Making forest conservation benefit local communities: participatory forest management in Ethiopia

Mulugeta Lemenih, Claire Allan and Yvan Biot
Making forest conservation benefit local communities: participatory forest management in Ethiopia

Key Messages:

- Command and control approaches to protecting common property resources such as forests and rangelands, without actively involving local communities, have failed to control deforestation and habitat destruction.

- Farm Africa pioneered the introduction of participatory forest management (PFM) to Ethiopia in the 1990s. This involved developing formal management agreements between local communities and government with benefit-sharing clauses that act as incentives for local communities to manage the forest.

- The approach has evolved from pilot stage and has been adopted by federal and regional governments as a proven model of forest management. It now forms the institutional framework through which carbon projects such as REDD+ and other ecosystem services schemes are implemented in the country.

- From an initial emphasis on conservation and the livelihoods of forest-dependent people, the focus now is on raising smallholders’ incomes through better market linkages for timber and non-timber forest products and the monetisation of carbon stocks and watershed protection.

- The approach illustrates how forest conservation can benefit smallholders and how local communities can be allies in government efforts to protect resources for future generations.

July 2015

Acknowledgements: Over the past 30 years, Farm Africa has been privileged to work with many funding and delivery partners to develop our PFM approach. We would like to thank the European Union, the Royal Norwegian Embassy in Ethiopia, the Mitsubishi Corporation Fund for Europe and Africa, the UK Department for International Development and other funders for their financial support. We would also like to thank SOS Sahel who have partnered with us throughout the development of our forestry programmes in Ethiopia. This support has been invaluable to developing and challenging our approaches to constantly improve our forestry work. We would also like to thank the Government of Ethiopia and the Government of Tanzania for their partnership, facilitation and leadership. Farm Africa is solely responsible for the content of this report.

Cover image: On the look out for forest coffee in Ethiopia’s Bale Eco Region. Photo: Farm Africa
Today less than 4% of Ethiopia’s land is forested, compared to around 30% at the end of the 19th century (WBISPP, 2004). Poorly defined forest property rights and insecurity of tenure have contributed to this deforestation. In 1975 forests were decreed state assets, shifting full ownership, management responsibilities and use rights from private owners and local communities that had managed forests since time immemorial to central government. This change in management was unable to stem the numerous threats that economic development posed on forests, which found themselves under a de facto open access regime.

Forests offer considerable potential for sustainable production of high value timber and non-timber forest products (NTFPs), such as coffee, honey and spices. However a forest management system that prioritised forest protection over production stifled the development of forest-based businesses and further alienated communities from managing and benefiting from forests. Redolent of Hardin’s ‘Tragedy of the unmanaged Commons’ (Hardin, 1968), individuals were incentivised to exploit forests unsustainably, or convert them to other land uses, without investing in proper land management, as future access rights remained uncertain. As forest use was deemed illegal, any product extracted could only be traded informally, at lower prices, making forest-based livelihood activities less attractive than alternative land uses. Communities understandably saw limited value in conserving and managing forests, driving widespread and rapid deforestation.

In the meantime, Ethiopia has seen rapid population growth, from 18 million people in 1950 to 98 million today, with 80% in rural areas (UN Department for Economic and Social Affairs 2015). This population explosion has further exacerbated deforestation, through increased demand for farm and grazing lands, settlement spaces, and wood for energy and construction. Yet millions still rely on the dwindling forests to fulfil part or all of their livelihood needs (Lemenih, 2012).

Various attempts to arrest the rapid decline in forest cover, including reforestation and afforestation projects, have proved unsuccessful largely because they failed to address private incentives. Only when local communities are recognised as key stakeholders and mutually beneficial management arrangements are in place can they be effectively engaged to fill the institutional gaps that appeared when forest management was centralised.

Participatory Forest Management (PFM) emerged as a potential solution to this institutional vacuum and resulting deforestation. The model creates a framework for collaborative forest management between local communities and government forestry agencies. Under PFM, the parties enter into mutually enforceable agreements that define their respective roles, responsibilities, benefits and authority in the management of forest resources. These agreements are ratified by all parties through a forest management agreement (Warah, 2008).

In sharp contrast with the old ‘command and control’ system of forest governance, PFM recognises local communities’ stake in managing and improving the condition of the forests, rather than characterising them as an inevitable destructive force. PFM in Ethiopia has emerged alongside a broader global movement towards decentralised forms of natural resource governance (Larson and Ribot, 2004) that try and align environmental protection with economic development.

Participatory forest management

Farm Africa pioneered the introduction of PFM in Ethiopia in the mid-1990s in partnership with local NGO SoS Sahel Ethiopia and along with other agencies such as the German development agency GIZ (then GTZ). The approach was born from a workshop in 1994 designed to raise awareness of deteriorating forest conditions and share experiences from Southeast Asia where

1 Italics added by authors

2 ‘PFM’ encompasses diverse arrangements of shared rights and responsibilities between government and local communities. The spectrum ranges from full control by community (also called Community-Based Forest Management), through Joint Forest Management (JFM) to Participatory Forest Protection.

3 Where appropriate, it can also include private sector actors with a stake in the locale.
involving local communities in forest management was being rolled out with some success. In the same year, Farm Africa and SOS Sahel organised a study tour to India for Ethiopian government forestry experts to witness the success of government/community partnerships on the ground.

Ethiopia’s first pilot project was launched by Farm Africa/SoS Sahel in 1995 in Chilimo and Bonga. Subsequently, several other organisations began pilots of their own. These trials demonstrated the potential of the approach in diverse forest types and socio-economic settings and served as basis for scaling up and policy recognition. The Oromia Regional State became the first to officially recognise PFM in 2000, by forging formal agreements with communities. Box 1 illustrates the process as recorded in the first written guidance produced by Farm Africa and its partner SoS Sahel.

The pilot phase demonstrated how PFM projects could be implemented successfully and showed the potential of the approach for positive impacts on forest conditions and rural livelihoods. Trust in communities’ accountability and ability to manage forests grew and broad recognition and acceptance of the approach increased systematically at all levels of government. Since 2000, other development partners joined the initiative, and the geographical coverage of forest area under PFM increased substantially.

Today PFM is formally recognised in forest proclamations of Ethiopia’s Federal Government and several regional states. The approach has expanded significantly. Our own data suggests that nearly 40% of the country’s forest resources are now under some form of PFM, although Winberg (2010) is more cautious. The government is committed to taking the approach to scale and, through the Ministry of Agriculture (MoA), is currently implementing two large PFM projects. A Farm Africa PFM Project, supported by EU, covers 254,000 hectares of forest in four regional states. GIZ is integrating PFM into the government’s Sustainable Land Management Programme (SLMP) through a programme called PFM-SLM, working in forests in and adjacent to watersheds in three regional states.

The formal harmonisation of the approach across actors and programmes represents a key milestone in the evolution of PFM in Ethiopia. Many PFM actors (including Farm Africa/SoS Sahel,

Box 1: PFM in practice

There are several phases to the establishment of a PFM system. The first written guidance (Farm Africa/SoS Sahel Ethiopia, 2007), as well as the more recent harmonised national guidelines, present a three-phased approach:

The first focuses on investigating current and past forest conditions. Community forest management groups and government foresters clearly define who the forest users are and how they use the forest (stakeholder analysis), conduct participatory forest resource assessments to understand management needs and explore forest-based livelihood opportunities.

The second involves negotiations on what actions can improve forest condition and exploring rights and responsibilities held by communities. A forest management plan is prepared and a co-management agreement signed between community and government through transparent negotiation.

The final phase involves forest management actions to improve forest condition and sustainable use. The forest management and utilisation plan is translated into practice including the sustainable harvest and marketing of forest products.
widely held belief that deforestation was driven by poor farmers seeking to increase production through an expansion of their land assets led to increased efforts to increase the productivity of agricultural land as a means of diverting farmers’ attention from forests.

However, initial efforts to tempt away farmers from forests by generating greater income from agriculture proved counterproductive as they intensified deforestation to further expand agricultural land (Temesgen et al., 2007; Temesgen and Lemenih, 2011).

It thus became clear that, if forests do not represent an economic asset, they are not managed well. Promoters of the PFM model responded to this challenge by refocusing efforts on ‘making forests pay’. In this revised approach, forests are now actively managed, rather than protected, and communities are granted legal rights to produce and market forest products on a sustainable basis – see Box 3 (overleaf) for an example from Benishangul Gumuz.

Since the 1990s, Farm Africa has continued to drive improvements to the approach. The widely held belief that deforestation was driven by poor farmers seeking to increase production through an expansion of their land assets led to increased efforts to increase the productivity of agricultural land as a means of diverting farmers’ attention from forests.

Finally, building on its successes in Ethiopia, Farm Africa introduced the PFM model for

<table>
<thead>
<tr>
<th>Box 2: The PFM model presented in the Harmonised National PFM Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mobilisation Phase</strong></td>
</tr>
<tr>
<td>• Getting started</td>
</tr>
<tr>
<td>• Understanding PFM purposes and processes</td>
</tr>
<tr>
<td><strong>Implementation Phase</strong></td>
</tr>
<tr>
<td>• Participatory forest assessments and management planning</td>
</tr>
<tr>
<td>• Organising and legalising community institutions, signing Forest Management Agreement (FMA)</td>
</tr>
<tr>
<td>• Awareness raising on CBO and legal provisions</td>
</tr>
<tr>
<td>• Establishing forest cooperatives</td>
</tr>
<tr>
<td>• Developing then approving and signing the PFM agreement</td>
</tr>
<tr>
<td><strong>Reflection &amp; Monitoring Phase</strong></td>
</tr>
<tr>
<td>• Capacity building for implementation of PFM plan</td>
</tr>
<tr>
<td>• Participatory monitoring, evaluation and revision</td>
</tr>
</tbody>
</table>

GIZ, JICA, Ethio-Wetlands, Natural Resources Associations and others) had been implementing their own approach to PFM. Recognising that such lack of coordination could jeopardise the ability of government to scale up, a national PFM Task Force was formed. Farm Africa played a leading role in this group, which built on the relative strengths of each approach to create a harmonised national guideline that is in use by many practitioners today (Ministry of Agriculture (MoA), 2011).

What started out as a series of pilot projects has now grown to be recognised as one of the most promising models of natural forest management in the country (Federal Democratic Republic of Ethiopia, 2011).

At least five of the nine regional states are practising PFM today and have included it in their forest proclamations. Several regional states have revised their old proclamations to provide increasing recognition for the approach. Box 2 (above) sets out the PFM implementation steps in the Harmonised National Guidelines.

Since the 1990s, Farm Africa has continued to drive improvements to the approach. The widely held belief that deforestation was driven by poor farmers seeking to increase production through an expansion of their land assets led to increased efforts to increase the productivity of agricultural land as a means of diverting farmers’ attention from forests.

However, initial efforts to tempt away farmers from forests by generating greater income from agriculture proved counterproductive as they intensified deforestation to further expand agricultural land (Temesgen et al., 2007; Temesgen and Lemenih, 2011).

It thus became clear that, if forests do not represent an economic asset, they are not managed well. Promoters of the PFM model responded to this challenge by refocusing efforts on ‘making forests pay’. In this revised approach, forests are now actively managed, rather than protected, and communities are granted legal rights to produce and market forest products on a sustainable basis – see Box 3 (overleaf) for an example from Benishangul Gumuz.

Finally, building on its successes in Ethiopia, Farm Africa introduced the PFM model for
Box 3: Case Study: Frankincense production in Benishangul Gumuz

Farm Africa’s EU-funded PFM Project in Benishangul Gumuz Regional State trained PFM communities to produce frankincense from the forest. Before the project, government and privately held forest concessions produced frankincense using labour hired from outside the local area. With the introduction of PFM, local communities began producing it themselves.

Community enterprises were linked to a company called Natural Gum Processing and Marketing Enterprise that was interested in a reliable supply. In return, the company provided training in producing and delivering a quality product, that, in turn, realised a price premium of between 5-10 Ethiopian Birr per kilo compared to local prices i.e. 15-30% above local prices in each production year, while the community agreed to deliver their produce to the enterprise. With incomes growing annually, more community members became involved. Recognising the value of the forest, the community is committed to managing it and sustainably producing incense.

The exchange of experiences between Ethiopia and Tanzania continues to prove useful. In Tanzania, there is growing experience in the creation of sustainable value chains that can support continued community custodianship of the resource base, while Tanzania’s experiences in building institutional and policy frameworks represent valuable lessons in establishing the enabling conditions to attract finance.

Impacts

It takes years before changes in forest condition can be reliably measured. In Chilimo, where the first pilot was launched 20 years ago, satellite imagery confirms that not only has deforestation been halted, but forest condition has actually been restored (Table 1 and Figure 1).

Ground-based forest monitoring provides further evidence of improved forest condition. Regeneration in PFM forests has been found to be stronger than in adjacent non-PFM forests. Data from Adaba-Dodolla and Bonga, two of the early PFM sites, tell a similar story (Gobeze et al, 2009).

In Adaba-Dodolla, total stem density (a measure of forest growth) of four selected species was higher in forests under participatory management (Ameha, 2013) compared to forests that had not adopted this type of management. The study from Bonga also shows a healthy vegetation structure, with higher seedling, sapling and mature trees in PFM forests than in adjacent non-PFM forests (Gobeze et al, 2009). These findings offer early indications of PFM’s ability to stem deforestation and improve forest conditions.

PFM is not just about forest conservation - it is also and especially about embedding management arrangements that are mutually beneficial to the forests and the people that rely on them. Establishing profitable forest-based enterprises is now recognised as a major component of a successful PFM project.

Table 1: Forest area (ha) in Chilimo before and after PFM

<table>
<thead>
<tr>
<th>Land Use Type</th>
<th>1985</th>
<th>1995</th>
<th>2000</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forest</td>
<td>4036</td>
<td>3224</td>
<td>3616</td>
<td>3470</td>
</tr>
<tr>
<td>Farmland</td>
<td>1955</td>
<td>2727</td>
<td>2374</td>
<td>2528</td>
</tr>
<tr>
<td>Others</td>
<td>940</td>
<td>980</td>
<td>940</td>
<td>932</td>
</tr>
</tbody>
</table>

Based on the satellite image analysis illustrated in Figure 1
regimes today enable local communities to develop viable and profitable forest-based enterprises. Organisations like Farm Africa and SOS-Sahel work directly with them to identify forest products and services with high economic return, before providing targeted capacity building.

This involves training in improved technologies for quality improvement, developing value chains and establishing linkages to markets, and support for product certification in niche markets that can help generate premium prices - see Box 3 (left) for the case of frankincense production in Benishangul Gumuz.

---

8 Farm Africa applies FAO’s Market Analysis and Development (MA&D) method to identify profitable forest based enterprises (Lecup, 2011) – see also: http://www.fao.org/forestry/enterprises/25492/en/

The analysis of early impact data from Farm Africa’s EU funded PFM Project\(^9\) seems to indicate that it is possible to increase small-holder incomes through marketing non-timber forest products and that such activities can incentivise local communities to discontinue destructive activities such as illegal mining and forest conversion – see Appendix 1 for details.

PFM also offers social benefits beyond the economic and environmental benefits outlined above. The process not only considers revenue sharing between community group and government but also among community members themselves, with a special emphasis on women and marginalised groups. The local governance

---

9 http://www.farmafrica.org/ethiopia/ethiopia-forest-management-expansion

Figure 1. Forest improvement and reduced deforestation as a result of PFM in Chilimo forest, Ethiopia
Future pathways: paying for ecosystem services - carbon and watershed management

Global land use changes, including deforestation, contribute nearly one tenth of global greenhouse gas emissions (Le Quéré et al., 2014). Providing incentives to halt deforestation is an important part of the global climate change agreement. Over the last five years, Farm Africa has been exploring what some of these incentives might look like from a PFM perspective.

The best-known model for sustainable finance to reduce deforestation is the “Reducing Emissions from Degradation and Deforestation”, more commonly known as REDD+ scheme (UN-REDD, 2015). The scheme sets out the conditions under which governments and local communities can claim carbon credits for each ton of carbon that will be kept in the forest as a result of additional forest conservation actions. REDD+ shares many of the same aims as PFM: reducing deforestation, improving forest management and enhancing forest-based livelihoods, such that PFM offers an effective institutional foundation for REDD+.

In Ethiopia, the forest laws now empower rural communities with well-defined rights to (co)-own, manage and benefit from forest and woodland resources within their area through PFM. This has driven national REDD+ policy to adopt PFM as a vehicle for implementing REDD+ projects (Federal Democratic Republic of Ethiopia, 2011). Ethiopia’s REDD+ Preparedness Plan (R-PP) notes that aligning REDD+ and PFM has two major advantages: it gives REDD+ a strong grassroots institution to effectively address deforestation and degradation, and facilitates a socially acceptable, cost-effective way of using carbon revenue.

The forest laws of some regional states include provisions for community-based organisations to share carbon credit benefits when realised. In Oromia state, an agreement has already been reached between the Oromia Forest Wildlife Enterprise (OFWE) and Forest Managing Cooperatives in the Bale REDD+ project that communities will be entitled to 60% of carbon credit revenues once realised. These provisions and the experiences gained via such agreements will provide a good foundation to make REDD+ work effectively in the country.

While PFM provides the institutional base for forest management, REDD+ provides the additional incentives and resources needed for a full landscape perspective. With the potential financial resources obtainable from REDD+, investments can be facilitated that will improve farm activities, address energy problems (e.g. access to efficient cook stoves) and stimulate agroforestry practices and woodlot development.

Today, large scale or jurisdictional10 REDD+ projects in the country have also adopted PFM as their institutional base at grassroots level. REDD+ is not the only avenue for PFM-led sustainable financing. In Tanzania, a recent carbon stock assessment of the Nou Forest11 demonstrated that, while deforestation was not a current issue, thus undermining the case for REDD+ in this region, there exist other ways in which to derive an economic value from conserving what is already there.

Forests and their surrounding agricultural lands play a crucial role in watershed management, and so the project team is considering the introduction of a watershed-based “payment for ecosystems services” scheme to reward forest-dependent communities for making special efforts to maintain the vegetative cover in the uplands. Farm Africa’s “Conservation of biodiversity and ecosystems functions and improved wellbeing of Highland and Lowland Communities in the Bale Eco Region” project in Ethiopia, part of the EU ‘SHARE’ (Horn of Af
Africa-SHARE, 2015 programme, will investigate a similar approach to help safeguard the Bale Eco-Region’s crucial water supply function to the Ethiopian lowlands.

**Conclusions**

Forests worldwide have suffered hugely from the strains created by rapid economic development. Their disappearance is threatening the communities that depend on natural forests for their livelihoods and affects water supply to lowland areas. Deforestation is accompanied by a significant loss of biodiversity and is responsible for the accelerated release of carbon to the atmosphere.

The last 15 years has witnessed a gradual, if profound shift in approaches to forest management from government-led “command and control” to joint community/state management partnerships. There is some evidence that such approaches have been successful at reversing deforestation in areas that were at significant risk (Chatre & Agrawal, 2009).

Farm Africa has been an important actor in this endeavour in Ethiopia and, to a lesser degree, Tanzania, where it has helped systematise the approach and find acceptable compromises between stakeholders to deliver a model that governments could “own”. It has supported local government partners to embed the approach in practice, and policy-makers to embed it in legislation. PFM is now being applied successfully in a range of contexts, beyond Ethiopia, and we have worked hard to adapt it where appropriate. We have made progress in deepening women’s involvement but recognise this as an area where we still have some way to go.

Given the urgency of the need for sustainable solutions and growing pressure on increasingly precious resources, the imperative of addressing sustainable financing models has never been greater. We have made great strides in linking forest users to markets, including emerging markets for ecosystem services. We have laid the foundations for the development of several value chains, a successful REDD+ project in Ethiopia and have initiated a number of Payment for Ecosystem Services Schemes in both Ethiopia and Tanzania.

The next step on the evolutionary journey remains to be seen, but Farm Africa is committed to continuing to drive and develop the PFM model to deliver the best outcomes for forest communities in all our countries of operation and beyond.

---

**Appendix 1: Case Study – Frankincense Cooperative Marketing in Benishangul Gumuz**

For many years, Farm Africa has worked with forest communities and local authorities in the Bale Eco-Region of Ethiopia to develop forest management plans that give communities responsibility for protecting their forests. In return they are allowed to use the forest’s resources as a source of income. A PFM project in Benishangul Gumuz is helping the government extend this approach to other forests. More specifically, the project works with communities to:

- turn traditional activities such as raffia-weaving, making bamboo furniture and honey production into income-generating enterprises
- find the best markets for their products and train them in effective marketing
- protect their habitat by showing them how to make stoves that use less firewood
- take long-term responsibility for their environment by developing joint management plans for the forests.

This case study provides some preliminary data on the impact the project is having on the Tune Forest Management Utilisation Cooperative (FMUC) in Famatsere Kebele. Analysis of the Cooperative’s data between 2012 and 2014 shows that:

a) average quantity and quality of incense sold per member increased and
b) average income per member went up.

The Famatsere cooperative membership also increased from five members to 17 members between 2012 and 2014; membership peaked...
at 24 people in 2013 but was reduced due to conflict in the area, causing many to migrate to safer regions.

There are early indications that the project may be having a positive impact on household income resilience. Interview data shows a much more reliable income source throughout the year which can act as a supporting income should any hazards cause strain on other livelihood incomes (such as crops or livestock).

The preliminary data analysis of this case study thus seems to indicate that it is possible to raise incomes significantly through NTFP cooperative marketing, potentially incentivising a shift towards more “forest-friendly” livelihood activities.
References


Ministry of Agriculture, 2011. Harmonized PFM Guideline for Participatory Forest Management in Ethiopia, MoA,


Farm Africa technical review process

This paper has been prepared by Farm Africa’s Programmes Department and reviewed and approved for publication by members of our Programmes Advisory Committee (PAC). The PAC comprises technical experts, responsible for overseeing and advising the Board on all aspects of our programmatic work.
Making Forests Pay

Forests worldwide have suffered hugely from rapid economic development. Their disappearance is threatening the communities that depend on them, affecting the water supply to lowland areas. Deforestation is accompanied by a significant loss of biodiversity and is responsible for the accelerated release of carbon to the atmosphere.

Since the mid-1990s, Farm Africa has been leading the development and application of a new approach to forest management that emphasises joint partnerships between local forest communities and government.

Instead of trying to protect forests by keeping people out or encouraging them to do other activities, Participatory Forest Management (PFM) seeks to strike a balance between forest conservation and the economic activities of local people that depend on them.

Farm Africa has been at the forefront of developing a system that uses economic incentives to help forest conservation. In Ethiopia especially, we have helped refine the approach and find acceptable compromises between stakeholders to deliver a model that governments can ‘own’.

We have supported local government partners to embed the approach in practice, and policy makers to embed it in legislation. PFM is now being applied successfully in a range of contexts, beyond Ethiopia, and we have worked hard to adapt it where appropriate.

We have laid the foundations for the development of several value chains, a successful REDD+ project in Ethiopia and have initiated a number of payment for ecosystems services schemes in both Ethiopia and Tanzania. The next step on the evolutionary journey remains to be seen, but Farm Africa is committed to continuing to drive and develop the PFM model to deliver the best outcomes for forest communities in all our countries of operation and beyond.