was the Danida funded MEMA project in Iringa and Kilolo Districts in Iringa Region. MEMA was an area-based project that was developed with the specific objective of testing and developing workable methodologies in support of PFM, following the changes in policy and law that took place in the late 1990s and early 2000s respectively. The project worked with CBFM in dry miombo woodlands, as well as JFM in the West Kilombero and Dabaga/Ulongambi Forest Reserves which are part of the biologically rich Eastern Arc Mountains block.

One important element of the MEMA project was the establishment of a biodiversity and natural resource use monitoring scheme that fully involved the communities who had been assisted to obtain legal management rights to CBFM and JFM forests. Rather than measuring biodiversity as an end in itself, the monitoring focused on resource extraction and disturbance which are important elements that are needed to manage forests effectively and which provide an indicator of wider impacts on biodiversity. The scheme is based on data collected by village guards during patrols and by village committee members interviewing people about their perception of changes in available forest resources. The VNRC also keeps records of their own activities and all transactions related to natural resources such as issuing user permits, and collecting fees and fines. The monitoring was initially implemented in 23 communities and has since been replicated by other villages in Iringa region.

One of the goals of a good monitoring scheme is to provide information that can guide decision-making and improve management of the area being monitored. However, community based monitoring systems established as part of natural resource management have tended to suffer from limited sustainability and in many cases, last only as long as external, project support is provided. The monitoring system established in Iringa sought to take account of these lessons learned, by developing a tool that was driven by local management needs (and not external agendas such as biodiversity), used existing structures (patrol teams and the established VNRCs) and did not over-burden managers with excessive work.

5.1.1 Results of the PFM monitoring in Iringa

Although the monitoring system was established in 2002, and support to the MEMA project ended in 2004, a visit conducted by researchers in November 2006 in villages where MEMA was implemented established that nine visited villages within the original scheme were still continuing the monitoring to some degree and most could immediately show monitoring forms from 2006. Monitoring activity levels, however, declined compared to that during the project period (November 2002 – December 2003) (Table 16). In addition, only few of these forms had reached the District Authorities, and the District Lands and Natural Resources Officer had little information that monitoring efforts were continuing in these villages.

Another of the important questions was whether, in addition to on-going monitoring being continued, the information being generated was feeding into decisions taken locally, for

⁵ Section 5.1 draws heavily on a paper called Community Based Monitoring of PFM in Tanzania : Initial Experiences and Lessons Learned, by Michael Poulsen, John Massao, Neil Burgess and Elmer Topp-Jørgensen published in the Arc Journal in 2007

sustainable forest management. Research work in 2004 and information obtained during the visits in 2006 indicate that much of the monitoring data had indeed been used by the committees for discussions of management issues, and that relevant actions had been taken by these committees to solve pressing threats to the forest resources. More specifically, the committees had debated trends in availability and harvest of natural resources and had adjusted harvest quotas and other rules and regulations on the basis of monitoring results. However, it seems that management decisions are more often based on the results of discussions, rather than on trends revealed from analysis of patrol records. Nevertheless, many of the decisions are taken after discussions initiated by patrol observations and villager's general perception of the status of forest resources. Both monitoring methods have thus been found to be useful for sustainable forest management.

Table 16: Monthly monitoring reports produced by VNRCs in Iringa

Area	% of potential number of reports			
	Nov. 02 - Jul. 03	Aug. 03 - Dec. 03	Jan. 04 - Jun. 04	Jan. 06 - Jun. 06 ⁶
Woodland under CBFM (15 villages)	81.5	73.3	42.7	25-50
Forest under JFM (8 villages)	77.8	91.7	87.5	50-75
Total (23 villages)	80.2	80	59.2	c. 50

5.1.2 Lessons learned

Community based monitoring schemes designed to support PFM management regimes in Iringa Region have persisted for 4 years after project funding ceased. This indicates that these systems might be locally sustainable. The VNRCs explained that they have continued the work because the monitoring results are useful in directing their management decisions. However, there may be other reasons. For example, in some communities there have been economic incentives as funds are collected from fines and user permits and these are used to pay people for their involvement in the work while other communities do not raise sufficient funds to pay people for their involvement in the monitoring. It has been proposed that there may be other, perhaps less tangible, incentives for the VNRC members. These may include the recognition they receive from the community for doing the work, or that they believe that the community is more likely to be handed further responsibility for managing the forests if they take on the monitoring burden, or perhaps that they hope to be rewarded by another project that comes to the area if they continue the monitoring. Incentives for local involvement are therefore seen as a key issue when developing local based monitoring.

An additional important lesson learned from the community based monitoring system established in Iringa is the importance of village-level discussions and the role this plays in guiding overall management decisions. In many cases, in the design of systems such as this, one tends to emphasise the collection and analysis of field data but little attention is then given to exploring how this data can be used to reach consensus, as well as reach management decisions based on dialogue, discussion and negotiation.

As many of the decisions taken at village level have come from discussion and not from an analysis of the data collected in the field, the importance of discussion and empowerment needs to be emphasised.

The Iringa District Lands and Natural Resources Officer (DLNRO) took part in the development and implementation of the scheme, but since 2003, pressure of work, lack of funds and to some degree also lack of incentives for local foresters has meant district staff have only been able to provide limited support to the continuation of the monitoring. This means that some of the results of the monitoring work, and the decisions made at local level, are not effectively reported back to the District authorities. If community based monitoring is

⁶ Rough estimate based on unverified data from just 6 CBFM villages and 3 JFM villages

to be effective, then it is important that it feeds into and informs decision making at higher levels, particularly when specific decisions or guidance are needed.

The new database system for monitoring of forest and beekeeping resources in Tanzania, National Forest and Beekeeping Database (NAFOBEDA) provides a framework for PFM monitoring to be rolled out across the forests of Tanzania (See Section 5.2). If effectively implemented at district level, this scheme will collect information similar to that piloted in the MEMA project villages throughout Tanzania. This could provide a powerful link between the role of villagers in forest management and the need of the local and central government to see the impacts of PFM at local to national scales and thus provide an incentive for local and regional authorities to ensure continued monitoring by local communities engaged in PFM.

5.2 The National Forestry and Beekeeping Database (NAFOBEDA)

FBD has developed NAFOBEDA and introduced it to more than 33 District Councils in some of the key forest areas in Eastern, Central and Southern Tanzania.

NAFOBEDA operates at both district and national levels. Data is captured at the district level from a range of different sites and forest managers. Examples include village governments which are managing a VLFR or a VFMA within a forest reserve, a DCFO with responsibility for catchment forest reserves, a mangrove officer who is responsible for mangrove forests, or an NGO actively supporting PFM processes in selected communities. The basic unit of data collection is a specific forest reserve with a defined area and known boundary. This means forest reserves; either NFRs, LAFRs, VLFRs, CFRs or PFRs form the basis for data collection and compilation. The “forest manager” (such as Village Council, District Council, FBD or a private company) is responsible for collecting and forwarding information on the forest to the district focal point, usually the DFO. The DFO then enters the data into the database and once a year forwards this to FBD for national compilation.

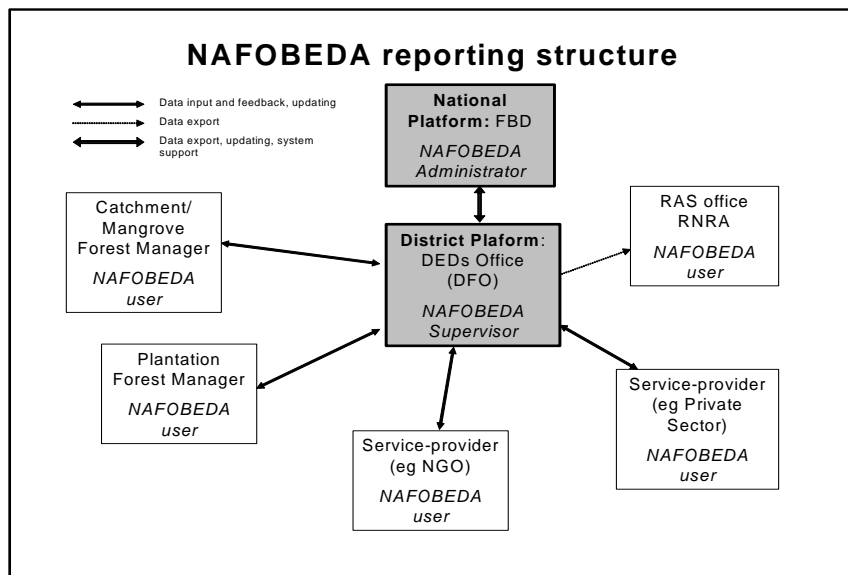


Figure 9: NAFOBEDA reporting structure

This reporting structure is illustrated in Figure 9.

NAFOBEDA captures village data through simple data collection sheets that VNRCs are required to fill and forward on a quarterly basis. The forms, in Kiswahili are entered by hand, and capture only very basic

information, such as revenues, expenditure, harvest of timber and non-timber forest produce, patrolling efforts and the effectiveness of the village committee. A sample form (in English) appears on Figure 10.



Quarterly Forest Monitoring Report								
Forest	Village	Quarter	Year	Production records				
Names and positions of committee members				Wood products	Unit	Quantity	No of permits	Revenue Tshs.
Females		Males		Positions: Chairman, Secretary, Treasurer, Patrol Leader, others				
1.	1.			Sawlogs				
2.	2.			Fuelwood				
3.	3.			Charcoal				
4.	4.			Poles				
5.	5.			Christmas trees				
6.	6.			Other				
7.	7.			Non wood products	Unit	Quantity	No of permits	Revenue Tshs.
Training/Workshops/Forest Assessment				Honey				
Date	No of Women	No of men	PFM Issues	Beeswax				
Village Natural Resource Committee meetings				Gum and resins				
Village Council Meetings				Basket making material				
Village Assemblies				Medicinal plants				
Training/ Workshops				Paying visitors				
Remarks				Hunting				
				Cultivation				
				Grazing				
				Mining				
				Fines				
				Sale of confiscated goods				
				Research permits				
				Other				
				Expenditure		Amount (Tshs)		
				Forest Management expenditure				
				Community Development expenditure				
Date		Date		Date		NAFOBEDA DATE		
Signature VNRC Secretary		Signature VNRC Chairman		Signature Village Chairman		Signature Authorised District Monitoring Officer		

Figure 10: NAFOBEDA data collection form

Villages undertaking PFM are required to demonstrate that they are managing their forests according to the management plan. Up until now, there has been no established way in which villages can report on their progress and keep district or FBD staff informed regarding their management activities. This form ensures that village governments are able to report in a standardised way and demonstrate effective management. Monitoring therefore becomes part of the overall agreement between the government and the community.

One of the main objectives of NAFOBEDA is to provide a single, institutionalised, national system into which all relevant data can be captured. Until recently, individual projects have tended to have their own monitoring systems, which operate during the project duration, but quickly die once the project closes. NGOs, projects and donors will increasingly be requested by FBD to ensure that relevant data supported by their activities are forwarded to NAFOBEDA for national compilation. Many of the development partners supporting FBD directly, such as Danida, MFA Finland and World Bank have already indicated that they will use the indicators in the NFP for their own impact monitoring purposes, and support the establishment of the NAFOBEDA, rather than project-based monitoring. This process of harmonising the efforts of donors and government is part of a wider one designed to strengthen government systems of forest administration and support under the umbrella of the National Forestry and Beekeeping Programme (NFBKP).

Another key objective of NAFOBEDA is to provide information for stakeholders beyond the forest sector. Given that forests play an important part in the government's campaign against poverty, it is hoped that NAFOBEDA will be able to keep key stakeholders such as Vice President's Office, Ministry of Finance and Economic Affairs informed of the wider benefits of sustainable forest management. The National Strategy for Growth and Reduction of Poverty (NSGRP) explicitly mentions PFM and forests as a key asset used by the rural poor in the struggle against poverty. Key indicators from NAFOBEDA will inform the NSGRP monitoring system, which tracks government's overall efforts to reduce poverty. In addition, NAFOBEDA will be linked to the Tanzania Bureau of Statistics overall database – called the Tanzania Socio-economic database (TSED), which provides a wealth of data on household incomes, livelihoods and other social indicators.

5.3 Conclusion

Pilot activities conducted in Iringa region indicate that community based monitoring schemes may represent an important way forward for supporting forest monitoring across the country. Community based monitoring schemes designed to support PFM management regimes in Iringa Region have persisted for 4 years after project funding support ceased. This indicates that these systems might be locally sustainable and offer important lessons in the design and development of locally based monitoring systems.

Locally based monitoring also provides villagers with the opportunity with which to demonstrate active and effective management to higher levels of government. Villages undertaking PFM are required to demonstrate that they are managing their forests according to the management plan and the requirements of the Forest Act. Up until now, there has been no established way in which villages can report on their progress and keep district or FBD staff informed regarding their management activities.

NAFOBEDA aims to link local monitoring with district and national monitoring needs through the establishment of an integrated programme. FBD has developed NAFOBEDA and introduced it to more than 33 District Councils in some of the key forest areas in Eastern, Central and Southern Tanzania. One of the main objectives of NAFOBEDA is to provide a single, institutionalised, national system into which all relevant data can be captured. Until recently, individual projects have tended to have their own monitoring systems, which operate during the project duration, but quickly die once the project closes. NGOs, projects and donors will increasingly be requested by FBD to ensure that relevant data supported by their activities are forwarded to NAFOBEDA for national compilation.

Chapter 6: Summary of conclusions and lessons learned and recommendations

6.1 Conclusions and lessons learned

6.1.1 The legal and institutional setting for PFM

Tanzania's legal and policy framework with regard to the management and ownership of forests by rural communities is one of the most advanced in Africa. The underlying reasons for Tanzania's progressive laws and policies relating to PFM appear to be related to Tanzania's socialist past and the strong power vested in village governments.

The rights and responsibilities of local level forest managers under CBFM are clear and unambiguous. Villagers retain all rights to use, harvest and sell forest products within their forest reserve in line with their approved management plan. In return, they must demonstrate the ability to manage and protect their forest over the long term, and to the benefit local people.

Although the legal basis for JFM is clear, uncertainty regarding benefit sharing as well as the low level of overall benefits available is undermining its viability in the long-term.

The highly sectoral nature of natural resource legislation constrains opportunities for communities to obtain multiple benefit streams from the management of forest and wildlife resources on village land.

6.1.2 PFM Impact and spread

Since PFM was introduced in Tanzania in the early 1990s, it has spread rapidly, to a level today where it covers over 4 million ha of forests and woodlands across the mainland. In general, forests managed under CBFM are mainly miombo or acacia woodlands as these constitute the largest ecosystem type of un-reserved forests while JFM has tended to be concentrated mostly in montane forests as well as mangroves, both of which are mainly located in forest reserves administered by the central government. CBFM appears to be the more widespread of the two forms of PFM. Further, CBFM appears to be the most effective in improving forest condition and reducing overall levels of disturbance.

The evidence that JFM improves results in improved forest condition appears to be mixed. Research carried out to date indicates that in some areas, JFM appears to be working as an effective management tool with which to restore and sustain forest condition while in others, it appears to be little better than when managed exclusively by the state.

Displacement of forest harvesting from PFM to non-PFM areas appears to be undermining the effectiveness of PFM at a wider landscape or ecosystem level in some areas. However, there has been very little research conducted in this area.

The contribution of PFM to improved livelihoods and incomes at both community and household levels appears to vary greatly from site to site and depends largely on the degree to which forest management decisions are devolved (through CBFM) or retained at national or district level (through JFM).

Recent studies conducted with a view of assessing the contribution of PFM to livelihoods across different wealth classes indicates that in relative terms, forests play a much more important role as sources of cash for poor than rich and normal households, but in absolute terms middle-income households derive higher cash incomes from forest products.

Traditional forest management plays an important but largely unrecognised in the management of forests and woodlands across many parts of Tanzania.

PFM appears to perform differently under different conditions and a range of inter-linked factors appear to influence its ability to deliver positive forest management, livelihood or governance outcomes.

6.1.3 Cost – Benefit Sharing, Governance and Equity

Clarity regarding the legal basis for the sharing of costs and benefits among village governments and the state varies significantly between CBFM and JFM. Prevailing forest legislation provides important incentives to rural communities to manage forests on village land on a sustainable basis by ensuring that almost all forest management benefits are captured at the community or group level. As a result, CBFM adoption rates have been growing rapidly over recent years. Important gaps in the legislation regarding the ratio and mechanism for sharing forest management benefits under JFM have meant that many JMAs have not been signed by government and have therefore stalled, frustrating local efforts to manage these forest resources sustainably.

The intrinsic value of forest resources under JFM and CBFM regimes impacts heavily on the degree to which substantial local benefits can be obtained by local managers.

The distribution of forest management costs and benefits in high biodiversity forests is inherently inequitable and asymmetrical with management costs being borne by local people while benefits are enjoyed by people living distant from the forest.

CBFM holds the key to sustainable forest management and significant contributions to rural livelihoods in some of the poorest and most marginalised parts of the country. However, there is so far little evidence that the legal transfer of areas of forest has so far been accompanied by tangible local economic returns from sustainable forest harvesting and utilisation.

In both forms of PFM, evidence collected so far indicates that without deliberate and conscious efforts to avoid elite capture, poorer members of the community may receive minimal benefits from forest management and in some cases may end up negatively impacted.

6.1.4 Changing Approaches to Service Delivery

Area-based PFM projects in the early 1990s played an important role in shaping the emerging legal and policy framework as well as building the capacity of local foresters.

From 2003 onwards, development partners have sought to align and harmonise the delivery of development assistance and in the forest sector this has been manifested by mainstreaming PFM support through government systems and local government reforms. Although deliberate efforts were made to integrate PFM support within the framework of emerging decentralisation reforms, support from donors was still channelled through parallel systems.

Redefining the role of central and local government within the context of supporting forest management at the local level is a process that takes time and continues to be resisted by some staff.

A broader programme of support towards natural resources management at district and village level has the potential to unlock some of the policy barriers to integration of forestry and wildlife management at the local level.

6.1.5 Monitoring and Evaluation

Pilot activities conducted in Iringa region indicate that community based monitoring schemes may represent an important way forward for supporting forest monitoring across the country.

Locally based monitoring also provides villagers with the opportunity with which to demonstrate active and effective management to higher levels of government.

FBD has developed NAFOBEDA an integrated programme with the aim to link local monitoring with district and national monitoring needs and introduced it to more than 33 District Councils in some of the key forest areas in Eastern, Central and Southern Tanzania.

6.2 Recommendations

Basing on the conclusions and lessons learned presented in Section 6.1, it is recommended as follows:

6.2.1 The legal and institutional setting for PFM

There is urgent need to finalise and operationalise JFM cost-benefit mechanism in order to ensure benefit flows to participating communities. The level of benefits is likely to increase if payment for ecosystem services (such as carbon and water) is implemented. In fact there is need to implement payment for ecosystem services soonest.

Further, in order to utilise the opportunity of obtaining multiple revenue flows from wildlife and forest harvesting from the same area of village land which currently is being lost, and therefore significantly reducing local incentives for long term natural resources management, there is need to remove legal “grey areas” constraining community level managers wishing to manage both forest and wildlife resources on such areas. This calls for strengthening of coordination of policies amongst the forest and wildlife sectors to ensure integration.

6.2.2 PFM Impact and spread

More research is needed to establish the effectiveness of JFM to support improved forest management.

Given the growing pressures on land for agriculture caused by either in-migration or natural population growth, it is important to reinforce traditional forest management with formal, legal recognition through the Forest Act to strengthen local forest management rights.

It is also important that more research is undertaken to identify conditions under which PFM performs best, so that in future, resources for supporting PFM at the local level are directed to those areas which have greatest potential for achieving impact. Further, there is need to introduce safeguards in PFM activities to reduce the opportunities for displacement of harvesting to non-managed areas. This is referred to as “leakage” under forest management programmes for REDD and is a major concern.

6.2.3 Cost–Benefit sharing, governance and equity

There is need to raise awareness on forest management rights, laws and opportunities among forest dependent communities and strengthen capacity within local governments to ensure tangible economic returns from PFM. Further, in order to ensure that the poor benefit from PFM, deliberate efforts must be made to avoid elite capture.

6.2.4 Changing Approaches to Service Delivery

In order to increase efficiency in service delivery, there is need to broaden the potential range of investments eligible under the LGDG to include forestry, wildlife, fisheries and wetlands.

6.2.5 Monitoring and Evaluation

Since NAFOBEDA has now been institutionalised as the official monitoring tool for the FBD, there is need to roll it out to many more districts to strengthen monitoring.

References and bibliography

The references below are a compilation of known recent articles and papers with relevance to Tanzanian PFM many of which have been referred to or used in the preparation of this publication.

- Ahrends, A. (2005) Patterns of degradation in lowland coastal forests of Coast Region, Tanzania. Diploma thesis, University of Greifswald, Germany.
- Akida, A. and Blomley, T. (2006) Trends in Forest Ownership, Forest Resources Tenure and Institutional Arrangements: Are They Contributing to Better Forest Management and Poverty Reduction? Case Study from Tanzania. Unpublished Report. FAO, Rome, Italy.
- Akida, A. (2007). What is the National Forestry and Beekeeping Database? *The Arc Journal*. Issue 21: 34- 35. Tanzania Forest Conservation Group. Dar es Salaam, Tanzania
- Alcorn, J., A. Kajuni and B. Winterbottom. 2002. Assessment of CBNRM Best Practices in Tanzania, Final Report Prepared for USAID/Tanzania. 118pp
- Blomley, T. (2006) Mainstreaming Participatory Forestry within the Local Government Reform Process in Tanzania. *Gatekeeper Series* No. 128. International Institute for Environment and Development, London, UK.
- Blomley, T. & Ramadhani, H. (2006) Going to scale with Participatory Forest Management: early Lessons from Tanzania. *International Forestry Review*, 8: 93-100.
- Blomley, T and Ramadhani, H. (2007). Participatory Forest Management in Tanzania. An overview of status, progress and challenges ahead. *The Arc Journal*, 21. Tanzania Forest Conservation Group, Tanzania.
- Blomley, T., Pfliegner, K., Isango, J., Zahabu E., Ahrends, A., Burgess, N. (2008). Seeing the Wood for the Trees: Towards an objective assessment of the impact of Participatory Forest Management on forest condition in Tanzania. *Oryx*. 42(2), 1–12
- Blomley, T., Ramadhani, H., Mkwizu, Y. & Böhringer, A (2009). Hidden Harvest: Unlocking the economic potential of Community Based Forest Management in Tanzania. In German, L., A. Karsenty and A.-M. Tiani, (Eds). *Governing Africa's Forests in a Globalized World*. Earthscan. London, UK.
- Boiesen J.H, and J.F. Lund. (2003). Participatory Forest management in Tanzania: A socio-economic study on the implementation of PFM in Iringa District. MSc (Forestry), Unit of Forestry Department of Economics and Natural Resources, The Royal Veterinary and Agricultural University Copenhagen, 118pp
- Brockington, D (2007). Forests, Community Conservation, and Local Government Performance: The Village Forest Reserves of Tanzania, *Society & Natural Resources*, 20(9):835–848
- Brockington, D. (2008). Corruption, Taxation and Natural Resource Management in Tanzania. *Journal of Development Studies*, 44:1 103–126
- Danish International Development Agency (Danida), (2004). Review of the Present Royalty and Revenue Collection System for Forest Products in Lindi Region. Final Report. PEM Consult Ltd, East Africa
- FAO (2007). Technical, Administrative, Financial, Environmental and Social aspects of Wood Production in Rufiji District. Unpublished Report. FAO Tanzania Country Office 66pp.
- FAO (2009). State of World's Forests. Rome.
- FARM Africa. (2006). Tanzania Participatory Forest Management Project:” Participatory Forest Management for Livelihoods/Poverty Reduction and Conservation” Concept Note. 17pp
- Goldman, M. (2003). Partitioned Nature privileged Knowledge: Community-based Conservation in Tanzania. *Development and Change*. 34(5):833-862.
- Hamza, K.F.S na R. Kitula. (2003). *Tathmini ya mazao ya sitimbao ya msitu wa Mgori*. Singida District Council. 119pp.

- Hurst, A. (2003). State forestry and spatial scale in the development discourses of post-colonial Tanzania: 1961–1971. *The Geographical Journal*, 169 (4): p 358–369
- Hurst, A. (2004). Not Yet Out of the Woods A Political Ecology of State Forest Policy and Practice in Mainland Tanzania, 1961-1998. Submitted in fulfilment of the requirements for the Degree of Doctor of Philosophy. St. Antony's College/School of Geography and the Environment, Trinity. 323pp
- Iddi, S. and H Sjöholm. (1997). Managing natural forests at the village level: reaching the ultimate development goal. Proceedings of XI World Forestry Congress 13 –22 October 1997, Antalya, Turkey Chapter 5 Topic 26 P1 –12.
- Iddi, S. (2002). Community participation in forest management in the United Republic of Tanzania. In Second International Workshop on Participatory Forestry in Africa: Defining the way forward: sustainable livelihoods and sustainable forest management through participatory forestry. Proceedings of the second international workshop on participatory forestry in Africa 18-22 February 2002 pp. 31-58. Food and Agriculture Organization, Rome, Italy.
- Igoe, J. (2003). Scaling up Civil Society: Donor Money, NGOs and the Pastoralist Land Rights Movement in Tanzania. *Development and Change*. 34(5):863-885.
- Junge, H. (2002). Decentralisation and Community-based Natural Resource Management in Tanzania. – The Case of Local Governance and Community based Conservation in Districts around the Selous Game Reserve Rolf D. Baldus and Ludwig Siege (Eds.) *Tanzania Wildlife Discussion Paper No. 32*. Wildlife Division, 97pp
- Isango, J.A. (2006) Monitoring Growth and impact of harvesting options, shifting cultivation and grazing on vegetation growth in miombo woodlands of Iringa District, Tanzania. Unpublished Report. Tanzania Forestry Research Institute, Morogoro, Tanzania.
- Isango, J.A. (2007). Monitoring of Permanent Sample Plots (PSPs) established in SULEDO miombo forests in Kiteto Districts, Tanzania. Unpublished Report. Tanzania Forestry Research Institute, Morogoro, Tanzania.
- Kajembe, G.C., Nduwamungu, J. & Luoga, E.J. (2006) The Impact of Community Based Forest Management and Joint Forest Management on the Forest Resource Base and Local Peoples Livelihoods. Case Studies from Tanzania. Commons Southern Africa Occasional Series, No. 8. Centre for Applied Social Sciences, University of Harare, Zimbabwe.
- Kajembe, G.C., G.C. Monela and Z.S.K. Mvena. (2002). Making community-based forest management work: a case study from Duru-Haitemba village forest reserve, Babati, Arusha, the United Republic of Tanzania In: Iddi, S., Sarrazin, K. and Reeb, D (editors). Second international workshop on participatory forestry in Africa, 18-20th February 2002, Arusha, Tanzania. Second International Workshop on Participatory Forestry in Africa, Defining the way forward: Sustainable Livelihoods and Sustainable Forest Management Through Participatory Forestry. 169-172.
- Kajembe, G.C., J Nduwamungu and E.J Luoga. (2004). The impact of community-based forest management and joint forest management on the forest resource base and local people's livelihoods: Case studies from Tanzania. CASS/PLAAS occasional paper series No. 8 Centre for Applied Social Sciences and Programme for Land and Agrarian Studies. 22pp
- Kajembe, G.C, Y.M Ngaga, S.A.O Chamshama and M.A Njana. (2009). Performance of Participatory Forest Management (PFM) regimes in Tanzania: preliminary findings in the Project “Applied Research in PFM”. In Nshubemuki et al., (Editors). Proceedings of the First Participatory Forest Management (PFM) Research Workshop: Participatory Forest Management for Improved Forest Quality, Livelihood and Governance. June 2009.
- Kibuga, K F. (2004). Study on Lessons learnt from UTUMI project. Ministry of Natural Resources and Tourism/Danida. 23pp
- Kiteto District Council. (2005). Beekeeping Development in Kiteto District, Final Report. 67 pp
- Kobb D (1998). Forestry Royalties in Tanga Region: Paper versus Reality Ministry of Natural Resources and Tourism, Tanzania Forestry and Beekeeping Division Department of

- International Development Cooperation, Finland Finnish Forest and Park Service. 64pp.
- Lovett, J.C. (2003). Statute Note: The Forest Act 2002 (Tanzania). *Journal of African Law*. 47(1):133-135.
- Lund, J.F and Ø.J. Nielsen. (2006). The Promises of Participatory Forest Management in Forest Conservation and Poverty Alleviation: The Case of Tanzania. pp. 201-241. In: Charton, H. and Médard, C. (eds.) 2006. L'Afrique Orientale. Annuaire 2005. L'Harmattan. Paris. France
- Lund, J.F. (2007a) Is Small Beautiful? Village level taxation of natural resources In Tanzania. *Public Admin. Dev.* 27:307–318
- Lund, J.F. (2007b). Money Talks: CBFM and Village Revenue Collection in Iringa District. *The Arc Journal*, 21. Tanzania Forest Conservation Group, Tanzania.
- Lund, J. F. (2007c). Economics and Politics of Participatory Forest Management in Tanzania. PhD Dissertation. Forest and Landscape Denmark. University of Copenhagen.
- Lund, J.F. and F. Helles, (2006). Taxation Issues in Tanzanian Forest Decentralisation. Unpublished paper presented to Danish Society of Foresters.
- Lund J.F and T. Treue. (2008). Are We Getting There? Evidence of Decentralized Forest Management from the Tanzanian Miombo Woodlands. *World Development* Vol. 36, No. 12, pp. 2780–2800,
- Luoga, E.J., Kajembe, G.C. & Mohamed, B.S. (2003) Impact of Joint Forest Management on Handeni Hill Forest Reserve and Adjacent Communities in Tanga, Tanzania. Unpublished Report. Sokoine University of Agriculture, Morogoro, Tanzania. Publisher/Organization, City, Country.
- Malimbwi, R.E., Zahabu, E., Misana, S., Monela, G.C., Jambiya, G.C. & Mchome, B. (2005) Charcoal potential of miombo woodlands at Kitulangalo, Tanzania. *Journal of Tropical Forest Science*, 18, 121-126.
- McKone, D. (1994). A Brief Survey of the Traditional Forest Reserves of Rungwe District, Mbeya Region, Tanzania. 10pp
- Mellenthien, J. (2005). Timber Utilisation in SULEDO Village Land Forest Reserve, Kiteto District. Unpublished report for ORGUT Consulting AB
- Meshack, C.K., Adhikari, B., Doggart, N. & Lovett, J.C. (2006) Transaction costs of community-based forest management: empirical evidence from Tanzania. *African Journal of Ecology*, 44, 468–477.
- Meshack, C.K and Raben, K. (2007). Balancing Costs and Benefits, Rights and Responsibilities in the Management of Catchment Forests. *The Arc Journal*, 21. Tanzania Forest Conservation Group, Tanzania
- Mgumia, F.H. & Oba, G. (2003) Potential role of sacred groves in biodiversity conservation in Tanzania. *Environmental Conservation*, 30, 259–265.
- Milledge, S., Gelvas, I. and Ahrends, A. (2007), Forestry, Governance and National Development: Lessons Learned from a Logging Boom in Southern Tanzania. TRAFFIC East/Southern Africa
- Mniwasa E and Shauri, V. (2001) Review of the decentralization process and its impact on environment and natural resources management in Tanzania. Lawyers Environmental Action Team (LEAT), Dar es Salaam, Tanzania.
- MNRT. (2003). Participatory Forest Management: A Report on Lessons Learnt. National Forest Programme, Forestry and Beekeeping Division. 80pp
- MNRT (2005) A Study on the Social, Economic and Environmental Impacts of Forest Landscape Restoration in Shinyanga Region, Tanzania. Unpublished Report. The World Conservation Union Eastern Africa Regional Office, Nairobi, Kenya.
- MNRT (2006). Management of natural Resources Programme (MNRP_TAN-092). Final Evaluation Report.
- MNRT (2008a). Participatory Forest Management in Tanzania. Facts and Figures. Forestry and Beekeeping Division. 13pp
- MNRT (2008b). Tanzania Forest Sector Outlook Study: 2008-2018. Forestry and Beekeeping Division. 142pp
- MNRT (2009). Final Draft National Forest Policy. Forestry and Beekeeping Division. 47pp

- Mustalahti, I. (2002). The stick has been handed over: Recommendations in the way forward of Participatory Forest Management in Korogwe and Muheza Districts, Tanzania Technical Paper 66. East Usambara Conservation Area Management Programme. 98pp
- Mustalahti, I. (2006). How to handle the stick: Positive processes and crucial barriers of Participatory Forest Management Forests, *Trees and Livelihoods*, 2006, Vol. 16, pp. 151–165
- Mustalahti, I. (2006). How to handle the stick: positive processes and crucial barriers of participatory forest management. *Forests, Trees and Livelihoods*. Vol 16 p151-165.
- Mustalahti, I (2007). Msitu wa Angai: Haraka, haraka, haina baraka! Why does handing over the Angai forest to local villages proceed so slowly? In: Gould, J. & L. Siitonen, Anomalies of aid. *A festschrift for Juhani Koponen*. Helsinki: Institute of Development Studies. 15:168-86.
- Mustalahti, I H. (2007). Handling the stick: Practices and impacts of Participatory Forest Management. Case study analyses of Finnish Forestry assistance in Tanzania, Mozambique, Laos and Vietnam. PhD thesis. Danish Centre for Forest, landscape and Planning, Faculty of Life Sciences, University of Copenhagen
- Mwihomeke, S.T., Msangi, T.H., Mabula, C.K., Ylhäisi, J. & Mndeme, K.H. (1998) Traditionally protected forests and nature conservation in the North Pare Mountains and Handeni District, Tanzania. *Journal of East African Natural History*, 87, 1-28.
- Nathan, I. (2007). On the Promises of Devolution: Overcoming the Constraints of Natural Resource Management in a Village in Tanzania. *Journal of Transdisciplinary Environmental Studies* 6:1
- Nelson, F and Blomley, T (2007). Eating from the same plate. Integrating Community based wildlife and forest management. *The Arc Journal*. 21:11-13. Tanzania Forest Conservation Group, Dar es Salaam, Tanzania
- Nelson, F. and S. Ole Makko. (2005). Communities, conservation, and conflict in the Tanzanian Serengeti. In B. Child and M.W. Lyman, (eds.), *Natural Resources as Community Assets: Lessons from Two Continents*. Sand County Foundation and the Aspen Institute, pp. 121-145.
- Nelson, R Nshala and W.A. Rodgers. (2007). The Evolution and Reform of Tanzanian Wildlife Management. *Conservation and Society*, Volume 5, No. 2, p 232–261
- Neumann, R.P. (2001). Africa's last wilderness' reordering space for political and economic control in colonial Tanzania. *Africa*. 71(4):641-665
- Nielsen M.R. (2006). Importance, cause and effect of bush meat hunting in the Udzungwa Mountains, Tanzania: Implications for community based wildlife management. *Biological Conservation* 128: p509–516
- Ngaga, Y. M., G. C. Kajembe, S.A.O. Chamshama, T. Treue, H. Meilby, J. F. Lund, N. Burgess and D. Brockington (2009). Brief Midterm Report Applied Research in Participatory Forest Management (PFM): Assessing under which conditions PFM contribute to the goals of Poverty reduction, Sustainable forest management and improved local governance in Tanzania.
- Nuru, H., C.D.K Rubanza and C.B Nezia. (2009). Governance of key players at district and village levels on health improvement of Urumwa Forest Reserve, Tabora: Ten years of Joint Forest Management. In Nshubemuki et al., (Editors). *Proceedings of the First Participatory Forest Management (PFM) Research Workshop: Participatory Forest Management for Improved Forest Quality, Livelihood and Governance*. June 2009.
- Nshubemuki, A. (2009). The role of Joint Forest Management in Ruvu North Forest Reserve on the livelihoods of the participating communities. A dissertation submitted in partial fulfilment of the requirements for the degree of Master of Arts in Rural Development, Sokoine University of Agriculture. Unpublished
- Odera, J. (2004). *Lessons Learnt on Community Forest Management in Africa*. A report prepared for the project *Lessons Learnt on Sustainable Forest Management in Africa*. National museum of Kenya, Nairobi. 74pp

- Persha, L. and T. Blomley. 2009. Management decentralization and montane forest conditions in Tanzania. *Conservation Biology* DOI: 10.1111/j.1523-1739.2009.01276.x. Article published online 23 June 2009, in advance of print.
- Pfliegner, K. & Moshi, E. (2007). Is Joint Forest Management viable in protection forest reserves? Experiences from Morogoro Region. *The Arc Journal*, 21:17-20. Tanzania Forest Conservation Group, Dar es Salaam, Tanzania
- Poulsen, M.K., Massao, J., Burgess, N. and E. Topp-Jørgensen. 2007. Community based monitoring of PFM in Tanzania: Initial experiences and lessons learned. *The Arc Journal*, 21: 31- 33. Tanzania Forest Conservation Group, Dar es Salaam, Tanzania
- Raphael, T and G. Swai. (2009). The impacts of Participatory Forest Management and local people's perceptions on its implementation in the village level in Mufindi district, Southern Tanzania highlands. In Nshubemuki et al., (Editors). Proceedings of the First Participatory Forest Management (PFM) Research Workshop: Participatory Forest Management for Improved Forest Quality, Livelihood and Governance. June 2009.
- Sauer J and JM Abdallah. (2007). Forest diversity, tobacco production and resource management in Tanzania. *Forest Policy and Economics* 9: p 421– 439
- Semesi, A.K. (1992) Developing management plans for mangrove forest reserves of mainland Tanzania. *Hydrobiologia*, 247, 1-10.
- Simula, AL. (2004). Tanzania National Forest Programme: moving towards a sector wide approach in implementation. *European Tropical Forest Research Network News* 41/42: 34-41.
- Sjoholm, H and Luono, S. 2002. Traditional pastoral communities securing green pastures through participatory forest management. The case of Kiteto District, United Republic of Tanzania. In: Proceedings of second international workshop on participatory forestry in Africa. FAO, Rome. 455 pp.
- Tiwari, M. (2004). Lessons Learnt From Sustainable Forest Management Initiatives In Asia. A report prepared for the project "Lessons Learnt on Sustainable New Delhi, India. 60pp
- Topp-Jørgensen, E, Poulsen, M.K., Lund, J.F., and Massao, J.F. (2005) Community-based monitoring of natural resource use and forest quality in montane forests and miombo woodlands in Iringa District, Tanzania. *Biodiversity and Conservation* 14: 2653-2677.
- Treue, T and Lund, J.F. (2008). Are we getting there? Evidence of Successful Participatory Forest Management from Tanzanian Miombo Woodlands. *World Development*. 36: 2780-2800
- URT (1982). Local Government Act No 7. Dar es Salaam, Tanzania.
- URT (1998) National Forest Policy. Ministry of Natural Resources and Tourism, Forestry and Beekeeping Division, Dar es Salaam, Tanzania.
- URT (1999) Village Land Act (and Regulations) No. 5 of 1999. Ministry of Lands and Human Settlements, Dar es Salaam, Tanzania.
- URT (2001) Project Implementation Manual: Annex 2. Improving Service Delivery for Participatory Forest Management. Unpublished Report. Ministry of Natural Resources and Tourism, Forestry and Beekeeping Division, Dar es Salaam, Tanzania.
- URT (2002) The Forest Act, No. 14 of 7th June 2002.
- URT (2003) Framework for Participatory Forest Management. Ministry of Natural Resources and Tourism, Dar es Salaam, Tanzania.
- URT (2004). Local Government Capital Development Grant System. A manual for the assessment of councils against minimum access conditions and performance measurement criteria. PMO-RALG Dodoma.
- URT/Danida. (2004). Evaluation of HIMA Programme in Iringa Region (Preparation for ASPS HIMA Evaluation) Draft REPORT. 10pp
- URT (2006) Participatory Forest Management: Facts and Figures. Forestry and Beekeeping Division, Ministry of Natural Resources and Tourism, Dar es Salaam, Tanzania.
- Vyamana, V.G., A.B. Chonya, F. V. Sasu, F. Rilagonya, F.N. Gwassa, S. Kivamba, I. Mpressa and E. A. Ndowo. (2008). Participatory Forest Management in the Eastern Arc

- Mountains area of Tanzania: Who is benefiting? 12th Biennial Conference of the International Association for the Study of Commons, Cheltenham England, July 14-18, 2008. Digital Library of the Commons.31pp
- Veltheim, T., Kijazi, M. & Killenga, R. (2002) Participatory Forest Inventory of Proposed Mfundia Village Forest Reserve. East Usambara Conservation Area Management Programme. 55pp
- Veltheim, T. and M. Kijazi, (2002). Lessons Learned on Participatory Forest Management. Technical Paper 61 East Usambara Conservation Area Management Programme. 128pp
- Wily, L. (1998). Villagers as forest managers and governments “learning to let go”. The case of Duru Haitemba and Mgori Forests in Tanzania. Forest Participation Series, No 9. International Institute for Environment and Development, London, UK.
- Wily, L. (1999). Moving Forward in African Community Forestry Trading Power, Not Use Rights. *Society & Natural Resources*, 12 (1): 49-61
- Wily, (2000) Land tenure reform and the balance of power in Eastern and Southern Africa. *Natural Resource Perspectives*, 58. Overseas Development Institute, London, UK
- Wily, L.A. (2000) Forest law in Eastern and Southern Africa. Moving towards a community based forest future? *Unasylva*, 203, 29-62.
- Wily, LA and Dewees, P, (2001) From Users to Custodians: Changing Relations between People and the State in Forest Management in Tanzania. World Bank Policy Research Working Paper No. 2569.
- Wily, L.A. (2002) Participatory Forestry in Africa: an overview of progress and issues. In Second International Workshop on Participatory Forestry in Africa: Defining the way forward: sustainable livelihoods and sustainable forest management through participatory forestry. Proceedings of the second international workshop on participatory forestry in Africa 18-22 February 2002 pp. 31-58. Food and Agriculture Organization, Rome, Italy.
- Woodcock, K., C.K. Meshack and C. Bildsten (2006). Review of TFCG-Facilitated Participatory Forest Management in the Eastern Arc and Coastal Forests of Tanzania. *TFCG Technical Paper No 12*. Dar es Salaam, Tanzania. 1-115 pp
- World Bank, (2007). Putting Tanzania's Hidden Economy to Work: Reform, Management and Protection of its Natural Resource Sector. Dar es Salaam, Tanzania
- Ylhäisi, J. (2006). Traditionally Protected Forests and Sacred Forests of Zigua and Gweno Ethnic Groups In Tanzania. *Publicationes Instituti Geographici Universitas Helsingiensis* A139
- Zahabu, E. (2006a). Case Study 2. Handei Village Forest Reserve, Tanzania. In Community Forest Management as a Carbon Mitigation Option. Case studies. (Eds: D. Murdiyarto & M. Skutsch) pp 16-20. CIFOR, Bogor, Indonesia
- Zahabu, E (2006b). Case Study 3. Kitulangalo Forest Area, Tanzania. In Community Forest Management as a Carbon Mitigation Option. Case studies. (eds: D. Murdiyarto & M. Skutsch) pp 21-26. CIFOR, Bogor, Indonesia