



**Enhancing tenure security for local development through legal recognition and scaling up of
participatory mapping of community forests under customary lands in Mangochi District in
Malawi**

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Scaling up Responsible Land Governance

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Abstract

Community forests perform multiple functions as a reserve land for expansion of agricultural production in most rural areas and a place for gathering natural products that play an important often under-estimated role in local economic development. However, with multiple pressures from population growth, land use conversion, environmental degradation and climate change induced natural disasters, many of the natural forest systems continue to disappear at high rates. This calls for the development of innovative and inclusive models that incorporate strengthening knowledge base of the multiple values of the forest resources that ensure sustainability. Balancing conservation objectives and the often competing functions of community forests has been at the core of participatory community base natural resources management that gained popularity since the recent past. However, continued high rate of deforestation has put efficacy of participatory approaches to question. Unlike the two-dimensional maps of land tenure, community forest tenure is characterized by nested and overlapping rights which are a product of complex connections between various groups of people and the resources in the forest. This paper, therefore, argues that unless there is an adequately negotiated and agreed clear burden-benefit sharing mechanism amongst different forest users, the community forest will remain a contested area. It concludes by providing critique of an innovative ‘access – benefit sharing’ model developed by TreeCrops Ltd in cooperation with Zankhalango Forest Association in Malawi.

Key Words: Tenure security, Participatory mapping, Community forests

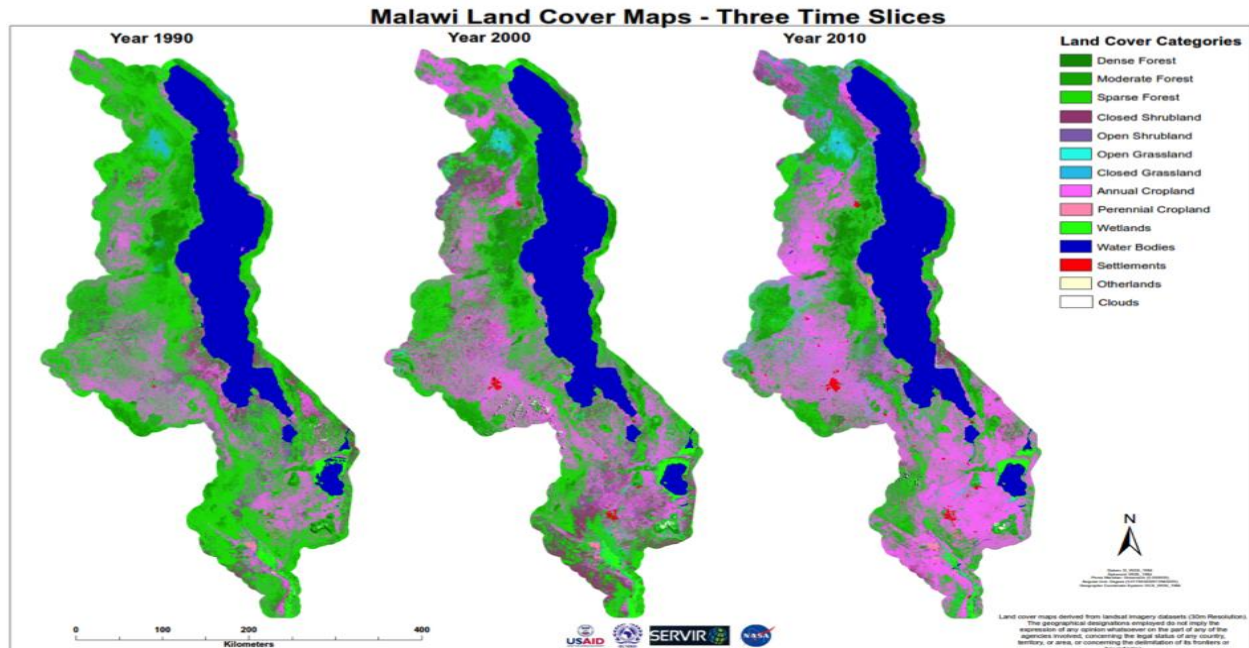
1.0 INTRODUCTION

FAO defines forests as ‘land spanning more than 0.5 hectare with trees higher than five meters and a canopy cover of more than 10 per cent or trees able to reach these thresholds in situ. It does not include land that is predominantly agricultural or urban land use’ (FAO, 2015). The Southern African Development Community Protocol on Forestry (SADC, 2009) defines it as ‘any ecosystem containing trees and which is so defined by national policy or legislation and includes the concepts of ‘forest land’, “forest products”, “forest resource” and “forest genetic resource”. The Malawian Forestry Act defines a forest as ‘an area of land proclaimed to be a forest under this Act or unproclaimed land with trees on it’ (Forestry Act, 1997).

Malawi forests and woodlands are estimated to cover 3,237,000 hectares, about 34 per cent of the total land area of Malawi (FAO, 2010). Based on land tenure, Malawian forests are classified as state (or public) forests, customary (or community forests), and private forests (Government of Malawi, 2002). Public or state forests include forest reserves, national parks and wildlife reserves, which together are commonly referred to as protected areas. Data from the Department of Forestry shows that currently Malawi has a total of 97 protected areas, comprising of 88 forest reserves, five national parks and four wildlife reserves, occupying a total of 2,018,198 hectares, representing about 22 per cent of Malawi’s total land area (Government of Malawi, 2013).

Customary or community forests are those located on unallocated land and the designated village forest areas (VFAs) - that are areas of forest woodland from which villagers could obtain poles and firewood, under the jurisdiction of traditional authorities (TAs). They cover about 1.1 million hectares, about 11.7 per cent of Malawi’s total land area (Government of Malawi, 2013). Privately owned forests are a negligible proportion of the total forest area and comprise mostly of planted forest plantations.

Naturally, the total forest cover is estimated to be declining at the rate of 1.0 to 2.8 per cent, representing a loss of about 33,000 hectares, annually due to deforestation for fuel wood, settlement and agricultural expansion (Government of Malawi, 2013; RCMRD, 2010). After the Earth Summit in 1992, Malawi’s National Environmental Action Plan (NEAP) identified deforestation as one of nine key issues with a recommended revision of the environmental and natural resource sector policies (Government of Malawi, 2002).



RCMRD (2010)

Globally, the concern for high rates of deforestation has sparked a variety of theories about the causes of deforestation. The prevalent discourse amongst natural resource managers in the tropics is based on the Malthusian viewpoint: more people, less forest. In other words, increasing populations in rural areas leads to deforestation, usually through the mechanism of land clearing for settlements and agriculture (Adger, 2001; Walker, 2004).

Another well-known theory with Malthusian overtones is the “fuelwood gap,” which states that deforestation occurs when fuelwood demand exceeds the net fuelwood production of available forests (Mahiri and Howorth, 2001). Others posit that free trade regime has accelerated deforestation, especially when massive external debt pushes a country to produce agricultural or forest products as quickly as possible in order to repay its loans (Wunder, 2000; Ehrhardt-Martinez, 2002). There is some evidence that that trade liberalization has contributed to deforestation in Tanzania and Zambia (Minde et al., 2001).

Yet other authors have suggested that insecure land tenure encourages unsustainable land use, including deforestation (Wunder, 2000); that poverty in and of itself is a driver of deforestation (Minde et al., 2001; Fisher, 2004); and that decisions about the use of trees can only be understood in the context of cultural and gendered power relations (Rocheleau, 1995). No single explanation is likely to be sufficient in any given case.

This paper builds on the tenure security strand of the theory of deforestation - that forest users are often unmotivated to invest in long-term resource measures such as forest conservation measures, planting of trees, or other improvements, if they are unclear whether or not they will hold on the land long enough to receive the benefits of their investments. In other words, why should a community keep its local forest intact if government claims that it is its property and issues permits to loggers to clear it?

Land tenure security in a broad sense denotes that the right of access to and use of land is regulated by known and clear set of rules and that the right is enforceable either in a court of law or through a customary process. In other words land tenure security translates into a bundle of enforceable rights held by an individual or community over land, trees and other resources. Land tenure security strongly impacts on people's decisions to invest in a particular land which in turn influences local development. Chinene, Maimbo and Banda (1998) point out serious environmental problems prevalent under customary lands such as deforestation, soil erosion, uncontrolled grazing, and dry season burning for the purposes of hunting that are directly linked to the tenure system.

It is purported that with a secure tenure to community forests, local communities will enjoy legal recognition, and practice sustainable use and management of community forests. These three broad areas are summarized and further broken down into a set of priority issues and variables (Table 1).

Table 1: Benefits of secure tenure for local communities

Human rights and well being	Equitable prosperity and sustainable livelihoods	Healthy and sustainable environments
<ul style="list-style-type: none"> • Legal identity • Protect dignity • Cultural heritage • Diversity of rights within the community • Perceptions and awareness • Self-determination • Protection of rights 	<ul style="list-style-type: none"> • Enhanced productivity • Sustainable incomes • Equitable access • Reduced conflicts • Multiple benefit streams 	<ul style="list-style-type: none"> • Sustainable land use • Ecosystem services and benefits • Sustainable production and consumption • Community regulations and protection • Mobility and other traditional systems • Strong local institutions • Harmonization of sectoral laws

Source: Adapted from UNEP (2014: 21)

Community forestry is an evolving branch of forestry whereby the local community plays a significant role in forest management and land use decision making by facilitating support of government as well as change agents. Community forests perform multiple functions as a reserve land for expansion of agricultural production in most rural areas and a place for gathering natural products that play an

important, often under-estimated role, in local economic development (Figure 1 and 2). Wood cutting, wild harvesting, grazing, fishing, hunting and others, play a vital role for the survival of some communities and/or community members.

Figure 1: Typical community forest user



Government of Malawi (2013)

Natural wild products and other non-marketed ecosystem services derived from community forests make up to 50 per cent to 90 per cent of the total source of livelihoods of the forest dependent households worldwide (Sukhdev et al., 2010). For example, in Malawi the contribution of forest resources to national economy (gross domestic product) is estimated at 4.4 per cent (Government of Malawi, 2010). Community forests also provide many other benefits such as places to recreate and enjoy nature; they protect water quality and deliver other environmental benefits, and they have also long been sites for environmental and cultural education. As such, the mapping and valuation of forest resources within their control is posited to propel communities to seek tenure security over such lands so as to plan, manage and monitor forest based activities.

The inherent nature of community forest as provider of vital and often survival resources and services to the community makes community forests an arena for competition among various resource users, and attempts balancing these have been at the core of participatory community based natural resources management. However, with multiple pressures on the finite community forest resource emanating from population growth, land use conversion, environmental degradation and climate change induced natural disasters, many of the natural forest systems continue to disappear at high rates (Jumbe and Angelsen, 2006).

Figure 2: Multiple users of functions of community forests



Government of Malawi (2013)

This calls for a re-look at the conventional forest protection mechanisms. There is the need for the development of innovative and inclusive models that include strengthening the knowledge base of the multiple values of forest resources to ensure the sustainability of resources.

Worldwide, forests, rangelands, drylands and bodies of water are frequently governed by local communities, through community-based tenure rights and institutions (Beck and Nesmith, 2001). The Voluntary Guidelines for the Responsible Governance of Tenure of Land, Fisheries, and Forests in the Context of National Food Security highlights the need to secure tenure rights for local communities with customary tenure systems to enhance food security and food sovereignty (FAO, 2012). Again, the Rio+20 Outcome Document also emphasizes the role secure tenure plays in meeting the needs of rural communities, and called for strengthened forest governance frameworks. Tenure rights are also expected to be included throughout the upcoming Sustainable Development Goals (SDGs) of the Post-2015 Agenda.

Notwithstanding, a gap still exists between policy and practice. Community forest tenure rights are rarely recognized in practice. This paper argues that unless there is an adequately negotiated and agreed clear burden-benefit sharing mechanism amongst different forest users, the community forest resource will remain a contested area. It concludes by providing critique of an innovative ‘access – benefit sharing’ model developed by TreeCrops Ltd in cooperation with Zankhalango Forest Association in Malawi.

The rest of the paper proceeds as follows: Section 2 reviews the goals and tenure arrangements that characterized community forest governance and management in the era before colonization (in 1891). Section 3 presents a critical analysis of the mixed experiences of the decentralized participatory management reforms, the Village Forest Areas (VFA) in the forest sector in Malawi. Section 4, presents the proposed ‘Access-Benefit Sharing Mechanism’ (ABSM) developed by TreeCrops Ltd, then Section 5 concludes with a critical analysis of the ABSM.

2.0 HISTORICAL NARRATIVE OF FORESTRY TRADITIONS IN MALAWI

During the precolonial era (up to 1891), institutional (tenure) arrangements governing local community forest tenure developed largely unimpeded by rules imposed from outside the community. Basically, each village could develop institutions to govern and manage its own woodstock resources if it chose. Levels of community investment in developing tenure arrangements to govern and manage forestry resources correlated with the perceptions of resource scarcity by the respective communities ((Jumbe and Angelsen, 2006)). Although this relationship does not always hold, the most elaborate tenure systems generally occur in the most resource-poor communities or imported to better resource-endowed communities by migrants from ecologically poor communities ((Jumbe and Angelsen, 2006)). In addition to ecological variations and the related scarcity of forest resources, availability and access to other livelihood opportunities played a role in explaining variations on strength of forest governance tenure. Mangochi District lies along the shores of Lake Malawi in the southern Region, and key livelihood occupations of the people in the district are nomadic artisanal fishing and combined with part-time fishing and part-time farming (Figure 3). Artisanal fishery communities along the Lake Malawi seasonally migrate from one area to the next in search of seasonal fish catch (See Map of Mangochi).

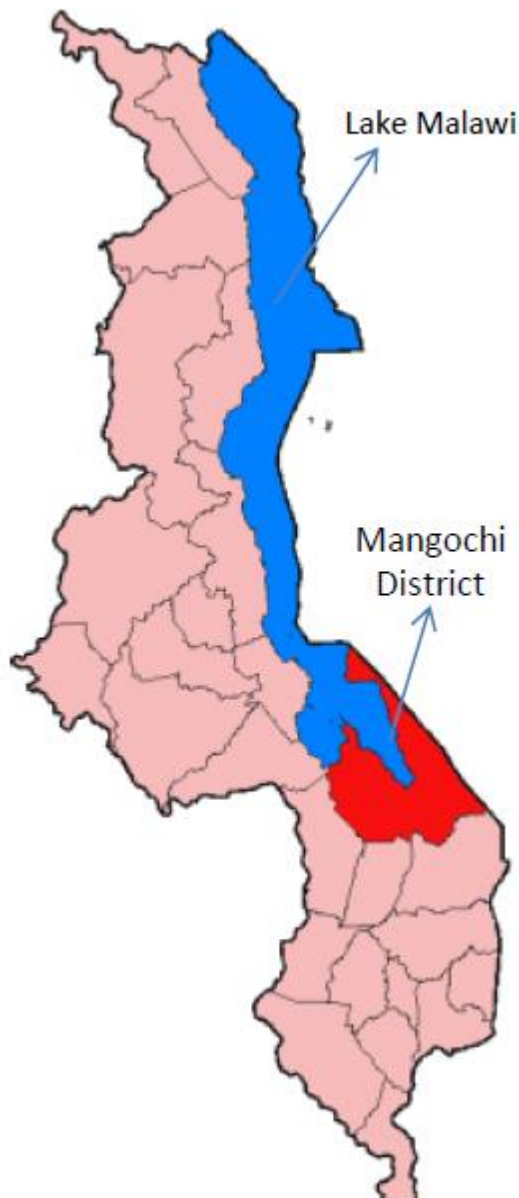
Figure 3: Drying small fish on the shores of Lake Malawi



Hara (2008)

These communities rely less on forest-based resources for their livelihoods hence have generally less elaborate tenure of governance of forest compared to those communities highly dependent on forest-based resources living in upland areas. A pattern of tenure arrangements for community forest resources was a village-based organization that regulated access to and harvesting of forest products. Among the most important products were building poles, firewood, wood cut for charcoal, wood for tool handles, fruits, nuts, browse consumed by local livestock and seasonal hunting. Access to these resources was generally limited to community residents. Restrictions varied by community and resource type. For example, dead wood could freely be harvested by residents for household consumption, whereas cutting green wood required special authorization by the village authorities, usually the village headman or headwoman (Kambewa et al., 2007). These tenure arrangements were relatively simple and easily understood by both local people and those who work in the local areas. However, the tenure rules did vary from community

Map of Malawi



to community and, for historical reasons, were not easily amenable to standardization.

All communities that had a tradition of governing their own forest resources also had local monitoring and enforcement mechanisms. Typically, young men, under the control of senior villagers, mounted periodic patrols of village forest lands. Infractions were sanctioned in light of their seriousness as well as the willingness of the accused to admit guilt and submit to penalties. For example, herders judged guilty of lopping limbs from live trees to provide browse for their animals were often fined the biggest animal in their herd. The animal was butchered and the meat shared out among community members or sold and the proceeds added to the village fund.

Most communities also had appeal processes in cases where an accused refused to accept the decision of local authorities. Such appeals of the village-level decisions were brought before the group village headman or even further before the chief of the clan whose decisions were usually final (Jumbe and Angelsen, 2006).

Most of these community and intercommunity resource governance institutions were carefully structured to ensure that their officials would be buttressed against temptations and pressures in making rules and deciding conflicts. To become a village leader, one had to be scrutinized and accepted by all sub-clans to be selfless and of high moral standards. Moreover, cases were tried and decisions made publicly, assuring total transparency (Jumbe and Angelsen, 2006).

During the colonial period, land and forests officially became the property of the state. The colonial Ordinance of 1911 asserted state control over most renewable resources. However, in some areas, especially where forest resources were deemed of low economic value by colonial authorities, the actual imposition of state control was limited and local institutions existed and exerted control over and manage wood stock resources. This led to a policy shift (in the Ordinance of 1926) to introduce Village Forest Areas (VFAs) that were areas of forest woodland from which villagers could obtain poles and firewood. By 1963, there were 5,103 VFAs covering 105,496 hectares (Kambewa, 2007).

After independence in 1964, forestry officials gradually extended their control over renewable resources to include most of the less valued community forests. Regulations took the form of national restrictions on the cutting of trees in state forests, protected areas and community forests. Additional code provisions authorized forest officials to regulate many species of trees growing on farmers' fields (Kambewa, 2007). To cut wood legally, one had to obtain authorization from forest officials, a procedure involving several steps that were costly in terms of both time and money. Instead of having to walk only to the village headman for verbal permission, users who wanted to cut in compliance with formal regulations had to travel to forest offices. Forest officials being few in number and frequently in the field, were often difficult to contact for cutting permits. Some foresters also demanded that those who wanted permits provide fuel for service motorcycles to enable the forester to travel to the field to check the trees proposed for cutting (Kafakoma et al., 2005).

The system effectively made legal cutting prohibitively expensive except for those involved in commercial harvesting. Local people did not find it necessary to support the official system if they could avoid it, especially when regulations were applied to trees that they had planted or protected as natural regeneration. On the other hand, those who complied with official harvesting regulations, in practice, cut wood where they chose. This often led to commercial harvesters cutting trees in community forests without local authorization. They sometimes even cut trees on agricultural land that belonged to either individuals or to the community (Andersson, 2006). Violations were punishable by fines or even imprisonment.

The assertion of state control set a stage for a long contest, between local forest users and forest officials. Foresters, responsible for applying code regulations on nationalized forest resources, overrode local forest governance systems, many of which had strong customary characteristics and proved themselves to be effective in practice. Sometimes, foresters overturned village-based decisions against individuals charged with illegal cutting, and village officials who sought to settle disputes about community forests using indigenous (customary) tenure rules were fined (Kambewa et al., 2007).

Forestry officials, however, lacked both the human resources and the incentives to mount a credible monitoring system. Two or three forest guards were responsible for patrolling an entire district, whereas, under customary system, villagers themselves were responsible for their own lands and the adjacent shared community forest areas (Jumbe and Angelsen, 2006). The consequence was that the formerly well-managed community forest resources were converted into open access resources. As supplies for dead wood declined, commercial wood cutters began to harvest live trees, leading to further deterioration of the community forest resource value. This led to a policy shift to re-enforce Village Forest Areas (VFAs) that were areas of forest woodland from which villagers could obtain poles and firewood.

3.0 VILLAGE FOREST AREAS: THE CASE OF MALAWI

In the past, extensive policy reforms have fundamentally transformed the institutional conditions for the governance of natural resources in most developing countries. As centralized and free market oriented solutions have floundered, new and more decentralized institutional arrangements that seek to involve local actors and communities have emerged (Anderson, 2006). Embedded in these decentralized institutional arrangements is power in the form of ‘local authority’ given to communities to participate in the management of their natural resources.

Participatory forest management is a widely accepted model on ensuring sustainability of forest resources that has gained wide acceptance and has become the primary guiding principle in the management of natural resources worldwide (Mendoza, 2005). It was developed on the premise that once resource users are authorized to function as co-managers of resources, with a say in when and how they are harvested and by who, strong incentives immediately exist for local communities to participate in controlling access to and the harvesting of these resources (Luintel and Chhetri, 2008). The mapping and valuation of forest resources within their control is posited to propel communities to seek tenure security over such lands so as to plan, manage and monitor forest based activities. It is commonly held that, unless local communities are directly engaged in the management of forests, and also unless they see adequate incentives for

themselves through such engagement, the task of arresting or slowing the process of deforestation and forest degradation can be a daunting one (Luintel and Chhetri, 2008; Kowero, Campbell and Sumaila, 2003).

Corbett (2003) defines participatory mapping as a set of approaches and techniques that combine modern cartography with participatory methods to represent the spatial knowledge of local communities. It is based on the premise that local inhabitants possess expert knowledge of their local environment which can be expressed in a geographical framework which is easily understandable and easily recognized. In simple terms, participatory mapping refers to a methodology or a process where local communities are engaged in quantifying and valuing resources in forests. Di Gessa (2008) in his work on “Participatory Mapping as a Tool for Empowerment” shows how participatory mapping has evolved to become a well-established tool of development intervention and one that can be very empowering in securing land rights. Communities collect information relevant to their needs and use local knowledge and information to create a representation of the issue at hand then proceed to use such maps to meet their particular needs. In this case, the map gives more confidence, voice and a point of reference to the community.

Empowering local communities with the means and incentives to sustainably manage their natural resources has been increasingly seen as critical to protect the resource from degradation and/or dispossession, eradicate extreme poverty and thereby achieve sustainable development.

Starting 1992, the government of Malawi (GoM) retrenched most of its forest guards, under the structural



adjustment programme (SAP). As such, the Forestry Department had scarce human resources with which to enforce punitive laws on forest management. This coupled with pressure from local communities who were suffering a wood energy crisis, led the government of Malawi, with support from FAO under the Tropical Forest Action Programme (TFAP), the World Bank and other

development partners to initiate a review of policies and legislations related to forest management in Malawi. This effort led to the development of the National Forest Policy 1995/6 and the Forestry Act 1997 (effectively, repealing the Forest Act 1942). Dhose (2015) notes five points that may have motivated government of Malawi to consider repealing the Forest Act 1942 as follows: “high rate degradation of

forest resources; inefficacy of the state and its laws to control forest resource degradation; conflicts among users; availability and capacity of local users; and security of both resources and users”.

Eliminating restrictions on harvesting forest products by communities is a central priority of the legal and policy reforms in the forestry sector (Government of Malawi, 1996). Section 30 of the Forestry Act 1997 empowers the Village Headman/woman (VH) with advice from the Director of Forestry to demarcate a part of unallocated customary land into a VFA *"... which shall be protected and managed in the prescribed manner for the benefit of the village community"*. Section 31 (1) (d) of the Forestry Act further states that Village Natural Resources Management Committees (VNRMCs) shall be established as legal bodies to make decisions over forest management and utilization of VFAs. This Act aims at re-invigorating the VFA scheme as a key strategy to manage community forest resources. However, due to population pressure, most VFAs were cleared for agriculture and settlements, such that by 1994 there were only 1,182 VFAs covering 3,159 hectares, down from 5,103 VFAs covering 105,496 hectares in 1963. To support implementation of the government policy, several donor funded programmes and projects were commissioned to revamp old VFAs and establish new ones. One such project is the African Development Bank (AfDB) supported Lilongwe Forest Project that started in 1995 to support 99 VFAs in Lilongwe District in central Malawi (Kafakoma et al., 2005).

The results were not successful, as most VFAs were cleared due to pressure for firewood, settlement and agriculture. Again, these projects were providing cash incentives to VNRMCs that were construed as ‘purchasing’ their participation. In essence, VNRMCs assumed the role of the departing forest guards and the cash incentives was their payment. Given this perception among the members of the communities, the VFA approach is not perceived as effective in forest protection in Malawi, despite positive experiences in Tanzania and other countries with low population pressure.

4.0 PHYTOTRADE AFRICA: BUSINESS PROFILE AND SUPPORT TO ZANKHALANGO ASSOCIATION

4.1 Trade in wild plants

International trade in wild plants has significantly evolved over the years mainly because they are used in a wide variety of products especially pharmaceuticals, herbal remedies, teas, spirits, cosmetic, sweets, dietary supplements, aromas, essences among others. Lange (2004) observed that an estimated number of 70,000 plants species are used in folk medicine worldwide. Other researchers estimated that approximately 3,000 species are traded worldwide. In India about 7,500 species are used in ethno

medicine which is half of the country's native plants species (Kuipers, 1997). According to Xiao (1991) 6,000 species of Chinese native plants are used for medicinal purposes and 5,000 species in Africa (Lange, 2004). In other words international trade in wild plants has increased due to very high demands for medicinal aromatic and food products in the domestic, regional and international market. Furthermore raw forest products are much cheaper on the market than their chemical equivalents. The World Health organization (WHO) reported that 21,000 plant taxa are used for medicinal purposes (Lange, 2004). Finally consumers prefer products from wild plants because of the perceived idea that they are more natural than those containing chemical properties.

It is worth mentioning that the research studies examined have introduced a proviso to their conclusions by observing that there seem to be only few reliable data on the volume of wild plant species currently traded in the international market and that it is difficult, if not impossible, to compile data on values of all botanicals or even of a single botanical because they are used in several sectors (FAO, 1997). The World Custom Organization harmonized system's heading on plants used primarily in perfumery, in pharmacy, or for insecticidal, fungicidal or similar purposes and includes ginseng roots, coca leaf, and poppy straw as the main plants traded suggesting that these plants are highly commercialized. The standard international trade classification on its part has a similar heading and included ginseng roots and liquorice roots as the main plants traded.

According to data collected between 1991 and 2003, the international trade in botanicals was estimated worldwide at 320,550t of import valued at \$978 million and at 368,100t of export valued at \$847million (Lange, 2006). The global market is dominated by very few countries mostly from temperate Asia and Europe. Indeed only 12 countries are actively involved in the import and export of botanicals (Lange, 2006). These countries are Hong Kong, United States, Japan, Germany, Republic of Korea, France, China, Italy, Pakistan, Spain, United Kingdom, Malaysia, India, Mexico, Bulgaria, Chile, Egypt, Morocco, Albania and Singapore. These countries make up 80 per cent of the world trade of wild plants. Hong Kong is the biggest importer of botanicals while China and India are the principal suppliers.

According to Lange (2006), the United States, Hong Kong and Germany were important trade centres of medicinal and aromatic plants between 1991 and 2003 as all three countries export and import very high quantities of the commodity (Lange, 2006). In the period 1992 to 2003 the United States was a trade centre for North and South America. It imported 51,200mt and exported 13,050mt. Hong Kong was a trade centre for East and Southeast Asian markets. It imported an average of 59,950mt and exported 55,000mt in the period 1991 to 2003. Finally Germany, a trade centre for intra-European trade and a link between East and Southeast European markets imported 44,750mt and exported 15,100mt (Lange, 2006).

Egypt and Morocco seem to be the only suppliers of medicinal plants in the African continent. However the FAO's report on medicinal plants shows that Sudan and Afghanistan are the main exporters in the least developed countries (LDCs) group (Kuipers, 1997). Other African countries in that category are Madagascar, Tanzania, Senegal, Togo and Burundi. These countries' share in the global market however is very small. African countries might have a bigger share in the world trade as suppliers of wild plants but the same is not recorded because most of the trade is largely carried out underground.

The data examined above clearly shows that the share of Sub-Saharan African countries to the international market of wild plants between 1991 and 2003 is not significant compared to countries from temperate Asia, Europe and America. Indeed only Egypt and Morocco are recorded as important African suppliers of wild plants with Egypt exporting most of pharmaceutical plants to the world market.¹ Sudan only supplies Germany in very little quantities.

In conclusion international trade in wild plants has increased due to high demands in the pharmaceutical, food and cosmetic market and because wild plants are relatively cheaper to buy and process than their chemical counterparts. The major traders for that commodity worldwide are developed countries while developing countries are the main suppliers. African countries do not seem to be very active in the sector generally with only Morocco and Egypt as the main traders and other African countries supplying individual countries with very small quantities. However the data on Africa's share in wild plants trade is not reliable because most of the trade is unregulated hence carried out underground (Kuipers, 1997). Hence the share of Malawi and other African countries to non-timber forest products trade might be much higher than what has been suggested so far.

4.2 IFAD/PhytoTrade Africa initiative to support local collectors

PhytoTrade Africa is a Southern Africa bio-sector trade association, registered in 2001 as a not-for-profit non-governmental development organization that works with a wide range of different actors (private companies, research organizations and government departments) to promote social enterprise, through research and knowledge sharing around existing and potential commercial applications for under-utilized African indigenous plants, and application of this knowledge in the development of local and international trade for African plants that helps reduce rural poverty and sustainable utilization of the biodiversity in Africa's natural forests and savannas.

The plant species for trade development are selected based on local knowledge backed up by scientific research, but mostly those with commercial potential. Some of the criteria species selection (Table 2) includes that:

- It is likely that it will create significant income opportunities for poor rural people;
- Its ecology and management must be well understood (so as to ensure it can be managed sustainably);
- It must occur in relative abundance so as not to be under and major ecological threat, and in sufficient quantities to create significant economic opportunities;
- There must be evidence of actual or potential market demand for one or more products;
- It should be able to deliver cash benefits to producer communities relatively rapidly;
- It should be accessible to rural communities that gives an inherent advantage in its production to them.

Table 2: Examples of focal plant species for PhytoTrade Africa

Botanical name	Common name	Potential products	Market niches
<i>Adansonia digitata</i>	Baobab	Fruit pulp	Cosmetic and nutraceutical (food and beverage) ingredient
		Seed oil	Cosmetic ingredient
<i>Citrullus lant</i>	Kalahari melon, Tsamma melon	Seed oil	Cosmetic ingredient
<i>Harpagophytum spp.</i>	Devil's Claw	Dried, sliced tuber	Cosmetic, pharmaceutical and nutraceutical ingredient
<i>Kigelia africana</i>	Sausage tree	Fruit pulp	Cosmetic, pharmaceutical and nutraceutical ingredient
<i>Schinziophyton rautanenii</i>	Mongongo, Manetti	Seed oil	Cosmetic ingredient
<i>Sclerocarya birrea</i>	Marula	Fruit pulp	Nutraceutical ingredient, flavor and fragrance
		Seed oil	Cosmetic and nutraceutical ingredient
<i>Trichilia emetica</i>	Natal mahogany, mafura	Seed oil	Cosmetic ingredient
<i>Ximenia spp.</i>	Sour plum	Seed oil	Cosmetic ingredient

Source: PhytoTrade (2015)

With a grant from IFAD, PhytoTrade Africa (PTA) is supporting capacity building of its local collectors' association members in accessing local regional and international markets for wild plant resources in the southern Africa region. One such a group is the Zankhalango Association in Malawi. Zankhalango Association was established and registered in Malawi in 2012 with a membership of about 300 collectors of wild plant products in southern Malawi who have been and are selling and exporting within the PTA

product supply chains for over 10 years. Annually, the Association sells over 400 metric tons of Baobab (*Adansonia digitata*) pulp powder, and their other key product is *Strophanthus kombe* (Figure 4).

The Association's business is based on the existence of wild plants in natural woodlands, as such; the Association and its collector members have a strong interest in sustainable supply of the plant materials. It is for this reason that PTA is supporting Zankhalango in its efforts to protect these resources as a basis for their income and livelihood. The Association monitors the population of wild plants in their local forests by keeping data that is collected on seasonal/annual basis, and the figures show a declining trend of products availability and biodiversity in their forests. The main threat to the Association's wild plants business is deforestation.

Figure 4: Some of the wild plants harvested from the bush



Source: PhytoTrade (2015)

Malawi suffers from an ever increasing deforestation due to the growing population pressure that forces people to clear forest land for farming, production of fuel wood and charcoal for sale, and poles for building houses. This is compounded by ignorance among most local community members of the monetary and non-monetary values of these wild plant resources.

Despite the understanding amongst collectors that these forests have a value, the majority of community members still see these forests as only unexploited open access resources for extension of farms, hunting, cutting firewood, building material. PTA has conducted a participatory action research with the collectors to perform a forest valuation exercise for comparative analysis of economic and non-economic values of different plant species as used by communities for various purposes and under varying land use/management regimes, which shows enormous benefits of conservation-based utilization of forests as opposed to other 'conventional' uses. With this information, the Association started a discussion with the local non-collector community members, local leaders, and the Department of Forestry about how to best protect the resources from being lost.

The only available legal instrument or option is for the collectors and their communities to request from Malawi government's Department of Forestry for the establishment of a Village Forest Area (VFA) under the Forestry Act 1997. This option however, bears the risk that the forest may be cleared by the communities, based on the experience of other VFAs implemented before. Under this circumstance, how do we protect a community forest under customary tenure in a self-incentivizing manner that delivers benefits for all?

Unless there is an adequately negotiated and agreed clear access and benefit sharing mechanism amongst different forest users, that is, collectors and non-collectors, the forest resource will remain a contested resource. We share experiences from Malawi by reviewing lessons from the various VFA initiatives in Malawi, and critique of the “Access-Benefit Sharing Mechanism” (ABSM) model developed by a PhytoTrade member in Malawi, TreeCrops Ltd, working with local collectors of Zankhalango Association. The model involves three components: a) using the VFA framework as provided in the Malawi Forestry Act 1997 to establish a village forest area with a geo-referenced map and inventory database of the resources in the community forest, including valuation of forest resources; b) implementation of participatory mapping, monitoring, reporting and action planning on forest resource use and protection; and c) development of a community-wide access and benefit sharing mechanism as an incentive plan.

PTA has conducted a participatory mapping with collectors to perform a forest valuation exercise on comparative analysis of economic and non-economic values of different plant species as used by communities for various purposes and under varying land use or management regimes, which shows enormous benefits of conservation-based utilization of forests as opposed to other 'conventional' uses.

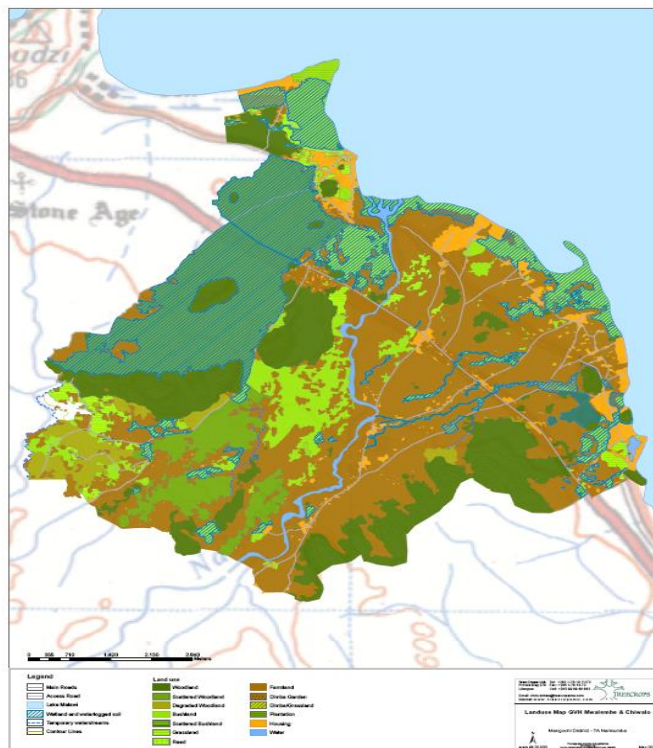
4.3 The access and benefit sharing model - Zankhalango Association

PhytoTrade Africa (PTA) works with the Zankhalango Association and TreeCrops Limited in Malawi on strengthening security of tenure and access rights of collectors to wild plant resources in community forests on customary land using the Village Forest Area strategy. The Zankhalango Association was established and registered in 2012 with a membership of about 300 collectors of wild plant products in southern Malawi. They have been selling and exporting within PTA product supply chains for over 10 years.

TreeCrops working in association with Zankhalango association developed a model based on that principle. The model involves three components:

- a) Using the VFA framework as provided in the Malawi Forestry Act 1997 to establish a village forest area with a geo-referenced map (Figure 5).

Figure 5: Mapping of land and resource use and management, Mangochi District, Malawi



Source: PhytoTrade (2015).

- b) Implementation of participatory mapping, seasonal monitoring, reporting and action planning on forest resource use and protection. This exercise involves creation of a geo-referenced database of

all forest resources in the forest, conducting annual inspection, monitoring and reporting of the key forest resources. During the annual inspections, new resources are captured and degraded or dead resources are deleted from the database (Figure 6).

Figure 6: Community annual inspection of the forest resources



Source: PhytoTrade (2015)

- c) Valuation of forest resources and development of a community-wide access and benefit sharing mechanism as an incentive plan (Table 3). Using participatory approaches, PTA facilitated community-led valuation of local wild plants in the forest based on different uses and harvesting procedures. This involved step by step exercise with communities in focus group discussion. First, in a specific community forest, a list of all known plant species was drawn and quantified (by estimated number of plants and percentage of the plants in the local forest). Second, for each plant species listed, all possible uses were listed. Third, each listed use, an estimated monetary value was attached (after discussion and agreement). For each plant species, a total monetary value was computed by summing up monetary values for the different uses of the particular species. Fifth, the computed total monetary values were compared.

Table 3: Forest Valuation – Malawi Exercise

	Vernacular Name	Botanical Name	Utilization	US\$	MWK	Extraction	Plant part	Use/Land Use
1	Matabwa	Diff.species	Construction timber	533.3	200,000	20.6%	wood	Destructive
2	Makaala	Diff.species	Charcoal	533.3	200,000	20.6%	Wood	destructive
3	Mphunga	???	Seed, eaten like rice	266.7	100,000	10.3%	seed	Non destructive
4	Makangadza	Like matame	Edible fruit	200.0	75,000	7.7 %	Fruit	Non destructive
5	Zikwawo	Ipomoea spp	African sweet potato	144.0	54,000	5.6 %	root	destructive
6	Malambe	Adansonia digitata	Cash crop, fruit	133.3	50,000	5.2%	Fruit	Non destructive
7	Nkhuni	Diff.species	Firewood	133.3	50,000	5.2%	Wood	destructive
8	Kombe	Strophanthus kombe	Cash crop	133.3	50,000	5.2%	Fruit	Non destructive
9	Milimo		Roof construction	133.3	50,000	5.2%	Wood	destructive
10	Mulaza	Palm leaves	Making mats	133.3	50,000	5.2%	Leaf	Non destructive
11	Udzu	Grass	Thatch grass	133.3	50,000	5.2%	Stem/leaves	Non destructive
12	Mankhwala	Diff.species	Medicine	53.3	20,000	2.1%	Unknown	Possibly destructive
13	Luzi		Fibre for ropes	10.7	4,000	0.4%	Bark	destructive
14	Bwemba	Tamarindus indica	Edible fruit	7.5	2,800	0.3%	fruit	Non destructive
15	Matondobwinja		Edible fruit	7.5	2,800	0.3%	fruit	Non destructive
16	Mzilu		Edible fruit	7.5	2,800	0.3%	fruit	Non destructive
17	Matowo	Azanza garckeana	Chewing gum	6.7	2,500	0.3%	fruit	Non destructive
18	Mateme	Strychnos spinosa	Edible fruit	5.3	2000	0.2%	fruit	Non destructive
19	Jejejele	Sesnanian spp	Febnce construction	5.3	2000	0.2%	Dry stems	Non destructive
20	Ndiwo	Relish	Edible leaves	2.7	1000	0.1%	Typically leaves	destructive
21	Mtalawanda	Allophyllus africanus	Edible fruit	2.1	800	0.1%	Fruit	Non destructive
22	Kafupa	Oxygonum sinuatum	Edible fruit	1.3	500	0.1%	fruit	Non destructive

Source: PhytoTrade (2015).

The monetary values of the plant species from the participatory valuation exercise were then discussed against the methods of harvesting the species, by the same group members (Figure 7). Two prominent methods were classified were: a) destructive, involving killing of the total plant and destroying other plants such as climbers or shallow growing plants, for example, wood cutting and charcoal preparation; b) conservative, involving harvesting only a specific part of the plant and leaving a minimum damage to the plant and almost no damage to the other plants.

Figure 7: Village assembly – focus group discussions



Source: PhytoTrade (2015)

With regard to community-wide access-benefit sharing, TreeCrops devised a model that will not only benefit collectors but also non-collectors (Figure 8). Collectors sell the raw botanicals they collected from the registered and mapped forest to the private company. The company processes and then sells these processed wild products in the international market and gets a premium through a fair trade approach on top of the sale price by virtue of the fact that these products are organic.

Figure 8: Players in the supply chain of wild plant products, Malawi



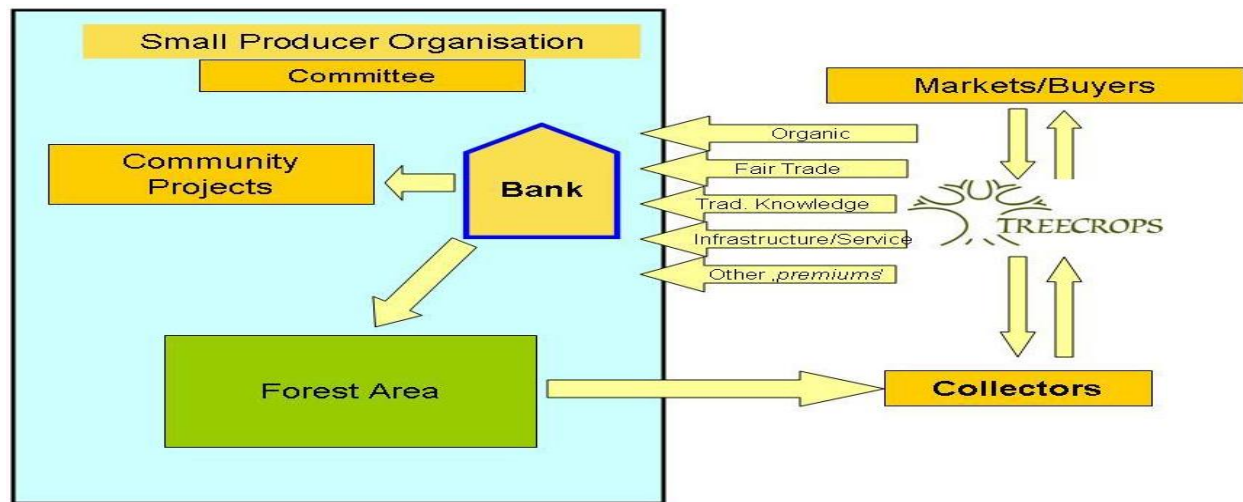
Source: PhytoTrade (2015)

4.4 Utilization of the cash premium at community level

The premium is generated within the value chain as an extra payment on wild plant products harvested from the wild. This money is channeled to the community through the Zankhalango Association which uses the premium paid to it by TreeCrops Ltd to implement community projects or invest it back into the forest through reforestation activities, protection of the forest and fire prevention measures. This premium is meant to compensate the community for its ‘loss’ as the collector typically pays nothing to the community. How this money is handled and used has the potential of enhancing local development and forest protection but also of escalating local conflicts.

The premium is then paid into a bank account and will be used to finance development projects for the benefit of the local community or support forest protection measures (Figure 9). The rationale behind the scheme is to involve the wider community in forest protection by making it understand that the forest is the source of the premium that funded community development projects.

Figure 9: Benefit and access sharing mechanism



Source: PhytoTrade (2015)

5. CRITIQUE OF THE BENEFIT ACCESS SHARING MODEL AS A FOREST MANAGEMENT STRATEGY

Rushed or poorly planned processes to develop Community Based Forest Management

The “Standards and guidelines for participatory forestry in Malawi” provide excellent guidance on how to ensure that relevant actors and authorities at village level are included in CBFM (Government of Malawi, 2005: Kajembe, Monela and Mvena, 2003). For example it notes that “*if important stakeholders are not included from the outset, if benefit sharing has not been openly discussed, widely agreed and endorsed, if committee members or office bearers are not accountable to their wider membership and community, then the institution (Village Natural Resource Management Committee) will not be sustained in the long term*”.

Despite such warnings, pressure to see quick results often generates rushed processes that fail adequately to consult or reach consensus among the existing power structures at community level (FGLG 2008). A case study from Ntcheu District provides a case in point, where a VNRMC was rapidly imposed to conserve (and reforest) an area that was degraded by Mozambican refugees. Without ownership from the local clan leaders, the established forest was treated as an open access resource and destroyed. Only when the Village Forest Areas were put back under the control of local clans has afforestation happened at pace (Kafakoma, 2008).

A failure to learn the lessons of success

From past VFA success stories, eight key ingredients must be added to the enabling policy framework (see Department of Forestry, 2003):

- (i) Good support for community capacity building (from donors, NGOs or the Department of Forestry);
- (ii) Adequate time to conduct a careful process of community institutional strengthening;
- (iii) Home-grown solutions that build on institutions / power structures that already exist – especially Traditional Authorities - rather than imposing a one-size-fits-all model;
- (iv) Coordination between different activities in the community – even to the extent of founding a dedicated Community Based Organization such as Zankhalango Association in Mangochi District that should harmonize different activities both within and across multiple interest groups;
- (v) Considerations beyond forestry;
- (vi) A proactive staff member at the District Forest Office
- (vii) An active Traditional Authority;
- (viii) Inclusion of women in planning activities.

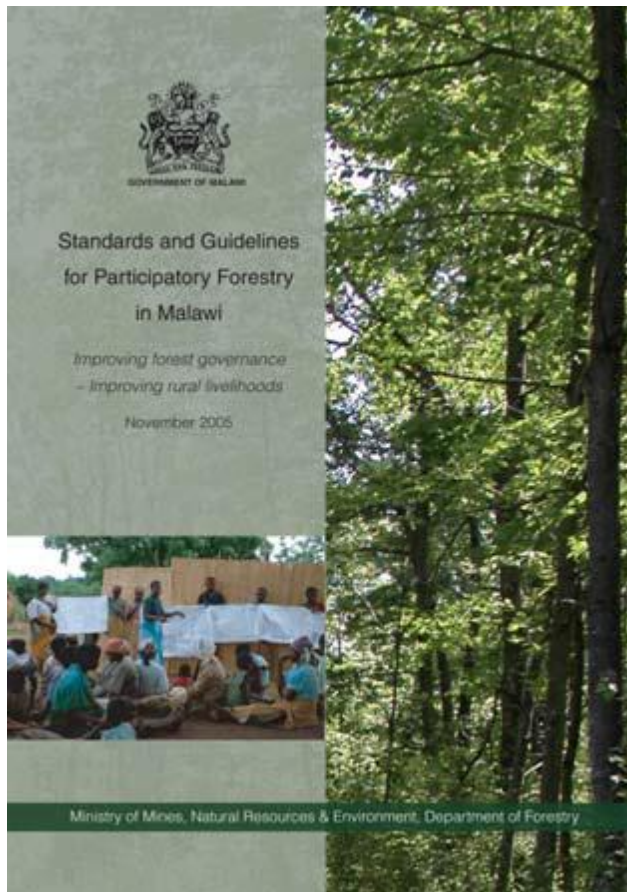
While it may be difficult to find all of these ingredients in every area, there is a need for greater attention to the process of institutional development than is often the case (Kayambazinthu, Matose, Kajembe et al. 2003). Respect for the existing institutions and especially the roles of Traditional Authorities was a particularly important feature of success stories from Mwanza, Ntcheu and Mzimba Districts (Kafakoma, 2008). In the absence of external interventions it is often these Traditional Authorities that have managed village forest areas for generations. Where VNRMCs have marginalized such authorities they have usually failed.

Make decentralisation a reality especially with regard to access and benefit sharing

The Department of Forestry should make the decentralization process of access and benefit sharing a reality. Devolution of responsibilities to local government authorities without the necessary financial and technical support has proved a waste of time and energy. A possible way forward is that the state should increase the number of VFAs and focus less on the administrative aspects of forest management.

Recommendations

It should be noted that under the Malawian legislation, devolving the authority to Zankhalango



Association to control community resources would not overcome the challenge of resource degradation. The Association would be recognized only as a private association, without authority to sanction non-members and other forest users, who refuse to abide by common property regulations governing the use of forest resources. Key recommendations for the establishment of sustainable VFAs to the Zankhalango Association were, to:

- Negotiate and mobilize their communities and local leadership on the essence of establishing VFAs and forming a VNRMC. This will involve raising awareness on the economic and non-economic importance of under-utilized wild plants and biodiversity, and the impacts on wild plants of various forest land uses and management practices.
- Negotiate and agree on a clear access-benefit sharing mechanism amongst different forest users, that is, collectors and non-collectors. There is need to clearly stipulate the access and benefit sharing mechanism between the private company, forest dependent communities, local government authorities and the Department of Forestry. Without clear benefit and burden sharing mechanisms, the motivation for VFAs will vanish.
- Devise a formal control mechanism that ensures that the funds are allocated as they should. The Association still has collectors as members and there is always a risk that the funds are misappropriated by the latter. We, therefore, suggest that a formal body constituted of local chiefs, collectors and the Department of Forestry be given the authority to manage the funds for the benefit of the community.

Key recommendations for Department of Forestry, especially the District Forestry Offices in the establishment of sustainable VFAs, are, to:

- Support capacity building on roles and responsibilities of VNRMCs and other village level institutions. The processes by which VNRMCs are formed are critical to effective operations of VFAs. This includes provision of the Standards and Guidelines for VFA establishment, and processes for registration of VNRMC as a local forest organization and other key documents or processes as stipulated in the Forestry Act. There should be a new and explicit emphasis on the roles of the Traditional Authorities in such processes with flexibility to endorse alternative institutional arrangements where these are locally agreed to be preferable. The Department of Forestry, especially the District Forestry Offices have a particular role in ensuring that a coordinating mechanism at district and village level is developed.
- Support communities in developing forest management plans and by-laws. There is need to speed up the process of assisting communities to develop management plans and by-laws for them to qualify as legal entities in order to effectively participate in forest management. There is need for the Department of Forestry and District authorities to agree on their roles in providing forest monitoring services for forest dependent communities as stipulated in the Standards and Guidelines for Participatory Forestry in Malawi. They should also inform the people in villages on how they can access the various services at district level that would assist them with VFA management.
- Support communication on the benefits of VFAs to all key decision makers. To improve the lack of political will and improve the understanding to implement CBFM, the Department of Forestry needs to spread the word to all key decision makers. Many communities in Malawi have forest resources but are lacking the powers to protect them from encroachment or even sale to outsiders, and are losing the basis for their livelihoods through either of these two ways.

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