

TRENDS IN FOREST OWNERSHIP, FOREST RESOURCES TENURE AND INSTITUTIONAL ARRANGEMENTS: ARE THEY CONTRIBUTING TO BETTER FOREST MANAGEMENT AND POVERTY REDUCTION?

CASE STUDY FROM THE UNITED REPUBLIC OF TANZANIA

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Summary

Since approval of the revised National Forest Policy in 1998, the legal and policy environment for forestry in the United Republic of Tanzania has undergone a fundamental shift and now recognizes the need for partnerships with a range of stakeholders, while seeing rural communities as a critical partner in forest management. This change in forest practice and enforcement is partly a result of Tanzania's experiments with socialism and "villagization" (*ujamaa*) in the 1970s, which emphasized the role of the village in local administration and governance. The introduction of centralized administration during the colonial era had weakened the traditional land tenure arrangements and practices that defined common property rights.

Before colonialism, most land was common property, and was owned and utilized by members of well-defined groups, such as a tribe, the inhabitants of one village, a family or a clan. Management of these resources was governed by traditional or customary law. The Land Ordinance of 1923 defined and regulated land tenure in Tanganyika, declaring all land – occupied and unoccupied – as public land. The control and adjudication of such land was vested in the Colonial Governor. The Forest Ordinance of 1957 reinforced central government's exclusive control of all forest resources, and did not recognize traditional rights to use forest resource for villagers living around the forest reserves. Village assemblies were not designated as local authorities and were not consulted during the granting of licences to harvest these resources. Consequently, forests and forest resources were regarded as alien and belonging to the government, so local communities had little interest in conserving or managing them.

Perspectives on the role of forest in society have changed and broadened as a consequence of social, economic, environmental, cultural and political changes. Land laws (particularly the Village Land Act) have strengthened and formalized the role of the village council in administering matters relating to land and the management of natural resources at the local level.

The Forest Act, which was gazetted in 2002, allows two different approaches to partnerships and the devolution of rights in forest management. First, it recognizes a range of forest managers, all with full responsibility for forest protection, utilization and conservation. These managers include national, local and village government, groups and private individuals. Second, the law allows partnerships for the co-management of forest resources. Where forest management is shared between the State and local communities, the relationship is formalized through the signing of a joint management agreement (JMA). Where forest management on State-owned forest land is shared with a commercial forest company through a public–private partnership, this agreement is termed a concession. The Forest Act recognizes different kinds of forest tenure categories:

- *national forest reserves (NFRs)*: gazetted forests owned and managed by the central government through the Forestry and Beekeeping Division (FBD) of the Ministry of Natural Resources and Tourism (MNRT);
- *local authority forest reserves (LAFRs)*: gazetted forests managed at the district council level under the local government;
- *village land forest reserves (VLFRs)*: forests owned by villages and managed by committees established under the village councils. This is a new category of forest, which was legalized following approval of the Forest Act.

Because the legal basis for forest law is relatively recent, many experiences regarding participatory forestry or partnerships with the private sector are still emerging, and it is difficult to draw conclusions regarding the viability of these or their contribution to either poverty reduction or forest management. This paper attempts to address these questions with the limited knowledge base that exists at present.

The two main types of participatory forest management that have been practised over the last decade are community-based forest management (CBFM) and joint forest management (JFM). Experience to date suggests that where communities have full title to the land and forests and decision-making power regarding use and management, participatory forest management (PFM) appears to be reaching its twin objectives of improved forest management and improved livelihoods. The law recognizes communities, through their village councils, as the sole managers of VLFRs. Evidence from communities that reserved their own forests in the mid-1990s clearly shows that forests are being restored, unregulated activity is being reduced and encroachment is declining. Forests also continue to provide local subsistence benefits and opportunities for regulated commercial harvesting (where the resource base is sufficient in size and composition).

JFM is proving much more complex, however, as forest management rights and responsibilities are shared between two forest managers. JFM has been heavily promoted by government in forest reserves with high biodiversity, which provide important services to the country in terms of water catchment functions. For local residents, the high conservation status of these reserves means that the legal benefits from them are limited. This has resulted in a number of observers criticizing the approach, as management costs placed on the communities far outweigh any tangible local benefits realized. Where utilization is permitted – such as in productive forests, including plantations, some natural and mangrove forests – the approach has been complicated further by failure to agree on national guidelines/regulations regarding how and what quantities of forest benefits (such as forest royalties) can be shared with local communities.

The act allows private individuals to own forests – usually small plantations, woodlots or forest patches, which are generally managed to provide domestic and commercial produce, such as poles or timber. Forest management and potential income generation are high for individuals who are sole owners and managers. A second form of private forestry is where large-scale investors or forest companies establish forests on village or general land (outside forest reserves). Although not widespread in Tanzania, a few well-known cases exist, such as Kilombero Valley Teak Company (KVTC) and Tanganyika Wattle Company (TANWAT). Although not required by law, most of these companies enter into partnerships with local residents to maintain good relations, and thereby reduce the risk of fires or encroachment. Such partnerships range from providing local employment to more elaborate schemes such as that practised by KVTC, which has established a community fund for supporting local development initiatives.

Forest monitoring for management purposes in national forest reserves is generally rather weak in Tanzania. Most often it is difficult to determine the extent of forest cover under different management regimes. Forests provide revenue from forest royalties, and other important services such as water and biodiversity, but they lack proper management plans. Forest plantations do at least have management plans and minimal monitoring. The lack of proper management plans and monitoring in most State-owned forests is due to the vast areas of forest resources and their limited quantities. As a result, many management actions are not implemented. Local governments also manage forest reserves, but their forest planning, management and monitoring are often non-existent. In many cases, no financial resources are directed towards the management of forest reserves, which are largely viewed as revenue sources for local governments, and lack of proper management has led to encroachment and illegal harvesting. Villages are required to undertake routine patrolling and monitoring of their own forests, and in most cases this has proved an effective way of controlling unregulated forest harvesting. Management plans, also required by law, are enforced through the use of local by-laws. In many cases, the running costs of VLFRs are covered by a portion of the revenue received at the village level. Private forests, particularly those managed by large-scale companies, tend to be very well planned, managed and monitored.

Through the National Forest Programme (NFP), efforts are under way to develop a comprehensive forest sector monitoring system – the National Forestry and Beekeeping Database (NAFOBEDA). This system is expected to provide detailed assessments of forest

cover, quality and status, as well as other data regarding forests' contributions to local livelihoods.

The review of forest tenure in Tanzania concludes that when forest management responsibilities are devolved to the community, group or individual levels, the potential for achieving the goals of poverty reduction and sustainable forest management is maximized. Even under JFM arrangements where cost and benefit sharing is clearly stated, the objectives of forest management are met. This study proposes the following ways forward:

- Elimination of major stumbling blocks for advancing JFM through developing a clear, transparent and nationally agreed framework for sharing the costs and benefits of managing government-owned forest reserves.
- The rapid scale up of support to rural communities that are interested in reserving their own forests on village land, to assist them in establishing VLFRs in ways that comply with the Forest Act.
- Harmonization of laws and regulations that govern community management of forestry and wildlife resources for local benefits.
- Strengthened protection of traditional forests through providing forest managers with legal instruments available under the law.
- Improvement of the quality of forest-level planning and monitoring in all forest reserves under central or local government.

Acronyms

| | |
|-----------------|---|
| CBFM | community-based forest management |
| CFR | community forest reserve |
| FBD | Forestry and Beekeeping Division |
| FMU | forest management unit |
| IIED | International Institute for Environment and Development |
| IUCN | World Conservation Union |
| JFM | joint forest management |
| JMA | joint management agreement |
| KVTC | Kilombero Valley Teak Company |
| LAFR | local authority forest reserve |
| LAMP | Land Management Programme |
| MNRT | Ministry of Natural Resources and Tourism |
| NAFOBEDA | National Forestry and Beekeeping Database |
| NGO | non-governmental organization |
| NFP | National Forest Programme |
| NFR | national forest reserve |
| PFM | participatory forest management |
| PFRA | participatory forest resources assessment |
| SIDA | Swedish International Development Agency |
| SWAP | sector-wide approach |
| TANWAT | Tanganyika Wattle Company |
| TFCG | Tanzania Forest Conservation Group |
| VFMA | village forest management area |
| VLFR | village land forest reserve |
| VNRC | village natural resource committee |
| WMA | Wildlife Management Area |

Introduction

Much of Africa's forest estate is under the jurisdiction of either national or local governments. Excessive deforestation and forest degradation, resulting from population growth, agricultural expansion, escalating demand for wood products, illegal logging, industrial development and rapid economic growth, have triggered a debate on the effectiveness of public sector forest management and the need for changes in forest resource tenure and institutional arrangements. As a result, there is a shift towards decentralizing decision-making to lower levels of government, including districts and villages, and to increasing private sector involvement in forest management. To institutionalize the involvement of other stakeholders in forest management, changes in forest tenure and institutional arrangements for management are inevitable.

Between June and October 2006, FAO commissioned a study based on country-specific case studies from 23 countries in Africa, including the United Republic of Tanzania.³ The objective of the study is "to achieve a better understanding of the relationship between forest resource tenure and forest management, and in particular of the implications for poverty alleviation". Tanzania was selected because of the advanced degree of community involvement in forest resource management in East African countries. The study is expected to help policy and law development in the respective countries, and will also raise awareness of the linkages between forest ownership, forest management and institutional arrangements and sustainable forest management and poverty alleviation.

The information in this report was collected from a range of literature and data sources, mostly available within the Forestry and Beekeeping Division (FBD) of the Ministry of Natural Resources and Tourism (MNRT), supported by personal interviews and some field visits. Much of the quantitative data regarding forest area and tenure arrangements are based on one-off studies, some of which were carried out a decade ago. At present, there is no apparent system for the regular updating of figures, as monitoring systems are still being developed.

³ The other countries were Algeria, Angola, Cameroon, the Central African Republic, Côte d'Ivoire, the Democratic Republic of the Congo, Ethiopia, Gabon, the Gambia, Ghana, Kenya, Madagascar, Mali, Morocco, Mozambique, Namibia, the Niger, Senegal, South Africa, Uganda, Zambia and Zimbabwe.

The formal and legal context

LAND TENURE SYSTEMS IN TANZANIA

In order fully to understand the forest tenure system in the United Republic of Tanzania, it is important to understand the basic land tenure system. The legal basis for land tenure in Tanzania is derived from two basic laws that were passed in 1999. The Land Act and the Village Land Act state that all land in Tanzania is public land, which the president holds in trust for all citizens. The president delegates the power to designate, adjudicate and modify land tenure status to the Commissioner for Lands. District and village councils play an important role in managing land at the local level. These two laws have the overall objective of formalizing and legalizing traditional and customary land tenure arrangements.

Tanzania recognizes three categories of land:

- *Reserved land*: This is land set aside by central government for purposes such as nature conservation under wildlife or forestry laws. It includes forest reserves, wildlife reserves and national parks. Management of these areas is defined by the parent law (e.g., forest reserves are managed according to the Forest Act).
- *Village land*: This includes all land within the boundaries of registered villages, of which there are more than 10 500. Village councils and assemblies are given power to manage this land. The Village Land Act of 1999 allows village government to enter into agreements and enterprises that provide well-being for villagers. Village councils are required to divide village land into three categories: communal land, which is shared by a large number of individuals within the village and may include grazing, pastures, forests or other areas with natural resources; occupied land, which is used for housing, cultivation, businesses, etc. and managed by individuals or single families; and future land, which is set aside for future use by individuals of the community.
- *General land*: This is land that is neither reserved nor village land. It is managed by the commissioner of lands, on behalf of the central government.

FOREST TENURE SYSTEMS IN TANZANIA

The total area of land covered by forests in Tanzania is estimated at 34.6 million ha, of which 14.3 million ha is gazetted as forest reserves. The remaining 20.2 million ha of unreserved forest is under heavy pressure from conversion to other land-use systems such as agriculture, wildlife protection, grazing, land settlement, recreation and industrial activities. Table 1 provides an overview of the areas of forest under different ownership or management categories.

TABLE 1
Forest distribution by ownership and management regime

| Ownership | Productive | | Protective | | Total | |
|---|------------|-------------------|------------|------------------|------------|-------------------|
| | No. | Area (ha) | No. | Area (ha) | No. | Area (ha) |
| Declared or gazetted forest reserves | | | | | | |
| Local authority forest reserves | 95 | 1 356 204 | 74 | 231 470 | 169 | 1 587 674 |
| National forest reserves | 223 | 9 292 845 | 225 | 2 986 862 | 448 | 12 279 707 |
| Private forest reserves (company) | 3 | 47 834 | 1 | 13 097 | 4 | 60 931 |
| Village land forest reserves | 81 | 136 919 | 187 | 319 478 | 268 | 456 397 |
| <i>Subtotal reserved forests</i> | <i>402</i> | <i>10 833 802</i> | <i>487</i> | <i>3 550 907</i> | <i>889</i> | <i>14 384 709</i> |
| Unreserved forests | | | | | | |
| Proposed local authority forest reserves | 20 | 64 019 | 43 | 102 559 | 63 | 166 578 |
| Proposed national forest reserves | 15 | 352 557 | 50 | 443 367 | 65 | 795 924 |
| Proposed village land forest reserves | 442 | 850 417 | 392 | 754 144 | 834 | 1 604 561 |

| | | | | | | |
|------------------------------------|-----|------------|-----|-----------|-----|-------------------|
| <i>Subtotal</i> | 477 | 1 266 993 | 485 | 1 300 070 | 962 | 2 567 063 |
| Forests on general land | n/a | 17 704 269 | | | | 17 704 269 |
| <i>Subtotal unreserved forests</i> | | | | | | 20 271 332 |
| Total | | | | | | 34 656 041 |

Sources: MNRT, 2000, 2002, 2006a; FBD records and information from Kilombero Valley Teak Company (KVTC).

The Forest Act (2002) recognizes the following categories of forest.

National forest reserves (NFRs): These are gazetted forests owned and managed by central government through FBD. They cover about 12.3 million ha, and constitute approximately 35 percent of the total area under forests. NFRs are either protection forest reserves (managed for conservation purposes such as biodiversity or water catchment) or production forests (including natural and plantation forests, which are harvested for timber, fuelwood and other purposes).

Local authority forest reserves (LAFRs): These are gazetted forests managed at the district council level as production and protection forests. There are 169 gazetted forest reserves under local government control, with a total area of 1.6 million ha and including both productive and protective forest reserves. LAFRs are regarded as a major source of district revenue from charcoal and timber extraction.

Village land forest reserves (VLFRs). These are a new category of forests, which became legalized following approval of Forest Act No. 14 of 2002. VLFRs, as suggested by the name, occur on village land and are owned and managed by the village council, on behalf of the village residents. There are approximately 1 100 VLFRs, either planned or already in existence, covering a total area of slightly more than 2 million ha, which represents approximately 11.5 percent of all unreserved forest land. They are managed for both production and protection purposes, depending on their location, size and composition. Following the legal transfer of rights and responsibilities to village government, through a process known as “declaration” villagers gain the right to harvest timber and forest products, collect and retain forest royalties and undertake patrols (including arresting and fining offenders). They are also exempt from regulations regarding the harvesting of reserved tree species, and are not obliged to share their royalties with either central or local government. One of the underlying goals of the forest policy is progressively to bring large areas of unprotected woodlands and forests under village management and protection. The Forest Act (2002) describes the legal process that enables village governments to reserve and manage their own forests.

Community forest reserves (CFRs): These are found on village land and are similar in all respects to VLFRs, except that the village council delegates their management to a group of people within the community (such as a women’s group or a group of charcoal producers, timber operators or beekeepers). In such cases, the owner/manager is not the whole village but a subgroup or a subvillage.

Private forests: These are of two main kinds. The first is small-scale production of trees on private land, usually as part of an agricultural system. These forests may be the result of agroforestry or – more commonly – the establishment of small woodlots from 0.25 to 3 ha in size. Efforts to establish woodlots by individuals are significant, especially in Iringa region, where shortages of wood have encouraged farmers to plant woodlots and establish nurseries. These woodlots consist mainly of pines or eucalyptus, which are sold locally for timber and poles. In Tanga region, Muheza district, small plots of teak (*Tectona grandis*) are a common feature. Unfortunately, there is no information on either the legal state of ownership or the total forest area under individual ownership. The total contributions of individual woodlots, including agroforestry systems, to household income and poverty alleviation are not known.

The second type of private forestry involves large-scale private forestry enterprises obtaining leases on either village or general land for the purpose of planting trees. Within this category, there are three known private forests covering a total of 60 931 ha. Trees are produced for a range of purposes, but mainly for timber, poles or wattle bark. Annex 2 provides details on these three private forests.

Forests on general land: General land, formerly known as public forest land, is non-gazetted or non-reserved land, and is managed by the Commissioner of Lands on behalf of the president. Forests on general land (or general land forests) are, however, under the authority and jurisdiction of the Director of Forestry and Beekeeping. These areas constitute 51 percent of all Tanzania's forest land, and cover a total of 17.7 million ha. They have open-access use rights, and are characterized by insecure land tenure, shifting cultivation, and harvesting for fuelwood, poles and timber. They are under heavy pressure from conversion to other competing land uses, such as agriculture, livestock grazing, settlements and industrial development, as well as from wildfires. The rate of deforestation in Tanzania is estimated at 90 000 ha/year, and most of its impact is on public forests (United Republic of Tanzania, 1998).

Sacred and traditional forests: Although this forest category is not recognized by law, there are a wide variety of traditional, customary, clan or sacred forests that are managed at the community level for various reasons. Sacred forests are totally protected for burial sites, worship, sacred or religious purposes, while traditional forests are used for local consumption, for example, to provide dry-season grazing areas for pastoralists or local supplies of forest produce. Both these types of forest are usually well protected. Rather than using formal institutions such as village councils, sacred and traditional forests are often governed by clan or village elders, and protected by local beliefs or superstition, as well as more formal law enforcement. They are often very small in size and highly fragmented. A study in the North Pare mountains in northern Tanzania identified 290 clan (sacred) forests, locally called "mshitu" or "mpungi", covering a total area of 370 ha.

FOREST MANAGEMENT SYSTEMS INVOLVING MULTIPLE STAKEHOLDERS

The Forest Act provides two main mechanisms that result in stakeholder partnerships for the management of forest reserves: joint forest management (JFM) and forest concessions.

Joint forest management

JFM is a collaborative management approach that divides the responsibility and returns of forest management between the forest owner (usually central or local government, but sometimes the private sector) and the forest manager (usually forest-adjacent communities). JFM takes place on land reserved for forest management, such as NFRs (e.g., for catchment, mangrove or production purposes), LAFRs or private forest reserves. It is formalized through the signing of a joint management agreement (JMA) by village representatives and government (either the district council or MNRT). The legal basis for establishing JMAs can be found in Section 16 of the Forest Act (2002). FBD is currently revising the first version of its JFM guidelines, which were published in 2001. A survey by FBD in June 2006 established that JFM is operating or being established on 1.6 million ha of forest, representing approximately 13 percent of all forest reserved by national or local government and involving 719 villages (MNRT, 2006a).

Forest concessions

Section 20 of the Forest Act (2002) describes the process for establishing forest concession arrangements for the management of trees in forest reserves or general land. The law does not define a forest concession clearly, so there is potential for confusion between this section and

the one describing JMAs (Section 16). The Forest Policy provides some clarification by describing a concession as:

“a long-term agreement between the government and a forest industry enterprise, the latter to manage a forest reserve, industrial plantation or part thereof mainly for timber production. The company is responsible for all harvesting and silvicultural activities including road construction and maintenance. The government collects the agreed royalty and concession fees” (United Republic of Tanzania, 1998)

The general consensus that seems to be emerging is that Section 20 of the law applies to large-scale industrial private forestry enterprises only, while Section 16 refers to any other form of co-management of forest resources. Concession agreements are for extended periods (e.g., 50 years) and are bound by the principles of a management plan agreed between the government and the private company. The process for developing a concession agreement is described in a recent MNRT publication (2006b).

FOREST MONITORING

Through the National Forest Programme (NFP) efforts are being made to develop a monitoring system for the forest sector: the National Forestry and Beekeeping Database (NAFOBEDA). An existing system already tracks all forest reserves and their different characteristics and details, including management regimes, ownership and utilization levels. This system has been piloted in six districts of Tanzania and at the national level within FBD. It will be introduced to other districts, resulting in national coverage within two or three years.

Changes and trends

As in many African countries, the advent of colonization in the United Republic of Tanzania fundamentally changed land tenure from a traditional and customary system to a centralized formal one. The introduction of centralized administration during this period weakened the traditional land tenure arrangements and practices that defined common property rights. Throughout history, different cultures have used common property to manage resources sustainably; in Tanzania common property was owned and utilized by members of well-defined groups, such as the inhabitants of a village, or the members of a family or clan. Management of common resources was guided by resource use rules under traditional or customary law.

Under the Land Ordinance of 1923 (Cap. 113), all land in Tanganyika, whether occupied or not, was defined as public land. Rights over the land were placed with the State, to be held, used or disposed of as “rights to occupancy” for the benefit of the people. Under the Land Ordinance, the titles to occupy land issued under customary law were recognized as rights of occupancy.

During the village mobilization of 1973 to 1976 (known as “villagization” or by its Kiswahili name *Ujamaa*), village structures assumed an increasingly important role in land tenure. During this period, hundreds of thousands of families were forcibly moved from their ancestral land to sites that were suitable for cultivation in locations where the government could provide much-needed social amenities. The role of the village and the legal basis for the concept of village land were enshrined in law through the approval of the Land and Village Land Acts in 1999.

Village councils were first elected by rural communities in 1975, but not recognized as empowered local government structures until 1981, through the approval of Local Government Act No. 7 of 1982. Villages were formed from combinations of existing hamlets, and in some areas completely new villages were created. Since then, the role of local institutions and traditional values in managing natural resources has declined, and management is increasingly the responsibility of village government structures such as the village council or the village natural resource committee (VNRC). Village government has replaced chiefs and clan elders in land allocation. Local beliefs about the value of protecting forests and traditional property rights, which influenced the use of common resources, have gradually eroded (Monela *et al.*, 2000).

Forest law and policy over the past 100 years have mirrored these shifting trends in rural land tenure. The Forest Ordinance of 1957 (Cap. 389), which governed the conservation and management of forests and forest products, was highly centralized. Part II Sections 5 and 9 of the ordinance provided for the declaration of central government forest reserves and restrictions on the use and/or occupation of such areas. This created conflict when villagers were denied their traditional rights to use resources, resulting in alienation of forest reserves and a subsequent lack of interest in conserving them for future use. Village assemblies were not consulted about the granting of licences to harvest forest resources near or in village lands. This was because these bodies were not designated local authorities and had no legal mandate to assume management responsibilities. The harvesting of forest products on land outside central government forest reserves was vested in central government.

In the early 1990s, with financing from the Swedish International Development Agency (SIDA), pilot forestry activities were established in Arusha region of northern Tanzania in dryland miombo forests that had been subject to encroachment and overharvesting. Activities were implemented through the Land Management Programme (LAMP), which facilitated communities’ protection and management of three forest areas: Duru-Haitemba, Mgori and Suledo. Originally, central government had identified these forests as potential areas for gazettement as forest reserves, under provisions of the forest ordinance. Local opposition to the creation of national forest reserves was high, however, owing to concerns about exclusion from an area that was viewed as traditional village land. In addition, local forest officers were

viewed with much suspicion and were widely regarded as corrupt, making local people doubt the potential for success of a reserve managed by government staff. Following consultations with FBD in 1994, it was decided that the villagers in these areas should be allowed to manage the forests themselves, using their own resources and for their own benefit. Using by-laws that were legislated under the Local Government Act of 1982, villagers were encouraged to take an active role in local forest management through the establishment of village forest committees and patrol teams. Previously, forests had been open-access resources for use by both local and distant forest users, who generated income and short-term benefits from them, but in an unsustainable manner. Following the decision to empower village councils, these forest areas began a remarkable recovery that still continues.

These pilot areas were profiled at the national and international levels. LAMP initiated discussions with FBD in the late 1990s regarding how the forest areas could be formalized within the existing legislation. At the same time, a number of other area-based projects were facilitating the establishment of so-called village forest reserves in areas of forest set-aside, or areas reserved by village councils. A major milestone was reached in 1998 with approval of the revised national forest policy, which completely reframed the centralized and protectionist nature of forest policy in Tanzania. For the first time, forest policy clearly acknowledged forests' contribution to poverty reduction and rural livelihoods. Perhaps most important, however, the revised forest policy recognized the role of communities in the management of forest resources, as demonstrated by the two excerpts in Box 1.

Box 1. Excerpts from the Forest Policy of 1998

Policy Statement 5 (p. 19): To enable sustainable management of forests on public lands, clear ownership for all forests and trees on those lands will be defined. The allocation of forests and their management responsibility to villages, private individuals or to the government will be promoted. Central, local and village governments may demarcate and establish new forest reserves.

Policy Statement 6 (p. 21): Village forest reserves will be managed by the village governments or other entities designated by village governments for this purpose. They will be managed for production and/or protection based on sustainable management objectives defined for each forest reserve. The management will be based on forest management plans.

This policy shift paved the way for approval of the Forest Act (2002), which became operational following publication of the Forest Regulations. This act provides for a diversity of management options and expands the range of potential forest managers to include individuals, groups, villages, local and national governments. It also makes possible a range of management options in which roles are shared between forest owners and users. The concept of participatory forest management (PFM), a central strategy of Tanzania's Forest Policy (1998), Forest Act (2002) and NFP (2001), was conceived as a mechanism for transferring forest ownership and management from the central to village government, as illustrated in Box 2.

Box 2. Major milestones in the policy and legal framework

1982: Local Government Act No. 7 spells out the roles of district and village governments, and provides new levels of autonomy and devolution to local councils.

1998: National Forest Policy recognizes the roles of a diverse range of stakeholders and partnerships with non-governmental organizations (NGOs), the private sector and local communities for sustainable forest management.

1999: Village Land Act No. 5 confers responsibility for village land management and adjudication in lands to elected village councils.

2001: NFP (2001 to 2010) provides a strategic framework for implementation of forest sector policy, and stresses the roles of stakeholders from the public, private and voluntary sectors.

2001: Community-Based Forest Management Guidelines issued by MNRT.

2002: Forest Act No. 14 passed by parliament.

2004: Forest Regulations that operationalize the Forest Act issued by MNRT.

The following are the three broad policy objectives of PFM:

- *Rehabilitation and maintenance of forest quality*: The primary goal of PFM is to restore and/or maintain forest quality and environment and the ecological services that forests offer to local and national stakeholders. It assumes that delegating management responsibilities to the lowest possible level leads to improvement of the forest resources in question.
- *Improved livelihoods for forest-dependent communities*: Through access and user rights to forest resources, rural livelihoods at the village, community and household levels are expected to become more secure and sustainable. Communities will benefit from:
 - financial returns, from the sale or lease of forest resource and the collection of fines;
 - reduced vulnerability, through a sustainable supply of forest-based goods and services for domestic consumption (water, building materials and energy).
- *Improved local governance through more effective local natural resource management institutions*: Locally elected village institutions provide the institutional basis for forest governance at the community level. PFM aims to strengthen these institutions to manage local resources in more effective, transparent and cost-efficient ways – thereby contributing to improved local governance.

The concept of forest concessions and mutually beneficial relationships between the public and private sectors for the long-term management of forest resources is relatively new in Tanzania, and was included in the Forest Policy of 1998. The Forest Act (2002) provides the legal basis for forest concessions, and MNRT has recently approved guidelines and formats for agreements. Various models of concession arrangements will be piloted.

Analysis of forest management systems

FORESTS OWNED BY CENTRAL AND LOCAL GOVERNMENT

In the United Republic of Tanzania, State-owned forest reserves (including national and local authority forest reserves) constitute about 40 percent of the total forest estate and cover about 13.8 million ha. In most cases, the central government has jurisdiction over the administration and protection of State-owned forest reserves, which are classified as NFRs. Central government employees involved in protecting NFRs include district catchment forest officers, zonal mangrove officers and forest managers. A small proportion – approximately 11 percent – of State-owned forest reserves is under the jurisdiction of local governments and supervised by district forest officers. These forests are classified as LAFRs. LAFRs and NFRs can be either production forests with commercial aspects or protection forests managed primarily as catchment areas where no consumptive utilization is permitted.

Owing to the scarce capacity and resources of both central and local government, the management of many government-owned forest reserves is limited. A recent study assessed the available staff and capacity to manage the Eastern Arc mountain forests, and found that the government was providing approximately one-quarter of the resources required to manage these forests adequately. Assuming that 1 km² of forest requires about US\$364 per year to manage, there was a shortfall of more than US\$1 million per year, even when donor funding was included (Burgess and Kilahama, 2005). Plantation forests tend to receive more government support because of their high economic value and potential for generating income. Key catchment forests that play vital roles in water conservation or biodiversity conservation, such as the forests in the Eastern Arc mountains, receive special attention and are often well supported by projects or external funding.

LAFRs tend to be poorly managed and many are viewed simply as sources of revenue for local governments, which have limited resources and few opportunities for generating local revenues. Typically, the only resources that local authorities invest in the management of LAFRs are the staff salaries of divisional or ward-level forest staff under the district council.

Where no formal arrangement for PFM exists, local communities have very few legal rights to use forests. Unregulated consumption often takes place, however, particularly in areas close to urban centres where the demand for charcoal, timber or fuelwood is high, such as in Pugu South Forest Reserve, an NFR within an hour's drive from Dar es Salaam. Despite the extremely limited management inputs from government, encroachment into government-owned forest reserves is surprisingly low.

A recent study tracked forest cover changes in the Eastern Arc mountain forests and calculated that approximately 70 percent of the original forest cover has been lost and the remainder is retreating towards the boundaries of NFRs (Mbilinyi and Kashaigili, 2005). The period of greatest forest loss was between the 1970s and the early 1990s; the rate has slowed markedly because there are now very few pockets of forest outside reserve boundaries. The study demonstrated that local communities appeared to know and respect forest reserve boundaries, in spite of central government's negligible efforts to enforce them.

Regular monitoring of government-owned forest is very rare. In 1994/1995, FBD's Forest Resources Management Project, supported by the World Bank, undertook a national forest and land resources assessment to provide an updated picture of the state of forests in Tanzania, but no other national study has been undertaken since then. Specific studies of particular geographical priority areas or themes (biodiversity, stock assessment) have been undertaken, but their limited scope makes long-term monitoring impossible. Current plans under the NFP to develop a forest-based national monitoring facility may lead to organized assessments of forest resources.

FORESTS OWNED BY VILLAGE GOVERNMENTS

A village council may reserve common land within the village land as a VLFR for purposes of forest management. The village council owns and manages the trees through a VNRC, a group or an individual, and most of the costs and benefits of managing and utilizing forest resources are carried by the owner. Central government has a minimal role in the management of VLFRs, and district councils are responsible for their planning and establishment, as well as for undertaking occasional monitoring. To declare a VLFR, the village prepares a management plan, which must be approved by the village assembly. Villages can make by-laws to support the management plan and provide the legal basis for enforcing forest management rules. Annex 3 provides a sample format for a VLFR management plan, and Box 3 provides a case study of management.

The following are some of the incentives that the Forest Act (2002) provides to encourage local communities to reserve forest resources on general land (see Table 1):

- *Waiving State royalties on forest produce:* This means that the village is not bound by inflexible (and low) royalty rates, and can sell its produce at prevailing market rates.
- *Exemption from local government taxes (“cess”) on forest produce from village forest management:* This means that produce harvested from VLFRs is not liable for local government taxes during transportation.
- *Exemption from the reserved tree species list:* This mechanism under the Forest Act (2002) protects commercially important or endangered tree species on unreserved land, and entrusts their management (and commercial use) to the district forest officer. When under village management, decisions about harvesting are transferred to the village administration.
- *Confiscation and sale of forest produce and equipment harvested illegally:* Any forest produce or equipment used to harvest illegally in a VLFR may be confiscated and sold by the village council, and the proceeds used to benefit the village.

As a result of these incentives, communities’ interest in establishing community-based forest management (CBFM) is increasing. Evidence is mounting that forest condition is significantly improved when it is managed locally by mandated village institutions under CBFM arrangements. A study in Shinyanga region demonstrated that local communities’ restoration of forest patches (known locally as *ngitili*) had resulted in the reintroduction of 152 tree species and 145 bird species, many of which were thought to have disappeared before the forests were restored (MNRT and IUCN, 2005). Mgori forest in Singida district is another example. Covering 44 000 ha divided among five villages, the forest area has been heavily recolonized by game and a range of wildlife such as elephants, monkeys, baboons and leopards.

Despite the positive incentives provided under the law, villagers who have embarked on CBFM have not yet capitalized on the significant economic values within their forest reserves. The following are possible reasons for this:

- *Poor state of forest resources:* Much early CBFM was carried out on degraded forest land that had little merchantable timber left. This meant that utilization opportunities for forest managers were limited and long periods were required before the forests became commercially viable. For example, Duru-Haitemba Forest in Babati district is only now being considered for low-level commercial harvesting after 11 years of community management.
- *Reluctance to use harvesting as a management option:* The initial stages of CBFM are often concerned with reserving, securing, protecting and restoring forests on village land, because CBFM is frequently a response to uncontrolled utilization and severe degradation. Some communities resist harvesting for fear that utilization may lead to uncontrolled use and result in forest destruction. This fear is reinforced by district foresters’ heavy emphasis on conservation, in-line with their mandate to conserve and

protect forest resources. A further problem is communities' lack of knowledge about the availability of profitable timber markets, both locally and internationally.

- *Crop damage from wildlife:* As with JFM, increases in game numbers appear to have a negative effect on local social and economic conditions. In July 2004, an elephant from Mgori VLFR killed two people in Ngimu village and destroyed large amounts of crops – the first incidence of this type for many years in that village. Increased numbers of monkeys and baboons also pose a problem for farmers with fields close to the forest boundary. Unfortunately, wildlife management and use is regulated by a separate set of legal instruments, such as the Wildlife Management Act and the Wildlife Management Area Regulations (2002). Reserving forests on village land does not grant village governments automatic rights to wildlife. To obtain such rights, villages must follow different steps, leading to the eventual establishment of Wildlife Management Areas (WMAs).

Box 3. VLFR, case study of Kipangege village, Kibaha district

Kipangege village is located in Kibaha district, Coast region, and borders the NFR of Ruvu South. An adjacent area of land covering 232 ha was originally occupied by Mkubagile village, but this village was removed following the national villagization programme of the mid-1970s. The forced removal of the resident population resulted in rapid recovery of the forest through natural regeneration over 40 years, producing a mature coastal forest. However, proximity to Kipangege village meant that the demand for forest products was high, as was the frequency of forest fires, so degradation of the forest was an increased risk.

In 2001, the *Misitu Yetu* (Our Forest) Project, implemented by a local NGO – the Tanzania Forest Conservation Project – in collaboration with FBD staff based at Kongowe, supported the villagers' reservation of this forest area as the Kipangege VLFR. The forest is totally protected, and the village has set aside an additional area of village land from which villagers can continue to obtain forest products. This area and an area inside Ruvu South NFR are used as burial places. The project facilitated a JMA for the management of the Ruvu South NFR, based on a management plan for a single village forest management area (VFMA).

The Kipangege village forest patrol team conducts patrols once a week. It has 12 members, who are elected every two years on a rotational basis so that every villager has an opportunity to understand the forest through patrolling. When practical work is required for the VLFR, the communal work system is utilized. In this way, the boundary has been cleared and planted with tree seedlings. The households and farmers adjacent to the forest report illegal forest activities. A similar patrol team operates within the Ruvu South NFR, but its activities are complicated by the fact that patrolling is undertaken jointly with FBD forest rangers, who frequently fail to show up for joint patrols. The process for disposing of goods confiscated during joint patrols is also unclear and has created resentment within the village.

Achievements to date include the stabilization and recovery of Kipangege VLFR through community efforts, and the recovery of village water sources within the forest, which were threatened by forest degradation. Local residents are very satisfied with the fruits of their work and have been able to collect limited amounts of non-wood forest products. Conflicts between FBD and the village regarding the shared management of the Ruvu South NFR, however, have resulted in a questionable future for the JMA. Villagers complain that they do not get enough cooperation from FBD and that all management costs have been devolved to the community, while benefits remain with government.

VLFRs can be declared or gazetted. Declaration takes place when the village government formally agrees to set aside or reserve an area of forest within the village land. Once the respective district council endorses this declaration, the villagers are fully empowered to manage the forest using provisions set out in the management plan and by-laws. After three years, villagers may request FBD to gazette the VLFR formally. The differences in terms of legal powers are very unclear, however, and the process is voluntary, so very few village governments have gone through the rather complex steps required to achieve national gazettement. Currently, of 329 declared VLFRs, only 53 are gazetted.

The monitoring process for PFM is being integrated into the wider NFP monitoring system. Monitoring is largely done at the village level, with communities being provided with the skills to conduct participatory forest resources assessment (PFRA) and standardized tools for recording and monitoring financial expenditures, issuing permits, levying fines and undertaking patrols. Six-monthly status reports provide regular monitoring data on PFM.

PRIVATE FORESTS

Private forests are of two main types: large-scale investors or private companies establish private forests on land leased from villages, or from the government on general land; and, more frequently, individuals or households establish small woodlots or forest patches, either by planting trees or through natural regeneration.

The Commonwealth Development Corporation has financed two plantations in Tanzania: Kilombero Valley Teak Company (KVTC) in Kilombero and Ulanga districts, which has been operating since 1992; and Tanganyika Wattle Company (TANWAT), which plants wattle and has pines and eucalyptus in Njombe district. A third private forest – Farm Forest Company Limited – is financed by Norwegian investors and plants pines and eucalyptus for timber and poles in Mufindi and Kilombero districts. Escarpment Forest Company Limited is about to start generating revenue from trading carbon, having received certification for carbon sequestration in late 2000.

Box 4. Company private forest, case study of KVTC

In 1993, the Commonwealth Development Corporation established KVTC with a 99-year lease from the Government of the United Republic of Tanzania. The company's mandate is to develop plantation forestry as a means of promoting sustainable economic, social and environmental development in the Kilombero Valley.

KVTC aims to produce 230 000 m³ of timber per year on a sustainable basis. It has leased 28 131 ha of land in miombo woodland, and proposes to plant teak over 25 percent of this area. The remaining 75 percent has land-use plans for natural areas, with the aim of sustainably managing approximately 8 000 ha of miombo and protecting the remainder of the leased land.

ENVIRONMENTAL IMPACTS

The importance of evergreen forests as areas of exceptional biodiversity and endemism is understood. The conservation of important ecosystems and areas of high biodiversity is part of KVTC's environmental policy, which is strictly adhered to when natural areas are converted to teak plantations. The formal procedure for converting natural areas to teak plantations provides for the conservation of important ecosystems and areas of high biodiversity.

In early 2004, KVTC carried out remote sensing using satellite images from Spot 4 with a resolution of 10 m. This forest cover mask can be used to compare forest cover changes within and outside the KVTC concession areas and to assess the impacts of KVTC activities on surrounding areas, at the district, regional and country levels. Forest cover changes from May 2002 to July 2004 were compared. An area of 69 488 ha was assessed, comprising 16 388 ha of KVTC-leased area and 53 100 ha of village land. The results showed a forest cover loss of 0.73 percent of the total area within the KVTC concession, compared with a 4.4 percent loss outside the KVTC leased land. The areas that experienced decline and the causes of forest loss are being monitored yearly.

SOCIAL AND ECONOMIC IMPACTS

KVTC is committed to the socio-economic empowerment of the people, and has embarked on a local economic empowerment programme.

- The company has shifted its employment base to use outsourced employment.
- KVTC contributed US\$800 000 to the local economy in 2005, mainly via its outsourcing programme.
- The local villages received US\$30 000 of village contracts during 2005. The company works with villagers and has established village contracts that educate and heighten the environmental awareness of villagers by financially rewarding them for the reduction of wildfires and poaching in the KVTC area.
- KVTC pays social funds directly into villages' bank accounts, of which the company is a co-signatory. Funds are managed to achieve goals set by the villages.

- KVTC and its contractors employ about 500 labourers a day.
- KVTC has started an outgrowers scheme in which local residents are provided with subsidized seedlings, technical advice and inputs and are guaranteed markets for timber from mature trees of an acceptable size and quality.

Private forests that are established or reserved on private land by households include woodlots, areas of land left to regenerate and recover, and small plantations for commercial production of forest products.

Box 5. Household private forests, case study of Mzee Mabula in Maswa district

Mzee Mabula moved to his current home in Wigekelo, Maswa district in 1978. At that time, the land was in very poor condition and had been cleared and heavily overgrazed. Almost all the vegetation had been removed by extensive browsing of goats and cattle from neighbouring villages. Mzee Mabula set about restoring the area, initially by planting sisal around the edge of the farm to keep livestock off his land. He then contacted the *Hifadhi Ardi Shinyanga* (Shinyanga Land Conservation Project – HASHI), which was supporting local communities' restoration of forest lands through the traditional system of *ngitili* – a land management practice developed by the Sukuma pastoralists to provide dry-season grazing for livestock. Mzee Mabula was advised to allow a portion of his farm to regenerate naturally and to start digging a series of water harvesting contours on the most degraded areas, which covered about 20 acres (8 ha). A small pond was dug at the bottom of his farm, which filled up during the heavy rains of 1998 and now provides water for most of the year for domestic and livestock use.

Since he started restoring his land in the mid-1990s, Mzee Mabula has seen a number of significant changes in his local environment. Trees have re-established themselves and many are now old and large enough to be harvested for fuelwood and building poles, while bees – which used not to be found – recolonized the area after Mzee Mabula placed traditional hives in flowering acacia trees. Grass has re-established itself under the regenerating trees and now provides important fodder resources for his cattle and goats. What was previously an eroding piece of land is now a local water catchment area.

The following are some of the benefits that Mzee Mabula has enjoyed since reforesting his farm:

- Sufficient pasture for his 50 cows, goats and sheep, even during the dry season when other areas are exhausted.
- Sufficient fuelwood for domestic use, with some surplus to sell to neighbours.
- Available water for drinking and watering stock. His wife and daughter no longer have to collect drinking-water from wells distant from the farm.
- Sales of pasture and thatching grass to neighbours, at Tsh 500 per bundle (about US\$0.4).
- Sales of poles to neighbours, providing enough cash to buy iron sheet roofing for his new house.
- Increased milk production and honey from beekeeping will soon add extra income.

Source: Adapted from Mlenge, 2004.

TRADITIONAL FORESTS

Many ethnic groups in Tanzania have collectively or individually conserved forest areas for a range of social, cultural, religious and other traditional purposes. Traditional forests can be thought of as either communal or private forest reserves that have not undergone any official establishment process. Perhaps the most well documented examples of this type of forest are the *ngitili* forests of Shinyanga and Mwanza regions. As a strategy to cope with shortages of fodder during the dry season, the Wasukuma pastoralists developed an indigenous fodder conservation system, called *ngitili*, which protects natural rangelands through controlled and deferred grazing. The final few weeks of the dry season are a critical and vulnerable time for livestock keepers, as all sources of grazing and browse are usually exhausted. *Ngitili* forests provide a reserve of fodder during this critical period. By enclosing a designated area as bush fallow and allowing livestock to use it only during this critical time, traditionally reserved forests are protected, resulting in rapid regeneration and re-establishment of trees. The browse trees play an important role in the nutrition of livestock, particularly as supplements to grasses and crop residues.

JOINT FOREST MANAGEMENT

JFM is a formalized management arrangement in which two parties have primary interests – the forest manager and the forest owner. The signing of a JMA transfers user and management rights, but maintains ownership. The Forest Act (2002), Section 16 states that a JMA can be made between:

- FBD and “any person or organization in the public or private sector providing for the management within the vicinity of that national forest reserve”, as well as community groups or other groups living adjacent to and “deriving the whole or a part of their livelihood from that national forest reserve”;
- a district council and a village council, a community group or any person or organization in the public or private sector providing management for that village council or community group;
- a village council and a community group providing management of a VLFR;
- the manager of a private forest and community groups or other groups of people living adjacent to and deriving the whole or a part of their livelihoods from or adjacent to the private forest.

The most common JFMs are agreements between central government and village councils, under which the village defines an area within the forest that it will jointly manage with the government. Such areas are called village forest management areas (VFMAs). Authority to manage the VFMA is delegated to an elected sub-committee of the village council, which is called the village environment committee, the village natural resource committee or the village forest committee. Box 6 provides a case study of a village working with JFM. To date, 719 villages have or are working towards acquiring approved management plans and JMAs for managing a total of 1.6 million ha (see Table 1). Management plans are developed by the villagers in consultation with district authorities and must include:

- name and description of the forest;
- objectives of the agreement;
- parties to the agreement;
- management activities to be undertaken;
- rules, and penalties for breaking them;
- how funds from forest management (fines, fees) will be managed and spent;
- procedures for resolving disputes that may arise among the parties to the agreement;
- duration of the agreement;
- how the agreement will be revised.

Experience over the last few years confirms the general assumption that JFM, when well facilitated, can lead to recovery and/or maintenance of forest quality. Although empirical evidence is scanty and only limited long-term ecological monitoring has been carried out, many villages responsible for forest management under JFM arrangements are reporting important indicators such as:

- improved water discharge and quality from forest areas managed jointly;
- increasing signs of natural regeneration in formerly degraded areas;
- reduced incidences and spread of fire;
- reduced illegal activities;
- reduced encroachment of agricultural land into forest areas;
- increased game and wildlife numbers and diversity.

It therefore appears that JFM contributes to sustainable forest management, but further research and documentation are required to confirm this.

Evidence of improved livelihoods is less clear, particularly regarding more tangible, economic returns from forest management. A recent assessment of JFM in Iringa district (Topp-Jørgensen *et al.*, 2005) found average annual village incomes of only US\$189 from JFM areas inside NFRs. The following are some of the wide range of reasons for this poor performance:

- National and international interest regarding the protection of critical forest ecosystems has led many early donors to direct funding for PFM towards high biodiversity and protection forests, such as catchment forests. Given the national and global values of these forests, local use options – and corresponding management responsibilities – tend to be minimal.
- Although a significant portion of the forest reserves under central government are productive forests and highly suited for JFM arrangements, progress in this direction has been limited. Two possible causes of this are the lack of a legal basis for sharing the significant revenues obtained from productive forests (planted or natural), which makes binding agreements difficult, and the reluctance from some quarters to share central government revenues with local communities.
- Fines collected by local patrols for illegal activities within the forest represent an important income source for village forest managers, particularly where the forest status precludes economically productive activities such as timber harvesting. As forest areas are brought under effective village control, the incentives for open-access harvesting decline, so illegal activities drop and income from fines tends to decrease. This has often reduced the revenues of village forest management committees to such low levels that even very basic village forest management costs become difficult to meet.
- As forests are managed in more sustainable ways, wildlife populations tend to increase and recolonize from surrounding areas. The ability of villages to cash-in on this new-found resource is limited by the restrictive, bureaucratic rules and regulations regarding community wildlife management in Tanzania. Consequently, increased wildlife numbers in JFM areas often represent an unwanted and growing cost owing to crop raiding and damage to property. This is a particular issue regarding larger mammals, such as elephants and buffaloes, which threaten life and property. Although villages may be granted wildlife management rights and hunting concessions through the establishment of WMAs, this requires complicated institutional arrangements and it is not yet clear whether a single area can be managed simultaneously as a WMA and a VLFR.

Box 6. JFM, case study of Nyamisati village, Rufiji district

Nyamisati is a small village located on the northern fringes of the Rufiji delta on Tanzania's coastline. The village is remote, isolated and characterized by low levels of literacy and very limited development. In 1998, with support from the Norwegian government, FBD initiated activities in this and another 18 coastal villages in the delta area to develop JFM agreements for the management of important mangrove forests, which were under severe threat from harvesting and other forms of development. The village signed a JMA with the government following extensive negotiation of village by-laws and management plans. The mangrove was divided into productive (utilization) and protective (conservation) zones.

ENVIRONMENTAL AND SOCIAL IMPACTS

- 140 ha of mangrove forests have been rehabilitated.
- Effective joint patrols and control of the harvesting of mangroves have resulted in the natural regeneration of degraded areas.
- Rice farmers, who had cleared 20 ha in 2004, have moved out of the mangrove following negotiations with the VNRC, indicating a high level of awareness about the importance of the ecosystem.
- Conservation zones have been improved and recovered. Communities have contributed to this by providing labour for replanting and patrolling and by following selective harvesting regulations and by-laws.

- Communities and district staff have been trained in beekeeping, seaweed farming and fish and shrimp farming techniques.

Among the remaining challenges are the following:

- *Tenure conflicts:* During the villagization era of 1969 to 1973, villagers were allocated land for farming, some of which was mangrove that they subsequently occupied for rice cultivation. The displacement of many of these farmers to make way for the regeneration of mangrove has created conflicts and deprived the farmers of livelihoods. A second cause of conflict arose over failure to demarcate the boundaries of each village's land and of each VFMA, leading to uncertain roles and overlapping mandates in disputed areas.
- *Cost and benefit sharing:* Failure to agree on equitable cost and benefit sharing continues to undermine JFM arrangements in this and other coastal villages. According to villagers interviewed for the case study, revenue from the utilization zone amounts to just over Tsh 6 million/month (about US\$4 600). Before regulated harvesting was introduced under the JMA, forest products were collected free, and mangrove poles were an important revenue source to villagers (one villager said that he used to earn about Tsh 90 000 a month). The JMA may therefore have resulted in reduced incomes and subsistence benefits, leading many villagers to question the rationale for the project. Together with the delayed finalization of regulations and guidelines for benefit sharing, this will undermine local communities' continued commitment to JFM.

CONCESSION ARRANGEMENTS IN GOVERNMENT FORESTS

As already discussed, concessions are provided for in both law and policy, and guidelines are currently being formulated for the negotiation of concessions and the preparation of template formats. To date, no concession or lease of government forest land has been negotiated, and the future of concession arrangements is currently unclear.

Conclusions and the way forward

Forest policy, law and practice have evolved rapidly over the last decade, largely as a result of changes occurring outside the natural resources sector. Since the 1970s, the United Republic of Tanzania has been promoting decentralization through locally elected district and village governments. This has increased, and a range of services and government budgets have been devolved to local government levels over the last ten years. This trend has been accompanied by a focus on participation in the formulation and implementation of policy – local communities are expected to participate directly in planning and achieving their own development. Within macroeconomic policy, the increasing emphasis that Tanzania and its development partners put on poverty reduction has led all government departments to demonstrate a clearer link between their activities and broader poverty reduction goals. The introduction of the land laws in the late 1990s sought to formalize customary land tenure in village areas, devolving land allocation and adjudication matters to village governments.

These trends were sufficient to ensure that when the Forest Act was passed in 2002 it transformed decades of centrally controlled forest management by embracing a range of partnerships among players in the public, private and civil society sectors. The degrees to which these new opportunities have been put to advantage have varied considerably. Progress has been made regarding the implementation of PFM, and currently more than 1 800 villages are involved in some form of PFM on more than 3.6 million ha of forest land. Arrangements for leasing part or all of government forest reserves (termed forest concessions in law) have met with less success.

Annex 4 provides an overview and typology of the different forest tenure types known to exist in mainland Tanzania, and draws general conclusions regarding the degree to which these different tenure arrangements have contributed to poverty reduction, sustainable livelihoods and restoration or maintenance of forest condition. The most State-controlled forms of forest management appear at the top of the table, and the most privatized forms at the bottom. Community-based and communal forms appear in the middle.

Although not perfectly correlated, this analysis suggests that the chances of achieving sustainable forest management and poverty reduction are highest where forest management rights and responsibilities are fully devolved to the community, group or household level. NFRs have been effective in maintaining forest cover, but only where significant investments of funds and staff have been made. The creation of forest reserves without management arrangements results in degradation and loss of forest cover, as shown in the case of LAFRs.

For local governments faced with limited financial resources and pressing development demands, investment in forest management is often limited, and LAFRs are often perceived as more of a source of income than an asset that requires long-term investment and management. Limited transport, access to forest areas and capacity result in inappropriate management practices. For village communities that own, manage and use the forest they live next to, the incentives to invest labour, time and resources in management are greater.

Where government has entered into partnerships with local communities (in JFM), forests seem to be being restored and the management undertaken by communities through local patrols appears to be having a positive impact. In terms of positive and tangible benefits to communities, however, the picture is less clear. The strict protection management regime practised in protection forests, such as catchment forests that are reserved primarily to conserve water and biodiversity, restricts harvestable resources to only low-impact, non-timber forest products, such as medicinal plants, honey, dead fuelwood and, in some cases, limited livestock grazing. The absence of agreed guidelines or regulations regarding the level and mechanisms for sharing forest management benefits (royalties or produce) in production forests has prevented JMAs in such forests from being endorsed, even though they may have passed through long negotiation and discussions at the community level. These two factors have meant that the livelihood benefits of JMAs in government forest reserves have been somewhat limited.

Forest and wildlife resources are governed by parallel sets of legal instruments, which have evolved separately and place quite different requirements on communities with regard to local management. This sectoralization of laws and policies places additional burdens on communities wishing to benefit from the revenues from both commercial wildlife hunting and the sustainable utilization of timber from forests on village lands; currently it is not clear whether a WMA can be established in an area declared as a VLFR (or vice versa).

In general, the monitoring of government-owned forests for management purposes is weak in Tanzania, particularly in LAFRs. At the forest sector level, improvement is currently under way as development partners and government move towards a more harmonized sector-wide approach (SWAP) within the framework of NFP. FBD is establishing and operationalizing a sector-wide monitoring framework that will draw on lower-level monitoring systems operating in villages and districts to provide regular status reports regarding the achievement of sector-level indicators.

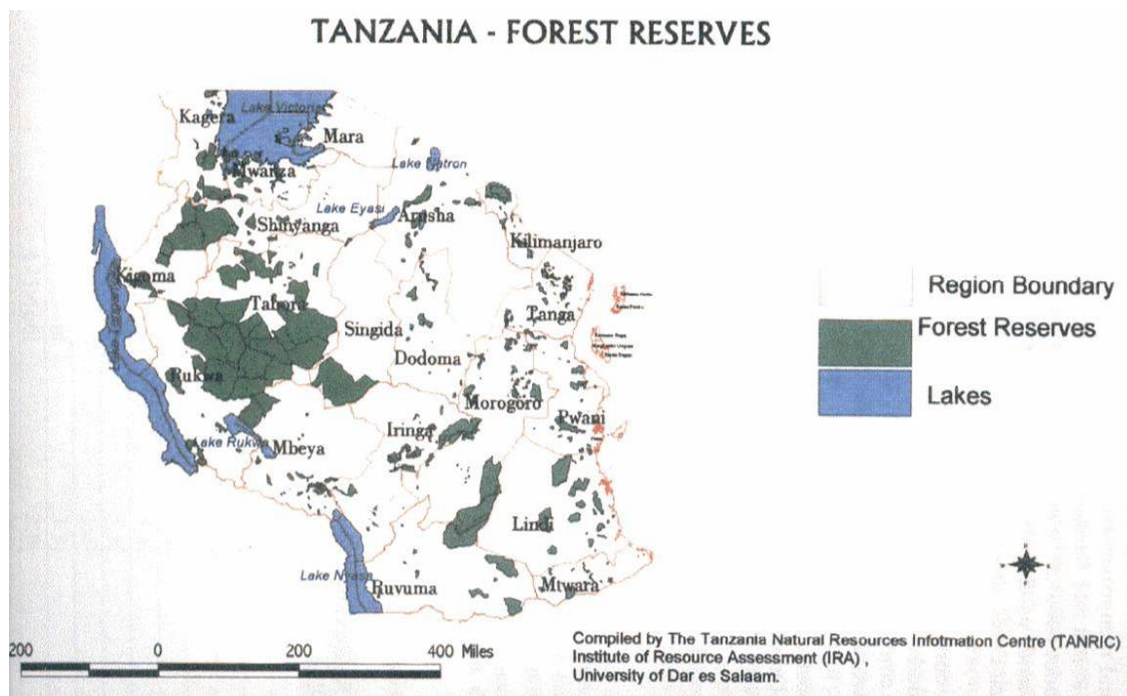
Recommendations regarding forest policy, law, forest management and planning issues related to improved livelihoods include the following:

- A clear, transparent and nationally agreed framework for sharing the costs and benefits of managing government-owned forest reserves through JMA needs to be developed. This has been identified as a major stumbling block for advancing JFM in both productive and protective forests. The framework should include simple tools for assessing, negotiating and agreeing forest management costs and benefits with local communities, as well as a mechanism for sharing forest royalties. Regarding protective forest reserves, more imaginative approaches are required, such as developing payments for environmental services – water, power, biodiversity and carbon.
- Laws and regulations governing the community management of forestry and wildlife resources for commercial hunting and forest resource use need to be harmonized to embrace a more broad-based conceptualization of community-based natural resources management and to avoid the potential for conflicts at the local level.
- There is need to scale up the support to rural communities interested in reserving their own forests on village land, to assist their establishment of VLFRs in ways that comply with the Forest Act. Some villages have large areas of unmanaged miombo woodlands, and others have traditional forests that have been managed under customary rules and tenure; both need to be formalized to ensure adequate protection under the law.
- Tanzania has a large number of traditional, sacred and cultural forests that are owned individually or communally and used for a range of purposes, including religious, cultural or social uses, as well as more utilitarian purposes such as dry-season grazing, collection of medicinal herbs or beekeeping. Almost all of these forests have been protected by traditional institutions and sanctions, but this protection now needs to be strengthened by providing forest managers with legal instruments.
- Different models of concession arrangements for managing forest plantations with the private sector need to be piloted and implemented. Agreements must contain clear provisions for working with and supporting community-level social and economic development. This is planned with support from the Tanzania Forest Conservation and Management Project, financed through the World Bank.
- There is a need to improve the quality of forest-level planning and monitoring in all forest reserves under both national and local government. Creative mechanisms will need to be developed at the local government level to ensure that a portion of the revenues received by local governments from forest royalties go towards forest management at this level. This could be through some form of retention mechanism, whereby shares of revenues are retained and earmarked for forest management.

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ANNEX 1. TANZANIA'S FOREST RESERVES: NATIONAL AND LOCAL AUTHORITY



ANNEX 2. PRIVATE (COMPANY) FOREST PLANTATIONS IN TANZANIA

| Region | District | Name of manager | Area (ha) | Main products |
|--------------|-----------------------|-------------------------------|---------------|---|
| Iringa | Njombe | Tanganyika Wattle Company | 17 800* | Wattle bark, fuelwood, charcoal and logs for the factory, power station and sawmill |
| Iringa | Mufindi and Kilombero | Escarpment Forest Cooperation | 15 000** | Timber and poles; carbon trading |
| Morogoro | Kilombero and Ulanga | Kilombero Valley Teak Company | 28 131*** | Teak and miombo woodland products |
| Total | | | 60 931 | |

* 2 862 ha planted to date.

** 1 446 ha planted to date.

*** 6 800 ha planted to date.

ANNEX 3. FORMAT FOR A VILLAGE LAND FOREST RESERVE MANAGEMENT PLAN

Part I Background

Section 1 General

This sets out:

- who wrote the plan and on behalf of whom;
- how the decision to put the forest under planned management came about;
- what forest the plan refers to;
- the status of the plan – for example, to be adopted, tested and altered as necessary over the coming year, and to be reviewed every year after that.

Section 2 Description

A. The forest: This describes the proposed VLFR, CFR or VFMA within a government reserve:

- location;
- size (estimate);
- vegetation/forest types;
- boundary, marked or unmarked;
- forest management units (internal boundaries based on management and objective);
- condition of forest;
- problem areas;
- brief history of forest ownership and management.

B. Forest use:

- Outline of how the forest was used in the past and how it is used today.
- Short assessment of which uses are causing most damage.
- Short assessment of the importance of the forest to the local community: from water catchment to fuelwood.
- Identification of main user groups (legal and illegal), distinguishing between villagers and outsiders.

C. The community: Brief description of the village that will manage the forest:

- name, ward, division, district;
- population and households;
- year registered, history prior to that;
- names of other villages with which it shares boundaries;
- whether the village area boundary is known, marked, titled;
- sources of livelihood for the community, with average farm area, average number of livestock per household, sources of employment outside the village, etc.;
- all sub-villages that directly border the forest.

Section 3 Objectives

This lists the purposes of putting the whole forest under community-based management, for example:

- to bring the woodland under a system of accountable management;
- to demarcate the woodland as protected, to prevent further expansion of farming into that area;
- to establish that the forest is owned by all of us as a common resource and will not be available for settlement and allocation but will serve us forever as a source of wood resources;
- to close off the forest from random use to enable it to be restored;

- to protect our water catchment area;
- to regulate the use of the forest so it stays at indefinitely sustainable levels;
- to enable us to make better use of the wasteland areas in the forest.

The forest is divided into forest management units (FMUs). For each FMU, a specific objective should be listed.

Each FMU is listed here and the specific management objectives are listed. Where harvesting is permitted, for each FMU the volumes and species should be stated.

Part II The plan of action

Section 4 The manager

This identifies who will act as manager – usually a VNRC, but may be a Joint Forest Management Committee (JFMC) where the plan is for the community to manage equally with the government forester. This section:

- lists the responsibilities and powers of the committee;
- states how the committee will be appointed – usually through election by the village assembly, with endorsement by the village council;
- states the committee’s term of office;
- states its composition – for example, at least one representative from each sub-village, at least three women, a representative from the village council, appointed by the village council;
- states its exact relationship with the village council – usually the committee is approved by the village council and given powers in respect of the management of the forest;
- states specific duties of the committee’s chair, secretary and treasurer;
- lists the duties of the patrol supervisor, boundary supervisor, etc., if these are to be appointed;
- states how the committee will operate – for example, meet at least once a month, keep minutes of each meeting, quorum of 50 percent of all members, etc.

If the forest is to be managed by sub-villages, this needs to be set out here. If only some functions, such as protection, are to be handled by sub-villages, this needs to be set out here, and how each sub-village will report to the main committee.

Section 5 Reporting

- How the committee will inform the village council of its progress and problems.
- How the committee will report to the village assembly.
- If the forest is a VFMA in a government reserve, how the committee will report to the forester.
- If it has been agreed that this VFMA will be just one of several covering a reserve, whether and how the different managers will communicate or meet on matters of mutual interest – for example, through a coordinating committee meeting three times a year.

Section 6 Record-keeping

This lists all the records that will be kept relating to the forest’s management, who will keep these records and how they will be held responsible for them being properly and honestly kept. Likely records include the following.

A. Minute book: To record meetings and decisions of the committee. The conduct and results of any forest inspection made by the committee will usually also be recorded here.

B. Offences and fines book: To record all offences against the rules, offenders charged, fines levied, date paid (receipt number) and where the fine money has been deposited, the items it has been spent on, etc.

C. Receipt book: This will normally be obtainable from a district treasurer who will record the numbers of the books issued to the committee.

D. Permit book: To record each permit issued by the committee, for what purpose, to whom, amount of the fee, number of receipt issued, date of expiry, who will supervise or inspect the use, etc. Permits and licences may be handwritten chits signed by the secretary and stamped with the VNRC stamp.

E. Patrol book: In which the patrol supervisor records exactly who patrolled where, when, what damage to the forest was seen, etc. If the return of wildlife is an indicator of successful protection, then sightings by patrollers may also be recorded here.

F. Account book: Where there is or will be considerable funds from fines and/or fees, the VNRC will create a forest management account, with a minimum of two signatories and one other non-committee member for withdrawals.

G. Income and expenditure book: This records all incoming money from fines and fees and all outgoings, with full details and signatures as appropriate – for example, signatures of the patrollers who receive rewards confirming that they have indeed received the reward.

Section 7 Money management

To avoid CBFM faltering because money is poorly managed, it is critical for the plan of action to set out clearly how it expects any funds relating to forest management to be handled. This is so even when very little money is expected.

A. Responsible people: Who will receive, receipt and hold money from fines and fees. Where that money will be kept safely. Usually this is the function of the treasurer.

B. Accountability: How often and to whom funds received are reported, and who has access to records relating to payment of fines, expenditure, etc. – for example, the village assembly should receive regular reports, and any village member should be able to see the record books on request. How will the treasurer be punished if she/he is found to be misusing funds?

C. Permitted expenditure: This lists the items on which money from forest management may be spent. Usually it is best to restrict this to items directly needed for forest management, and prioritized.

Section 8 Boundaries

A. Perimeter boundary: This describes the existing or proposed perimeter boundary of the VLFR, CFR or VFMA. It notes the other villages or VFMA's the boundary is shared with. The plan of action for agreeing and/or marking the boundary is set out clearly here.

B. FMUs and boundaries: This describes the subdivisions inside the forest – the FMUs.

C. Special sites: Sometimes a forest contains special sites that need special management – for example, springs. Set out how the site will be marked, managed and maintained, and any other actions that need to be taken.

Section 9 Protection

This is usually the main task of CBFM, and this section sets out how protection will be carried out.

A. Patrollers: How they will be elected, for how long, and reporting to whom.

B. Operations: The basis on which protection will be organized, area by area, the size of patrols, how often, where to, how they will apprehend offenders, report damage, who they will report to at the end of each patrol.

C. Accountability: Who is responsible for organizing patrols, checking on their performance, how patrollers who abuse their role will be dealt with.

D. Rewards: How patrollers will be rewarded if they apprehend offenders or succeed in protecting an area from damage for an agreed period (often one year).

Section 10 Rules

A. Access rules: These usually define who may use the forest. It is usual for non-members of the forest managing community to have limited use or be banned entirely from entering the forest if it is degraded or under threat, with minor uses reserved for the members of the main village.

Where the forest is being managed on the basis of sub-villages, it may be planned that each sub-village may use only its own designated part of the forest, unless the committee gives special permission.

B. Uses: This sets out exactly how the forest may and may not be used. For example:

- uses that are forbidden now and in the future;
- uses that are permitted only on issue of licences with payment of fees;
- uses that are permitted on issue of domestic user permits;
- uses that are freely permitted to village members.

Each use must be covered, no matter how small, as well as details about the method of extraction permitted – for example, if the community decides to allow a certain quantity of poles to be cut annually, the plan will need to specify the species, the zone, the tools for cutting the poles, the months, whether stems or only branches may be cut for poles, and so on.

C. Other rules: For example:

- To reduce the risk of fire in the forest, no burning may take place on fields that border the forest.
- All villagers are bound to report illegal users; any person failing to do so will be fined.
- No charcoal may be produced on farms until further notice.

Section 11 Punishments

This sets out what punishments will be placed on those found to be destroying the forest or damaging community-based management in any way. The main punishment is usually fines, but where a person has no funds, alternative punishments may be ordered.

A. Procedures for handling offences: For example, patrollers may not fine offenders or levy fines.

B. Fine rates for each offence: For example, these could be doubled for second offences.

C. Responsibility fines: These are instituted when the community wants to ensure leaders or when members of the committee want to make themselves more accountable than ordinary

villagers by charging a second fine when the offender is a member of the village council or any of its committees. Where a patroller or VNRC member is found to have committed an offence, the plan will normally state that the village assembly may remove him/her from that position.

D. Other punishments: For example, the offender could be required to fill gullies with stones, repair a road, or help burn bricks for the school, if he/she is unable to pay a fine by the scheduled date.

E. Failure to acknowledge an offence or pay a fine: For example, if a person refuses to acknowledge that she/he broke a rule, the plan should set out how to deal with this. This will normally involve a hearing by the village council, and if the matter is still not resolved, the committee may determine to send the case to the ward tribunal, primary court or district court for action.

12 Improvement

This lists any actions planned to rehabilitate the forest or develop its potential. Describe how, who and when each will be undertaken.

A. Rehabilitation: For example, to plant seedlings around a degraded spring to encourage the return of water; to fill gullies with stones and cut and plant suckers in an area that has been so severely burned that no regeneration of useful species is occurring.

B. Development: For example, to permit villagers to use a bare area for private plantations on payment of a fee; to discourage certain species by permitting free thinning of that species, or to encourage growth of a specific tree by permitting it to be pruned in a certain month; to permit harvesting of a certain species or area on a strict rotational basis; and to plan entering into agreement with a commercial harvesting operation to use a specified area/species.

Section 13 Utilization

This section describes how, if at all, the forest will be harvested and utilized. This may not be needed if, for example, the forest is protecting a water catchment or sacred site. However, based on the participatory forest resources appraisal, some FMUs may be suitable for harvesting and utilization. This section describes the types of harvesting allowed, where they will take place, which species, and levels of offtake.

The section will also describe how harvesting will be controlled, monitored and regulated.

Section 14 Monitoring

This sets out the practical ways in which the community and forester will be able to check whether their management of the forest is working or not.

A. Indicators: These list practical measures of success, for example:

- declining number of fires;
- increasing occupancy of beehives;
- undergrowth appearing in previously bare areas;
- increased new tree seedlings;
- decreased cases of illegal felling;
- forest dwellers have left the forest;
- perimeter boundary visible and known.

B. Monitors: This lists who will be responsible for collecting the information, making the assessment and making the results known to the village assembly, village council, forester, etc.

C. Timing: This sets dates for the first monitoring, when the results will be discussed and action agreed, and when and how this plan will be amended on the basis of findings.

Section 15 Timetable

This brings together a list of the main tasks and sets target dates for action.

A. Immediate actions: For example, VNRC and patrol team to be elected at x meeting of village assembly, to have held first meeting by x date, to have procured record books, met with district treasurer to register the receipt book, etc.

ANNEX 4. FOREST TENURE ARRANGEMENTS IN TANZANIA AND THEIR CONTRIBUTIONS TO POVERTY ALLEVIATION

| Forest type/tenure category | Estimated area (ha) | Contribution to local livelihoods | Contribution to improved forest condition | Management and monitoring capacity |
|---|---------------------|--|---|--|
| National Forest Reserves (with no JFM) | 10 810 716 | Very limited other than illegal use and subsistence-level collection of non-timber forest products | Moderate levels of protection in strategically valuable forest reserves maintain forest quality, but many areas declining | Limited capacity to manage other than high-value forests (catchment, mangrove and plantations) |
| Local Authority Forest Reserves (with no JFM) | 1 444 419 | Very limited legal use, but heavy local use (illegal) | Generally in poor condition. Heavy harvesting and low management inputs. High levels of illegal use and often encroached | Almost no investment at all. Very poor management capacity |
| JFM in protective forest reserves (both LAFRs and NFRs) | 1 284 314 | Very limited allowable use owing to protection status of forests | Evidence from montane and mangrove forests that recovery and stabilization are taking place | Heavy emphasis on planning of JFM agreements at the village level, but limited follow-up |
| JFM in productive forest reserves (either LAFRs or NFRs) | 333 662 | Great potential, but absence of benefit sharing modalities prevents local impact | Generally good, especially where levels of illegal harvesting are not prohibitively high (e.g., close to urban centres) | Heavy emphasis on planning of JFM agreements at the village level, but limited follow-up |
| Concession arrangements in government forest reserves | Not existing as yet | No experience, but if well managed have potential to contribute locally | Unknown, but have potential to re-establish trees on vacant land in forest plantation reserves | Unknown, but could be included in terms of concession agreements to ensure solid management |
| General land forests | 17 704 269 | Important safety net function for the poor, but harvesting levels are unsustainable | Heavy and uncontrolled use and lack of management lead to rapid deforestation, particularly close to urban centres | Almost no management or investment. Seen largely as a resource for extraction only |
| Village Land Forest Reserves (CBFM) | 2 047 000 | High potential, increasingly being realized. All revenues remain at the village level | Strong evidence from many sites that forest condition improves rapidly | High levels of management. Regular patrols, strong planning and routine monitoring |
| Community Forest Reserves (including traditional or clan forests) | 31 800 | High potential. All revenues remain with group, although not usually harvested commercially | Strong evidence from many sites that forest condition improves | High levels of management. Regular patrols, strong planning and routine monitoring |
| Small-scale private forest reserves (household) | Unknown | High potential. All revenues and benefits retained by owner | Good. Private tenure encourages investment and long-term perspective | High |
| Private forest reserves (company) | 60 931 | Depends on company. If well managed, good potential | High. Profit motive leads to strong forest establishment and management | High, as revenue streams depend on it |

* Sources: MNRT and FBD records.