

Miombo Woodlands and Rural Livelihoods in Malawi

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Section 1. The miombo/people interface

Farmers in Malawi remove woodlands to plant crops but they also derive a vast range of other basic needs from the surrounding forests. These miombo woodlands have until relatively recently always been vast in comparison to the human population and their needs. Over the years the woodlands and the way they have been used have changed, but their contribution for maintaining well being and providing peoples' basic needs appears to have remained important. The main changes in the woodlands are a decrease in the area of woody plants remaining and the nature of the interface between woodlands and people. Forest area has reduced considerably; about 2.5 million hectares of forest land were converted to agricultural land between 1946 and 1996 (Openshaw, 1997). The nature of the interface between people and miombo – once limited to being a superstore of products for the home, the farm and the hunt – has increased in complexity. Here we have simplified the complex relationship by identifying four of the main positive dimensions of the interface between rural livelihoods and miombo woodlands. These are presented diagrammatically in Figure 1.

Some of these dimensions are more significant than others, some are concerned with meeting the basic needs of a subsistence livelihood, while others relate more to exploiting new economic opportunities. Some are of local significance and others of national importance. The purpose of this booklet is to explore some of the dimensions of the people/miombo interface and in particular identify those key areas that are most crucial for food security and poverty alleviation.

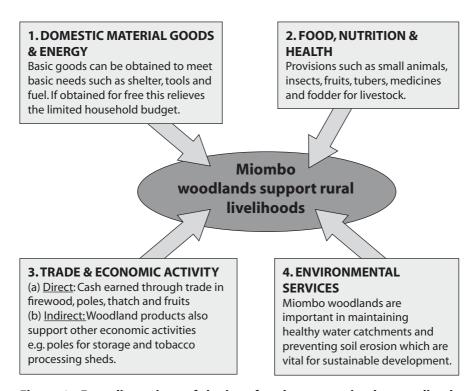


Figure 1. Four dimensions of the interface between miombo woodlands and rural livelihoods

Section 2. The dimensions

DIMENSION ONE: Domestic material goods and energy

How important is this dimension for household well being? What are the implications of the unavailability of certain species or tree sizes? Criteria based ranking exercises (Simons, 1997) reveal that firewood, construction materials, thatching and medicines are considered the most basic domestic needs which are met from miombo woodlands. These products are essential, used on a daily basis and appropriate substitutes are hard to find. However, increasingly these basic products and other less essential goods are becoming scarce. The consequences of this reduced availability can be categorised as follows:

Consequences of product loss

- Longer walking distances As firewood becomes scarce, women must walk further and spend more time to find what they need.
- Substitution In Mulanje women choose to collect firewood of inferior species
 and smaller sizes which can be found near the village rather than trek into the
 forest reserve where good quality firewood is plentiful simply because of the
 time involved (Konstant, 1999). Herbal medicines can also be substituted by
 modern medicines.
- Purchase Poles are often purchased if local collection is difficult and tree bark
 fibres may be substituted with sisal fibres or wire from inside old car tyres.
 Substitution is not only fueled by lack of products, some people prefer the
 alternatives but such an option is usually only for the wealthy e.g. use of iron
 sheets instead of thatch grass.
- Cultivation Recently, in some forest-poor parts of Malawi, planting trees for
 poles, timber, firewood and fruit has become common. Evidence from Mulanje
 shows that in some villages nearly half of all villagers cultivate thatch grass
 areas (Konstant, 1999). Inada (2000) also reported that farmers often plant
 indigenous bamboos on their farms as a response to scarcity in the forest.
- Do without Bush meat, caterpillars, certain herbs, fruits and large-sized trees for house poles and drums are no longer used by some communities.

On the whole, while these trends can be explained by villagers there is little quantitative data to demonstrate the flow-on effects of these consequences. For

example we do not really know the consequences on a household's time and resources of using less durable poles for building or the impact on family well-being if the women spend twice as long searching for firewood or if trees for making mortars are no longer available. It is likely that the better off people are able to cope more easily than the poorest.

Economic value

One problem with trying to understand the value of the forest products used domestically is that the goods are 'free' to community members. However, it is sometimes possible to assign a monetary value to each product based on what a person without access to the free good is prepared to pay for it. One study revealed that by using this method a years supply of home-used firewood for one household was enough to buy 416 kg of maize (using prices of 1996) or almost half a years supply, and that the value of poles consumed by a household in a year was equivalent to 120 days of maize supply for the same household (Simons, 1997).

DIMENSION TWO: Food, nutrition and health

Forest foods tend to be considered less important than the products mentioned so far largely because they are seasonal in nature and cannot be relied upon as a staple. A detailed study of 36 farming households in one location revealed that during a continuous period of 25 months a total of 37 different leaf vegetables, 2 root vegetables, 21 fruit and 23 mushrooms and 14 caterpillar species were collected (Abbot, 1999). Other information from the same study suggested that forest foods can be categorised into four rather loose groups as shown in Figure 2.



Figure 2. Forest foods comprise different categories

Mushrooms, although consumed in normal years, are not usually thought of as food, but during times of intense food shortages they might be the only foods consumed for days at a time. In normal years they are considered a cheap and tasty relish and when plentiful are often preserved for later use (see Box I). However, if there are suitable market opportunities for sale of mushrooms and the proceeds can be used to buy maize then this can probably contribute more to food security than mushroom consumption.

Box 1. The traditional way to dry mushrooms

"On returning home from a mushroom collection trip Nancy sets aside enough mushrooms for 1-2 meals for the whole family and the rest will be dried. To process the mushrooms first they boil them, then throw away the water in which they were boiled and then add fresh water and boil for another 10 minutes. After that they are put in a basket so the water drains away, then the mushrooms are put on a mat in the open sun for drying. After drying, the mushrooms are put in *zikwatu* (bundle) using *masuku* (*Uapaca kirkiana*) leaves, which are later hung in the kitchen where the smoke helps to preserve them. Some of the *zikwatu* are sold to people in town and others are eaten by the family".

Miriam Mkandawire of Vwenyere village also preserves mushrooms using the same general method but she sometimes makes a bench of thin poles – a drying rack in fact – and underneath she makes a fire to speed up the drying process.

Source: Lowore and Munthali 2002: 16

Many people eat fruits while they are in the forest. However, some of the most prolific and preferred fruits are collected and brought back by people to their homesteads for later consumption and further processing. These include, *Uapaca kirkiana, Parinari curatefolia, Tamarindus indica* and *Adansonia digitata*. There is little quantitative evidence which demonstrates the nutritional importance of wild fruit consumption in Malawi but the fact that children are driven to look for forest fruits to alleviate their hunger indicates that the contribution is probably significant.

DIMENSION THREE: Forest trade and economic activity

A great many forest products are now traded in Malawi. Some have always been traded within communities but are now traded in greater quantities and across greater distances than ever before, e.g. mats and baskets. Others are relatively "new" products such as bamboo furniture, and some products, although always widely used have only recently gained a market value e.g. wild mushrooms.

Firewood

In Malawi, the firewood and charcoal trade is the largest and most integrated of the forest product markets. For the majority of Malawians having access to wood fuel is a matter of necessity; 84 % of the urban population use wood fuels for cooking

(NSO 2000). This urban demand drives the rural communities who have access to indigenous woodlands to "cash in" and liquidise their natural resources. The marketing of the produce may involve villagers selling firewood at the roadside directly to urban-dwelling passers-by or via a pronounced market chain consisting of collectors, traders and vendors.

In 1996 it was estimated that the trade of wood fuel to the four main cities provided 55,000 part-time employment opportunities and had a total value of about \$US 43.66 million (Openshaw, 1997). For some villagers firewood selling is a regular source of supplementary income (see Box 2) while for others it is an activity undertaken only in times of temporary hardship. Engaging in charcoal making on a regular basis requires more skills, capital, and time than firewood selling.

Box 2. Firewood collectors from Mpata

Many women from the villages of Kharama and Khamula collect firewood from Mulanje Mountain forest reserve. They always collect deadwood and never cut trees. They use the wood at home for domestic purposes and also sell at Phalombe market. For each headload they must pay \$US 0.1 to the Department of Forestry whom they cannot avoid as there is only one path down the mountain. They sell each headload for \$US 0.9. The women are organised into a group of 10 and they each collect one head load a day. On each day they give all the profits to one woman so that on one day someone gets \$US 9, the next day all the profits go to a different woman. This way every ten days everyone gets their money in a lump sum which is much more useful for budgeting than getting a little everyday. The problems they face include the distance needed to travel to get the firewood and danger faced when the paths become slippery in the rainy season. During the dry season they are willing to travel further which means they can find a lot of firewood in a single area.

Source: Lowore et al. 1999

Fruits and mushrooms

Unlike the purchase of firewood, buying wild fruits and mushrooms is a matter of choice rather than necessity and it is therefore interesting to note the recent increase in marketability of these once minor forest products. The most marketable species include a number of species from the genera *Cantharellus*, *Amanita* and *Termitomyces* (Ngulube, 1999). For those rural people who are involved in mushroom selling the proceeds are highly valued as a means of buying other foods. Table I gives an indication of the range of incomes earned by those involved in the business.

The popularity of the product amongst urban residents has been noted by some entrepreneurs who have started to engage in wholesale buying and selling. They say the business is good because the turnover is rapid. Mushroom harvesting is believed to be non-destructive and the main threat to the trade is loss and degradation of habitat due to other factors.

 $\label{thm:come} \textbf{Table 1. Some information about income and profits involved in the wild mush room business}$

| Category and activity of participant | Place | Approximate income earned in US\$ throughout the wef * season |
|--|---|---|
| Collectors who sell at the roadside | Liwonde | US\$ 1.3-5 a day (most days in the season) |
| Collectors from the village who travel and sell direct | Mzimba | US\$ 0.05- 0.84 a day (not daily) |
| to town-based vendors | Mzuzu | US\$ 0.84- 1.05 day (sometimes daily) |
| Collectors who go to town to sell house to house | Mzuzu/Machinga | US\$ 0.73-2.1 a day Some exchange <i>wef</i> for maize flour, plate for a plate (some daily, some not) |
| Traders who buy from | Mzimba | US\$ 1.05-2.63 a day (daily) |
| collectors – either from the collection area or from collectors who come | Mzuzu | US\$ 1.05-2.1 a day (sometimes daily) |
| to town | Zomba | US\$ 1.2-8 (sometimes daily) |
| Wholesale traders who buy from collectors | Buy at Perekezi, sell in Kasungu | US\$ 11 a day (2-3 times a week) |
| | Buy at Liwonde, sell in Zomba or Blantyre | US\$ 10-30 a day (2-3 times a week) |

^{*}Wef = wild edible fungi

Sources: Lowore and Boa 2001, Lowore and Munthali 2002.



Wood carving

Making and selling curios is a specialist but vibrant small scale industry in Malawi thought to be generating income for over 5000 people (Marshall et al. 2000). Initially curio markets emerged in tourist sites and the carvers relied on local woody resources. As these resources have become limited the carvers have moved to the resource-rich sites opening up opportunities for vendors to buy in bulk from the resource-rich sites to sell in the traditional tourist locations. Markets are unpredictable and profit margins low. Some traders undertake bulk trading to South Africa which is a major international market for Malawian carvings.

Scarcity of the preferred species (*Pericopsis angolensis*, *Dalbergia melanoxylon*) of the right size is an increasing problem which is handled in two ways; migrating to resource-rich areas and using less preferred species such as *Toona ciliata* or *Uapaca kirkiana*.

Handicrafts and implements

A great many other forest-derived products are traded in Malawi not least traditional household goods and basic implements such as mats, baskets, brooms and tool handles. Despite urbanisation and availability of "modern" goods there are few preferred substitutes for these products which are required in ever increasing quantities by Malawi's expanding population.



Gender Issues

There has always been a division in traditional forest use, but this is only partly retained once a product becomes commercialised. Trends suggest that while men are becoming increasingly engaged in traditionally female oriented activities such as firewood and mushroom collection, men's activities tend to remain men's activities e.g. woodcarving and charcoal production. With respect to the latter, women may participate with vending but rarely with production. Table 2 provides some details about the participation of women in a range of forest related businesses.

Table 2. Percentage of females employed in a range of forest related enterprises

| | % female involvement |
|--------------------------------|----------------------|
| Producing traditional medicine | 0 |
| Brick making | 0 |
| Carpentry | 2 |
| Sawmilling | 4 |
| Charcoal production | 8 |
| Woodcarving | 11 |
| Grass/bamboo/cane | 15 |
| | |
| Traditional implements | 55 |
| Firewood harvesting | 54 |
| Grass harvesting | 55 |
| Vending forest products | 51 |
| Distilling drinks | 52 |
| Traditional healer | 50 |
| | |
| Beer brewing | 77 |

Source: NSO 2000

DIMENSION FOUR: Maintenance of environmental services

Detailed documentation of the consequences of unplanned forest removal are hard to find. There is evidence that streams and rivers which were once permanent are now dry but little research had been conducted in this area to validate these claims. While the environmental services of miombo woodlands are sometimes considered to be intangible there are nevertheless very real consequences of forest removal from fragile sites. It is clear that forest removal can lead to flooding, soil erosion, siltation and reduced water flows in the dry season. Even less well documented are the consequences of deteriorating water flows on rural livelihoods, perhaps in terms of health, household labour budgets and lost economic potential.

In 2001, crop flood damage in Malawi caused the loss of about 400,000 metric tons of maize valued at \$US I billion. More than 30,000 households were affected and 3,054 houses were damaged. Floods destroyed roads, bridges and threatened large irrigation schemes. Soil of an amount of 1.5 million m³ was dredged from Mkula Dam, a strategic station for hydroelectricity generation in the country (FD 2002). Interruptions to the electricity supply can cause huge losses for industry and render the service expensive.

Section 3. The importance of forestderived income to food security

For the rural poor in Malawi, making a living is a matter of daily struggle. Sale of forest produce is often a supplementary activity in an attempt to make ends meet and the motive is rarely to make a profit. Studies on micro-enterprises in Malawi have shown that most people who sell forest produce do so as individuals or as small family operations, start off with little, if any, capital outlay, produce small quantities of mainly unprocessed or crudely processed goods and make little profit (NSO 2000). The money earned is used almost entirely to meet immediate domestic needs and little is saved and/or reinvested in the business. This is particularly true for the primary producers. Those who engage in bulk trading need more capital to start with and must be in a position to save some of the proceeds in order to buy more goods for resale otherwise their business is unsustainable. The business of the primary producer is sustainable only as long as the raw material remains freely available from forest or common land. It is important to take note that primary producers are motivated by an urgent need to reduce their vulnerable status whilst the traders are more likely to be motivated by the awareness of a profit making opportunity.

The degree to which sale of forest produce assists different people varies along a continuum from mere survival to coping with vulnerability to making profit. These variations are well explained if we look at a range of examples taken from the trade in wild edible mushrooms (Box 3).

Change over time

The status of the trade in forest-derived products is of course not static. Evidence would suggest that sale of many items is on the increase due to two main factors; the rise in urban population and an increase in alienation between urban people and forests. There are of course other factors such as a relaxation in access to protected forests and perhaps an increase in the cash needs of the rural poor. As a mushroom vendor in Machinga explains "over the years the number of people selling mushrooms has increased a lot. It is a generation thing – these days people are always in need of money. It is the same with mangoes, we never used to sell mangos like we do today" (Lowore and Boa 2001).

Box 3. The livelihood strategies continuum and mushroom selling

Surviving – Mushroom selling provides some financially impoverished people with a chance to earn some money to buy food

Two mushroom sellers, an elderly lady and a young girl were encountered selling mushrooms in Ekwendeni in February 2002. They explained that they had not eaten nsima (staple food made from maize) for three days and they hoped to earn MK40 (\$US 0.5) from the mushrooms sold on that day. Some days later another young lady was interviewed. She explained that with the MK15 (\$US 0.2) earned from the sale of mushrooms on that day she would spend MK10 on maize, MK0.5 on milling it and MK4.50 on salt.

Coping – other people see that mushroom selling can make a genuinely important contribution at a difficult time of year.

Kenasi Affad of Machinga regularly sells mushrooms during the season. He makes a collection trip between 2-4 times each week and spends the intervening days on his roadside stall selling the mushrooms to passers by. He may sell between 5-10 plates in a day but often less. Kenasi explains "when the mushroom season is over I buy fish from the lake and sell it. Later I sell cassava. The lake is closed to fishing at about the time the mushrooms are ready. The most profitable business is fish selling, followed by mushrooms. During the season I can make from MK350-400 (\$US 4.4 – \$US 5) per week".

Adapting – some local vendors diversify into mushroom selling as they see profits can be made quickly

The day before Thomson Nthala was interviewed he had sold mushrooms worth MK220 for cash plus MK80 worth on credit to someone who works locally and wanted to send the mushrooms to Lilongwe. He would sell what he bought for MK150 for MK450 therefore making MK300 profit. Thomson said mushroom selling is a good business because one can make a profit from very little capital, MK100 is enough to start off with. When mushrooms are out of season he sells agricultural produce. The money he generates is used to pay rent and keep his family. He even bought a radio with the profits. Mr. Nthala said that more and more people are going into mushroom trading these days.

Accumulating – with some entrepreneurial flair mushroom selling is a promising but not fully saturated market opportunity

Mr. Kalize is a second hand clothes (*kaunjika*) dealer who also trades in wild mushrooms, buying them from Perekezi and selling them in Kasungu. It is a profitable business, usually he spends MK600 on 2-3 baskets of mushrooms which he then sells in Kasungu for MK2000. In addition to buying more mushrooms he will usually spend MK400 on transport and something to eat whilst in Kasungu therefore making MK1000 per trip and he sometimes make 3 trips in a week. This is more than he can make selling *kaunjika*. Last year 2000/2001 he started with MK300 at the start of the season and had made MK18,000 by February which enabled him to buy four bales of *kaunjika*.

Source: Lowore and Munthali 2002; Lowore and Boa 2001; Devereux 1999.

Section 4. The way forward

These insights into the four dimensions of the miombo woodland/rural people interface in Malawi help us to consider future forestry policies and development efforts in the following ways;

- Can forest product based enterprises be boosted so that incomes for the rural poor can increase?
- Can woodlands be maintained so that those with little disposable income can still obtain the products they need to sustain themselves and their way of life?
- Can woodlands be maintained so that access to essential services, such as year long supplies of clean water, can be assured?

Boosting businesses

Recently there has been a growing interest in natural resource based enterprises in Malawi. The emphasis is on those products which are less easy to overexploit, are high in value or have potential for added value through processing e.g. honey, tree oils, jams, juices, handicrafts, dried fruits and mushrooms. It is nevertheless important to think of the sustainable production of wood fuels for the simple reason that demand remains high and the market is well developed.

Despite this growing interest in the non-timber forest product trade in Malawi there are few examples where interventions by development organisations have led to increased incomes or an increased incentive to conserve woodlands.

Where does the problem lie?

The problem is that selling forest produce is an activity which is accessible by poor people and is therefore basically a subsistence activity motivated by poverty rather than profit. This fact alone makes it difficult to find ways of upgrading the activity from an income generating activity to a real business. Lack of skills, capital, interest and ability to invest in the production base as well as general attitude are all constraints which need to be addressed.

In the interests of equity and social inclusion some of the efforts which have been made to increase income through natural resource based enterprises have worked through groups and community ventures. Increasingly we are learning that this approach is not working and that targeting individual entrepreneurs might be more appropriate.

Despite a slow start there does appear to be significant potential for boosting forest produce based enterprises if a number of obstacles are tackled and if the "correct" business model is used. The possible Way Forward is outlined in Box 4.

Box 4. Way Forward – Boosting Businesses

The rationale behind boosting natural resource-based businesses is that more livelihoods can be supported and there is an assumption that this can be achieved through changes in the existing collection, processing and marketing chain. However, an analysis of the production and marketing systems reveals that for businesses other than subsistence-level activities, the normal business model of primary producer selling to trader remains typical. In which case it is pertinent to examine what changes might be needed to increase income and for whom. Changes such as value addition and achieving access to more lucrative or more sophisticated markets might be achievable by intermediary traders. Changes such as increasing volumes sold and securing a more predictable market might be achievable by the primary producer. Although poverty reduction programmes may focus on the most poor – who are likely to be the primary producers or collectors – boosting businesses also relies on interventions at the more formal business end, and by helping traders and processors.

Primary producers often do not have the capital to invest in processing, or to buy from others to bulk up the quantity, nor the means and the know-how to access new – probably more distant and sophisticated – markets. However if they are able to form producer associations, bulk up quantity of produce and establish supply relationships with reliable buyers, producers may obtain a more secure income stream. Buyers may be willing to pay more for a product if producers can fulfill orders reliably. If honey, for example, is available in the right quantity, at one pick-up point and at the right time then the buyer will save on transport costs and may be willing to pay more per kilo.

Changes needed: Primary producers to be organised, better "connected" with an intermediary and to undertake bulking and preliminary processing.

The intermediaries should be assisted with business skills training, business services, advice with marketing, links with markets and technologies for processing. Clearly they want to keep their costs down and so having a better organised supply system will also be to their advantage as they spend less time and money sourcing their raw material.

Changes needed: Information and support concerning technologies, marketing and business skills provided to entrepreneurs. Accessible micro-credit.

It is by no means guaranteed that growth in natural resource based enterprises will lead to better managed natural resources even though theoretically the incentive for sustainable management should be enhanced in this situation. It is important that products which can be easily over exploited are sourced from forests which are managed. In situations where commercialisation is increasing in locations where management institutions are missing, interventions to build management institutions will be important.

Management institutions should be built for productive forests. Customers to be encouraged to buy Malawian produce from managed forests.

What about the domestic non-income use of woodland resources?

Using woodland products for household needs does not alleviate poverty – but an erosion of availability will contribute to poverty. If women must spend 16 hours a week looking for firewood as opposed to 8 hours a week this has implications for their opportunity to engage in economic activities or even non-economic activities, for example making sure their children have breakfast and get to school on time.

If access becomes difficult the not-so-poor can buy the necessary produce from others or they can buy alternatives. They may also have more money, land, labour and access to extension support which means they are better able to diversify their farming system to cultivate required produce. In this respect the maintenance of accessible and well-managed miombo woodlands is one way of preventing increased hardship for the poorest within the community.

Let us also consider the environmental services emanating from miombo woodlands. The maintenance of healthy water catchments, the prevention of soil

Box 5. Way Forward - Direct consumption, domestic use and maintenance of environmental integrity

Managing forests is costly. Whether poor villagers are willing to bear woodland management costs, in order to maintain the goods and services benefits of indigenous woodlands depends on a great many factors. For example, if firewood markets are close by the opportunity costs of not overexploiting to meet the demand is greater than if there is no local market nearby. It might be that there are other more effective ways of the getting the same goods and services, for example planting trees. It also probably depends on to what extent the owner-villagers share a common vision or not.

What is required? Communities which still have woodland on public access village land need to be helped to understand that the future of that woodland will be determined by the choices and actions made by members of that community. This is not always the case as some woodlands are affected by outside influences, but even there it might be within the power of the owner-community to protect their forest from outside influences - but at what cost? It is important that extension agents work with communities to help them understand the consequences of forest loss and the consequences of forest management for the community. They may need help to analyse the consequences for their well being if the products they currently collect from the woodland must be sourced from elsewhere or grown on farm. Technical and capacity building support should be provided if needed. The extension service needs to be skilled enough to realise that no blueprints exist and that each community may have a different way of approaching the issue. The formation of interest groups may be useful and capacity to deal with conflict resolution is also important. Everyone, whether they are rich or poor require the environmental services that woodlands provide so whilst these non-tangible benefits may seem the least likely of all incentives to motivate communities to manage woodlands they may in the end provide the best incentive. Income incentives may appear to be the most forceful but it is likely that income benefits will be captured by the more powerful members of the community.

erosion, flooding and land slides are hugely important. A healthy water catchment maintains permanent streams and rivers, which are used for irrigation, watering livestock as well as household purposes. Seasonally wet areas (dambos) which are highly valued for dry season food production are also maintained as a result of a healthy water catchment.

The fate of the woodlands

The information and analysis presented in this booklet is intended to help us approach indigenous woodland management from a more informed point of view. However, given the complexity of the issue it is by no means easy to come up with blueprint recommendations. In summary we therefore present the following concluding statements.

- Forests provide domestic products and meet a range of basic needs. In addition local scarcity and pockets of intense demand for products has kick-started a dynamic trade in a wide range of miombo-derived products.
- For many people, forest product trading is a low capital, low risk, low profit
 coping strategy and the potential to generate higher profits is simply not
 realized.
- Forest based businesses can best be supported through technical, business and marketing support but greater attention should be paid to the business model to ensure sustainability.
- While income is important, the subsistence and environmental benefits of miombo woodlands also contribute significantly to supporting rural livelihoods.
 The dangers associated with compromising the environmental services of catchment forests are particularly severe.
- Woodland maintenance and management involves associated costs and whether rural village communities are able and willing to bear these costs will vary greatly from place to place. Factors such as social organisation, value judgements and cost-benefit analyses will influence the outcome.

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What role do miombo woodlands play in supporting rural livelihoods and achieving food security for the rural poor of Malawi? Do the woodlands provide benefits to people or are they a hindrance? Is their removal the key to agricultural expansion and greater food security? How important are these woodlands? And do we need them? If so, what for and how can we plan to ensure they are managed to produce the benefits people need? Can interventions be designed to make them more useful and increase their contribution to poverty alleviation? This booklet does not provide all the answers to these questions but does attempt to shed some light on many of the key issues so that future planning and decision making can be made from a more informed point of view.









