

Challenges to The Sustainability of Participatory Forest Management Program: The Case of Gebradima Forest, Southwestern Ethiopia

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Abstract

Since the mid-1990s, the government of Ethiopian has implemented participatory forest management (PFM) program as major strategy to promote sustainable forest management whilst enhancing the livelihoods of those who largely dependent on the forests. This program was largely initiated by non-governmental organization and bilateral donors. However, several challenges threaten its sustainability following the termination of fund from the donors for funded projects. The present study seeks to identify some of the key challenges facing the sustainability of PFM program in the Gebradima forest, southwest Ethiopia, with emphasis post project period. Data were collected between January and March 2016 from three PFM scheme rural kebeles through in-depth interviews and focus group discussions which were supplemented with secondary data. The study revealed that the main challenges to the sustainability of PFM program are lack of financial resources that support long-term capacity buildings for participants, limited facilities, staff turnover, poor government support and gaps in PFM policy and legal framework. The study therefore suggests that to ensure long-term sustainability of the program the government will provide significant support toward financial, technical and institutional capacity enhancement for forest users, and create enabling policy, legal and institutional conditions for the program.

Keywords: Challenges; donor funded project; Ethiopia; Gebradima forest; participatory forest management; sustainability

Introduction

Participatory forest management (PFM) approach, in which forest management responsibilities and use rights legally shared between the government and local communities has become an important forest policy objective in many African countries (Schreckenber *et al.*, 2006). The government of Ethiopia has implemented PFM since the mid-1990s, as strategy to promote sustainable forest management whilst enhancing the

livelihoods of those who largely dependent on the forests (Mohammed & Inoue, 2013; Siraj *et al.*, 2018). Since the inception, a number of PFM initiatives and forest areas under PFM have increased substantially (Lemenih *et al.*, 2015). One such initiative is the Gebradima PFM scheme which was implemented between 2010-2014 by FARM-Africa with financial support from European Union in collaboration with Oromia Forest and Wildlife Enterprise (OFWE) in southwestern Ethiopia (FARM-Africa, 2014). More forests in Ethiopia are coming under PFM programs following the

National Forest Development, Conservation and Utilization Proclamation No542/2007, which promotes the involvement of local communities in forest management. More importantly, the policy creates opportunities for PFM implementation in different regions of the country (Negassa, 2014).

Until recently, PFM has been driven largely by externally funded projects and supported by a number of bilateral donors. These external actors have played important role in assisting Ethiopia to implement PFM programs through providing technical and financial supports, and also helped as mediate between the governments and local communities (Temesgen & Lemenih, 2012). Such programs were transferred to the beneficiaries for maintaining once the project funding ends. Experiences from Ethiopia where PFM is being practiced show that it has the potential of improving forest conditions and local livelihoods (e.g. Gobeze *et al.*, 2009; Tesfaye *et al.*, 2010; Takahashi & Todo, 2012; Aklilu *et al.*, 2014, 2016; Tadesse *et al.*, 2016, 2017).

Despite its acknowledged potential and the positive contributions noted above, the sustainability of these PFM outcomes by the beneficiary communities and institutions beyond the project lifetime is an area of concerns among researchers and conservationists throughout the world (Tiwari *et al.*, 2008; Gobeze *et al.*, 2009; Mahonge, 2013). This has generated immense interest and discussion over the issue of its future sustainability (Kuria & Wonyoik, 2016). Evidence from different studies indicated that 40% of all new community-based projects do not continued beyond the first few years following the termination of initial funding (Savaya *et al.*, 2008).

Sustainability further gained status since 1987 with the publication of the Brundtland Commission's report called 'Our Common Future'. The report defined sustainability as a 'development which meets the needs of the present without compromising the ability of future generations to meet their own needs' (World Commission on the Environment and Development [WCED], 1987). Since then a

number of definitions on sustainability have emerged across the globe. According to Tiwari *et al.* (2008), different scholars have defined and interpreted sustainability based on their experience and local context. Sustainability, in the context of development projects, can be defined as the continuation of positive project outcomes after assistance from a donor has ceased (Myers *et al.*, 2014). In this study, sustainability refers to the continuation of actual project activities by the forest user group (FUG) members after donors technical, managerial and financial support has ended. In the context of PFM, FUG means local communities who live in and around the forests, and who organized themselves to take the responsibility of managing forest resources following the termination of externally funding project.

Evidences have shown that a number of challenges continue to beset the sustainability of project activities after the project has ended (Shahbaz & Ali, 2009). For instance, Mahonge (2013) reported that lack of government support, appropriate monitoring mechanism, enough capacity building and technical support post project is one of the most important obstacles hindering the sustainability of PFM activities. Others studies indicated that many community-based projects have failed, usually because of lack of sufficient financial assistance from the government (Acharya, 2003). According to this author, most policy instruments for PFM do not allocate sustained funding support to carry out the new forest management responsibilities. Furthermore, it has been argued that most of the projects in developing countries have been implemented largely under donor funding, with minimal participation by professional foresters which in turn led to project failure in many cases (Mazur & Stakhanov, 2008). Other scholars generally agreed that lack of enabling policy, legislation and institutional reform affect the success of a community forest management program (Mahonge, 2013; Kuria & Wonyoik, 2016).

Many authors including Mahonge (2013) suggested that understanding factors that affect the sustainability of donor funded community forestry projects is essential for long-term

sustenance of project activities and designing better project in the future. A number of empirical studies (e.g., Gobeze et al., 2009; Takahashi & Todo, 2012; Aklilu et al., 2014, 2016; Tadesse et al., 2016, 2017) undertaken over the past decade in Ethiopia have focused on the impacts of donor-supported PFM programs in terms of forest condition and livelihood improvements and the issues of sustainability of such program following the termination of externally funding donors remain poorly understood. This suggests a need for more empirical studies to increase understanding of the factors that influence the sustainability of PFM program especially after the termination of donor support funding. Furthermore, little empirical evidence available on the main challenges that encountered the sustainability of PFM program in Ethiopia, which is very important for improving modalities to scale-up PFM activities (Negassa, 2007; Gobeze et al., 2009). The present study therefore seeks to identify the main challenges facing the sustainability of PFM program after donor funding withdrawal in the Gebradima forest and make suggestions about ways of addressing identified challenges. In addition, the findings of this study will assist policy-makers to look the main challenges that confront the sustainability of PFM program in the study area and beyond. In the next section of this study, we present the description of the study context as well as methods of data collection and analysis followed by results and discussion. The final section presents the conclusion and policy implications.

Materials and Methods

Description of the study area

The present study was conducted in Gebradima PFM site (7° 48'-8°17' N latitude and 35° 21'-35°49' E longitude), which is found in Illubabor administrative zone, southwest highlands of Ethiopia. The forest stretches over three districts with altitudinal ranges between 1,444 to 2,444m a.s.l. Three rural *kebeles* (the lowest administrative unit in Ethiopia), namely Sagi-tageta, Tulusuna and Gordomo, where PFM has been in progress were randomly selected for the study (Figure 1). The forest

covers a total area of 76,418.14ha and characterized by rugged mountains, deep gorges and extensive dissected plateaus. The general climate is moist subtropical with a mean annual rainfall of 1,782.76 mm and mean annual temperature of 19.18°C (NMA, 2016). The rainfall pattern is a unimodal with low rainfall in January and February, and maximum rainfall between the months of June and September. The soil types covering the study area are predominantly dystric nitisols, cambisols, dystric gleysols, gypsic yermosols and orthic solonchaks (FAO, 1990). The most common woody species are *Albizia gummifera*, *Millittia ferruginea*, *Pouteria adolfi-friederici*, *Schefflera abyssinica*, *Sapim ellipticum*, *Ficus surand* and *Croton macrostachyus* (Tadesse et al., 2016). The forest in this area also has some regional importance because it covers the upper catchments of several important rivers such as Baro-Akobo tributaries of the Nile from Ethiopia.

Since 2010, PFM scheme was implemented by Farm-Africa, an international British based non-governmental organization (NGO) with financial support from European Union in collaboration with the OFWE. The aim of the program was to promote sustainable forest management through implementation of PFM and improve the livelihoods of forest dependent communities through promoting forest-based livelihoods and other non-forest based alternative livelihoods (Farm-Africa, 2014). Under PFM arrangement the government retains legal ownership and control over the forest, whereas FUG members granted an exclusive use rights to the forest products within the demarcated forest area defined in the forest management agreement (Siraj et al., 2018). Being resident in and around the forest was the main criteria for forest user group membership. Based on information obtained from district forest enterprise office, a total of 29,901.61ha of forests have been transferred to 13 formally registered FUGs involving nearly 2,182 households as of 2015.

Agriculture, in which subsistent rain fed crop cultivation and supplemented with some livestock production, constitutes the basis of the economy of the local people. Although

different types of crops are cultivated, the most predominant are maize (*Zea mays L.*) and sorghum (*Sorghum bicolor L.*) mainly for household consumption. Cattle and equines also constitute the main livestock types in the area. Additionally, non-timber forest products

such as forest coffee, honey and spices harvested from the forest remain important components of their livelihoods.

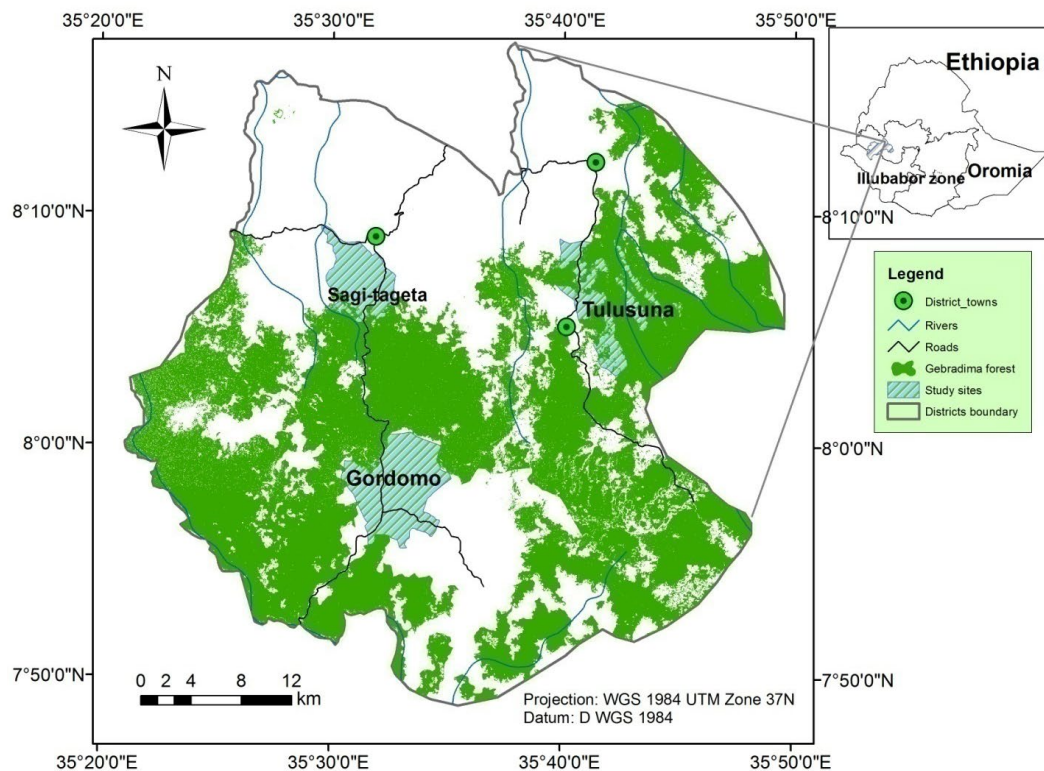


Figure 1. Location map of the study sites in Gebradima forest, Southwest Ethiopia

Data collection and analysis

Data used in this study were collected from both primary and secondary sources. Primary data were collected using in-depth interviews and focus group discussions between January and March 2016 from each sampled PFM scheme rural *kebele*. In-depth interviews were held with a total of 24 key informants, mainly selected from the FUG members, forest officers of OFWE at both zonal and district levels, executive committee members and forest experts. These key informants provided information on the main challenges facing the continuation of PFM activities following the termination of external funding resources and gave recommendation for possible solutions to

achieve better forest management and livelihood outcomes.

Furthermore, three focus group discussions were held with members of FUGs, comprising a group size of eight participants. Checklist was used to facilitate the discussion and guide the focus of the research. Detailed notes were taken throughout the discussions. Purposive sampling was used to select both key informants and focus group participants in order to obtain knowledgeable individual who can provide the needed information. All interviews and discussions were carried out by the principal researcher using local language (Afaan Oromo). To ensure ethical considerations, permission was sought from the OFWE zonal office and respective district administration authorities. Following an explanation of the

objectives and purpose of the study, anonymity and confidentiality of responses were explained to the participants before the interviews conducted. Secondary data was obtained from relevant government policy documents and reports found in both zonal and district forest enterprise offices. The qualitative data from interviews and focus groups were subjected to intensive content analysis in order to identify major themes. In the presentation, quotations were used to emphasize certain statements. In addition, the 2007 national forest policy was comprehensively analysed with a focus on PFM implementation.

Results and discussion

Challenges facing the sustainability PFM program

Results showed that a number of factors have been identified for the sustainability of PFM program in the Gebradima forest. These identified factors were grouped into five categories which included lack of financial resources, limited facilities, staff turnover, poor government support and gaps in policy and legal framework. These are discussed in detail below.

Lack of financial resources

One of the key challenges for PFM program sustainability is limited budget allocation that need to support community forestry activities following the end of externally funded projects. This has meant that inadequate funding minimizes the possibility of a project to be sustained. In line with this, Mahonge (2013) argued that for an externally funded project to be sustainable the government should allocate sufficient funds to support these activities. According to interviews conducted with zonal and district forest officers, regular budget allocated to support the PFM activities are not sufficient. This suggests that there is a need for additional funding sources to sustain the PFM activities. Moreover, they mentioned that budget allocated from the government only covers operational costs and staff salaries. Focus group participants also reported they

lacked access to credit facilities and subsidies from the government. They claimed that financial constraints prevented them from developing alternative livelihood strategies. According to Acharya (2003), lack of adequate budget support to the community forestry activities in post project years poses a risk to the sustainability of these efforts.

Based on the information obtained from district forest office, almost 98% of the total budget for PFM implementation comes from Farm-Africa, an international British based non-governmental organization through financial support from European Union. This finding is consistent with that of Bekele (2011) who reported that most forestry activities are not able to mobilize adequate public funding from within the sector since forest enterprises are not yet strong enough to cover their expenses in Ethiopia. According to this study, the budget allocated for the year 2009 for a forest enterprise in Oromia region ranges from 1 million US\$ to 10 million per year while budget allocated for Amhara regional state is less than 1 million US\$ per year. This suggests that forest management of the country has been constrained by insufficient budget allocations. This finding is, however, not in line with that of Myers et al. (2014), in Indonesia where government allocated 21 million US\$ to support community fire management and agroforestry after the donor funding completion. To overcome the problem of financial resources, several studies identified payments for environmental services including carbon sequestration and greenhouse gas emission reduction as potential financing mechanisms to sustain community based natural resource management approaches (Minang et al., 2007).

Limited facilities

Access to available transport and technical forest inventory instruments are very important for sustaining the PFM activities. According to interviews conducted with district forest officer, despite PFM implementations, the district forest enterprise is still highly challenged by availability of transportation and material facilities. This has led to threaten the

sustainability of PFM activities. He further indicated that currently only one motorcycle available at district forest enterprise office which was provided by the project. This issue was further confirmed by the lead author during field work. One key informant from the district forest enterprise stated that ‘although the program promoted bottom-up approach and involved the forest users in all stages of the program implementation for sustaining the project activities, continued supervision of these activities across three districts was very challenging’. This can be attributed to lack of sufficient transportation like motorcycles and vehicles.

Zonal forest officer also mentions similar concerns for limited transportation and material facilities. According to him, these limited facilities come from frequent restructuring of the forestry institutions. The study by Lemenih & Negassa (2012) confirmed this reality. According to these authors, over the last three decades both federal and regional forestry institutions in Ethiopia have faced frequent restructuring. For instance, over the years, Oromia Bureau of Agriculture and Rural Development is responsible for the administration of forests found in the region. However, in 2007 Oromia Forest Supervising Agency was established to coordinate the establishment of eight forest enterprises across the region which is then changed to the Oromia Forest and wildlife Enterprise in 2009. This lack of stability led to limited transportation and material facilities, which in turn hindering the effectiveness of forest management and sustainability of these project activities.

Another constraint that is noted by district forest officer is the lack of available forest inventory equipments. According to him, forest inventory instruments such as calipers, a hypsometer and Global position system (GPS) were taken from the district forest enterprise office by the project implementer following the termination of the project. A similar result was reported by Mohammed & Inoue (2012) in Chilimo forest, Central Ethiopia were lack of inventory tools as a reason for the absence of recent forest inventory data. According to this study, in addition to the inventory tools, other

materials such as seed collection tools, computers, and vehicles, which may have contributed to efficient implementation of PFM, were also taken from the district forestry office to other government offices such as the district agricultural office and regional agricultural and rural development bureau. In line with this, Minang et al. (2007) argued that technical resources such as satellite images, GPSs, and tree height measurement instruments would be helpful in providing information required for forest data.

Staff turnover

Adequate and effective staffing is also an important factor for sustaining community-based projects. According to Myers et al. (2014), lack of adequately trained personnel is a major detractor from sustaining community-based projects while providing adequate staff leads to supports project longevity. Interviews with district forest officer revealed that limited number of forest experts, particularly at field level, who can provide technical assistance and conduct regular monitoring of the PFM activities often identified as a key factor that influence the sustainability of PFM program. This problem is further aggravated by the high turnover among knowledgeable and skilled forest experts. The continuous staff turnover at district level can be explained by the availability of other local NGOs in the area which attract these experts due to their better salary and other incentives. For instance, during PFM implementation the office existed with three forest experts, but after the project termination they left the office and joined other local NGOs. This reality further confirmed by Tesfaye et al. (2015) who reported that due to its limited capacity and less human resources OFWE has not been able to demarcated and properly managed all of the region’s forest resources. According to these authors, there is a need to increase professional forest experts to fully administer the region’s forests.

Gaps in PFM policy and legal framework in Ethiopia

For PFM program to be successful there must be strong enabling policy and legal support

(Tsegaye et al., 2007). According to the study made by Tesfaye et al. (2015), there are several national policies, strategies and proclamations including the constitution of the country that advocate and recognize the need for people's participation in forest resource management in Ethiopia. For instance, Ethiopia recently approved a Forest Development, Conservation and Utilization Proclamation No542/2007, which promotes active participation in forest management through the establishment of PFM¹, where local communities co-manage forest resources with local government authorities (Temesgen & Lemenih, 2012).

Currently, PFM is increasingly recognized by both federal and regional governments as an important, and perhaps as the only, viable option for sustainable forest management in the country (Bekele et al., 2015). The Oromia Forest Proclamation No72/2003 also supports the implementation of PFM². For instance, the proclamation encourages the participation of local communities living within and adjacent to state forest priority areas on conservation, development and proper utilization of state forests.

Despite significant improvements, there are still gaps in the legal aspects related to PFM that holdback the effectiveness and full realization of the potential of PFM in the country. In general, the report by Mellese (2011) identified the following gaps in the legal instruments of the country to successfully promote PFM. Firstly, lack of explicit and clearly articulated legal provisions for PFM in the federal forest proclamation. For instance, communal ownership of forests has not been separately recognized under Proclamation, only private and state ownership is recognized.

Secondly, there is /are no article(s) in the forest proclamation that legitimize community-based organizations (CBOs) best suited to PFM. Consequently, different PFM actors have been struggling to use different forms of CBOs (e.g. forest management associations/cooperatives, forest user group and forest management group). Thirdly, the federal forest proclamation offers restricted user right for local communities (e.g. collection of non-timber forest products), and does not offer strong forest tenure, and it emphasizes more on conservation of forest resources than its sustainable use by local people. Finally, the fourth limitation is lack of clear benefit sharing arrangement between government and beneficiaries. For instance, the different PFM models hold various benefit sharing arrangements leading to variations in the amount and kind of benefits communities obtain from PFM regimes in the country. This has lead great disparity among PFM projects in terms of community entitlement to the benefits from the forest products. For instance, harvesting and selling of wood products are practiced under Adaba-Dodolla and Chilimo PFM cases but others still not practicing. This is due to lack of standard benefit sharing arrangements either at federal or regional levels. Furthermore, the benefit sharing arrangements are not similar even within the same region. For instance, in Chilimo PFM 70% goes to the community and 30% to OFWE, and in Adaba-Dodola 60% to the community and 40% to OFWE (Temesgen & Lemenih, 2012).

According to informants, memorandum of understanding between the forest department and the forest users have gives little regards for other forest recourses available in the forest. For instance, one participant noted that 'the agreement remains silent on how the benefits of forest management particularly for timber production and expected economic benefits that would be available in the near future from payment for environmental services (e.g. reducing emission from deforestation and forest degradations can be shared with FUGs'. Moreover, they reported that absence of clear benefit sharing mechanisms. According to Bekele et al. (2015), Ethiopia has not yet

¹ The Ethiopia Forest Proclamation No542/2007

² The Forest Proclamation of Oromia No72/2003

developed a legal benefit sharing mechanism from carbon gain.

Ensuring tenure security and clear ownership in which users are assured of their rights and benefits over a long period of time can be improved forest management. According to Bekele (2011), forest users are more likely to invest in forest management when ownership of the land and forest resource is clear and secure. Discussions with key informants revealed that although PFM provided access right to forest products, the ultimate ownership and power over the forest rests with the government. This clearly indicates weak tenure rights over forest resources. Similarly, the federal forest proclamation does not mention communal ownership of forests, only private and state ownership is mentioned. According to Bekele (2011), compared with other tenure holders, holders of community-based management agreements in forestlands, watershed reservations and protected areas enjoy the fewest rights under their tenure instruments.

Poor government support

Effective government support is needed to ensure long-term sustainability of the PFM activities. This in turn suggests that without strong government technical assistance to the FUGs the continuity of PFM activities will be threatened. Government can support the forest users in a numbers ways, providing the required technical, financial, managerial capacities, access to technologies and improved markets for forest products. One of the important technical supports is building the capacity of FUGs through providing various trainings and awareness creation. According to Tiwari *et al.* (2008), sustainability of community-based activities were depends on the skill and capacity of FUGs who take up responsibility of running these activities. This implies that access various training plays a crucial role in enhancing the capacity of FUGs to manage forests and ultimately improve their livelihoods.

Based on discussion made with FUG members, the institutional capacity building activities

were decreased as compared to during the project implementation period. This limited capacity building activities can be explained as the result of less staff in number and quality as reported by district forest enterprise officer. A similar study by Lemenih & Negassa (2012) reported that OFWE has little readiness and capacity in technical, human resources and even structural dimensions to fully take over the project process and sustain it. Another issue raised by forest experts and committee members is the failure of government to support law enforcement against reports of illegal activities, especially tree cutting for commercial timber and charcoal production by non-participants from neighbouring villages. Moreover, as one informant mentioned 'the enforcement of law against the offender in relation to these illegal activities was very weak. As revealed from discussions conducted with district forest officer, weak enforcement of law against offenders is linked with corruption at various levels. This indicates that there is a lack of willingness from judiciary bodies to implement the criminal code on illegal forest users. Respondents fear about the sustainability of the program if law enforcement bodies do not provide sufficient protection. According to Mellese (2008), courts of law particularly have a big responsibility in applying the law and fighting against deforestation and loss of biodiversity in Ethiopia.

This finding is in agreement with previous research that government may not be strongly committed to PFM and may not allocate sufficient resources to monitor and support the initiative in Bonga forest, southwest Ethiopia (Gobeze *et al.*, 2009). According to these authors, support from the government is also unsatisfactory to provide legal assistance for forest users against encroachers and offenders. They further indicated that due to weak law enforcement, there is a continuous clash between members of FUGs and others on access to the forest and use of its products. A similar study by Ameha *et al.* (2014) reported that the persistence of the PFM program in Ethiopia is challenged primarily by the lack of support from the authorities to the FUGs. According to these authors, if a PFM program is not acknowledged and supported by

the local authorities, it is unlikely to be successful to conserve the forest resources as well as to contribute benefits to FUG members.

In general, discussions with key informants and focus group participants revealed that the PFM activities that set by the project will not sustain without strong supports from the government. A similar result was reported by Lemenih & Negassa (2012) from Belete-Gera PFM project, southwest Ethiopia. According to this study, respondents skeptical about the sustainability of the new form of forest management in post project period as unsatisfactory commitment from the government to support PFM. A study result in Ethiopia by Negassa (2007) also revealed that members of forest management groups still have doubts in the sustainability of PFM. According to this author, the major reasons identified for this skepticism were history of frequent institutional changes and the ineffectiveness of the legal system to protect community forests.

Conclusion and policy implications

This study was intended at identifying the main challenges facing the sustainability of PFM program in the Gebradima forest, southwest highlands of Ethiopia. It was found that lack of financial resources, limited facilities, staff turnover at district forest enterprise, poor government support and gaps in policy and legal framework were the main challenges faced the sustainability of PFM activities following the termination of donor funded project. Although, experiences and lessons from this project have been positive, government support was at minimum level and could not help much to enhance the sustainability of PFM activities. Achieving sustainability of PFM activities demand sufficient funding, institutional capacity building and long-term commitments from government and forest users. Enhancing the capacity of forest users can be achieved through creating linkages with service partners (e.g. higher institutions, research organizations). In order to address the issue of financial problem the government could exert efforts toward identifying different opportunities for sustainable financial support

like reduced emission from deforestation and degradation and payments for environmental services. The forest department should work with law enforcement bodies in sustaining PFM activities. Other important issue that needs due consideration by government is creating enabling policy and supportive legal framework for future sustainability of the PFM activities. There is need to further studies on the role of different actors and the extent at which they influence the outcomes of PFM, which is not the subject of this study.

Acknowledgements

We would thank the participants who provided us valuable information for this study. The first author would like to express his heartfelt gratitude to Addis Ababa University, Association of African Universities and Mettu University for their financial support.

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