

Project Impact Assessment

Final Report

**Non-Timber Forest Products - Participatory Forest Management (NTFP_PFM)
Research and Development Project, South West Ethiopia**



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Acronyms

DA Development Agent

FGD Focus Group Discussion

FMA Forest Management Association

GO..... Government organization

NGO Non-government organization

Got* The smallest administrative unit within *Kebele

***Kebele*A administrative unit in Ethiopia, constituting of
several *gots***

NTFP Non-Timber Forest Products

PFM Participatory Forest Management

SNNPRS Southern Nations, Nationalities & Peoples Regional State

***Woreda*Roughly equivalent to a District, made up of several
*Kebeles***

Executive summary

Participatory forest management (PFM) or co-management is an approach where multiple parties, generally communities residing in and around forests and a government body jointly negotiate and agree on a management plan in which utilization, protection, monitoring, and evaluation rules are detailed in binding legal agreements. Under PFM arrangement communities were to assume forest management responsibility, extract benefits from it with more organized and sustainable basis, and win rights they have lost for long. PFM is not only a livelihoods and forest issue, it is also a political as well as a socio-economic arrangement through which communities and their elected leaders are made autonomous and accountable in their decisions concerning forest governance. It is about building the technical and managerial capabilities of communities to support their livelihoods from forests, build their self-confidence, and also ensure the sustainable use of the resource-base under community control through enduring institutions. Therefore, the impact of PFM projects should be evaluated not only by the type and volume of forest products each household extracts, but also in terms of how the approach helps communities to build self-reliance and the resilience of the institutions it has introduced.

For a long time, the Ethiopian forests suffered from various constraints: lack of clearly and prudently constructed forest policy (the first forest policy came only in 2007); predicaments in forest ownership and unregulated use of the resources which resulted in open access situation for decades; lack of adequate engagement of individuals and communities in forest development; etc. The alienation created by the nationalization of all forests in 1975, and the open access situation created as a consequence of the change of government in 1991 and the subsequent structural vacuum, have resulted in extensive deforestation which continued uninterrupted for several years.

The Non-Timber Forest Products - Participatory Forest Management (NTFP-PFM) Research and Development Project in South-West Ethiopia was started in 2003 with a goal to improve the livelihoods of local forest users through sustainable use of the

resource and to maintain the environmental services provided by the forests. The project covers part of the forest areas found in the *Bench-Maji*, *Sheka* and *Kefa* Zones of the Southern Nations, Nationalities and Peoples Regional State. The principal underlying logic for the formation of the project was bringing sustainable use of the forest resources by building on the potential for the production of NTFPs while at the same time increasing the value of forest benefits to local livelihoods through improving forest users' marketing and entrepreneurial skills and capacity. Whereas this has remained the focal issue throughout the first phase of the project, local forest management was given more attention during the second phase towards achieving sustainable forest management by combining both utilization and forest governance aspects. Consequentially, the scale of the project has also grown up from six *Kebeles* to the current 22 *Kebeles*.

Evaluation of the impacts of the project was undertaken towards the end of the second phase. The project was evaluated against its objectives with much emphasis on the impacts on household income, and changes in perception of local community with respect to rights and responsibilities before and after the project. The study also attempted to assess the relative importance of income from the forest in comparative ways and also quantified the contribution of major NTFPs to total household forest income. This assesment used both primary and secondary data sources. In the first case, a household questionnaire survey was conducted which covered 115 PFM member households; the Focus Group Discussion (FGD) invloved five categories of the community: *Kobo* right-holders and non-*Kobo* right-holders (those with and without customary rights over certain number of trees or a forest area), women (ordinary members and in leadership), minority ethnic groups (*Menja* and *Me'jen'ger*), and FMA leadership at woreda level. Formal interviews were condcuted with woreda and zonal government officials, and also with project staff at *Masha*. Participatory Rural Appriaisal tools (3Rs techniques) are employed on selected groups to assess perceptions related to rights, responsibilities and revenue.

In the last six years of the project existence (Phase 2), a number of encouraging results have been observed indicative of the relevance of the objectives set at the start. The study indicates that

- Average household forest income has increased;
- Market access has improved; communities have gained control and use rights over the forest;
- The collective and individual responsibilities have been built among members over hitherto open access forests;
- The fast decline of the forest resource has been prevented and forest rehabilitation initiated; and, most importantly,
- The economic and social rights of women and the minority groups have begun to be strengthened

Although this study distinctly shows so many encouraging outcomes from the PFM project in the four districts, and also reveals the potential the approach holds to support livelihoods by sustainably managing the forest, constraints have been identified by members and also sensed by the consultants. Various experiences here in Ethiopia and in other places show that the key determinants of success or failure of PFM are: amount of benefits extractable from the forest resource by each member household; scope/degree of institutionalized autonomy for PFM members who should make independent choices concerning the management and use of the forest resource; level of technical, regulatory and administrative institutional capacity developed through time; and extent of accountability of concerned government bodies and PFM leaders.

In line with the above observation, it is the opinion of the consultants that NTFP-PFM Project managers and the concerned government officials should attentively go after and work to solve what PFM members identified as problems. Some of these include: the expansion of the incentive benefits from the forest, strengthening of institutional durability/resilience, further building of the technical and managerial capacity of PFM

leadership and members, enhancing the leadership capacity and opportunities of women and the minority groups.

In conclusion, the PFM approach in the Ethiopian context is probably the most tangible and realistic forest management option when state investment in forestry is declining and individual initiatives are at their minimum. Therefore, the NTFP-PFM project should urge the concerned government offices to sign the agreements with those PFM units who have already received legal recognition, and also work to scale-up the experience gained at the present sites to other forest areas.

1. Introduction

1.1 Background to the project and the need for the study

Background: In the past two decades community participation in natural resource management has been widely adopted by many Sub-Saharan African countries (Nelson & Agrwal, 2008) as a remedial policy measure. The approach was further given international eminence in the 1992 Rio Earth Summit, and, the 1994 UN Convention to Combat Desertification that called for the establishment of participatory mechanisms in resource management and policy making and implementation processes. In Ethiopia, failure of the state's forest property rights regime and exclusion of communities from managing and using these resources, the growing conflict between state forest agencies and communities, and increased frequency of droughts seems to have created favorable field environment to initiate PFM with the aim to move the forest resource out of open access situation and manage it sustainably.

The rationale for launching the NTFP-PFM project includes the maintenance of a forested landscape to support improved livelihoods of local forest-dependent communities and ensure the delivery of environmental services in a wider context. The strategy of the project that followed the above rationale is to develop and promote local forest management (PFM) and forest-based economic incentives with integrated practices of NTFP and forest product development for different people/forest scenarios.

Description of Forest areas: The forest types covered in this evaluation study are classified under the moist montane forest formations found in Ethiopia (Feyera 2011). Owing to their locations in mountainous areas and isolation from other similar ecosystems by various physiographical barriers, montane forests are valued for their high species endemism and their hydrological functions by accumulating fresh water and thus are important sources of water supply for economically important sectors including domestic uses, agricultural production, and hydroelectric power generation (Butt and Price, 1999). Feyera (2011) also pointed

out the high significance of these forests for biodiversity conservation at a global scale as they are home to many threatened species. In addition to being the natural habitat of the wild Arabica coffee, they are also remarkable for other economically important plant species including spices and honey bee flora.

The NTFP-PFM Project specifically focuses on the moist montane forests located in the *Bench-Maji*, *Sheka* and *Kefa* Zones of the Southern Nations, Nationalities and Peoples Regional State (SNNPRS) in the Southwest of Ethiopia. The SNNPRS, where 19% of the remaining forests are found, is the second regional state in the country in terms of its forest cover (WBISPP, 2001). Similar to other highland forests, these forests are also influenced by a high rate of agricultural expansion and are exposed to high livestock and population pressure (Place, et al., 2006). In particular, the forests in these areas are highly influenced due to coffee management (Feyera, 2011). On the other hand, the potential of these forests especially in relations to the production of NTFPs such as wild coffee and honey was the major factor for the initiation of the NTFP-PFM SW Ethiopia Research and Development Project in the above three zones (Million and Dereje, 2004).

The total forest area and number of member households in the forest management associations that are covered in the study are given in Table 2 (see Section 3.1). The forest stretches over four Woredas (districts), 21 *Kebeles*, and 65 Got PFM sites. About 56.8% of the total area is under forest cover, ranging between 43.6% in *Gesha* district and 70% in *Anderacha* district. With 26681ha total area and 18713ha forest area, *Anderacha* is also the largest of the four districts contributing to 45% and 56% of the total area and forest area, respectively. On the other hand, about 67% of member households are found in *Anderacha* (31%) and *Gesha* (36%) districts.

1.2 Objectives of the study, method of data collection and analysis

Objective of the study: The study was conducted targeting multiple objectives but mainly to investigate rigorously the impacts of the project on household income,

change in perceptions of local community with respect to rights and responsibilities before and after the project. The following are the specific objectives of the study:

- To quantify level of household income (total and cash) from the forest before PFM and after PFM, and the contribution of major NTFP products to total household forest income;
- To assess the relative importance households attach to forest income in relation to their livelihoods and in cash income generation both before and after PFM;
- Assess the perception level of control and user rights communities had over the forest before PFM implementation and gained after PFM;
- Assess the extent and type of active forest management before and after PFM implementation by communities;
- Asses project contribution to enhance government employees technical capacity and policy construction

1.3 Method of data collection and analysis:

The sources of data include both secondary and primary data sources. Secondary information was obtained from relevant documents and reports found in the project offices. Primary data was collected by undertaking a series of discussions with major stakeholders in the form of key informant interviews, formal interview, group discussions, participatory appraisal (3Rs) methods, and also the more conventional method of household survey.

With regard to livelihoods improvement, information related to the significance of the impact of NTFP-PFM project for the livelihoods of project participants was collected with a focus on the following key themes: what influences does the PFM project have on forest income and livelihoods? And what are the differences between different groups in the local community? In relation to forest management and conservation, information concerning engagement of project participants in

forest protection and management activities and their perception of changes in forest conditions were investigated.

Household survey: households were randomly selected in all the four *Woreda's* covered by the project in a two stage sampling procedure. A total of 110 households were originally planned to be selected for the household survey. Whereas the sampling had aimed at including 25% of the PFM sites (17 out of 65 PFM sites), two major strata were identified for sampling purpose taking into account the expected substantial difference in terms of impact between those PFM sites which were established earlier (during the first phase of the project) and those from the recent or second phase of the project. Besides, in view of the relatively short period of time since the establishment of the newer PFM sites, which are far greater in number or extent than the older sites, for the purpose of undertaking an impact study, the total number of sample households was split equally between the two strata thus giving more weight and representation to the older, but fewer, PFM sites. Accordingly, all the six older PFM sites were automatically included in the sample and the remaining 11 PFM sites were selected from the other 59 newer PFM sites. The number of sample PFM sites to be selected from each of the *Woredas* was determined in proportion to the total number of PFM sites that are located in each of the *Woreda's*. Each of the sample PFM sites in the respective *Woredas* were randomly selected in proportion to the number of households per PFM site to ensure equal probability of selection for all participant households. Finally, the sample households (55 households in each stratum) were allocated to sampled PFM sites in proportion to total number of households per PFM sites and respondent households were selected randomly. However, the computation of sample sizes ended up giving a total of 115 households due to the effect of rounding up of fractions. Therefore, both subjective sampling (in the group discussions and the participatory 3Rs assessment) and objective sampling (in the household survey) were employed to ensure reliability and representativeness of the data collected for the study. Before and after data were compared using paired t-test comparison or matched-pairs categorical analysis as appropriate.

Focus Group Discussion: Focus group discussion (FGD) is a tool where participants articulate their perceptions and opinions about an issue of their concern by freely interacting with each other. It helps the data collector to understand how and why participants perceived an issue the way they do. This tool, by and large, is believed to be useful in removing overstated opinions that some individuals might convey, as participants correct each other. It also helps explain information collected through tools like household survey and formal or interval interviews.

The FGD were conducted for five days from 21 to 25 April 2013 in two Zonal administrative zones of *Kaffa* and *Sheka* involving four of the districts (*Woredas*) where the NTFP-PFM Project has been in practice for the last three to six years. These are: *Masha*, *Gesha*, *Anderacha* and *Dehub Bench*. Except for that of *Dehub-Bench woreda* (where participants exceeded twenty), each group consisted of five to six members. The FGD categories consist of *Kobo* owners and non-owners, minority groups (*Menja* and *Mejenger*), women, and Forest Management Association (FMA) leadership at *woreda* level.

Moderation: The FGDs were moderated by two individuals with experience. It was made to ensure that each group member had a chance to express him/herself by ensuring fair distribution of time. Sufficient time was given for each group to exhaustively discuss matters related to the forest ownership, management, protection, and utilization “after” and “before” PFM was implemented. Beside the above important points, each group was also requested to express its opinion and to identify what it thinks are the major challenges facing the sustainability of the PFM arrangements in the area, and what should be done to improve this in the future to increase benefits from the forest and also protect its recognized rights and the resource base.

Interpretation: The information gathered through various qualitative techniques that include group discussion with PFM group members, field supervisors and experts, and formal interviews with zonal and district officials, as well as with

project staff members were analysed for similarity and deviations after the initial themes upon which the discussion and the interviews were based were identified and categorized. In the next stages corresponding themes were combined or brought together, while less relevant themes and the weakly expressed ones were omitted. Finally the emerging themes were put together to form a comprehensive representation of the perception feelings, and opinions of participants.

2. Findings of the study

2.1 Socio-economic & demographic characteristics of samples

The study covered the forest areas which were included in the NTFP-PFM Research and Development arrangement and were operating at the time of data collection. It stretches over 33.5 thousands of hectares of forest area under 65 *Gots* consisting of 4427 member households including associate members (Table 1 below).

Table 1 Distribution of sample households among Woredas

District (<i>Woreda</i>)	Total area (ha)	Forest area (ha)	No. of PFM sites	No. of sampled PFM sites	No. member households	Associate members	No. of Sampled households
<i>Anderacha</i>	26681	18713	26	6	1005	375	26
<i>Masha</i>	10882	4859	17	4	839	230	21
<i>Gesha</i>	17262	7533	17	5	1533	72	54
<i>Bench</i>	4158	2372	5	2	373	0	14
Total	58983	33477	65	17	3750	677	115

Most of sample households are from the *Shakicho* (45.6%), *Kafficho* (43 %), and *Benchi* (7%) ethnic groups, while the remaining 5% come from another four different ethnic groups – *Oromo* (2%), *Kambata* (1%), *Mazhenger* (1%) and *Maneti* (1%). Whereas about 7% of PFM member households are female headed, the proportion of female headed households in the sample was 2.6% (Table 2).

Table 2 Demographic characteristics of sample households

	Number
No. of Female headed households	3
No. of Male headed households	110
Average Age of household head	41.3
Average Size of household	6.6

Table 3 presents the sample households' possession of major assets. Compared to other parts of Ethiopia, the average area of cropland can be considered far higher than average. Livestock possession can be considered very common with 92% of respondents owning at least one and 81% owning four or more livestock.

Table 3 Households' asset ownership

Household asset	N	Mean (total sample)	Mean (n)	Minimum	Maximum
Area of crop land (ha)	112	2.3	2.35	0	8
Area of grazing land (ha)	38	0.25	0.74	0	2.5
Area of forest land (ha)	10	0.02	0.28	0	0.6
Area of homestead farm (ha)	74	1.08	1.68	0	8
Number of <i>Kobo</i> trees	40	4.0	11.6	0	70
Number of coffee trees	58	94.7	187.7	0	3000
Number of beehives	92	11.9	14.8	0	72
Livestock size	106	10.5	11.4	0	39

2.2 Livelihoods

Both crop and livestock productions are practiced by most households. Cattle keeping, apiary and poultry are the most common activities in the area. Most of the respondents have ranked crop, livestock, and forest-based income sources as the most important contributors to their livelihoods and for cash income (Table 4).

Table 4 Ranking of major sources of income

Source of income	% of respondents							
	Contribution to the overall livelihoods of household (Rank)				Contribution to cash income (Rank)			
	N	1	2	3	N	1	2	3
Crop cultivation and homestead farm	115	<u>74.8</u>	15.7	9.6	113	<u>62.0</u>	25.7	11.5
Livestock	114	17.5	<u>51.8</u>	29.0	113	20.4	<u>48.7</u>	29.2
Natural forest based income (forest products; timber + NTFPs)	115	9.6	30.4	<u>58.3</u>	113	17.7	26.6	<u>54.0</u>
Petty trade or other commercial business	11		9.1	18.2	11	9.1	9.1	18.2

2.3 Utilization of forest products before & after PFM

The major forest products extracted that were reported by respondent households are listed in the order of their frequency in table 6 together with total income and respective contribution to total forest income. Fuelwood is the most widely extracted forest product and the highest contributor to aggregate forest income of respondent households. The next three widely extracted forest products that follow fuelwood in terms of contribution to households' aggregate forest income are forest honey, forest coffee, and construction wood.

With the exception of wild meat, income has increased for all forest products after PFM. Income from spices (*Timiz* & *Korerima*) has increased 30 & 10 folds, respectively in the after PFM compared to before PFM, followed by forest coffee, construction wood and wild pepper. Therefore, the NTFPs – three spice products and forest coffee – constitute four of the top five ranking forest products in terms of increase in income honey coming 7th at 124%.

Average total forest income has increased from Birr 4967 before PFM to Birr 12193 (145%) after PFM. This is a 120% increase (in current prices) compared to the target of the project, which is increase in forest income by 25%. Taking into

account an estimated inflation of 92% between the period November 2006 and April 2013, the increase in real income is about 28%. Hence, this project goal can be claimed to be achieved. On the other hand, the corresponding quantities of products extracted from the forest have shown a significant decrease whereas the number of households involved in extraction activities has shown a 600%, 100%, 78%, and 45% for the *Timiz* spice, forest coffee, *Korerima* spice, and timber, respectively. Still, when households that were engaged at both times are considered, *Korerima* has shown a significant decline in quantity per household though the current average quantity including newly participating households has increased. In a similar pattern, furniture production for domestic consumption has declined (-4%) while production for sale has increased (72%) which might also indicate more new participants involved in production for sale. This might therefore also be an indication of a trend towards higher production by the new participants who possibly are more commercially oriented than the earlier participants, though the number and quantification of observations couldn't yet give conclusive evidence on this.

Most of the observed increases in income might thus reflect the combined effect of the increase in the value of products and the increase in the number of business-oriented households who tend to harvest more and sell a higher proportion of their harvests. On the other hand, whereas the increased cash income generation and higher participation could be attributed to improvement of market linkage through forest products enterprise development by the project (see figure 3), the increase in the number of households participating in extraction activities may also be taken as an indicator of the improved equity in forest income as the result of the project.

Table 5 Annual household income from major forest products extracted before and after PFM

Forest Products	N	After PFM (ETB)		Before PFM (ETB)		% Change after PFM		Change in Quantity
		Mean	% share in forest income	Mean	% share in forest income	Mean	% share	
Fuelwood §	112	4260	41.9%	2251	47.4%	89.2% ***	-5.50% ***	(-)
Climbers §	107	240	1.9%	122	1.8%	96.7% **	0.10%	(-)
Honey	97	2787	33.6%	1246	34.0%	123.7% ***	-0.40%	(-)
Construction wood §	96	3143	12.1%	669	10.9%	369.8% ***	1.20%	(-)
Yegilo	76	150	2.7%	82	3.6%	82.9% ***	-0.90% **	(-)
Furniture	65	150	1.4%	42	1.3%	257.1% **	0.10%	(+,-)
Bamboo §	43	541	2.9%	405	4.0%	33.6%	-1.10%	(-)
Forest coffee	36	2707	23.1%	380	17.0%	612.4% ***	6.10% ***	(+)
Gebete	25	33	0.4%	23	0.9%	43.5%	-0.50%	(-)
Spice (Korerima)	27	3013	13.80%	218	10.4%	1282.1% **	3.40% *	(+)
Spice (Timiz)	22	312	4.00%	10	1.8%	3020.0% ***	2.20% ***	(+)
Timber	20	1870	13.70%	1271	25.2%	47.1%	-11.50%	(-)
Wild food	20	68	1.00%	54	2.2%	25.9%	-1.20% **	(-)
Wild meat	11	109	3.30%	258	8.90%	-57.8% **	-5.60% **	(-)
Wild pepper	7	216	2.80%	58	1.9%	272.4% **	0.90%	(+)
Charcoal §	4	13715	26.60%	11050	38.3%	24.1%	-11.70%	(-)

§ Income values were collected per weekly basis and converted to yearly income; *** = significant at 1%, ** = significant at 5%, * = significant at 10%

The perception of households on the change in the availability of forest products shows similar patterns to the quantitative results (Figure 1 & Table 6). In general the results in the above table and the perception of households clearly indicate a decreasing trend in the quantity of wood based products extracted such as fuelwood, charcoal, *Yegilo* (traditional beehive made of wood), *Gebete* (wooden toppings of house pillars and bowls), construction wood, and timber and also a decline in the production of wild meat from hunting. In a similar pattern, a decline is also observed in the percentage share of income from most of these wood-based forest products and hunting in total household forest income. On other hand, an increased

involvement of households in the production of spices and forest coffee, which are the major NTFPs produced for cash income generation, is also observed. The change in production of honey however was not found to be significant though the figures indicate a decline. This can therefore be taken as an indication of the major shift made towards the production of non-wood based NTFPs whereas there seems to be less extraction of wood-based forest products owing perhaps to the relatively more strict regulation on these products.

Table 6 Perception of households on the change in the availability for extraction of major forest products after PFM is applied

Product	% of respondents		
	1=declined	2=about the same	3=increased
Firewood	52.6	21.9	25.4
Construction posts/poles	51.4	20.7	27.9
Honey	36	16.2	47.8
<i>Hareg</i> (climber)	37.6	28.4	33.9
<i>Yegilo</i>	67.4	14.7	17.9
Furniture	44.6	31.5	23.9
Timber	50.6	11	38.5
Spice (<i>timiz</i>)	21.8	23.1	55.1
<i>Gebete</i>	51.4	31.9	16.7
Wild food (mushroom, bamboo shoots, <i>Acho</i> , <i>Kechi</i>)	42.3	22.5	35.2
Meat from wild animals	65.1	7.9	27
Spice (<i>korerima</i>)	30.5	8.5	61
Forest coffee	9.8	11.8	78.4
Bamboo	41.2	52.9	5.9
Charcoal	61.2	14.3	24.5
Spice (wild pepper)	38.2	38.2	23.5

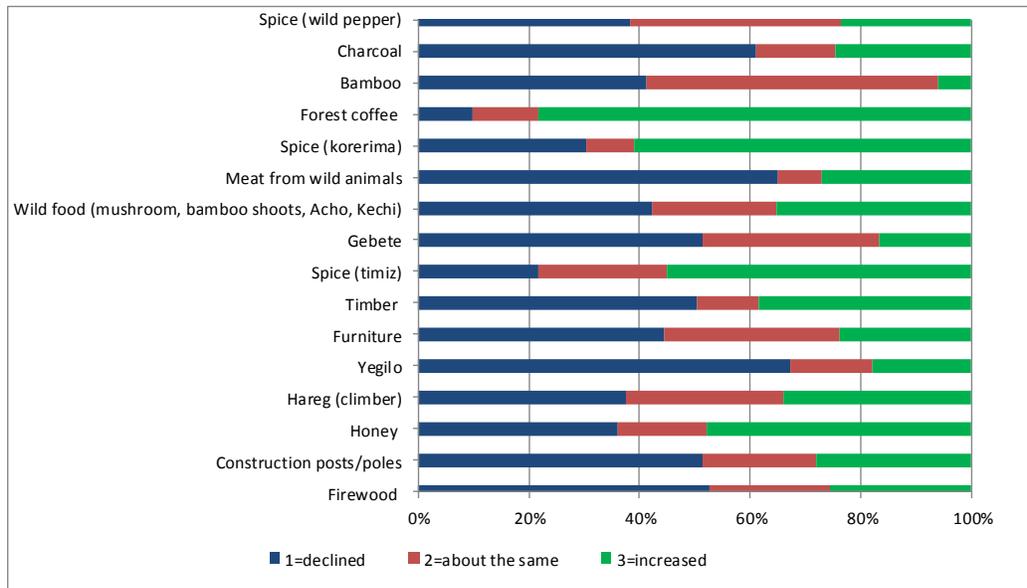


Figure 1. Perception of households on the change in the availability for extraction of major forest products after PFM is applied

2.4 Members' perception

2.4.1 On State of forest before PFM

Ownership: All group discussants acknowledged the ownership of the forest to be vested in the state since the time of the *Derg*. In the old days, and even after land/forest was nationalized, clan leaders somehow “controlled” the forest. As the power of clan leaders slowly declined, particularly after 1975 when their power over the forest was restricted to sacred (cultural) forests, an open-access situation gradually developed. There was little sense of ownership among the community at the time. Despite the claim of ownership of the forest by the state, there was no protective or management intervention from the government side. Trees and few forest areas with “owners” or with the customary *Kobo* entitlements were protected by the claimants. *Kobo*-right-holders were/are concerned more about the big trees, on which they have bee-hives, or trees reserved for future use.

A good number of group discussion participants narrated the changing ownership pattern until the current time. They noted that it was only during the *Derg* time

(1974-91) that some kind of control was put in place when sometimes people were caught and punished for processing lumber and making charcoal. The customary use of forest products continued unabated. *Kobo*-right-holders continued with their customary use. After the fall of the *Derg* all attempts to control or conserve the forests in the area disappeared; the forest became the “property” of everyone or no one.

Management and protection: There was little management or protection of the forest before the *Derg* time. Clan leaders had some rules and made people to follow such rules; for instance when climbers were removed care should be taken to avoid damage on trees. Such cautions were increasingly ignored after the 1991 change of government. Those forests identified as sacred (cultural forests) were and still are well protected. Clan leaders have made it their responsibility to protect such forests; although they are not very big in size (e.g. 10-15 ha in *Masha*), there are several such forests.

All categories of participants in the focus group discussions, zonal and district officials as well as members of the FMA leadership, told similar stories about the state of forests in the area to having remained for too-long in an open access situation with little management or protection before the intervention of the project. Each group highlighted the danger the forests were under for lack of ownership and control¹. They emphasized their lack of awareness at the time on the importance of the forests and the possibility of complete destruction if the past tradition of forest resource use had not been changed.

Utilization: According to group participants there was competition among community members to exploit more forest resources because the forest belonged to

¹ The traditional *Kobo* system based on either tree or area-based individual control of forest resources, and also the long standing practice of protecting cultural forests considered sacred by clan leaders must have played important role in the preservation of parts of the forest.

all. Large tracts of forests were turned to non-forest land-use, especially coffee and tea plantations by outside investors. As a response to the increasing number of investors, an “invasion” as one *Kobo*-right-holder described the situation; some community members also entered the race by carving out land from the forest to enlarge the areas under their control. The forest started to be used by everyone even by people coming from far-away places to collect forest products and particularly graze their animals. The slash and burn method of agriculture was a common practice; settlements were expanding in the forest; people were also clearing forest to create a space for coffee plantations. Even trees/forests under *Kobo*-right-holders were used without control. Thus it seems that there were no restrictions or regulatory intervention from the government side to regulate / standardize forest utilization.

Most respondents remembered to have each year constructed bee-hives with huge wastage of wood due to a lack of awareness of the use of modern and lasting beehives. They told stories of how people fall from high trees and died trying to extract honey; in some cases extraction of honey from the traditional bee-hives caused forest fires. Development Agent’s and information from district Agricultural Office told how fire started in the *Masha* neighborhood during honey extraction, although the *Masha* group discussants mentioned the recent forest fire to have been caused by delay in the rain for about two months and the creation of a dry spell, a very uncommon phenomenon. The two-month drought occurred, according to the *Masha* group, as a result of huge deforestation by large-scale investors.

The women’s group in *Anderacha* district who came from five different *got* (PFM groups) reported what they had heard from elders about how in the old days their forefathers protected the forests through customary rules; for *example, they said they used to prohibit the felling of big trees*. According to this group, the practice of protecting the big trees in a traditional way was forgotten by their fathers, who they said were not much concerned about the sustainability of the forest as compared to their forefathers.

They remembered, how, before PFM was established in the area, their access/benefits or rights to the forest products were mainly through men or their husbands. *We have to get what we need through men/husbands.* Women used to collect *Korerima, a'tcho, cabbage and fallen coffee beans only.* It means that men controlled most important sources of income, like coffee and honey. All groups identified the following forest products used for domestic consumption and markets:

Table 7 Forest products used for domestic consumption and market as identified by respondents

Item with local name	English name	Remark
<i>Ta'wula</i>	Lumber	Mainly for market
<i>Magedo</i>	Firewood	Mainly for domestic use
Ke'sel	Charcoal	For market
<i>te'gera, mofer, kenebr, wo'gel</i>	Agricultural tools	Domestic use
<i>Ge'bete</i>	Bowl	For domestic and market
<i>Wanza kirfit</i>	Cordia tree bark	Domestic use for roofing
Climber		Both for domestic and market
<i>Me'seso</i>	post	<i>pole standing at the middle of a house holding up the roof</i>
	Cinnamon (E)	Mainly for market
<i>Zin'jibil</i>	Ginger	Mainly for market
<i>Kundo berbre</i>	type of spice	Mainly for market
<i>Enguday</i>	Mushroom	Mainly for market
<i>Ma'ar</i>	Honey	Mainly for market
<i>Mit'mita</i>	Strong peppr	Mainly for market
<i>Ti'nji</i>		Mainly for market
<i>Ta'zema mar</i>	Honey from non-stinging bee	Mainly for market
<i>Se'sino</i>	Pole from tree fern (<i>Cyathea capensis</i>)	
<i>Zembaba Se'len</i>		Mainly for marketing

2.4 2. State of forest after PFM

Ownership and access rights: All members in each group seem to know the legal/formal owner of forests to be the state. They rightly stated that although the customary tenure has given some traditional use-rights, the ultimate ownership and power over the forest rests with the state. The establishment of PFM has helped communities to assume formal rights² over the forest they are using with some legal backing. Now, as some strongly noted, they have developed a strong sense of rights over the forest resource, which they said has “returned” the forest to them after remaining for long under an open-access situation.

The term “rights” has a legal connotation, therefore, un-enforceable customary use has a serious limitation. For the first time since the feudal territorial expansion, through PFM communities have won their lost rights, i.e. officially recognized and legally enforceable rights once they have signed the PFM agreement and bylaws with the government. Although, the rights communities currently won may not be complete, compared to the previous time current changes (of rights) must be hundred percent, i.e. currently assumed rights by communities, compared to what they had is high.

Furthermore, households were directly asked in the household survey to link the activities of the project with changes in forest use rights, control and decision making, marketing of forest products, and the benefits obtained from the forest resource. Accordingly, the household survey also showed that the majority of respondents believe forest use rights and decision making in forest management has changed from a non-existent state during the pre-PFM period to very high

² When it comes to legal matters customary land/forest rights in Ethiopia most often falls in a grey area. The last two Constitutions of Ethiopia (1980, 1995) did not provide explicit ownership rights over forest. Ownership, according to both constitutions rests with the state, customary use rights are recognized. However,, there are no enforceable legal provisions specifying what formal guarantee do such resource users have, as provided to highland agricultural lands. If customary uses continue to exist, it is not because they have formal backing, but are tolerated for lack of state capacity to do otherwise.

improvement in the post-PFM period in terms of community rights and control (Table 8).

Table 8 Perception of households on the change in access and decision making

Attribute for the Community	N	% of respondents							
		Before PFM				After PFM			
		none	low	moderate	high	none	low	moderate	high
Access control	107	50.5	47.7	0.9	0.9	0	0.9	37.8	61.3
Ownership feeling	97	40.2	56.7	2.1	1.0	0	0.9	27.3	71.8
Decision making in forest use	94	57.4	40.4	2.1	0	0	1.8	43.2	54.9
Decision making in forest management	98	56.1	42.9	1.0	0	0	0	39.6	60.4

A shift from apathy/indifference (towards the forest) to individual and collective concern and the growing sense of ownership by the communities are critical primary steps that could be turned into a more concrete force for self-engagement and active participation in the sustainable management of the forest. The evaluating team believes that these conditions are in place, and need to be built upon.

Management and protection (responsibility): According to participants in the group discussion in all places, there is a genuine acknowledgement of the effort made by the project staff to save the forest from destruction. They said the project provided the necessary tools like awareness creation, training, and visits to other parts of the country where there is little forest and also where PFM have been established. They said they have become more aware of the need to protect the forest and manage it on a sustainable basis.

When it comes to community's input in the management and protection of the forest, most refer to the internal rules (by-laws) each PFM *got* has developed where the contribution of each member is specified. Groups from all *Woredas* specified their activities and contributions to the management and protection of the forest. There are a number of committees established in each *got*. These are: Protection,

Utilization, Development, Planning, Monitoring and Evaluation Committees. Some of the activities of members include: taking care of naturally generated seedlings, enrichment plantation, guarding against illegal cutting of trees and other products which require permission to access, reporting (illegal) agricultural settlements, poaching of wildlife, and forest fire. The forest Utilization Committees established in each *gote* also prepares exploitation guidelines in line with the forest management plan, and issue permits in accordance with the rules.

During the group discussions it was learnt that before PFM there was no type of protection or management responsibilities assumed by communities except for those forests categorized as *cultural* or *sacred* (protected by clan leaders). In fact it is difficult to find any kind of collective action or individual responsibilities existing when the resource was in an open-access situation. *Kobo*-right-holders had and still have individual responsibilities over their holdings, but this has nothing to do with “before” or “after” PFM scenario. What can be said about *responsibility* may be similar to what has been stated above about *rights*. Communities did not exercise collective responsibility towards the forest before PFM; they could not have exercised any responsibility over the resource as no one owned it formally (Forests were owned by the state). During the group discussion it was established that before PFM the forests remained in an open access situation and no one had any kind of responsibility to effect management. Now, under PFM the situation is different. Communities have formally assumed individual and collective responsibilities when they sign the PFM agreement, with management, protection and utilization responsibilities with government bodies, and also worked out through internal rules by which the PFM members share responsibly and benefits for which they have become responsible.

In this situation, one needs to be careful in comparing the pre-PFM time when no community responsibility existed for the forest and the current situation when communities have taken full responsibility. This changing situation is reflected in the fact that between 81% - 85% of respondents in the household survey reported

engagement in forest protection activities and regular participation in meetings in their respective forest management associations since PFM was established (Table 9).

Table 9 Engagement of households in forest management and protection activities post PFM

Forest management and protection activities	% participated	Average number of family members involved	Average days per year spent on activity
Guarding the forest	81.6	1.31	15.9
FMA meetings	86.0	1.17	12.6
Forest protection activities	82.1	1.26	18.2

Concerning the management and protection of the forest, there was a series of complaints among participants in group discussion in South-Bench concerning the reluctance of local officials to punish those caught in illegal activities in the forest. As there is no Kobo system in the *woreda*, guarding of trees by individuals does not exist. The *South-Bench* group, particularly the *Me'je'n'ger* community, mentioned what they said were serious resource protection challenges. They accused Farmers Association/*Kebele* leaders of providing town's people with forest land to plant coffee by clearing forests. Some "buy" forest areas from the farmers and expand their holdings. Some have 9 to 10 hectares of unregistered land under their possession. Some of the illegal activities identified by the project staff as well as during group discussion include:

- Encroachment into PFM sites to start coffee plantation by people from neighboring *gots* and even by people living within the *got* is becoming a serious problem. Sometimes encroachment comes from town dwellers in the name of investment. There is a court case in *Masha* due to encroachment in to the PFM forest.
- Extraction of forests products like timber by those who come from outside the *got* or *Kebele* administration.

- Recently in *Gesha* a holy water (*tebel*) was discovered in the PFM site that attracted many people. The forest is being encroached into by those who have constructed small huts, and some individuals also cut trees
- The illegal activities by the individual from outside the *got* are not as such widely spreading as the FMA members are actively engaged in the forest management practice. However the issue of investment is a threat and frequently mentioned by the communities in the joint forums.

Utilization and revenue generation: After PFM was established in their respective areas, restrictions were put on accessing some types of forest products without permission, such as timber/lumber, charcoal, etc. Also some activities like planting of coffee seedlings and agricultural activities are prohibited. While most people agree that having permission to access the forest is necessary for some items (lumber, charcoal, etc.), the process of getting authorization to use these forest products is taking an extended time and involves travelling to District office.

Expectation for compensation for protecting the forest seems to be high in *Masha*, especially in *Uwa kebele* among area-based *Kobo*-owner groups. They noted that they were told (during the establishment of PFM) that foreign countries will give financial support for protecting the forest that serves as a *lung of the world/Africa*, but did not receive anything by way of a tradeoff for their efforts of reducing the consumption of wood products and protecting the forest resources.

The 3R (PRA) tool which was applied to capture the perception of communities in terms of pre-PFM and current revenue level shows the following result. For *Andaracha*, although the result for higher income and women group showed an increase, the low income community group indicates a decrease in value. They justified this score by giving a descriptive presentation of what they used to extract from the forest, and what they are allowed to access currently, post PFM. They said they extracted spices like Ethiopian cardamom (*korerima*), coffee, honey, charcoal, firewood, timber, posts, poles, and tree-fern, for household consumption and for

sale. Now, the important marketable items like charcoal, firewood, timber, and tree-fern are restricted. In *Masha*, the result of the scoring for all three groups (higher income, poor and women) shows an increase after PFM. In *Gesha*, there is a slight increase for revenue compared to the pre-PFM time for higher and low income groups, and decrease for the women group. The results of the scoring by the higher and low income and women groups on the level of the revenues obtained from the forest products at the current time compared to the pre-PFM time showed an increase.

During the group discussion, most of the complaints about post-PFM access restriction came from Kobo-Right-holders, and the women group. The PFM rules have limited the absolute, (free and unregulated) access of *Kobo*-rights-holders', leading to many complaints. The women group also emphasized the reduction in the type of forest products they used to extract, and also on limitations on clearing patches in the forest to grow some plants like onion for income generation in the forest. We heard no complaint from non-*Kobo*-right holders, however.

Based on the results of the household survey, more than half of respondents rated as high the changes related to improved protection of the forest and increased skills and knowledge on sustainable forest use. On the other hand, changes in access to credit, market, and the forest (use rights), and reduced price risk and collective harvesting activities were evaluated to be moderately improved by the majority of respondents (41% - 52%) (Figure 2 & Table 10). However, a maximum of 70 (61%) of respondents have responded on these issues whereas only 21(18%) and 39 (34%) of the respondents gave their assessment of the changes in reduced price risk and access to credit and capital, respectively (Table 10).

Table 10 Households' perception of changes in access, use and income from major forest products as a result of the PFM project

Change related to access, use and income from major forest products	N	% of respondents				
		0=No change	1=Small	2=moderate	3=high	4=Very high
Better access to the forest	70	0.9	4.4	40.9	39.1	14.8
Better protection of forest	53	0.0	0.9	23.5	53.9	21.7
Better skills and knowledge	57	0.0	10.4	18.3	50.4	20.9
Better access to credit/capital and equipment	39	20.5	11.4	52.3	11.4	4.6
Better access to markets	52	19.7	6.6	44.3	14.8	14.8
Reduced price risk	21	21.0	8.1	41.9	17.7	11.3
Collective action in harvesting	57	18.8	17.4	42.0	17.4	4.4

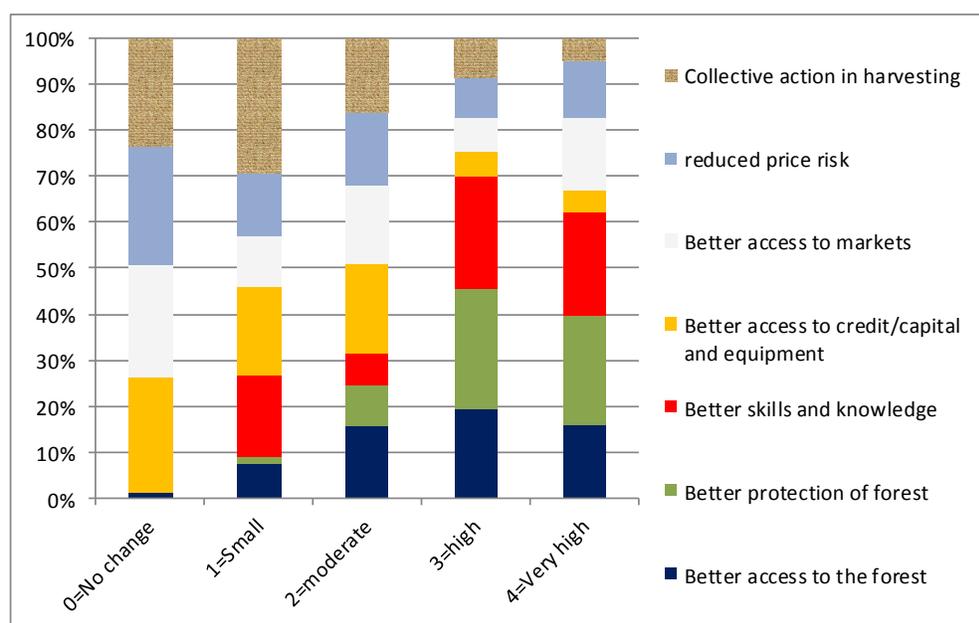


Figure 2. Comparative share within evaluation scores of each of the issues related to changes in access, use and income from major forest products after PFM is applied, as perceived by households

Household's Perception on the role of Coops and PLCs: As indicated in figure 3 and table 11, the increase in the price of forest products, the increased cash income generation from forest products, the increased role of cooperatives and PLCs as buyers of forest products, and the improved access to markets were the four top

ranked changes, respectively, as a result of the establishment of cooperatives and PLCs. Excepting two, the rate of responses on most of these issues were low as questions were forwarded in such a way that respondents were free to name the issues on their own (table 11). Besides, it might be too early to make such kinds of evaluations for most of the respondents in the newer PFMs. This result supports the previous argument that either the higher values being generated from the forest products or involvement of new households are the possible explanations for the seemingly paradoxical results indicated in table 6 and figure 1 where both increased income from forest products and lower level of extraction from the forest were observed simultaneously.

Table 11 The Rankings of the roles of Cooperatives/PLCs in forest marketing by respondent households

Change	N	% of respondents				
		First	Second	Third	Fourth	Fifth
Price of forest products has increased	59	64.4	27.1	6.8	1.69	0
Higher quantity sold for cash income generation	54	33.3	46.3	13.0	5.56	1.85
Cooperatives are important buyers	39	10.3	20.5	33.3	15.38	7.69
More able to sale to wholesalers	28	0.0	14.3	42.9	14.29	7.14
More able to sell to consumers	21	9.5	4.8	23.8	19.05	19.05
Most forest products are processed	23	8.7	4.4	17.4	21.74	8.7
More harvest and less cost of sale	27	0.0	11.1	37.0	11.11	11.11
Main market more accessible	23	0.0	17.4	8.7	8.7	4.35

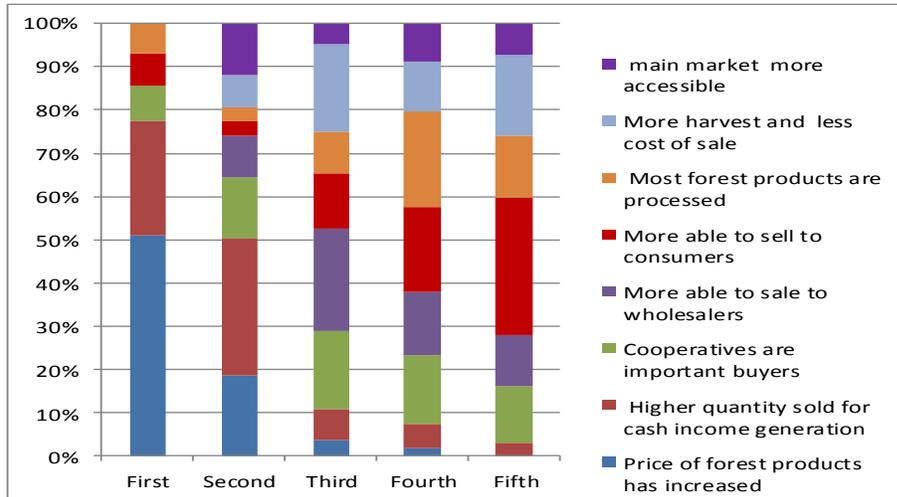


Figure 3. Comparative share within rankings of each of the issues related to the roles of Cooperatives/PLCs in forest marketing as perceived by respondent households.

2.5 Project Impact & Sustainability

2.5.1 Awareness and perception (community and officials)

Perception over the trade-off: All groups acknowledged having a reduced access to the forest, and a drop in income. Some forest products which were important sources of income particularly for poorer households were prohibited completely; some can be accessed by securing permission. Most argue, however, that their overall condition at this point in time is not poorer in terms of income to support their livelihood compared to the situation before the introduction of PFM in the area, when they freely accessed forest products. In fact, according to some participants, income has grown many folds compared to that before PFM, but they doubted how much this was due to the new PFM arrangements. The reasons given by such individuals included: introduction of alternative livelihood support means, such as fattening of stock, back-yard bee-hiving (supported by project training), and domestication of items like *Korerima* (also supported by the project).

The *Gesha* Kobo right holders and non-holders groups, in particular were more assertive in denying the decrease in income due to PFM establishment in the area.

They emphasized the importance of having training on the construction of beehives from local materials including mud, and using modern bee-hives at backyard, and propagating black Cardamom (*Korerima*) on farm. These practices which were all encouraged and supported through training by the project staff, enabled many households not only to improve their livelihood condition, but also helped women to build their own sources of independent income.

In *Gesha* and *Masha* the most important NTFP is honey. Traditionally honey comes from hanging beehives on big-trees. This means that Kobo-right-holders have vested interest in protecting the trees, if not the forest, as a key natural capital asset. Such individual concern or protection will continue as long as the traditional methods of honey production survive the introduction and expansion of modern bee keeping methods in the backyard.

Zonal and district officials' understanding: The officials interviewed in two separate occasions were Marketing Department head, Deputy Chief of Agricultural Bureau, at Zonal level, and deputy chief of Agricultural Office and Marketing expert at district level. The first question referred to them was to tell the team about the forest situation before the establishment of PFM in the area; and various other questions were posed. Their response to the first question was like a story telling in which they recounted the bad situation the forests were under before PFM. According to them, the forests were on the verge of complete destruction due to unregulated utilization by everyone, urban and rural people alike.

Since the start of the intervention through the PFM approach, according to the officials at different levels, things are changing for the better. What the interviewees identified as contribution of the project to the preservation of the forest in the area can be summarized as follow:

- The project helped community members with training in such areas like modern bee-hive production and use, domestication of *Korerima* and also soil-water conservation at watershed level, forest protection, etc.
- The visit they organized to other parts of the country with little forest resources and prone to drought had a huge impact on the visitors attitude towards the importance of protecting and ensuring the wise use of the forests around them
- The good thing about this project is that the staff members are working in close collaboration with government offices; they base their plans on the government's development policy directions and programs
- They have technically and financially contributed to the formulation of the Southern Nations, Nationalities, and Peoples Regional State Forest Development, Conservation and Utilization proclamation (147/2012).
- They have helped to create PLCs for marketing forest products and established a national/international market for such products like honey.
- The success of the PLCs has instigated the establishment of specialist Coops for forest products.
- The project has helped women to develop their own sources of income in terms of NTFP products, including backyard modern bee-hives.
- The project has constructed offices for the FMAs, and financially supported government experts and managers for training.

The complaint from *Got*-PFM members about the time it takes to secure permission to use certain types of forest products was presented to the official. The district official noted his doubt on the capacity of the community to taking full responsibility for managing the resources by themselves.

Concerning indemnity in case of expropriation of forests under PFM, the officials at the district level noted that the law, although it supports compensation, is not specific about the type or rate of reparation, as it is described for agricultural lands.

The response to the suggestion of the possible termination of the project activity in the area, was that all responded with stern advice against untimely termination. There are a number of activities that needs attention; they noted that government offices have a lot of work to do; for all technical and financial purposes, they would not be able to give the attention the project staffs have been giving to the forests and their communities. The officials at both levels have serious doubt if the current status favoring PFM members can be retained if the project is terminated without making the PFM Associations strong enough to defend their respective legally endorsed rights.

Generally the level of awareness of community members and government officials about the importance of forests, and the pressure the resource is under are impressive. Communities seem very much aware of their rights and their limitations; the government officials also accept that there is a demand for land due to investment expansion as a government policy, and that there are environmental issues which make it necessary to conserve the resource.

2.5.2 Livelihood improvement

During the group discussion many participants in all *woredas* accepted/agreed on the improvement in their livelihood conditions since PFM has been established. They said many people are re-building their houses with corrugated iron-sheet. According to the household survey results, 99% of respondents believe that their living conditions is better now and also link these positive changes with the project. About 35% of the respondent rate the effect of the project to be high, while 64% think the positive impact of from the project as small. On the other hand, about 75% believe that the PFM project is highly successful in ensuring sustainable and equitable forest use.

In relation to changes in livelihood strategies, a significant change was reported in the importance of forest-based income sources between the pre-PFM and post-PFM periods. Taking households who had the highest rank for forest-based income

(either in terms of contribution to livelihoods or household cash income) as forest dependent households, the number of forest-based households has declined from 57 to 28 (-103%). The proportions of households who rated forest cash income as the highest and second highest contributor have declined by 12% and 3.5% (Prob > chi2 = 0.0427), respectively. However, in terms of change in income in the post-PFM period, all the three major income sources (crop, livestock, and forest-based) were reported to have increased, this being by 75%, 62%, and 75% of the respondents, respectively (Table 12).

Table 12 Households' assessment of the change in income to household from different income sources after the PFM is applied

Source of income	N	% of respondents		
		Decreased	No change	Increased
Crop cultivation and homestead farm	115	20	4.35	75.65
Livestock	114	21.93	15.79	62.28
Natural forest based income (forest products; timber + NTFPs)	115	16.52	7.83	75.65
Petty trade or other commercial business	24	12.5	66.67	20.83
Wage labor and Employment	20	10	80	10
Support from Go or NGO, etc	19	0	78.95	21.05
Payment from renting out coffee trees/land	18	0	33.33	66.67

On the other hand, among the three major sources of income, crop cultivation was given the highest rank (55% of respondents) and livestock production the second highest (49% of respondents) whereas forest-based incomes were given the third rank (45% of respondents) with regard to the potential for growth in the future. About 28% of the respondents' valued forest-based income as having the highest potential to improve their livelihoods in the future thus being better than livestock in this respect as only 20% of the respondents gave livestock the highest rank.

In general, about 40% and 44% of respondents gave the highest or second highest ranking to forest based income sources in terms of importance to overall livelihoods and cash income generation, respectively. On the other hand, about 82% of forest-

based households and 44% of non-forest based households gave forest-based income sources the highest or second highest ranking in terms of potential to improve their livelihoods in the future.

2.5.3 Forest resources

With regard to forest conditions, most respondents greatly appreciated the decline in destructive activities in the forest such as encroachment, settlements, forest fire and illegal harvesting activities whereas they similarly appreciated the positive changes in regeneration and regulated harvesting following the PFM establishment (Table 13).

Table 13 Change in forest condition based on household opinion

Attributes	N	Before PFM				After PFM			
		none	low	moderate	high	none	low	moderate	high
Forest area encroachment	114	0	3.5	6.1	90.4	29.8	57.9	9.7	2.6
Forest regeneration	115	3.5	87.8	8.7	0	0	0	46.4	53.6
Health of young seedlings	115	6.1	85.2	6.1	2.6	0	1.8	47.3	50.9
Illegal harvest of forest products	113	0	0.9	4.4	94.7	25.7	69.9	3.5	0.9
Legal harvest of forest products	107	31.8	56.1	8.4	3.7	1.8	6.2	47.8	44.3
Settlement in the forest	108	3.7	3.7	11.1	81.5	63.7	34.5	0.9	0.9
Forest fire	105	4.8	6.7	28.6	60.0	56.8	40.5	0.9	1.8

The observed changes in the forest condition as seen by the households interviewed and as indicated in the above table is remarkable in showing the significant impacts following the operation of the PFM. Particularly, the relatively higher ratings given by the majority of respondents in relation to the recovery of the forest and survival of the new regenerations combined with the reduction of illegal harvest, new settlements in the forest, and low level of encroachment can be considered as reliable indicators for a good beginning towards the sustainable management of the forest resource.

2.5.4 The question of social equity under PFM

Kobo-right-holders and Non-holders: The customary *Kobo* arrangements in the area are of two types: the first is area-based: an owner of *area-based Kobo* exercises rights over all plant/tree resources found within the limits of his holdings. The second type is tree-based *Kobo* where the *Kobo* right holder's entitlements are limited to the big trees within a specified area. Access by non-owners to both holdings requires the permission of *Kobo* right holders, which is not often denied. In the case of hanging of bee-hives and also lumber production (pit-sawing) however, the non-owner enters a "share-cropping" arrangement with the right holder.

In *Masha*, the complaint on the part of *Kobo*-right-holders was over the election of PFM (*got*) leaders from non *Kobo*-right-holders. They said that this group has no knowledge and also lack concern about the forest as they don't own trees or forest areas. The election was reportedly held without the presence of the *Kobo*-right-holders.

Non-*Kobo* right holders were asked to express their feelings concerning their current position in which they are requesting permission to use a resource that has grown naturally without any "in-put" from *Kobo* right holders but which is controlled by them. There was an expectation from the researchers that there could be some kind of complaints by non-*Kobo*-right holders for being denied equal access to the naturally grown forest resource. On the contrary, FGD participants noted: *the Kobo system, is a long time tradition; it happens that our forefathers did not have such rights; and we could not have such rights as well*³. The *Kobo* customary rule, as long standing customary practices seems to have been 'accepted' by most, including local government official. The principle of PFM on the other hand, as well as the spirit of customary rules, is based on the fair distribution of resources, if not equal allocation. The PFM arrangement in three of the four *woredas*

³ The *Kobo* rights over trees and also over some forest areas by some members have prevented ordinary access to these resources. The 1975 land Act (which is still the basis for land tenure system of the country) nationalized and put all land and forests under state control. The Act did not give recognition to customary rights. But, the customary *Kobo* rights are still functional in many areas in the Southwest. This is not to criticize customary rights as such; but under PFM condition members' access to resources should be equal and customary rights should not be a guise to deny rights to access.

(there is no *Kobo* system in South-Bench) is largely different from what has been in practice in some other parts of the country under PFM, such as Chilimo, Adaba-Dodola etc. The customary entitlement of the *Kobo* system remains operational in spite of the issue of fairness in resource access under PFM arrangement. Here, due to different socio-cultural backgrounds, rights over the forest resources are allowed to be “unequal”.

The women and the minority groups: Concerning the positively changing situation for women after PFM in their respective area, the women listed the following:

- Access to forest products is regulated through rules detailed in the by-law developed by the members themselves.
- Forest use rights are no longer considered as belonging to a few dominant groups/clans (*gosa*), therefore there is an increased feeling of ownership of the forest among most community members, including women;
- Women participate on an equal basis in forest management activities. In the past women’s involvement was limited only to providing meals to the men out in the forest.
- Women are no longer dependent on men to get forest honey as it can be produced through domesticated bees (in backyard hives). As a result, bee hive making and honey production are no longer considered as men’s job.
- The fact that there is recognition of women’s equal rights over the forest in the PFM arrangement is in itself a positive change.
- The fact that women are consulted as separate groups in this discussion is also a new experience that has not been seen in the past in this area.

The researchers were impressed by the level of women’s awareness and their mature opinion concerning the changing forest management and utilization in their area. Although, the complaint about the restrictions and the time it takes to get permission to use some forest products is still with them, the view they developed concerning access limitations was found to be forward-looking and constructive. One of the women in the group (*Anderacha*) stated:

*The PFM has ensured sustainability of the forest resource. Now we understand that our use right to the forest doesn't mean **the right to destroy**, in the same way as we don't have any right on the life of our children though we gave birth to them and take care of them.*

The women groups also mentioned, for example, about their concern on the rising material needs of the current (younger) generation which they suppose is unsustainable taking the limited capacity of the forests. They highlighted the issue of sustainability to be urgent.

Among the **minority groups** involved in the discussion were the *Menja* of *Masha*, and the *Me'jen'ger* of *South Bench*. In *Masha*, one of the groups among the discussants seemed to be doing fine, and one person in the group owned over 200 beehives. Although the cultural segregation has yet to fully disappear, for the forest dependent *Men'ja* community the PFM arrangement has brought them not only rights over forests, but also some kind of improved social interaction. The *Me'jen'ger* are the other minority group, described as a truly forest dwelling community. They entirely associate their lives with the forest. Unfortunately, according to the group, their rights over the forest are infringed by outsiders. They stressed the need for education (training) for their community. They complained about their absence in the leadership of the got PFM groups established with support from the NTFP-PFM Project.

2.5.5 Institutional Resilience

Institutions, (internal/informal and external/formal), are sets of laws, regulations and norms used to regulate human behavior, and thus resource utilization. Where the two are complementary resource management and utilization becomes more stable. In modern Ethiopia, informal institutions, like customary resource use/management are very much undermined due to the super-imposition of the state structure that has reached the village level – the *kebele*. Currently, the customary resource use systems are also under serious threat from newly emerging and aggressively expanding external factors: international and national capitalists looking for investment openings.

The PFM approaches have enabled many communities to develop their own internal regulations through which they determine collective/shared and individual responsibilities to control, manage and use the forest resource. This approach has also provided customary resource use systems with recognition. These internal rules are accepted by the government body as a result of the signing of the PFM agreement by the *gots* PFM groups and the *Wereda* FMA with the *Wereda* administration. As a result, it can be further assumed that the bylaws and the internal regulations can stand in the court of law. Institutional resilience is measured by the ability of a system (in this case the PFM got groups and *Wereda* associations) to withstand any internal disturbance, such as corruptions within, etc., and external pressure like that coming from external forces (so called investors and powerful interest groups in nearby towns and community). The institutional resilience of the PFM approach has not yet been tested with any serious challenges (coming from both sides), although there are some indicators, like trespassing (encroachment), etc. (Further study is needed to look at the seriousness of these problems)

2.5.6 Problems in need of solution:

Excepting for differences in emphasis, almost all groups in all categories in all *Woredas* pointed to the following as issues that need the attention of the project office and the government.

- a) The time required to secure permission to gain access to some forest products like lumber needs to be shortened; according to some such authority should rest with DAs and *Kebele* officials.
- b) The women's group said also that the return obtained from forest protection is not sufficient; they must be allowed to "*clear some area and plant onions. The focus should not be only on conservation/protection of the forest.*"
- c) Despite the new opportunities for women, many women are not yet capable of using them. There should be more training for women. This is because women lack the necessary knowledge to assume leadership positions; women should have equal

participation in leadership positions. This will also improve the effectiveness of the PFM. The more women who are elected in leadership positions the more others will be inspired, and also the more access to knowledge and information there will be which can easily be transmitted to other women who do not have access to this, as *women listen to and trust each other more than men*.

- d) Marketing outlets with better priced for products are essential. Although people can sell their products to whoever gives them a better price, the local market appears to be too small compared to the big markets in cities like Addis Ababa. The market issue is much emphasized by the women's' group; they believed a *good price would encourage the women to produce more*.
- e) Training opportunities should be transparent and fair; trained individuals after returning to the villages should be able to act as trainers and train villagers. Training should focus on modern bee hive keeping, tree-planting on sloppy lands, protecting bee-hives from ants, etc.
- f) There is shortage of credit services, the availability of which would have helped women to develop alternative livelihood and diversify their source of income. More credit opportunities should be made available, they suggested.
- g) More attention on monitoring is necessary to see if the management and utilization of the forest is done in accordance with the agreement. Some participants believe that officials could be engaged in nepotism and corruption, although they could not be more explicit. Increases in the number of people involved in guarding the forest, and drawing up a program so that all people are involved in guarding equally were suggested.

2.5.7 Challenges of sustainability

The main concern shared by all groups in all categories was the sustainability of the newly won rights over the forest that had been lost long ago. It seems that most participants in the group discussion worry more about maintaining their rights over the forests than any other issue, for example, level of access. Some of the fears group members mentioned seems valid. The researchers share these community concerns from what they gathered from the area (through informal interaction) and experiences in other places. The concerns include the following:

a) Threat from agricultural investors: according to discussants, during the last decade and half they have been observing the expansion of tea and coffee plantations around them by different investors; they complained: *while we (community members) were denied cutting of trees with gejera (machetes), outsiders are knocking down thousands of trees with machines.* What was more worrying for them was the danger that they would one day lose their forest holdings. There was in fact a case or two in *Masha* and *South-Bench Woredas*. In the latter case, according to the group a certain individuals from town (*Mizan*) encroached into a demarcated (*Mejenger*) PFM area and shot at the members who tried to defend their holding. The *Mejenger* complained about lack of decision by government officials in such cases. This was also confirmed by the FMA leadership who said that after taking the case to court at zonal level, they could not follow the case for lack of money to cover travelling and other costs.

Participants also perceived the possible impact of such huge deforestation and land use change by investors causing shortage and unreliability of rain. All participants strongly associate shortage and unreliability of rainfall with deforestation. In 2013, according to them, rain was delayed for over two months for the first time in their memory. In the same year, fire started in the area, a convenient association.

b) Termination of the project. Many of group discussion participants believe that the project has helped them to win their rights and manage and use their forests. Although

experts and development agents are doing what they can to improve their livelihood situation, they are not to be compared with the service that the project provides communities with. Termination of the project would mean the loss of a strong helping hand. They believe that investors will not be a worry as long as the project office is around; they have less confidence in the government offices to defend their rights.

3. Recommendations

In our study of the NTFP-PFM project experience in the four *woredas* we have found interesting positive outcomes that should be built upon in order to ensure sustainable management of the forest resources. We believe the consideration of the following suggestions will enhance the huge potential of the PFM system to sustain itself.

a) Design and expand more incentive mechanism

Participatory forest management experiences from various countries show that the level of member's participation depends on the amount of benefits that individual households receive from such projects⁴. And people with a high level of forest dependency have a high interest or stake in the forest, which could be reflected in their level of participation in its management given the existence of the right incentives. What we think as the “right incentive” in the context of PFM arrangements here is the inclusion of wood among forest products extractable for marketing, in addition to their availability for domestic use. This suggestion also connotes a change in the name of the project itself, from NTFP-PFM to a more appropriate name that reflect the inclusion of timber, poles, charcoal, etc. It is a

⁴ PFM Experience of many countries comes to similar conclusion. For example, Burkina Faso's experience indicates that level of participation in PFM depended on the amount of benefits that individual members receive from such projects (Coulibaly-Lingani, et al, 2011). People with a higher level of forest dependency have a higher *stake in the forest, which is reflected in their level of participation in its management*. (Maskey, et al. (2006) also reached similar conclusion about Nepal that the degree to which users of the common forest resources participate in management activities is determined by the *benefits obtained from them*. Furthermore, *forest dependency has been found to stimulate people's participation in forest management*. Sarker's (2008) study of PFM of West Bengal (India) indicates that coercion cannot successfully control illegal access of forests by the poor, until and unless a substantial increase in the income from legal forest products meet their livelihood security. In Zimbabwe's Campfire Program, powers were transferred to District Development Committees who were largely under the control of central government. In Nepal, stream of monetary benefits was re-directed toward a group of resource users rather than attempting to create institutions that allow durable decision-making powers to local authorities Agrwal and Ribot (1999)

matter of developing (together with communities) a detailed exploitation arrangement based on sustainable management/utilization plan.

b) Ensuring institutional resilience

PFM is essentially a political, socio-economic and environmental arrangement through which communities and their elected leaders are made autonomous and accountable in their decisions concerning forest governance. It is a mechanism where partnership between the powerful state and "weak" community is negotiated over forest resource ownership, management and benefit sharing. The connecting institutional threads are the institution (rules and regulations) upon which the relationship between the various actors, including those engaged in conflicts, are regulated. It is, therefore, essential that the PFM system has a built-in mechanism to monitor, evaluate, amend or even change the rules and regulations in line with changing internal and external dynamics. The seriousness of the challenges to PFM sustainability can be understood only if further and deeper studies are conducted as time passes and more experience is gained.

In some instances PFM leaderships were accused of corruption and nepotism. Some suggested the increases in the number of people involved in guarding the forest to look after unlawful access by some. The idea is to strengthen the organizational capacity of PFM to control the corruption problem within. The researchers suggest the reinforcement of the internal monitoring system as well as augmenting the supervisory activity by project staff, and most importantly by FMA at *Woreda* level.

c) The *Kobo* system

The researchers believe that the exclusive rights of some individuals under the guise of customary rights over parts of the forest resource may become problematic in the future. The *kobo* tradition in the context of PFM approaches seems to have been misplaced, because, the principle of the approach requires equal access of resources among members. We understand why the system is still retained. However, for the best long term effect on the management and protection of the resource the *Kobo* tradition needs to be thoroughly studied in line with the principles of PFM and its sustainability.

d) Capacity building

Although assistance to community based organizations such as those developed the NTFP- PFM Project (like the project office in *Masha*) is still needed, what is ultimately critical is the organizational strength and personnel competence that PFM members can build within their organisations. We have learnt from group discussion that the project's record to capacitate PFM members through training is impressive. We found it still essential to invest in building the technical, organizational, and administrative capacity of members in order to enable them to withstand any disruptive events and challenges from within or outside. The helping hand of the project will not be around on permanent basis, so it is essential to use human capacity building as one of its exit strategy.

e) Speed-up the signing of pending PFM agreements with GO

We learnt that there are about 40 PFM units which has legally constituted, but did not sign agreement with the concerned *Woreda* government office. We were provided with no strong reason for this by the *Woreda* officials, (except mentioning about their busy schedule). In the face of so many uncertainties it would always be wise to push for a quick action to sign these agreements and allow members to implement the forest management plan.

f) Decrease in forest dependency

There seems to be a general trend that community dependency on the forests is slightly decreasing, and this drift (how much slow it is) might even continue in the same direction, as communities keep on diversifying their source of income and livelihood. Honey production from backyards, domestication of such spices like *Korerima* fattening of stock, and agriculture products are becoming important sources for communities. The decline in forest dependency would mean two things: **first**, an excellent opportunity for the forest to recover as human pressure decreases; **second**, it might also mean falling interest among communities (in the long run) particularly if the existing restrictions and the bureaucratic procedure to get permission to access some forest products continues, and the economic return is not worth the management and protection efforts. This trend needs to be closely

observed over time and ways of increasing the value of the forest and interest in it are needed⁵.

g) Women and minority participation

The limited participation of women and the two minority groups (especially the case of the *Mjenger*) in the PFM group leadership was one of the questions raised by both groups. Looking at the composition of leadership the complaint is found to be true. Though it is not an easy task to involve women in the leadership due to traditional socio-cultural conditions, strategies such as provision of quota system for women and minority groups in the PFM process could be introduced.

h) Securing permits for exploitation

One issue that all members of the meetings raised was a complaint about the time required to secure permission from the concerned government offices for accessing some restricted forest products, such as timber and tree ferns. We need to remember that these people were in an open access situation extracting products whenever they needed in the amount they required. During discussion they have accepted the restrictions for PFM, but never the time required to get permission when they request this. There must be some ways to improve and lessen the bureaucratic procedures, so that the communities are not pushed back to the old way of exploitation. If caught and punished for accessing a forest resource which they have been using for long, communities could not be able to see the crime of their act, but only the punishment.

⁵ Here the most important issue is the need to strengthen the integration of other income activities with the forest resource and the forest-based benefits and the consideration of the potential negative impacts on the forest resource from the increasing level of these other income activities. There will always be interaction between crop, livestock, and non-farm activities and working towards exploiting the positive interactions to facilitate integration will still maintain the role of the forest resource in people's livelihoods rather than viewing them as separate and competing sectors of activities.

i) Woreda FMA

We have noticed that the project is building office(s) for Forest Management Associations at *Woreda* level. The FMA at this level should serve as a mouth piece of sub-FMA at got level. There was a complaint from *Andaracha* FMA about the lack of funds to follow up a court case. This body should be allowed to access some forest products to cover its costs. Contribution from each got could be a source, but it is advisable that it also develops its own sources of funding for running costs.

In conclusion, passing over forest resources to communities is probably the easiest step, without forgetting the problems that might be created by the bureaucratic resistance and community's skepticism at the initial period. The major challenge is when it comes to the actual exercise by PFM members of the autonomy they have gained in accordance with the agreement signed with the government. Therefore, unless PFM schemes are established and run with a strong institutional basis and legal foundations, and members receive constant capacity improvement, it will remain vulnerable to internal (corruption) and external (bureaucratic) pressure for the simple reason of being an association created through 'unequal marriage' i.e. it is a partnership between the unpredictable state and village folks.

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