



Participatory Forest Management in Ethiopia, Practices and Experiences

**By
Ellen Winberg – Forestry Volunteer**



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The author Ms. Ellen Winberg

Executive Summary

Deforestation and the resulting environmental degradation is a major problem in the Federal Democratic Republic of Ethiopia and a key factor challenging food security, community livelihood and sustainable development. Between 1955 and 1979, over 77 percent of the country's forested area disappeared and it continues to lose 8 percent of its remaining forests annually.

Participatory Forest Management (PFM) is a mechanism to protect forests and enhance the livelihoods of communities who use and benefit from them in the process. PFM was first introduced to Ethiopia thirteen years ago but the approach is expanding to cover more and more hectares of forest across the country.

This report is the result of a survey of ten PFM actors in Ethiopia including stakeholders in the Federal Government of Ethiopia, regional governments, woreda offices, international development agencies and international as well as national NGOs.

The largest pockets of remaining natural forests of Ethiopia are located in the south of Oromiya and Southern Nations Nationalities and Peoples (SNNP) regions and the majority of PFM intervention sites are located in these areas. A smaller number of recently introduced sites are located in Amhara in northern Ethiopia.

The components that are reported to have been most important for successes in the different intervention areas are:

- Collaboration, involvement, continuous follow-up and support of relevant regional and local government sectors.
- Comprehensive and unified understanding within project staff at all levels including training of all field practitioners.
- Making use of and strengthening already present traditional systems; repeatedly consulting the community; communicating and building consensus with local elders, politicians and religious leaders and recognizing traditional knowledge and customary rights.
- Linking income generation to forest management as well as improving market access for forest products.
- Enabling exchange of experiences between farmers and communities at different PFM sites.
- Exchange between farmers of more informal character can have positive impacts on neighbouring communities. It often leads to farmers copying the methods that are introduced in the PFM areas, such as farming spices in their home gardens for income generation.

What became clear throughout the writing of this report was that for PFM approaches and sustainability of these interventions rely on self-financing mechanisms being put in place.

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1. Background

Ethiopia has been subject to extensive deforestation; estimates show that the country is losing up to 140 000 hectares of forest each year (FRA, 2005). Humans benefit from and, in many cases, are reliant upon forests for regulating and supporting cultural and provisional services (MEA). However, the expanse of forest areas is declining across the globe, partly as a result of logging activities and also due to conversion of habitats to croplands – agricultural expansion (MEA) accounts for up to 43 percent of tropical forest losses. Forested catchments account for three quarters of the planet's accessible freshwater resources, which loses its quality as forest conditions worsen (MEA). Fresh water catchments and soil preservation are important inputs to agriculture and food production.

The reliance on Non Timber Forest Products (NTPF) and other forest resources can be high in poor, rural populations living close to forests. Forests provide coping mechanisms during times of food scarcity as they offer wild fruits for children during periods marked by food shortages; enable bee hive keeping and provide fodder or grazing sources to communities within proximity (MEA). Some 300 million people on the planet are dependent, to a substantial degree, on the resources obtained from forests, their existence and health. These people's livelihoods and coping mechanisms are threatened by the loss of forest (MEA).

Protected forest areas with restricted access for local communities have often been introduced as a solution to tackle deforestation and its effects. When looking at the approach from a social perspective, restricting access to forest resources and relocating communities living in forest areas is, at present, becoming more frequently considered as unsustainable from a social perspective. Participatory Forest Management (PFM) is a forest management system that was introduced as a complementary mechanism which safeguards forests, while respecting traditional users and including them in the process. The designs, names and ideas of PFM are as various as the number of implementers all over the world. However, the general and common component is the focus on community participation in forest management. This includes agreeing with government institutions or landowners on management plans and the sharing of responsibilities, costs and benefits between a given community and landowners. It is most often introduced by external actors, such as NGOs or government organs.

PFM is recommended to contribute to improved food security and poverty reduction (PFM WG, 2010); it could therefore have the potential to play a part in reaching two of the Millennium Development Goals (MDGs): Goal 1 - Eradicate Extreme Poverty and Hunger; and Goal 7 – Ensure Environmental Sustainability. Nevertheless, PFM has often been criticized for not offering communities with enough revenue to get out of poverty, as it is usually designed with the main purpose of protecting forests.

The social benefits of a successful PFM implementation include not only revenue sharing, but also the building of an effective and just local governance as well as democratization. In the process of introduction and implementation, the relations between several stakeholders improve as they have to agree on common outputs. Social interactions that are important for effective PFM implementation are: empowerment; involvement; negotiation and collective decision making (Kelbessa and De Stoop, 2007).

2. Methodology

This report is the result of a study that was carried out between September 2009 and March 2010. The main inputs to the report came from a questionnaire that was distributed to PFM actors in Ethiopia. Results were drawn from the submitted information, which was qualitatively studied.

The participating actors are found within different types of entities and organizations such as: the Federal Government of Ethiopia, regional governments, woreda offices, international development agencies and international as well as national NGOs. These actors are found at different stages of implementation.

The responses from ten PFM actors were included in this study. Some of them were still in the planning or introduction stages of their agenda and could thus not respond to all questions, while others did not yet start preparing their implementation report for planned activities. During instances that these intended activities are relevant to the study, e.g. in questions of planning for climate change; they are included in the results. In other cases, where the question is meant to reflect the current situation, they are not included. Some projects did not finalize their management plans and responded based on assumed conditions during the time of the study – these may however change as they are adapted to local conditions as the project evolves.

The completion of the questionnaire differed between the answering organizations. Some respondents filled out only a short section of the questionnaire and therefore were not possible to include in all results. This makes the total number of respondents different across the study. The study also does not encompass all PFM actors in Ethiopia and should therefore not be regarded as exhaustive. Some of the reasons for the limited number of actors included in the study are as follows:

- Some PFM organizations referred to other actors for information sharing on their behalf.
- Some reported as being unable to contribute due to not being directly involved in PFM activities.
- Some found the questionnaire too comprehensive and did not manage to fill it within the time of the study.
- Others had not yet started up their PFM activities and could not contribute with information from their organizations.
- Some people that were contacted had left their posts at the PFM organization and could in some cases not refer a successor.
- Some organizations were despite several attempts, not at all accessible due to unavailability and limited coverage of e-mail and telephone services as well as lack of updated contacts.

NB: In addition to the above, some organizations may have been unintentionally overlooked during invitation to participate in the study.

The challenges encountered during the study give indication of the complex network of PFM actors, their working conditions and sometimes the lack of communication and connectivity between them. For instance, one overreaching organization provided information on a number of smaller organizations – and the data had some discrepancies. In such cases, the study

considered the data obtained from the smaller organizations rather than that from the larger organization.

In this study, those organizations or authorities introducing PFM projects to communities who have responded to the questionnaire are referred to as actors or implementers. They make out the foundation for the results of this study. The organizations have not been weighted for their coverage in the area or population included in their projects. Some run a number of projects of various sizes and others run only a few or a single project. The results should be looked at like trends of actors and activities rather than numerical data.

3. PFM in Ethiopia

3.1 Ecological and social reasons for introducing PFM

3.1.1 General motives behind introducing PFM

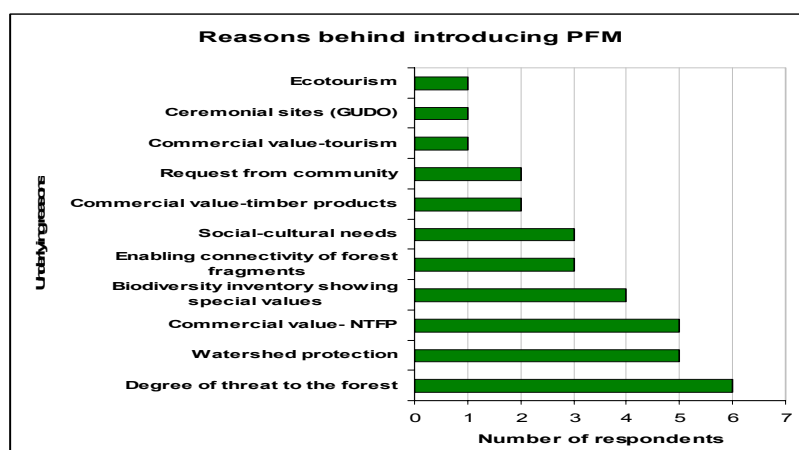
There are many reasons for introducing PFM, depending on whom you ask. The main two objectives are social and environmental. The one emphasizes mitigation of biodiversity loss, forest degradation and deforestation; while the other views a concern for livelihoods in forest neighbouring areas as well as the rights to utilize forest resources legally. These two are closely interlinked under PFM. However, the proportion of balance can be more prominent in one or the other, sometimes compromising one.

So in what areas does one introduce PFM and what is special with these areas? The underlying reasons for introducing PFM to a community can be various. Often a combination of the below points influence the selection of target communities:

- Cultural or ecological properties of the forest.
- The level of the communities' dependence on the forest for their livelihoods; its cultural values or the forest management tradition in the area.
- A history of forest loss and external pressure on the forest in the area and thus resulting in an acute need to act before forests are lost.
- Landscape management, such as watershed strategies, or enabling connectivity of forest fragments.
- Direct requests from the communities.
- The commercial value of timber, NTFPs or the potential for tourism.

The direct reasons for introducing PFM as given by seven organizations in this study are in all cases a combination of several causes (see Figure. 1). The utmost reason for the introduction of PFM in a forest area is the degree of threat to the forest and the external pressure it is facing. The two second most given reasons are watershed protection and the commercial value of NTFP - only in two out of seven cases was timber of commercial value indicated as a reason. In many cases, a biodiversity inventory showing special values is one of the reasons for introducing PFM.

Figure 1. Components that were important for the selection of the PFM sites for 7 organizations.

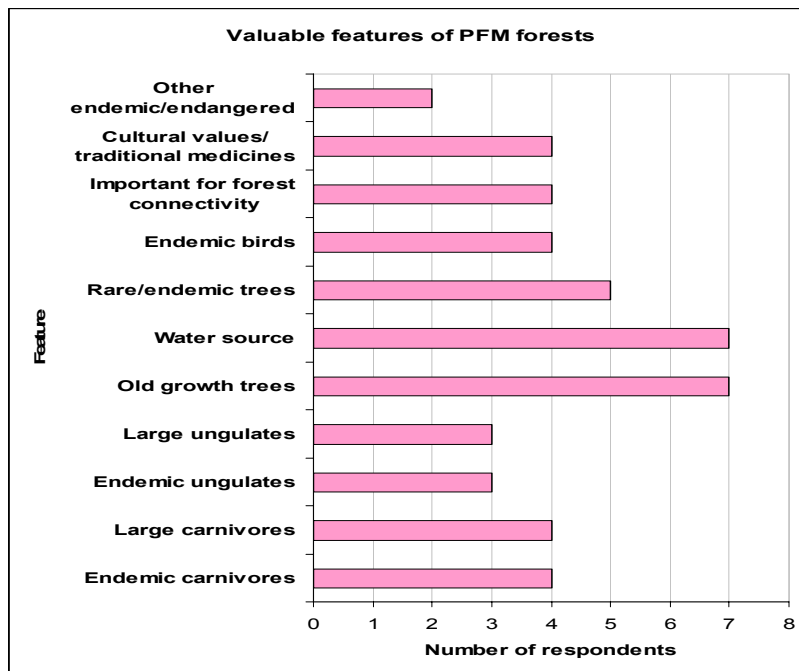


Five out of six organizations report of recent biodiversity inventories being carried out, but none report of any historical data on biodiversity. In a number of cases, the introduction is due to enabling connectivity of forest fragments for ecological reasons. Social or cultural reasons for introducing PFM are present in three out of seven cases. In a couple of cases, requests from the community itself is a reason as well. In two cases commercial tourism or ecotourism was a reason to introduce PFM.

3.1.2 Valuable features of PFM forest areas

Forests, where PFM is being implemented in Ethiopia, have a number of valuable ecological and cultural features. Some of these features are part of the reasons for introducing PFM to an area; and although the others are not reason enough for introduction, they are of significant potential or obvious value to communities or the ecosystem functions (e.g. ecosystem services, tourism potential or importance to traditional local customs). Most commonly, such forests harbour important water sources and old grown trees, but in a number of cases, they serve as habitat for endemic species of birds, carnivores and ungulates to mention a few (see Figure 2). Such animal resources, especially large mammals, can be beneficial when considering ecotourism as a source of additional income. While such activities already take place in some areas, this opportunity could still be explored by more actors.

Figure 2. Valuable features of the PFM forests reported from 7 actors



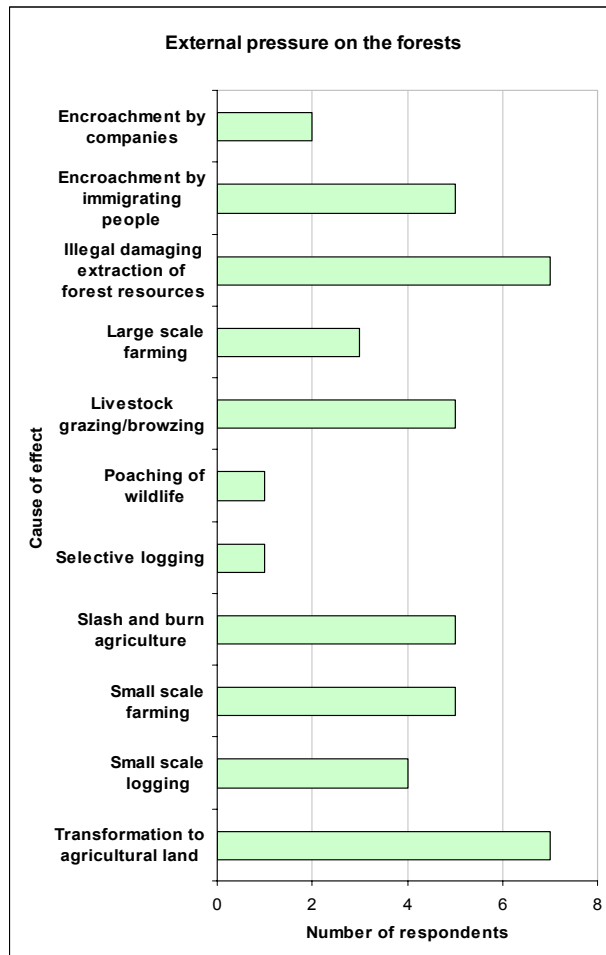
3.1.3 External pressure on forests as reason behind introducing PFM

As indicated in the beginning of this chapter, one of the important factors for introducing PFM to a forest area can be the deforestation rate in a given area. There are a series of reasons for the loss of forests in Ethiopia. The direct and indirect pressures on the forests that are now being tackled by PFM are composed of two main characteristics according to the results (see Figure 3): the first group of reasons are related to agricultural needs, while the second group of reasons are related to direct use and needs of forest products.

One third of the world's population, out of which the majority is located in developing countries, is dependent on fuel wood for their daily heating and cooking; fuel wood which is obtained from either forests or plantations (MEA). This case of dependence on fuel wood is a reality in Ethiopia. The most frequently reported drivers of deforestation in the PFM areas is the transformation of forest plots to agricultural land, and the damaging extraction of forest resources, such as fire wood. Encroachment by people from afar, slash and burn agriculture, livestock and small-scale agriculture are also commonly reported as affecting forests negatively. Yet another activity, which was reported as also having negative influence on the forests where the PFM projects are present is small-scale logging. Selective logging and poaching however are not considered as problems in more than one area.

A few organizations reported that large scale farming and encroachment by companies have had negative effects on the forest cover. One organization reported of competition for forest resources, such as coffee is increasing the pressure on the forest. This can imply that there is not enough reasonable alternative income generation available.

Figure 3. External Pressure and drivers of deforestation of forests includes in PFM, as reported from seven PFM organizations



3.2 Location of PFM in Ethiopia

3.2.1 Area coverage of PFM in Ethiopia in 2009-2010

Participatory Forest Management is quite new to Ethiopia - it was first implemented 13 years ago (Andargachew, 2009). As such, it is difficult to know the exact expanse of PFM forests and project areas in Ethiopia. Data on the current area coverage is lacking. Only by including the respondents from this study, the coverage in 2010 will be more than 211 076 hectares of forest (see table 1). Only half of the organizations that are included in this study managed to report area surface of their PFM forests. There are also a number of additional actors in PFM whose coverage is unknown to this study.

Table 1 - The forest surface coverage of a selection of PFM actors in Ethiopia.

	FZS	JICA	NTFP-PFM	ORDA	SZARDD	Total
Reported no. of sites	3	2	5	2	15	27
Total area covered in project (ha)	10 000	170 000	8 739	-	22 337	211 076
Total no. of households involved	>10 000	15 000 (2010)	505	-	4 396	29 901

NB: The table shows the PFM forest cover, the number of PFM project sites and the number of households involved in PFM activities by four PFM actors in Ethiopia. The cover between different actors varies largely in both area and population.

The largest pockets of remaining natural forests of Ethiopia are located in the south of Oromiya and Southern Nations Nationalities and Peoples (SNNP) regions (figure 4. and 5). The majority of the PFM intervention sites are located in these same regions. A smaller number of recently introduced sites are located in Amhara in northern Ethiopia. There are few if any plantation forests under PFM.

Figure 4. Forest and wood land cover of Ethiopia 2009

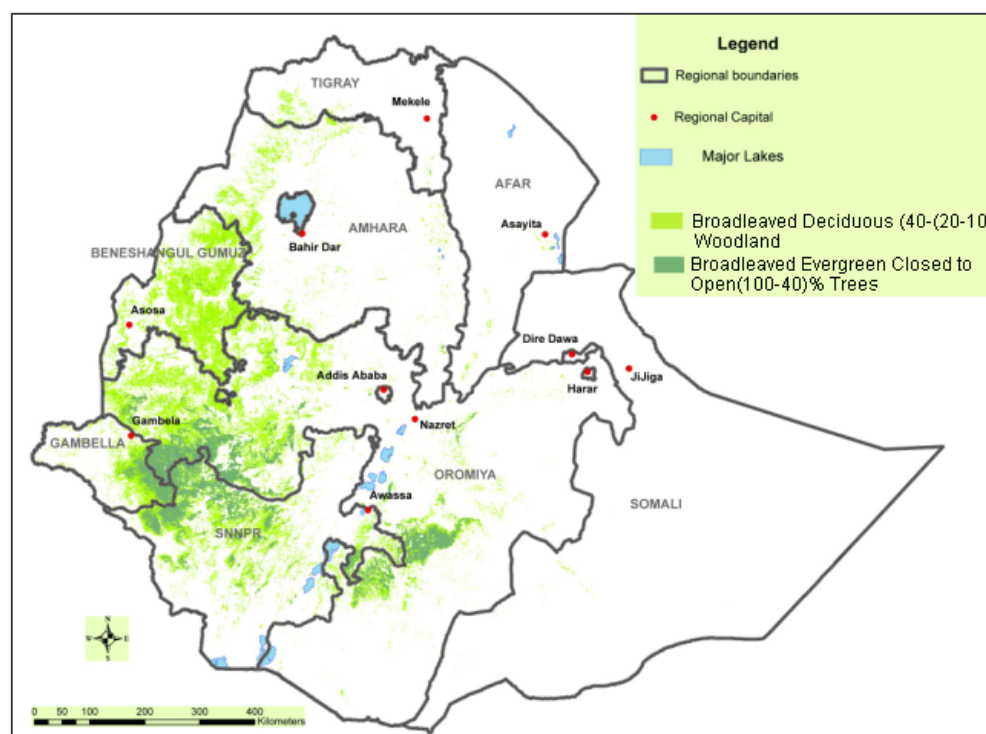
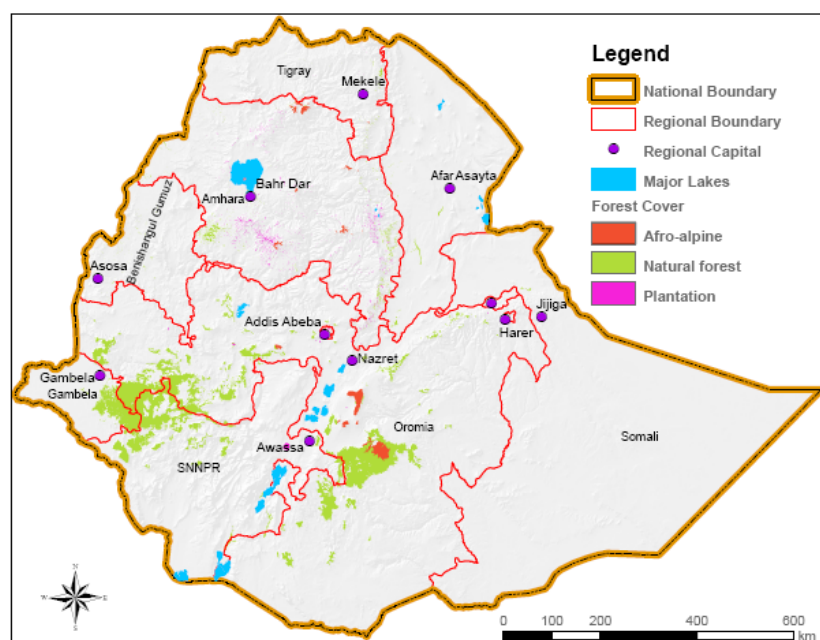


Figure 5. Natural forest and plantation cover in Ethiopia 1994- 2004



***NB:** The land cover map was derived from satellite imagery by the Woody Biomass Project. The map shows different level of details between the northern and the southern parts of the country. These differences are due to the adoption of different spatial scales and interpretation. The southern part was covered during the first phase of the project and the northern part is covered during the second phase. Year: 1994 – 2004. Source: Ministry of Agriculture and Rural Development (MoARD). The forest cover is extracted from this land cover data.*

Figure 6. Zones where PFM is being implemented by the reporting actors.



***NB:** The majority of the PFM forests consist of large homogenous non isolated blocks. The second largest part consists of discontinuous blocks separated by farmland. A minor part consists of plantations or highly degraded fragments of natural forest.*

Figures on the area of forest covered by PFM were not provided from many of the PFM organizations. In 2010, a database on the expanse of PFM in Ethiopia will be released. The work with this database has revealed that there is inconsistency among the organizations in the data they keep regarding members and forest surface, as has also been noted in this study. It is possible that the lack of area data is related to demarcation difficulties that many actors encounter. Due to the inconsistency and lack of detail of data, the smallest scale to picture PFM presence in is zonal level. PFM is present in at least 12 out of the 68 zones of Ethiopia. The zones which have PFM projects present that are represented in this study are shown in figure 6. However these zones are only covered by forest to some extent as seen in the previous maps. Some of the zones only harbour a small number of small scale PFM projects. Other zones harbour a vast number of projects by different actors, such as Bale. Each project covers all from a few hundred hectares up to some hundred thousand hectares of forest (see fig. 6).

3.2.2 Forest types and connectivity of PFM forests

The forests that remain in Ethiopia are close to each other. There are a few larger forest regions left (see fig. 4 and 5) where most of the PFM projects are being implemented. The forests that are included in PFM activities are in many cases separated by farmland. They are constituted by forest patches with some degree of connectivity or they are found as parts of larger homogenous forest blocks or forest belts (see fig. 7).

Until now, the majority of the forests represented in PFM projects in Ethiopia have been highland forests but recently there has been an indication of more lowland forests being included in PFM solutions (Andargatchew, 2009). The most frequently represented forest types in PFM are afro-montane and moist forests. Only in a few cases are dry forests included in PFM projects (see fig. 8).

Figure 7. The level of fragmentation of the forests that are represented in PFM from seven actors

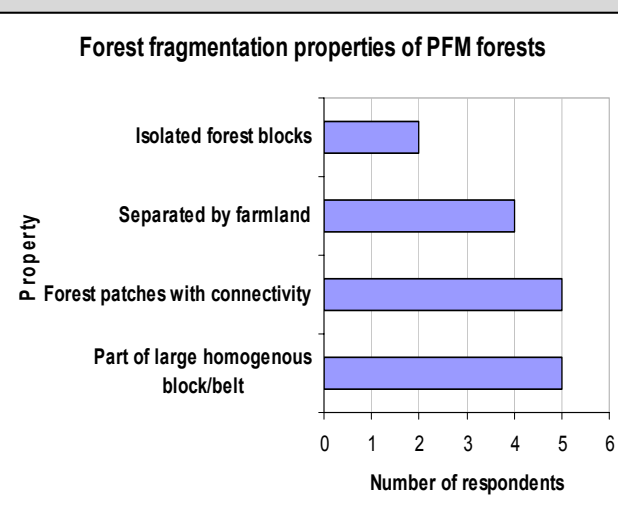
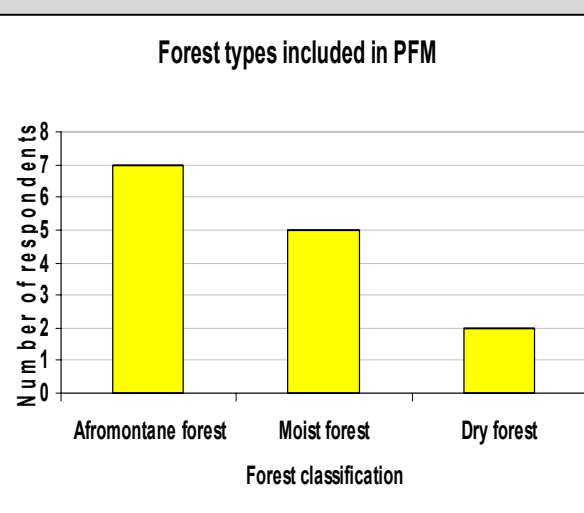


Figure 8. Forest types included in 8 PFM actors' projects



A proper overview of the number of people included in PFM activities in the country is difficult to ascertain. This is due to differences in social and administrative entities reported from the different actors. There is an inconsistency in documentation systems between them. The entities used for reflecting the expanse of inclusion of people in their projects vary from woredas, zones,

kebeles and sub-villages to communities, forest user groups, beneficiaries, household heads and individual people. An estimation of the numbers from the organizations that have reported number of households in their PFMs (see table 1) gives an indication of the vast number of people involved in PFM in Ethiopia. From four organizations the number of households involved is approximately 30,000. With an average family size of about six people, the number of people involved in PFM and benefiting from this equals hundreds of thousands if one also considers that there are a number of other PFM organizations present in the country. With the scaling up of PFM to be implemented by MoARD and FARM Africa/SOS Sahel soon the number will be a few millions.

PFM Database

To give a clear view of the cover of PFM in Kafa zone in Ethiopia a GIS Database for PFM was piloted with support from FAO and FARM Africa. It has the potential to be expanded and encompass all PFM activities in Ethiopia. It will hopefully bridge the gap between different PFM actors and enable information sharing. The database intends to give information on the following:

- Location of PFM sites;
- Size of PFM forests;
- Additional information of projects;
- Number of beneficiaries or members that are involved;
- Proportions in regards to gender/minorities/landless in the projects;
- Status of the community organizations in place (Cooperatives, Forest Management Associations etc) and the forest user groups;
- Land use and the homogeneity of the forests;
- Forest type;
- Density of PFM members per hectare.

It will give valuable background information of the coverage of PFM and the different conditions between different localities. Its use can be for evidence based decision making for land use, land allocation or as a tool to survey the state of PFM forests and protected areas. The users are intended to be PFM implementers as well as decision makers. For the database to be useful it needs homogeneously reported data from all PFM parties active in Ethiopia.

3.2.3 Commercial activities in and around PFM forests

There are a number of investments and corporate activities going on in PFM forest areas and their vicinity. Only two organizations have reported these activities not to be present. In three out of six cases the corporate activities are coffee plantations or tea estates and in two cases they are tea plantations or tea estates. In one case companies are collecting incense and gum. Whether the effects of these commercial activities are beneficial for the local communities or harmless to the environment is not shown here and should be investigated further.

3.2.4 Implementation stages of the PFM projects

There are few PFM projects that have been finalized with full responsibility handed over to the communities. Three out of eight organizations at the time of the study had transferred the management of forest areas to communities within their projects. The PFM actors that were included in this study are in different stages of the PFM process, either in investigation, assessment, negotiation or implementation stage. One of the organizations started their PFM activities in 1995 and one started in 2000. The rest started 2003, 2004 and 2009. Some of the

organizations have experience from work in other African countries before starting in Ethiopia. These were active in Tanzania, Kenya, Malawi and Senegal.

3.3 Utility of forests and forest products by communities

3.3.1 Community dependence on forests before PFM

It is difficult to determine the Importance of the forest for the livelihoods in communities living close to forest. These communities are often poor with limited possibilities. The organizations were asked to get an idea of the level of dependence of these communities had on forest products. One of the organizations answered that the dependency is very high because farming, animal husbandry and market access is low. Three organizations answered that it is seasonally high - when crops and livestock are insufficient, forest products become essential for food and income. Two organizations answered that forest resources are always utilized as complements to food and income but that alternative sources also are well available. These projects are located in dry forest areas. Only one organization answered that forest resources have never been important sources for food or income generation for the communities. In total, seven organizations shared their information. The organizations were also asked about the importance of forest products for income generation for the communities. One answered that it is not essential, rather an addition to the income of villagers. Four out of seven answered that it is essential to at least 20 percent of the community. In one case, each the forest products are considered to be essential for income generation to more than 50 percent and 80 percent respectively. This gives an indication that forest products presently play an important role for income generation in many forest communities.

In all cases where PFM later was implemented, the neighbouring communities were the ones extracting forest resources (see Table 2.). Temporary visitors from areas located further away from the forest also extracted products from the forest. In a few cases, companies also utilized the forests resource. In none of the sites it was reported that the companies conducted this extraction illegally. (However, since after introduction of PFM illegal corporate activities have started in some of the areas).

Table 2 - Responses from 7 PFM organizations regarding who extracted resources from the forest before PFM was implemented

Number of respondents	People who carry out the extraction of forest products
7	Direct forest neighbours
6	People from further away
2	Companies with extraction rights
0	Companies without extraction rights
3	People with tenure of the surrounding land
1	People with tenure of the forest
1	The customary land right holders (Kobo)

3.3.2 Utilizing forest products before and after PFM introduction

Forest products are reported to be equally important for covering direct household needs, such as food, medicines, housing and animal feed, as for generating income in six out of seven cases. In one case, it is said to be most important for income generation.

The forest products that were of highest importance to the communities before PFM was implemented are seen in Figures 9 and 10. The products are of varied importance for household needs and income generation. In general, firewood was the most important forest product for household needs, closely followed by construction wood. Honey played an important role in income generation as well as for household needs in some areas. Timber played an important role in income generation although in most cases timber and charcoal extraction is not allowed under PFM. There is a diversity of products that play important roles for households in different areas, much depending on the forest type of the area e.g. incense and grass is of high importance in the dry forests areas in the north.

In all cases, communities are allowed to access a number of non-timber forest products for household needs. The outtake of these is mostly restricted to specific species and quantities. Coffee has an important role in income generation before PFM in a number of areas and under PFM has become one of the most relied on products (see Figure 9.) Honey is not more important before PFM introduction than it is after however does become slightly less important to household needs after PFM is introduced. Non Timber Forest Products become the main income source in most of the areas after implementing PFM. Firewood (dead wood in most cases) fills an important role for income generation more often after PFM has been introduced. After introducing PFM, in most cases it is prohibited to extract timber for income generation. Only in one of the cases is timber still important for income generation under PFM. Construction wood plays as an important a role for meeting household needs after PFM is introduced as before PFM.

Figure 9. The forest products of importance for income generation before PFM

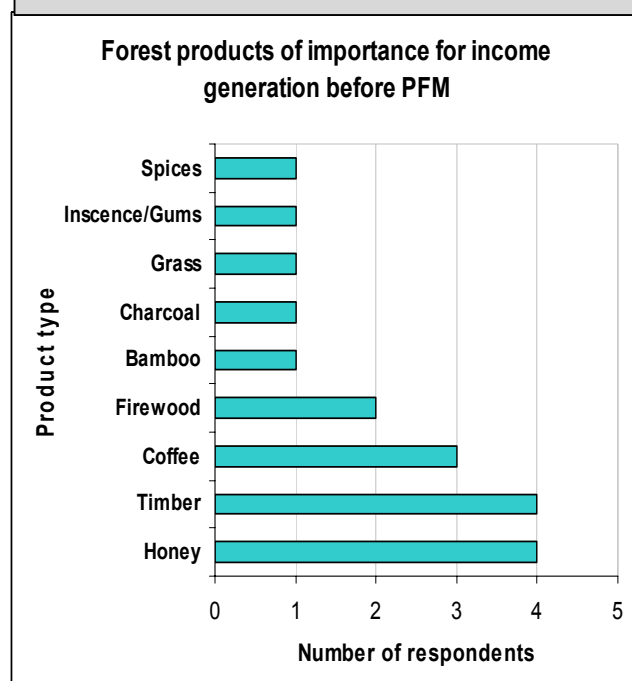
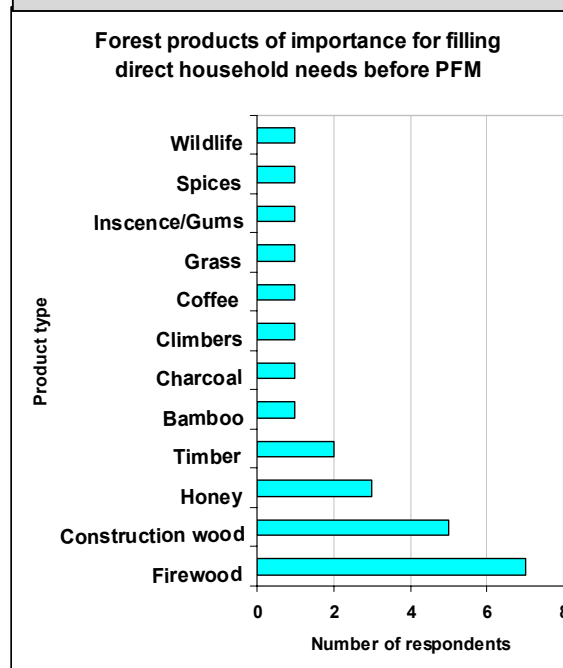


Figure 10. The forest products considered for filling direct household needs before PFM introduction based on responses from 7 organizations



The requirement to be legally allowed to make an income from NTFPs is that the community is organized and registered as a cooperative. Encouraging formation of cooperatives is part of the strategy of some but not all PFM implementing organizations.

Some PFM implementing organizations have specific activities around coffee in their projects or allow for coffee harvesting. One works exclusively on wild coffee, one on cultivated coffee and two organizations work with both types. Three actors do not include coffee at all in their activities. MoARD may work on coffee in areas where it will be relevant as part of their PFM strategy.

Figure 11. The forest products considered as most important for generating income based on responses from 7 organizations

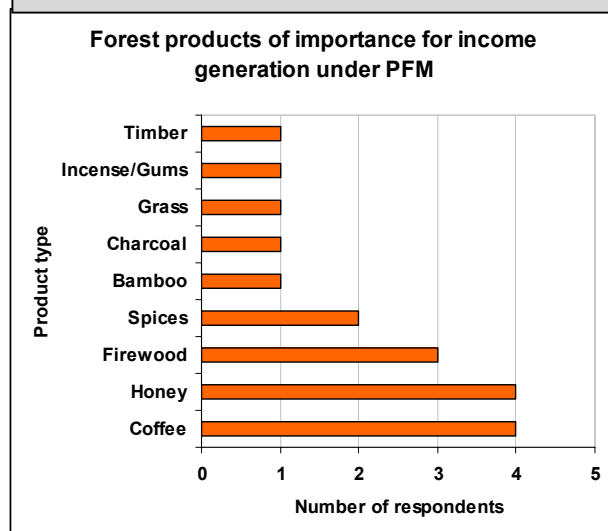
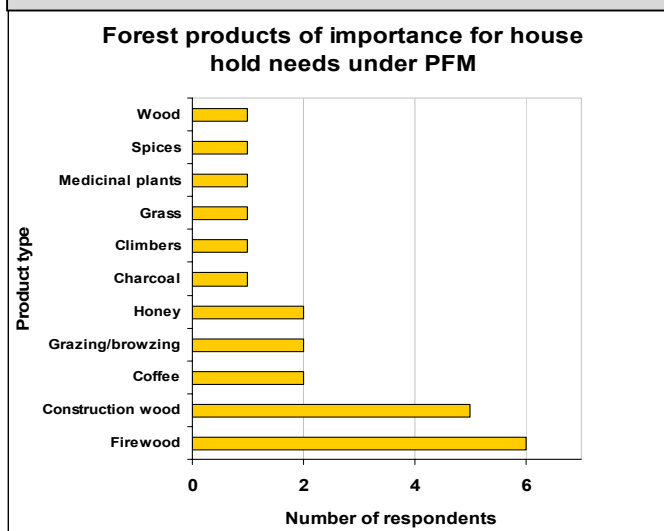


Figure 12. The forest products considered as most important for household needs based on responses from 7 organizations



Communities obviously need firewood and construction wood. If this is not accessible or its availability is limited under PFM management it might affect the livelihoods of the communities. In three out of seven projects woodlots are introduced to ease provision of wood for either household or commercial use. The species that are usually present in these woodlots are fast growing trees like *Cordia Africana*, *Grevillea robusta* and *Eucalyptus* sp. and in one case Bamboo.

3.3.3 Effects of forest resource extraction on forests before PFM introduction

Prior to PFM, the effect of resource extraction on the forest was mostly reported to have been negative. This can explain the careful regulations in extraction of forest resources included in the new management plans. No PFM organizations reported that the extraction of forest products did not have any negative effects. In fact, seven out of seven actors reported extraction in their PFM implementation sites to have differing degrees of impact on either the ecosystem itself, the forest size or quality or of having negative effects on communities locally or over a larger area, before the PFM was introduced. Results are shown in Table 3 but most commonly, it led to severe degradation of the forest with negative impact on local communities. In many cases the effect was found in an even larger area.

Table 3 – The effects of forest resource extraction on forests and communities as reported from seven PFM organizations

Number of respondents	Type of effect from extraction of forest products
1	Not affecting ecosystem or human well being
3	Extracted species were badly affected (density/behaviour etc.)
4	Severe environmental degradation affecting forest and community locally
3	Severe environmental degradation affecting forest and community in larger area
3	Rapidly reducing forest cover
1	Affecting forest quality but not size
1	Affecting forest quality and reducing forest size

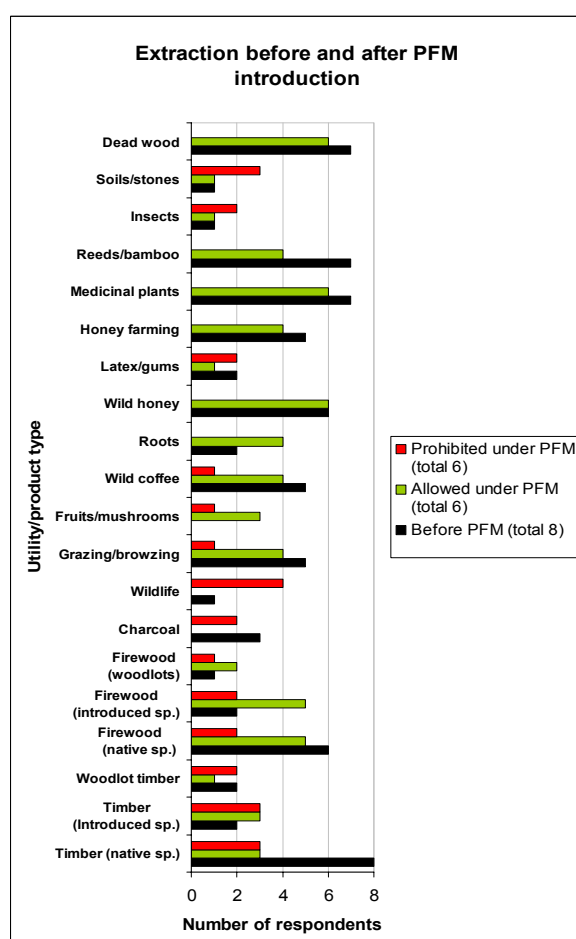


Figure 13. Chart showing the changes to forest utilization for communities with PFM introduction. The forest products utilized before PFM implementation are shown in the bottom bar. The products allowed to utilize under the new PFM are shown in the middle bar and the products prohibited to utilize under PFM are shown in top bar.

3.3.4 Limitations to forest resource utilization following PFM introduction

When PFM is introduced to a community it is accompanied by a management agreement and a plan that specifies restrictions and rights of forest utilization for the community. The utility is often strictly limited in regards to timber products from the forest, which in many cases, had been the most important source of income generation before PFM. The new management plan generally regulates extraction levels or periods in the cases where the extraction is not prohibited. Charcoal remains an important commodity for income generation in one case but it is otherwise prohibited under PFM. Bush meat and wildlife is not allowed to be hunted for in any of the PFMs and was only reported to be exercised before PFM in one case. Timber of native species that was in all cases extracted before PFM is highly regulated under PFM. Timber of introduced species is allowed to extract in more cases than it was utilized before PFM implementation but it is as often prohibited in the new management. It seems that the utility is directed towards extraction of firewood of both native and introduced species rather than timber. Dead wood is in no cases prohibited to use.

Coffee is in Ethiopia a high commodity product that can be commercially lucrative while still being ecologically sustainable to harvest in wild form. However, if one is really intending to ensure people's livelihoods and

diminish poverty, a major concern is the fact that coffee can't always compete with good quality timber when it comes to revenues that can generate income for communities. Through restricting sustainable timber extraction for income generation, in areas where coffee is not commercially viable, the communities risk being locked in poverty.

To avoid this outcome, alternative income sources that pay well must be put in place, such as sustainable tourism or ecotourism or ecologically sustainable logging for the market. Not all areas are attractive to tourists and investments in accommodation possibilities as well as infrastructure are often obstacles that need to be overcome to improve the flow of tourists, as is organization of the community. Profiling and marketing also needs to be done to attract tourists among a number of other issues.

3.4 Components of PFM design in Ethiopia

3.4.1 General components of PFM design in Ethiopia

There are some common features across the different PFM implementers when it comes to their strategies for PFM introduction and implementation. Firstly, the PFM idea is generally introduced by an external actor, such as an NGO or a local authority.

Overall, the components of PFM are concentrated around: forest development management that can include plantation and reforestation or rehabilitation of degraded lands; forest protection and utilization; monitoring of the forest and evaluation of the management following this. Emphases on these different topics vary between the implementers and are often complemented by activities aimed to improve livelihoods.

The common features across all the reporting PFM organizations when it comes to the activities introduced during the implementation of PFM are: the introduction and creation of Forest Management Associations, Community Based Organizations or Cooperatives and transferring ownership of the forest to the involved community. The latter is a possible strategy in the scaling up program by MoARD as well.

A management plan including outtake regulations is the second important part of the PFM implementation process. This is negotiated together with local authorities and communities. The preconditions for the negotiating parties can be unequal and emphasis needs to be put, not only on responsibilities, but on truthful knowledge sharing on communities rights, benefits and possibilities. This is not always emphasized during the negotiation process and a management plan is not in place in all of the project sites. Information and awareness raising of the value and importance of forests to surrounding communities is also carried out in the majority of the projects (eight out of nine).

There are some activities and design components to PFM that are not as commonly implemented across the organizations. Agro-forestry is reportedly introduced in five of nine organizations and is a possible component in the scaling up activities for MoARD. In five out of nine cases woodlots with commercial species are introduced for community use. Two of the organizations introducing woodlots also introduced agroforestry. Four out of nine programs report the introduction of alternative income sources as part of the PFM implementation.

Less frequently introduced strategies in PFM projects are: community ownership of or shareholdings in forest company; Farmer Field Schools to improve agriculture based income;

value addition of community products and improved market access and finally carbon trading initiatives and/or payment for environmental services. These activities have been each reported in two out of eight cases. Initiatives that are implemented only in one site each are: international certification of forest coffee and premium payment to communities in coffee producing areas. MoARD reports the prospect of developing NTFP opportunities and linkages to markets for these products during their scaling up project. One of the organizations that is not including features to improve livelihoods today mentions that some can be considered for introduction at a later stage.

The key components of the PFM organizations' strategies differ from each other. Some work on wider programs and others concentrate on more specific strategies. Forest management is not the main priority for communities while livelihoods are. Some examples of strategies can be outlined that reflect different emphasis on management and livelihood:

- First of all the scaling up of PFM project by MoARD is concentrating on capacity building at different levels: of woreda and kebele staff to enable support to PFM and NTFP development; at federal level for MoARD to take the lead in coordinating and monitoring PFM nationwide and at regional and zonal level to enable backstopping to field based extension agents.
- Introducing an ecoregion plan; strengthening government and community institutional capacity for sustainable land management; positioning functional and sustainable natural resource management and conservation systems that consider social needs; diversification of natural resource based livelihoods; ensuring a sustainable financing mechanism that benefit government and communities; promoting fitted legal, policy and regulatory frameworks for ecoregion planning, protected areas and community based natural resource management and finally the establishment of PFM systems.
- Concentrating on PFM strategies while including small scale livelihood initiatives such as ecotourism as well as working on PFM supporting initiatives like private land ownership registration to stop encroachment on communal land, tree nurseries and subsidizing fuel efficient techniques.

Steps for introducing PFM that are reported from the different actors have different weight on participation on the one hand and external directions on the other. Some are more top down driven and others emphasize the participation at all levels of implementation. Some outlines in the different strategies are:

- Establishing forest management associations (FMA) at community level and making an agreement with the regional government; holding farmer field schools to improve income generation from agriculture; implementing certification programs for forest coffee to improve income generation from coffee; establishing community cooperatives to allow for profit making from forest products and finally to introduce and implement forest management plans.
- A clean implementation following the steps of: making a baseline assessment; investigating; negotiating and implementing PFM. Stages that are otherwise a general part of most projects.
- PFM agreement between authority and community giving recognition of customary control of forest area; establishing FMAs who will be responsible for protection and controlling resource use, developing bylaws and the management plan; establishing private limited companies and cooperatives to market NTFP to provide benefits to communities.

- Training and awareness creation for stakeholders; participatory identification of forest resources and forest users; participatory demarcation of the forest; organizing the users; defining roles and responsibilities of government and community in management and introducing alternative livelihoods, woodlots and agroforestry.

The activities change and develop from the beginning of the process towards the end when the PFM should be self running. In the beginning they are accompanied with much awareness raising, trust building and communication. Then they drift toward the organization taking the lead when organizing the communities and introducing alternative income generation or livelihood activities. Then they develop to enable the community to run the PFM independently and finally the external organizations are phased out and the community and government remain as implementers. Some organizations concentrate on using government development agents (DAs) as implementers at the community level while others concentrate on using only their own staff resources. By using DAs one can reach a larger area, but the high turnover of people at these positions implies costs in frequent capacity building. The quality of the work also risks being lower when one concentrates on expanding as much as possible instead of assuring the quality at each site.

3.4.2 Zoning and access limitations

When implementing PFM in large forest areas it is common that some areas are set aside for protection. These zones are not allowed to extract NTFP or timber from and can include important features such as water ways. Most of the organizations report that parts of the forests where PFM is introduced is set aside for protection (four out of six organizations). Only a couple report not including a protected zone. This could be because of a limited size of the forest or because of general restrictions to forest resource use. However the reason is not clarified in the response.

In some PFM projects a human population capacity for the forest in terms of forest dwelling people has been set to ensure the sustainability of the management. This restricts the pressure on the forest further. When limiting the number of people that can utilize the forest, live in it or live in the vicinity of it, it is important to remember that it is controversial to put limitations on people as we can do on e.g. wild animals. Furthermore, it is important to have strategies for dealing with breaches of the limitations and preventing them in the first place, strategies like family planning for example. One more thing to consider when determining carrying capacities are the purpose of introducing these and what one wants to accomplish with these limitations: conserving forest areas; minimizing land degradation; ensuring a fair and sustainable flow of forest products to community or something else. An example on carrying capacity of a PFM forest is set by GTZ project. It is said to be set to 30 households per 360 hectares of forest or 12 hectares of forest per household in Adaba-Dodola. This has now been modified to 8 hectares of forest per household. Whether this improvement has an effect of the current management strategy or an adjustment of previously faulty numbers is not clear. If the former is the case, one can study and learn from the strategies implemented there.

3.4.3 Alternative income and livelihood sources

While introducing PFM in an area where dependency on or utility of forest products is high, some organizations work hard to offer alternatives to reliance on forest products. This, in turn, is intended to give further incentives to PFM members, diversify and improve livelihoods as well as relieve pressure on the forest.

Examples of additions or improvements to livelihoods introduced or promoted in PFM projects:

Beekeeping;
Nurseries;
Fuel efficient stoves;
Vegetable gardening;

Agroforestry or orchards;
NTFP development
Agricultural intensification/soil and water conservation

Among seven responding actors in this study three are not including alternative livelihood sources in their PFM strategies. Other actors have different combination strategies. One introduces fuel efficient stoves and tree nurseries. Another promotes vegetable gardens and agroforestry. A third mentions agroforestry, beekeeping, agricultural intensification and spice and fruit development schemes. A fourth concentrates on beekeeping as only additional income source. If the need for firewood is reduced by fuel efficiency, the income source from selling firewood can be increased, a higher population base can potentially be supported or damaging extraction to the forest can be avoided. Higher yielding agricultural lands or a more diverse crop base has positive impacts such as improved nutritional intake, which is especially important to children.

Sustainable Land Management in Kafa Zone- a landscape perspective

Between 2006 and 2008 FAO implemented a sustainable land management project in Kafa zone supported by the government of the Kingdom of the Netherlands. In this case, it was clear that strategies concentrating solely on farmland interventions would not be sufficient when common resource use is an important factor. Thus an integrated landscape scale approach became the promoted intervention.

It aimed at contributing to sustainable management and utilization of natural resources and the development of models that could be replicated elsewhere in Ethiopia. The ultimate goal would be to achieve “sustainable poverty alleviation and food security through the introduction of appropriate SLM techniques” and further “through the protection and conservation of natural resources, support to land certification and the development of SLM” (FAO, 2007).

The project covered a full watershed and included PFM as one of its activities. Overall the strategy included: land tenure; forestry and watershed management.

The project included activities such as:
structuring 10 PFM sites;

- developing management plans for plantation forests;
- building capacity of coffee producing cooperatives;
- holding awareness creating workshops;
- watershed development and livelihood diversification activities such as agroforestry, compost introduction and terracing;
- supporting land registration;
- carrying out participatory resource mapping;
- conducting rapid biodiversity and socioeconomic impact assessments;
- developing a wetlands management plan.

The project was deemed successful and after its implementation the PFM sites are still running effectively. However the project was phased out prematurely. The SLM/landscape scale strategy is now increasingly being implemented by other PFM actors in the country.

Unfortunately, rapid government staff turnover resulted in losing investments made in capacity building. Another obstacle affecting the implementation process was delay and difficulty in receiving funds from government.

Some of the main results that were seen during the course of the project were: the important role of women in SLM; influence on policy decision and strategy and community awareness increase.

The landscape scale strategy can be further developed.

3.4.4 Stakeholders and beneficiaries of PFM

When introducing PFM, one of the first steps is to determine the forest user group (FUG) as well as identifying the stakeholders in the area. These should be able to make their voices heard in the decision making process and throughout the process of implementing PFM. This gives credibility and accountability to the process. It can sometimes create problems when stakeholders are left out or disregarded. On the other hand it can also be very difficult to push along a project where too many stakeholders with different priorities and interests are involved.

In most cases the FUG are identified and become institutionalized only as the projects are introduced but in a small number of cases they are present even before the introduction. When determining the FUG most projects include the direct users of the forest (by five of six respondents) and as often the secondary users are included. In many cases they are determined on the basis of their situation neighbouring the forest (in four of six cases). In a few cases they are determined on the basis of the carrying capacity of the forest (two of six). In one case they are determined on the basis of an eligibility criteria set by the community.

The stakeholders that are always considered in the process of introducing PFM are the communities living near the forest or in it. In five out of six cases the local authorities are also included. In two cases the regional authority is considered as well. The historical inhabitants are included by four out of six organizations. In three of these four organizations newly arrived inhabitants are also involved in the process. Only one organization reports that downstream communities are considered as interest holders and included in the process. In one organization the scientific community is also involved as stakeholders in the process of implementing PFM. In cases where outside communities are included as PFM stakeholders it is related to the traditional user rights. In these areas, during dry spells, forest user groups far away from the forests are allowed to enter the forest areas to find grazing lands for their cattle. In other regions there are also seasonal coffee collectors included at stakeholders.

Some PFM organizations run project activities such as farmers' field schools. In the selection of participants for these activities some report of giving even representation to different community groups. Out of six organizations four make sure to represent gender evenly, two include minorities, two include landless people, one selects upon livelihood base and one gives full household membership. Only one organization does not consider even representation of different community groups.

3.4.5 Distribution of benefits, roles, responsibilities and ownership

In all different PFM intervention sites the general agreement is that the community is obliged to manage the forest sustainably and have the right to use some of the NTFPs. There are some different combinations when it comes to benefits, responsibilities and ownership among the different reported implementation sites:

- Organized community groups and regional government/forest services share the benefits, roles and responsibilities for the forest; government has the strict ownership of the forest.
- The benefits are shared between government and community; conservation, planting and selling of selected trees falls on communities; government is responsible for providing legal, technical and material support. Communities have user rights and jointly administer the forest. Ownership by both community and government.

- Communities have the responsibility for forest management with support from government and the project; ownership is government with community stewardship rights.
- Bylaws state the sharing of benefits and responsibilities by government and communities and government is responsible for monitoring and technical support.
- Joint management of the forest the responsibility lying on the government with communities partnering. Sharing of the benefits.

The majority of the answering organizations state that the ownership of the forest is transferred to the community when PFM is introduced. However in general, the government retains the ultimate ownership of the land in Ethiopia and the communities do not have the actual land titles. Some organizations prefer to call the ownership “stewardships”.

3.4.6 Management and Monitoring

Monitoring of the PFM forest is a hot topic. Its importance, effectiveness and what actors to involve is highly discussed. Generally the conclusion is that monitoring is necessary to evaluate the development and effect of the PFM and also that it is of importance for adaptive management. Only one out of seven implementers of PFM report not having monitoring in place yet.

When it comes to the executors of the monitoring the views differ on the best solution. Participatory monitoring by communities would be preferred by many PFM actors present in Ethiopia. It proves trust in these communities. At the same time it is said to be difficult to control the procedure and follow up the results if monitoring is carried out by communities. In three out of five projects the monitoring is carried out by representatives from both government and the PFM community organizations and in the rest of the cases, government and NGOs share the responsibility for monitoring. There are requirements on the skills of the government officer who carries out the monitoring and they generally need specific training such as a forester diploma. On the community side, awareness of the forest resource value and a good knowledge of the forest is required. In the scaling up PFM programme by MoARD participatory monitoring by government and community will be in place once implementation has started.

Monitoring also implies a financial cost that needs to be dealt with. How this cost should be covered is also discussed broadly. For a sustainable PFM both management and monitoring should be covered by the PFM itself which is done in only two out of seven reported cases, in one case it is also financed by community volunteer service. In most cases today, the cost is covered by actors from outside, from the initiating organization, government or by a donor run project.

The time intervals that monitoring is carried out in differs widely between all actors. The following examples can illustrate this:

- Communities patrol the forest daily and every second month government representatives patrol.
- Woreda official and NGO monitors every month.
- Development Agents and community representatives patrol every six month.
- Community and regional government patrol every three to five years.

Two important reasons for monitoring is to allow the adaptation of the management plan and allowing for evaluation of the PFM. Many actors include adaptability in these plans (4 of 5). They

allow for reviews following monitoring and adaptation of the plan when needed. The enforcers of rules and regulations in all cases include the communities themselves. They are in most cases supported by local government.

In case of disregarding of plans the procedures for dealing with these violations stretch from reprimands and sanctions to cancellation of the PFM contract.

3.4.7 Markets for PFM forest products

To increase the possibility of success when improving income generating activities from agriculture and forest products one needs to evaluate the market for the products as well as the market access. In areas far from the larger cities market access and infrastructure is generally limited. If the goal is to increase incomes for the communities in these areas it is important to enable market access for their products as well as choosing strategic products for marketing. Processing of forest products is an additional strategy to add value to them. Three out of nine organizations do not have any activities included to work on markets for PFM products. One of them explains that forest products are only allowed to utilize for subsistence which is why they have no strategy for this. The remaining organizations have different strategies for working with this, and their niches are:

- One of the actors concentrates specifically on NTFP and their potential for markets. They survey market possibilities for the products and link products to buyers and processors.
- Another actor concentrates largely on establishing business partnerships with coffee exporters which enables partners to purchase coffee directly from PFM cooperatives without going through commodity exchange. They also explore international marketing channels for the coffee.
- MoARD will be exploring market linkages and develop these when scaling up PFM.
- One more organization works on developing natural products and a market for these.

3.5 Results from introducing PFM

3.5.1 Changes to community livelihood and engagement following PFM

Introducing PFM in communities adjacent to forests in general brings considerable changes. The utilization of forest products is usually restricted and quotas for extraction are lowered to ecologically sustainable levels. If the allowed utilization is enough to be socially sustainable is an important question.

Positive impacts on communities' livelihoods after PFM introduction are reported from two thirds of the PFM actors. The impacts differ from place to place varying from a remarkable increase in living conditions, increased health, eradication of malnutrition and some degree of increase in income. Despite the income increase, still not all families can afford schooling for their children. One positive impact reported is that the household resource in terms of NTFPs is secured legally. At some sites there has been an increase in the utilization of NTFP by the community following the introduction of PFM. In some areas there are also improved marketing possibilities thanks to the PFM introduction. Despite this the general income from NTFP is kept rather low in the reporting areas. Only coffee, honey and spices are said to offer any significant contribution to incomes and these products are not available in all areas. In some places the reliance on coffee for income generation is high, with proportions of up to 80 percent but whether this is an outcome from PFM implementation or was the state before remains unclear.

During the process of introducing PFM some actors arrange exchange visits to earlier PFM projects and most actors have activities aimed at increasing awareness and educating the community about the forest. As a result, communities feel encouraged to proceed with the PFM and their awareness and knowledge of forest value and user rights generally increase during the introduction process. Exchanging experiences with other PFM communities can also be an important component to provide input and ideas along the way to enable development of the PFM and encourage entrepreneurship which in turn can improve livelihoods further.

Following the PFM implementation there are reports from the actors of commitment from the communities to protect their forests by following the resource use regulations, actively managing and patrolling the forest area.

3.5.2 Forest cover and quality change since PFM introduction

The general consequence of introducing PFM is that the forest gains some degree of protection by the community and thus many of the negative impacts that were previously affecting the forest decrease. This generally has positive impacts on the forest. In two thirds of the areas where PFM has been introduced forest cover is reported to have ceased decreasing (but yet without increasing in area). In a third of the areas, forests are increasing through natural regeneration and in one site it is increasing through planting of indigenous species. In none of the areas is it increasing through planting of introduced species. Likewise the quality and services of forests has ceased deteriorating in a quarter of the areas. From two thirds of the sites reports come of improvement of forest quality in terms of recovering biodiversity, higher seedling survival and improved water quality. In some cases the general resource status has recovered and improved following agreements of seasonal access to them. Whether these reported impacts are cause and effect is not possible to determine. Some more definitive positive effects of PFM are some cases where degraded lands are being rehabilitated by tree plantations and area closure implemented following the PFM introduction. Whether these positive impacts will have secondary positive effects on e.g. the landscape and watersheds remains to be evaluated as PFM progresses in the country.

3.5.3 Changes in extraction of forest products since PFM introduction

Introducing PFM includes putting limitations on forest resource extraction. Together with the commitment in management of the communities it has the consequence that the outtake levels of forest products from the forests decreases. In two thirds of the cases reduction and changes in extraction of forest products has been observed since PFM was introduced. Timber harvesting and charcoal production was reported to have ceased completely or decreased in extent. The outtake levels of firewood and bamboo has in some areas stopped for commercial purposes and in others fallen to sustainable levels. Timber extraction was part of the management plan in one of the sites and thus the extraction did not change. Free access to the forests is reported to have been diminished in all areas which is likely to be having the effect that no external actors are encouraged to access forest resources. However in a few areas an increasing pressure and extraction on neighbouring forests is being experienced. Some actors cannot confirm the changes to extraction by data from inventories but have to trust in reports from the communities.

3.6 Challenges, successes and opportunities

3.6.1 Dealing with difficulties along the way of PFM implementation

The PFM actors in Ethiopia are experiencing a variety of hindrances throughout implementation of their projects. These may in some cases cripple the effectiveness and success of the PFM projects. These obstacles are of different nature:

- Social
- Financial
- Administrative
- Conflicting motives
- Policy related
- Contradictory agreements
- Moving the deforestation problems

At the local level these obstacles include: resistance and scepticism from communities when introduced to the concept; boundary disputes during the delineation of the forest and difficulties in building mutual trust between farmers and implementers. The way to deal with these is commonly to increase the awareness within the community through frequent activities and meetings and to include all stakeholders and involve respected community, religious and administrative leaders in the participatory process and the development activities.

At the administrative level, difficulties encountered include financial limitations for carrying out activities as well as for expanding. Finding donors can be challenging and sometimes as a solution the activities are implemented bit by bit as funds become available. In other cases the financial problems are dealt with by all community members' participation in development activities and thus sharing the costs.

The support from government institutions at both regional and local level is reported to be inconsistent and sporadic. Also the high turnover of officials in key positions, e.g. development agents and government staff, as well as the lack of clarity in policies and regulations for ownership and utilization rights is considered to be affecting the development of PFM projects negatively. These issues are difficult to handle for the actors and they are hoping for development in the engagement of government organs as PFM is being scaled up in Ethiopia by MoARD. The challenge of a constant turnover of officials in important positions is also faced elsewhere in East Africa, e.g. there is a lack of continuity in key positions in the national forestry authority and in CBOs reported from Uganda. This is reported to lead to delay in the spread and development of PFM due to the slowing of the negotiations of agreements between the parties (Proceedings from Uganda 2008).

In some cases of training and exchange the actual engagement of participating development agents is minimal. Many participate only for the daily allowance that is paid and not for the actual learning experience, and have protested to participate only if they are provided with raised allowances.

The incentives for PFM introduction from government and community sides often have different emphasis on protection on the one hand and livelihoods and utilization on the other. This can have implications for the social and ecological sustainability of the projects and compromise its success.

There are shortcomings when it comes to offering sufficient economic incentives for communities to join in PFM. These are largely related to policy and legal limitations that restrict business and income earning from forest resources for forest management associations. For resolution to these issues some PFM actors are working on policy advocacy.

In some areas there are illegal private investments going on in the state forest areas that compromise the sustainability of the PFMs. There are also contradictory agreements made for overlapping forest areas where external corporate farming gets licensed in PFM forests. When scaling up and emphasizing PFM in Ethiopia, the government needs to commit to their agreements. If this fails there is risk of the intentions and goals of PFM being undermined and lost.

When restricting the use of a particular forest area there is a risk of redirecting extraction pressure to other forest areas as has been reported from one of the PFM actors. Also by limiting the defined user group and missing stakeholders, one risks increasing social and economic indifferences between neighbouring communities. This can be the case where one may still illegally extract timber from neighbouring forests while the PFM community is limited to use only NTFPs or in situations where PFM communities gain revenues from marketing NTFPs and other communities are left without. This unequal distribution would call for the extension of PFM to neighbouring forests and communities and working at a landscape scale.

The main conclusions that were drawn from the encountered obstacles show some key points to take into consideration to enable successful implementation of PFM. The following conclusions were stated by the organizations:

- Before the PFM process can even start it is essential to take time to sensitize the community and local government to the concept and get them onboard and become part of the process. The local government is especially important to have onboard for facilitation and negotiation since NGO mandates are limited.
- Overall transparency and a good approach to the community builds trust for the concept and eases the introduction and implementation of PFM as well as problem solving along the way. Undermining of traditional knowledge and local culture which would damage the process can be avoided by especially involving key people from the community and letting them make their voice heard.
- Clear roles and TORs need to be defined for all actors especially to committees and planning teams. There must be a clear commitment and accountability from involved actors at all levels and no contradictory actions carried out.
- Securing budget is important to enable smooth implementation
- Clear policies are fundamental to success of PFM and must state responsibilities, tenure rights, user rights and benefits for the parties.
- The motives and aims for PFM in Ethiopia need to be clarified and kept transparent. As part of this, consensus is needed between all PFM proponents at all levels.
- The communities' demands for firewood and charcoal need to be filled not to put too much pressure on neighbouring forests. For this, offering fuel saving technologies and alternative fuel sources should be more widely implemented.

3.6.2 Ingredients for success

The components that are reported to have been important for successes in the different intervention areas are:

- Collaboration, involvement, continuous follow-up and support of relevant regional and local government sectors.
- Comprehensive and unified understanding within project staff at all levels including training of all field practitioners.
- Making use of and strengthening already present traditional systems; repeatedly consulting the community; communicating and building consensus with local elders, politicians and religious leaders and recognizing traditional knowledge and customary rights.
- Linking income generation to forest management as well as improving market access for NTFP forest products.
- Enabling exchange of experiences between farmers and communities at different PFM sites.
- Exchange between farmers of more informal character can have positive impacts on neighbouring communities. It often leads to farmers copying the methods that are introduced in the PFM areas, such as farming spices in their home gardens for income generation. Thus the success spreads to indirect beneficiaries apart from the directly targeted ones.

3.6.3 Financial sustainability of PFM

One of the main concerns and critiques for PFM as a sustainable solution for tackling deforestation and poverty is the financial implications it brings. Projects are usually introduced by external actors who cover their direct costs. Often the projects have to struggle with financial limitations, thus restricting their effectiveness during implementation. The second challenge comes as these actors phase out. A self-financing mechanism needs to be in place for the sustained success of the PFM. If this is not in place, the enterprise risks being undermined and eventually fails or remains crippled and not leaving any justifiable positive effect for either community or environment. Currently none of the PFM projects included in this study have such a self-financing mechanism in place. They all are aiming at financial sustainability but have not yet found the solutions. Currently all but one requires external support for its implementation. The one project that reports not requiring external support has been extremely costly on the one hand but on the other it has managed to cover large areas of forest under PFM. The actual management plans are not yet being implemented but a high number of communities have been involved and the management should soon be in place. The members of these communities make good revenue from NTFP as a result of the project, but the sustainable self financing mechanism is still not in place.

Problems that have been observed elsewhere in East Africa when implementing PFM and that have crippled the process and goals of PFM are visible also in Ethiopia. Rather than facing the same problems Ethiopia can benefit from learning from other's experiences and mitigating the problems before they are even encountered. Some of the problems and solutions that are already suggested are:

- Insufficient knowledge in communities of their rights, duties and entitlements when negotiating the terms of PFM that needs to be strengthened in Kenya (KEFRI, Proceedings from Uganda, 2008). Today the communities are in an inferior position when negotiating

with authorities about the management which renders them to end up with fewer benefits and more responsibilities in the final management agreement.

- Since PFM doesn't generate direct revenues it isn't prioritized in the national forestry authority's operations in Uganda. Also there is a lack of resources in manpower and finances that prevents true efficiency. (Proceedings from Uganda, 2008)
- Interference of national and local politicians in the responsible management of forest areas is noted as a problem in Uganda (Proceedings from Uganda, 2008).
- In Uganda there are suggestions of stipulating minimum standards for the communities' benefits to avoid the imbalance in power relations between parties when entering the agreement (Proceedings from Uganda, 2008).

3.6.4 PFM opportunities from climate change

Successfully managed PFM forests, that don't suffer from deforestation and prevent the soil erosion, contribute to mitigating climate change. There is a general awareness of the Climate Change issue among the PFM actors but the strategies to deal with it differ from actor to actor. The importance of understanding of and carrying out mitigation measures for climate change such as stopping deforestation and reforesting degraded lands is on the agenda for a small number of projects. One PFM actor is actively encouraging communities in non-forested areas to plant trees individually or collectively to be able to benefit from Reducing Emissions from Deforestation and forest Degradation (REDD) and Clean Development Mechanism (CDM) project opportunities. One more organization is considering incorporating REDD and adaptation to climate change in their PFM strategy. The scaling up of PFM project by MoARD is exploring REDD and CDM and voluntary carbon markets for their future PFM projects. A third of the organizations are examining the possibility of or have initiated the process for payment of environmental services (PES) through carbon offsetting. Some actors are piloting PES and waiting for the results before extending. Since many of the actors are reporting challenges with financing and the long term financial sustainability of the PFM projects, the income from climate change mitigation initiatives, such as carbon trading, can offer opportunities for both financing for management activities and give incentives for the communities to keep their forest by additional incomes. However for investors to be interested they need security. One needs to be able to guarantee results and sound use of their investments.

3.6.5 Future scaling up of PFM in Ethiopia

PFM is a growing strategy for dealing with poverty and environmental degradation in Ethiopia. The Ministry of Agriculture and Rural Development (MoARD) is currently in the initial stage of scaling up PFM in Ethiopia. The project start-up was in June 2009 and the full implementation will start as from June 2010 and run until 2014. This will in turn increase the area covered by PFM to the year 2014. In one region alone the expansion can cover even more than 300 000 hectares of forest. The scaling up activities of PFM by MoARD will be located to Oromiya and SNNP regions and to some extent also in Amhara. PFM will also be introduced for the first time in Benishangul Gumuz region in the west. In total, a number of 349 kebeles will be included in 31 woredas. FARM Africa/SOS Sahel is an NGO that will be working parallel and in mutual cooperation with MoARD on scaling up the project. The span of activities and their specifics are not yet fully decided because of the early stage of the project. FARM Africa/SOS Sahel have previously implemented PFM projects in Bonga, Borena and Chillimo. The project is the second phase of their PFM activities in the country and the current focus is on strengthening sustainable livelihoods through improved forest management. It includes important components of information and experience sharing between actors on PFM as well as forest policy foundation and institutionalizing PFM in more regions. (PFM-WG, 2010) The distribution of the intervention

sites for FARM Africa/SOS Sahel and MoARD are overlapping in some woredas to ease sharing of information as well as training of project staff. In February 2010 MoARD and FARM Africa/SOS Sahel jointly launched the two EU funded projects for scaling up PFM in Ethiopia during the PFM working group meeting in Nazareth.

Apart from this large scale implementation programme, other actors are continuing their PFM work and are introducing it to new areas. OFWE report that GTZ-SLM PFM runs an up-scaling program carried out by AMBERO-GITEC in four forest sites. NTFP-PFM are also planning to scale up their activities to more areas and at the time of writing were waiting to get co-management with government in order to ensure the long term sustainability of the PFM. The NGO will support financially and technically.

4. Conclusions and recommendations

Forests under Participatory Forest Management are expanding in coverage in Ethiopia. The management strategy has good intentions to sustainably manage forest land and contribute to poverty reduction. It often leads to improved forest and environmental conditions. However it still faces problems of leakage and financial sustainability. It is also unclear whether it actually reduces poverty. Whether the management strategy can really lead to the desired results in a cost effective manner needs to be investigated further and as more and more projects are implemented there will be a broader data amount to base the conclusions on.

Ensuring that funds are sufficient before starting the PFM process is an important consideration as is allowing a lot of extra time for the implementation. Being able to finalize projects and see the results before phasing out is vital. To leave a project incomplete affects the trust and commitment of communities.

Implementing PFM in a Sustainable Land Management strategy has been shown to be effective and successful. This can minimize secondary effects on neighbouring forests as well as provide a more comprehensive solution for the entire area. Putting larger emphasis on activities outside of the forests is an important contribution to sustainability of the PFM. By improving the output from farm plots and introducing alternative or more efficient fuel consumption possibilities one can reduce pressure on the forest.

The incentives for government institutions as well as communities to engage and commit to PFM are in many cases unclear and insufficient. Communities need proper incentives and benefits that rightfully outweigh their investment in management and their limited access to the forests. It is also unclear whether user rights are really secured under the present agreements. Government, on the other hand, need clear incentives to ensure their continued engagement and investment in the field. Managing forests is a long term investment which requires commitment and clear incentives. Stable and clear policies are often pointed out as necessities for PFM to develop and succeed. Strong and well functioning institutions are considered to be prerequisites for good forest conditions (ECFF, 2010). PFM is not the only solution to reach sustainable forest management or for securing livelihoods in forest areas.

PFM organizations in Ethiopia are limited in their cooperation and communication in-between the organizations. They need to be more organized, make better use of the PFM working group (PFM WG) for exchange and need to follow up the commitments they have made in this forum. Apart from a high degree of cooperation between some organizations there is also an

unbeneficial degree of competition between some actors. This does not benefit the overall goal of achieving poverty reduction and environmental sustainability in Ethiopia's best interest. The responsibility of MoARD in taking the lead in PFM is large and must be given priority in resources to be able to achieve what they have set out to. The PFM actors are also not well organized in their data gathering for their own projects or when it comes to data sharing.

Few organizations working on PFM in Ethiopia include climate change modalities in their strategies. The possibility for benefiting from these and the counter investment and guarantee that needs to be made is not readily examined.

More work needs to be put into developing clear policies regarding forest-user right security and the accountability of government organs.

A proper evaluation of social, economic and environmental impacts of the PFM is necessary and timely. It should ascertain whether or not PFM is truly beneficial in reducing poverty and ensuring environmental sustainability in Ethiopia. Furthermore, the cost effectiveness in comparison to alternatives to reach the objectives of social and ecological sustainability needs to be evaluated to see if the current strategies are justified from social and economical perspective or if revision of strategies are needed. This evaluation should be performed by a neutral actor and be supported by all PFM actors in the country, government and NGOs alike.

Government institutions and officers need to be clear in their positions and stay active in their commitment to PFM to improve the chances of successful PFM.

More effort needs to be made to finding a solution for the financial sustainability of PFM as for the incentives of PFM for communities and government. At the community level, clear benefits and incentives are needed that rightfully outweigh the investments that are put into managing the forests. At the government level, incentives are required to ensure that strong engagement continues and priorities on how to best manage forests and what investments to make will not change. One strategy to consider can be sustainable timber extraction for income generation. The benefits from this can be shared between communities and government. Timber harvesting and all other strategies that are introduced to improve incomes of people need to be combined with improved market access and work on value addition. When it comes to timber, one can also explore possibilities for processing of the timber in multi-cooperative sawmills to increase the value of the product further and create job opportunities. The possibilities for PFM to reach past subsistence for communities and into development needs to be explored and emphasized.

The agreements that are made between communities and government need to secure a continuous commitment to the rights of communities. The government commitment needs to be stable without contradictory actions to ensure trust and dedication to the agreement from the community side.

Strategies to give incentives for staff to stay in their positions for the full duration of the projects must be developed to ensure that investments in capacity building are not lost. Also general regulating agreements with government for daily allowances for the different organizations can be a solution to avoid conflicting situations.

Planning and introducing PFM should more often, where it is relevant, be introduced in a landscape context strategy to avoid leakage. This can be in the form of sustainable land

management covering e.g. forest as well as agricultural areas and communities or across multiple forest compartments at once.

Specialties from different organizations should make use of and knowledge sharing of best practices should be encouraged e.g. by holding capacity building workshops under the PFM Working Group umbrella. Also the database for PFM should be made good use of and accurate and detailed information should be shared by all actors to this forum. The organizations need to keep a systematic record of their projects' coverage.

The climate change dilemma should be seized as an opportunity for PFM actors to safeguard economic incentives for communities and government to engage in PFM. Initiatives like REDD should be further investigated for its opportunities for PFM. One also needs to make investigation in counter actions and guarantees for the investors. One should be aware of the opaqueness of long term commitment in REDD and similar climate mitigation schemes. Thus such enterprises should still be complemented by other initiatives, such as sustainable tourism or sustainable logging.

FAO can be a beneficial and active partner in the investigation and developing of a self-financing mechanism for PFM that can be adapted for different areas and organizations.

Further suggestions for FAO are to investigate, coordinate and develop packages for utilizing climate change modalities as an opportunity for PFM to safeguard economic incentives of the involved actors in PFM.

FAO can finally also carry out a proper evaluation of PFM's ecological, economic and social results as well as its efficiency in providing sustainable development in Ethiopia.

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Annex I Contributing PFM actors and contact persons

Bale Eco Region Sustainable Management Programme (BERSMP), a joint programme of FARM Africa and SOS Sahel-Ethiopia	Participatory Natural Resources Management Advisor, Assefa Bereket
Frankfurt Zoological Society	Senior Technical Advisor, Dereje Tadesse
Japan International Cooperation Agency Participatory Forest Management Project in Belete-Gera Regional Forest Priority Area. Phase 2	Chief Advisor, Tsutomu Nishimura
Movement for Ecological Learning and Community Action-MELCA Mahiber	Program Coordinator Befekadu Refera
Ministry of Agriculture and Rural Development, Natural Resources Management Directorate European Commission funded Scaling-up PFM Project	Technical Assistant PFM, Peter McCarter
NTFP-PFM Project SW Ethiopia	PFM Specialist, Ahmid Said; PFM Advisor, Peter O'Hara; Project Coordinator, Bekele Haile
Oromia Forest and Wildlife Enterprise	Regional Counterpart Coordinator for Bale Eco-Region Sustainable Management Program, Alemayehu Nigussie
Oromia Forest and Wildlife Enterprise Finfine Branch Office	General Manager, Batu Meskelu
Organization for Rehabilitation and Development in Amhara	Dr. Yehanew Ashagrie; South Gonder Biodiversity Highland Project Coordinator, Abebaw Zeleke
Sheka Zone Agriculture and Rural Development Department	NRM Work Process Coordinator, Tadesse Shobeno; Head of Sheka Zone Agriculture and Rural Development Apartment, Tilahun Bekele

Further organizations that are working on PFM in Ethiopia are:

- Coffee Forest Forum
- Forum for Environment
- German Agro-action
- GTZ
- SUNARMA-Sustainable Natural Resource Management Association

There are likely more NGOs and organizations working on PFM in Ethiopia that have not come to the knowledge of FAO in time for this survey.