

International Journal of Social Sciences and Information Technology

<http://www.ijssit.com>

Vol 1 Issue VI, January 2016
ISSN 2412-0294

THE EFFECTS OF PARTICIPATORY FOREST MANAGEMENT PROJECTS ON THE LIVELIHOODS OF COMMUNITIES ADJACENT TO FORESTS

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Abstract

This study examines the effects of participatory forest management projects on the livelihoods of communities adjacent to forests. Previously, such projects were government led through a top-down approach and this prevented the communities from participating equally despite the fact that they were equal partners. The study therefore gives a comparison between the effects of the participatory forest management projects and the non-participatory ones used before. The central concept of the new paradigm is to grant exclusive user rights to organized user groups among the forest communities. The approach empowers the forest dependent communities to become organized and obtain access to the forest resource coupled with clearly defined rights and responsibilities. As a result the user groups are now living in harmony with their forests, their incomes have increased, adoption of alternative means of livelihoods, food security has improved, interactions among themselves and with authorities has also been enhanced and generally there has been an improvement in the use of forestry products. Additionally, experience gained from this approach has contributed to the consideration of community forestry as a viable pathway for forest conservation in the country. The study mainly relied on secondary data which comprised of journal articles. Scaling up such an innovative approach would serve to improve livelihoods of communities adjacent to forests while at the same time enhancing sustainable management of forests.

Keywords: *Participatory forest management, livelihoods, forest communities, forests, user groups*

1.0 INTRODUCTION

There is no single definition or universally accepted understanding of the concept of participation. The practice of participation is equally relative, as it is interpretative and therefore its application will largely be dictated by the circumstances on the ground. For some, participation is an effort to involve the community in the implementation of already drawn-up blueprint plans. For others particularly those concerned with power politics, participation implies involvement in the issues of polity such as agitating for multiparty politics, challenging the politics of exclusivity in favour of inclusive, plural governance (Mulwa, 2010). However, participation constitutes a process of devolution of power for decision-making and review of those decisions by the same people benefiting from development. Participatory development calls for the recognition and respect for local knowledge and experience, and people's ability to review and judge their own experience with a reasonable measure of objectivity. This process ensures true local ownership and commitment not only to the development projects and their outcome, but more importantly to the future development aspirations. According to Chambers (1983) any authentic model of participation should seek to empower the powerless towards assuring full responsibility over their own destiny, within the framework of their cultural and socio-economic realities.

Warah (2008) defines participatory forest management (PFM) as an arrangement where key stakeholders enter into mutually enforceable agreements that define their respective roles, responsibilities, benefits, and authority in management of defined forest resources. The necessity of ensuring clear incentives for communities to limit local resource use to sustainable levels, including the provision of non-forest alternative sources of income and subsistence and of legitimate participation in forest management are important components of sustainable natural resource management strategies.

Forests are considered an important safety net for the rural poor to meet emergency needs such as those due to food crop failures and economic hardship. Resource extraction from forests is an important source of income, without which such people's ability to satisfy basic needs would be constrained. Policies on exclusion of local communities from forest management, reservation of forest areas, and government control of forest resources have limited the extent to which local forest-dependent communities could benefit from forest use. Due to faulty design, inefficient implementation, and corrupt organizations, the outcomes of these state-centered policies in terms of forest conservation and revenue generation were very poor (Nath and Inoue 2010).

There are six key economic roles that forest resources play in Ethiopia:

- (i) Foreign currency earnings mainly from export of non-wood forest products;
- (ii) Import substitution for energy;
- (iii) Contribution to the GDP;

- (iv) Employment generation;
- (v) Livelihood support for millions of citizens, and
- (vi) Provision of environmental services that support other sectors, particularly agriculture, construction and energy.

At local level forests and trees provide food, medicine, energy, fodder, farm implement and construction materials. Upon conversion forestlands have been offering fertile croplands to sustain crop production. When protected forests are used as rangelands, act as biological measures to conserve soil and water and provide watershed protection. Studies show that 90% of the energy used in Ethiopia originates from biomass, and nearly 80% of human and 90% of livestock populations in Ethiopia depend on traditional herbal medicine for primary health care (WHO, 2002). FAO (2002) estimated that Ethiopia's fuel wood consumption amounts to 84 million m³ per year.

The failure of state-led resource management demonstrated that there was a need to change state policies and strategies to involve people living in and near forests in their management. This trend has led to the development of participatory forestry (PF) as an effective approach for sustainable management of forest resources during the last two decades. Participatory forestry can be defined as full participation of stakeholders in forestry decisions from policy formulation to field-level execution and back. It is regarded as an umbrella concept covering all of the different types of forestry activities that involve local stakeholders, especially villagers, in different degrees of decision making authority. The involvement of local communities, local governments, and other stakeholders (including the private sector, nongovernmental organizations (NGOs), and international agencies) has been accepted as an ongoing trend in forest conservation.

Toillier, Serpantie, Herve, & Lardon (2011) argue, in inhabited tropical forests, rural development and the involvement of the local population have become objectives complex from curbing deforestation. Community-based forest management has been posed as a solution to cope with the limited capacity of national institutions to achieve such objectives in developing countries. The transfer of forest management aims at reinforcing the local management capacities of forest users through their own efforts and their acceptance of both benefits and responsibilities.

According to Rantala, Bullock, Mbegu, and German (2012), the past two decades have witnessed a wave of devolution of forest rights to communities living in and around forests in Asia, Africa, and Latin America. This forest tenure reform has been driven by observed shortcomings in centralized natural resource governance in terms of effectiveness and equity, and increasing recognition of the rights of forest adjacent people as part of a broader introduction of human rights concerns and rights-based approaches to

natural resource governance globally. Bringing public, government-owned forests often existing open access resources in developing countries under the management of local communities is expected to increase the effectiveness and efficiency of management. Increased security of rights is also expected to translate into more direct livelihood benefits from forests to communities.

2.0 METHODOLOGY

This study relied heavily on secondary data obtained through critical review of existing literature, including journal articles. A minimum of 15 journals was used to generate the information for the study. Most of the journals and studies done on Participatory Forest Management on the livelihoods of communities adjacent to forests were from Ethiopia, Nepal, Bangladesh and Tanzania.

The number of journals analyzed was sufficient enough to generate credible information to support the claim that participatory forest management can positively impact on livelihoods of people living adjacent to forests. The approach can be argued to be more of qualitative since it relies on already existing information to support the study.

3.0 DISCUSSION OF THE RESULTS

3.1 Human capital

According to Ali, Ahmad, Shahbaz and Suleri, (2007) training on different aspects improved participants' human capital, so they were able to easily improve household income. Out of the total project budget, more than 15% of the money was spent for training purposes of the forest-dependent people. The Forest Department in Bangladesh offered a two-month intensive training program, which played a valuable role in the knowledge and skill development of 700 participants. The training program was able to create leadership and build a strong network among the participants in which they could work as a team, all of which have ensured the participants' capacity building. This study monitored the capacity building of participants according to the five key elements of community capacity building (Ali, Ahmad, Shahbaz and Suleri, 2007).

Almost all the participants received training components without major difficulties, and this study judged the effectiveness of the training program. Again, the Forest Department arranged 15-day refresher courses for all the participants, which easily explained the training content. This study also evaluates the overall skill and improvements of the participants for five important training programs through a 5-point rating scale (1 = Very good, 2 = Good, 3 = Satisfactory, 4 = Poor, 5 = Very poor). In the refresher course, each

of the participants was requested to select one or two specific programs in which they wanted to start a group. The study also observed that the Forest Department gave the highest priority to capacity building, due to the fact that the illiterate participants were unable to start any alternative livelihood program unless they were fully trained. Trainings can enhance skills, and skills might have significant impacts on the participants' attitude and perception of living, as well as forest conservation. Moreover, participants acquired skill and knowledge had an impact on the social capital, such as building relationship and encouraging self-capacity with the participating people (Ali, Ahmad, Shahbaz and Suleri, 2007).

3.2 Social capital

Social capital represents the social resources upon which people draw in pursuit of their livelihood objectives. These resources are developed through: networks and connectedness, membership of more formal groups and relationships of trust, reciprocity and exchange (DFID 2001). The qualitative observations also reveal that most people perceive the forest department as solely responsible for depletion of forests. According to people, forest department officials work with the timber mafia and sale their forests to outsiders. However, the trust and relationship of people to the forest department in participatory project villages is comparatively higher than that of the people of non- participatory project villages. This was because, in project villages, meetings of were held and staff from the forest department attended these meetings, thus increasing the chances of interaction with the community. Comparatively better (above average) trust was recorded of village-level institutions, like the Union Council (UC, an administrative unit composed of 5–7 villages), and *jirga* (traditional court of elders), compared to the state institutions (Islam & Sato, 2013).

According to Sukwong (2004) the participants' acquisition of skill and motivation had an enormous impact on the social capital, such as building relationships and encouraging self-capacity for the participants. The study observed that due to intensive training and community activities, a social network occurred among participants and local communities as well. On a measurement scale of –2, –1, 0, 1, 2 (–2 is strongly negative and 2 is strongly positive), the study visualized a past and present social relationship scenario among the participants and their community. It was noted that previously participants had strong negative relationships with the Forestry institutions and local government.

3.3 Natural capital

Natural capital denotes environmental assets, such as land, and common property resources, such as forests, water, or grazing land. In Participatory projects, participants already planted 1,100,000 tree species in their homestead premises, together with another 2,532,000 different species of local timber, fuelwood, fodder, and fruit in the Sal forests. Moreover, each participant received a participatory forestry

plot of 1 ha land, all of which effectively enhanced participants' natural capital. The participants adopted homestead agro forestry technology due to training and the good social relationship with other communities, from which they derived extra income, which they used for subsistence purposes (Islam, Rahman, Fujiwara & Sato, 2013).

However, the participatory plot/land is owned by the Forest Department, and so it should not be included in the measure of the participants' total farmland. Free access to Sal forests was already restricted for local people, and this study observed that a majority of participants (about 81.6%) depends on forest resources, especially for firewood (Islam, Rahman, Fujiwara & Sato, 2013).

3.4 Financial capital

Financial capital refers to the financial resources that participants use to achieve their livelihood objectives. Participants have needed a regular flow of money to ensure their financial capital, and the project supplied wage support as a transition to an alternative livelihood approach. It is normal that participants invested financial capital to achieve their children education and health care (human capital) and to cover household expenditures that partly sustained their livelihoods. In addition, the day labor scope was a good source of income for trained participants in nearby agriculture farms and other commercial farms. On the other hand, participants' natural stocks (e.g. trees and cattle) would supply emergency financial returns in order to face family crises. About 38% of participants agreed that the project outcomes were not able to ensure their food requirements throughout the whole year. Therefore, the project support would be a boost to livelihood capitals, especially the human, social, and natural capitals of the participants, but the sustainability of livelihood capitals depends on the development of all (five) capitals (Alam, 2009).

According to Rantala , Bullock , Mbegu & Laura (2012) indirect financial returns to individuals as a result of participatory forest management are also negligible. These are mainly related to the collection and sale of the seeds of an indigenous tree, *msambu* (*Allanblackia stuhlmannii*). A few respondents in Misalai and Shambangeda reported to have collected *msambu* seeds in the village forest reserves and other areas, and to have earned on average TZS 40,000 (US\$27) in a year. Income was also generated from other forest products, but these originated from other land uses, such as agroforestry systems and fallows. The link between Community Based Forest Management (CBFM) and revenue from butterfly farming promoted as a conservation-friendly, alternative income-generating activity in many East Usambaran villages is indirect, as butterflies are not limited to the reserved forests but exist in other areas where their host plants grow.

Income from butterfly farming appears to serve as a strong incentive to conserve village forests for those directly involved (Morgan-Brown, Jacobson, Wald, & Child, 2010). Another indirect and unquantifiable link is between the perceived improved environmental conditions due to the establishment of Village Forest Reserves (VFR) and the resulting increased agricultural production and income. Forty-three percent of the survey respondents in Shambangeda, Misalai, and Kwatango mentioned good environmental conditions (increased rain, improved climate, or soil erosion control) as a benefit of having a VFR, and a few considered this a direct personal benefit. “Rain” was the single most common benefit mentioned, combined in as “water,” including also “increased water in rivers” and “moisture (Rantala , Bullock , Mbegu & German, 2012).

3.5 Distribution system of forest products

Forest products such as wood fuel, logs, leaf litter, fodder, grass, and timber are distributed from the community forest on the basis of their availability, which depends on the type and the area of the forest. The distribution system is also selected on the basis of provisions made in the operational plan. Users of the community forest are given first priority in the distribution and are charged a reasonably low price so that every poor and disadvantaged household can benefit from the products of the community forest.

Manandhar & Shin (2013) argues that the price for timber is fixed at approximately US\$21.07/m³ within user groups and US\$62.85/m³ outside user groups. Green and dry wood fuel is sold for approximately US\$0.004/kg and US\$0.002/kg, respectively. Other forest products such as grass and fodder are distributed free of charge. The users need to use the forest products for household purposes, even when they are not using these products for commercial purposes. At the time of social and religious festivals, a natural disaster, or any other unusual situation, the user committee can decide to provide more products, particularly wood fuel and timber, free of charge to needy users as per the operational plan.

3.6 Income through the community forest and improvement of rural people’s livelihood

Community Forest User Groups (CFUGs) have various sources of income. In the past, forest resources have been one of the sources of government revenue from the centralized forest management system. Since the Community Forestry (CF) group program was launched, the executive committee of a CFUG has charged a set price for forest products when selling them either within or outside the group, and it collects a community fund by using a participatory approach management system. Eighty-two percent of the income is received from forestry sources, and only 18% from non-forestry sources. Income from forestry includes that from the sale of timber/logs, wood fuel, and non-timber forest products. The committee also collects non-forestry funds such as registration fees from users, membership fees, interest

from investments, fines, visitor's fees, and donations from various organizations such as non-government organizations. In recent years, the percentage of income from non-forestry sources has gradually increased. These funds are utilized for different purposes. In general, according to the operation plan, at least 25% of the income must be used for forest management. The rest is used for community development (Manandhar & Shin, 2013)

The income used for forest management goes into activities such as forest harvesting, logging, plantation, and protection. Besides forest management, the income is utilized for community development projects such as community buildings, school support, income-generating activities for the poor, irrigation, construction of motor/ trail roads, temple building, drinking water management, and donations for social work. It is also used for administration (office) management and to fund small-scale income-generating activities such as mushroom farming and handicrafts.

Community based forest management aimed to conserve the forest ecosystem through substitution for indigenous forest products (agro forestry), appropriate technology introduction (innovative agricultural techniques and fuel-efficient stoves), and income diversification. The shift to co-management development of local livelihoods also occurred. Capacity-building focuses on conservation of biological diversity, ecological processes, and addressing human needs in neighbouring communities. Project communities improved in financial assets, food security, quality of social and family life, and increased capacity for collective action. Observations of group dynamics and focus group discussions found that women experienced improved economic conditions, financial independence, and socio-political status. Collective decision-making benefits produce-marketing, reducing transport (Mazur, 2008).

3.7 Changes in food security status and household assets

According to Gobeze, Bekele, Lemenih and Kassa (2009) the ability of households to produce enough to feed their family throughout the year was identified by key informants as the major indicator of the change in food security status of households in the study area. The majority of the respondents reported reduction in vulnerability to food insecurity following the introduction of Participatory Forest Management (PFM). Two-thirds of the respondents indicated that, before PFM, they were facing serious food shortages during the months of May and June. This figure decreased to 31% after the introduction of PFM. Major reasons attributed to the change were the introduction and promotion of non-forest-based

livelihood activities and the accompanying training received that increased production and income levels. Eighty eight percent of the respondents reported that they had not gained any technical training and agricultural inputs support from any source before the introduction of PFM. Training provided to PFM participants focused on nursery and forest management, poultry production, beekeeping and the production of crops such as potato and various fruits.

Besides, the trainees were assisted to have access to micro-credit. The training and the credit facilities enabled households to diversify their income sources, and increased household income level. This led to improvement in their asset base. The possession of poultry, shoat, equines, modern hives, traditional hives and cattle, increased with PFM. Total livestock holding increased from 3.9 before the introduction of PFM to 8.0. Respondents associated the above change mainly to the community development fund introduced by the PFM project and the savings and credit scheme implemented by the project (Gobez, Bekele1, Lemenih and Kassa (2009).

3.8 Trends in forest products utilization

Farmers continued collecting a number of forest products even after the introduction of PFM. The products collected were poles, lianas, timber, firewood, feed for animals, wild coffee, source materials for furniture and farm implements, traditional medicine, etc. With the introduction of improved beehives with PFM, apiary activities increased. Firewood collection for own consumption slightly increased though the amount collected for sale declined significantly as was found out during discussions with key informants and women groups. The pattern of grazing inside the forest also changed. Before the introduction of PFM, 53% of the respondent households used to graze their cattle freely in the forest, whereas after PFM, only 12% of the respondents indicated that they still allowed their cattle to graze freely in the forest. Some began cut-and-carry system and gather grasses from the forest, mainly during dry season (Gobez, Bekele1, Lemenih and Kassa, 2009).

3.9 Changes to community livelihood and engagement following PFM

Introducing Participatory Forest Management (PFM) in communities adjacent to forests in general brings considerable changes. The utilization of forest products is usually restricted and quotas for extraction are lowered to ecologically sustainable levels. If the allowed utilization is enough to be socially sustainable is an important question. Positive impacts on communities' livelihoods after PFM introduction were reported from two thirds of the PFM actors. The impacts differ from place to place varying from a remarkable increase in living conditions, increased health, eradication of malnutrition and some degree of increase in income. Despite the income increase, still not all families can afford schooling for their children.

According to Gobeze, Bekele¹, Lemenih and Kassa (2009) one positive impact reported is that the household resource is secured legally. At some sites there has been an increase in the utilization of forest based activities by the community following the introduction of PFM. Some forest based activities include honey, spices and forest coffee. In some areas there were also improved marketing possibilities thanks to the PFM introduction. Despite this the general income from forest based activities is kept rather low in the reporting areas. Only coffee, honey and spices are said to offer any significant contribution to incomes and these products are not available in all areas. In some places the reliance on coffee for income generation is high, with proportions of up to 80 percent but whether this is an outcome from PFM implementation or was the state before remains unclear. Following the PFM implementation there are reports from the actors of commitment from the communities to protect their forests by following the resource use regulations, actively managing and patrolling the forest area.

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

Amente (2006) notes that poor forest dependent communities are more vulnerable to the effects of forest degradation than other members of society. In this regard, people-centered forestry approaches play a key role in establishing strong local control and sustainable use. Local control of the forest resource provides special opportunities in the fight against poverty and helps to enhance sustainable livelihoods.

The implementation of the new participatory forest conservation approach provided the user groups in the Bale Mountains legally recognized access to the forest products and services. The benefits include maintaining their existing homesteads and farm plots in the forest, grazing, and the use of forest products for consumption and sale. The coordinated and planned supply of wood products to the markets by the user groups coupled with a restriction on the flow of illegal wood products by the forest service has enabled the user groups to attain better prices for their products. Based on market surveys conducted

between 1999-2004, Amente (2006) reported an increasing trend in prices paid for wood products from the natural forests.

Additionally, the eco-tourism scheme has created local employment and additional income for some members of the user groups and their families. They are generating income by renting their horses to tourists, acting as guides and horse handlers and providing services to tourists in the mountain huts. At the moment the user groups closest to the trekking line are benefiting most from the service. Schmitt (2003) reported that 41 % of the members of one user group situated at the trek's starting point already consider eco-tourism an important source of income.

Apart from the benefits to individuals, 20 % of the overnight payments from the mountain huts go to the village administration to support community development activities. Some villages use this levy to cover the running costs, maintenance and construction of public primary schools in their village, which benefits the community at large. As much as 40 % of the forest rent collected from the user groups goes to the village administration for the same purposes. This fact has generated amongst the local population an increased value on the notion of forest conservation and raised the awareness of the user groups and the general public of the importance of the forest resource (Amente, 2006).

According to Rantala, Bullock, Mbegu & German (2012) Mgambo-Handei village forestry reserve (VFR) generated relatively more revenue from tourists and researchers compared to the other villages. The village also participated in a REDD pilot project. A team of villagers, partly overlapping with the forest committee, conducted carbon monitoring in the VFR, and the village was to be paid compensation for avoided deforestation. In 2009, it was debated whether the village had already been disbursed an agreed TZS 1.5 million (US\$1,070).

According to Ezebilo (2011) the combination of public property rights over land with provision of facilities such as a vocational centre enabled local participation. These facilities would provide local people with livelihood opportunities that rely less on forests. Examples of such livelihood opportunities would include an opportunity to acquire new skills for instance food processing and preservation skills. If local people depend less on forests the forest land area will increase and consequently promote biodiversity.

Participation in forest conservation projects enables local people to access non timber forest products under supervision of the conservation officials. It is expected that conservation officials would help to monitor and control exploitation of the products to achieve sustainable exploitation. This would help to

provide local people with access to livelihoods and at the same time protect the environment against degradation.

The link between Community Forest Management (CBFM) and revenue from butterfly farming promoted as a conservation-friendly, alternative income-generating activity in many East Usambaran villages is indirect, as butterflies are not limited to the reserved forests but exist in other areas where their host plants grow. Income from butterfly farming appears to serve as a strong incentive to conserve village forests for those directly involved (Rantala, Bullock, Mbegu, and German (2012).

4.0 Increased Security of Rights and Clearly Defined Ownership of Forests and Trees

According to Rantala, Bullock, Mbegu, and German (2012) as a result of Community Based Forest Management (CBFM) establishment, rights to withdraw and manage resources and exclude others have been devolved from the central and local (district) governments to the villages. At the same time, customary de facto management, withdrawal, and exclusion rights to forestland and resources, previously held by individuals and families, have been reallocated to the “community,” embodied in the village council and the forest committee. In all of the study villages, the establishment of a village forest reserve (VFR) has involved the appropriation of customarily held private farmland to some extent, although VFR establishment is primarily intended to take place on communal land. Village leaders and forest committee members discount the appropriated farms as “encroaching” into the forest, but the origin of these land claims varies.

In Misalai, the land had been previously allocated to the farmers by the village council, which then used its legal right to revoke the rights because the land was not being. The affected farmers, however, stated that they had been actively farming those areas, contesting the basis of the village council’s action (group discussion, Misalai, September 2009). On average, 18% of the survey respondents in the study villages reported a change in their access to forest resources since the establishment of the (Village Forest Reserve) VFR. The vast majority (90%) of these changes were toward more restricted access. Decreased access to firewood was mentioned most frequently, followed by timber and building materials. The diversity of sources of forest products may explain why most of the surveyed villagers did not report changes in access. Firewood is collected on individual farms as well as from neighboring farms, according to a Shambaa tradition. All of those who reported restrictions on access due to Community Based Forest Management (CBFM) responded by displacing harvesting from the village forest to farms or tea company forests. For villages located near tea estates, the proportion of those harvesting in the tea company forest is high. For people who rely solely on tea picking for livelihoods and do not have their

own farms, access to other people's farms and forest areas for firewood is crucial (Rantala, Bullock, Mbegu, and German, 2012).

Mazur and Stakhanov (2008), argue that the Community Based Forest Management (CBFM) project goals and objectives were developed by the team using a participatory approach to formulate co-management agreements and secure collaboration among key stakeholders. Community participation is secured through participatory rural appraisals, workshops, negotiation of co-management agreements, monitoring of resource use, and reliance on local institutions for implementation. The low-impact natural resource use programme was developed recognizing traditional uses of natural resources. Consideration of forest dependent livelihoods was essential in securing participation. Local communities controlled selection of qualified users and monitoring. Local communities could however make resource use decisions only within options authorized by park officials.

Local participation leads to the integration of public property rights with communal property rights, i.e. allocating local people a piece of land outside protected areas where they can establish a community forest for their own use. This would increase local people's access to forest products as well as increase the area of forest land and consequently biodiversity. The institution would help to discourage local people from carrying out livelihood activities that have negative impacts on protected areas (Ezebilo, 2011).

5.0 CONCLUSION

Results of the various studies show that PFM and associated investment enhances local peoples' livelihoods. They also suggest that where livelihood options are limited and where there exists no scope for local people to offset forest costs, then forest managers have to find alternative ways of compensating forest-linked households to convert forest natural capital into fiscal capital just for survival. The results provide hope that through PFM, with substantial financial investment for capacity building, joint management, income generating activities, education and awareness it is possible for forest managers to enhance household support for forest conservation through alternative household livelihood improvement options.

Although much remains to be studied about the impacts of PFM on forests and livelihoods, the studies indicate the potential of PFM as a vehicle to promote sustainable forest management provided that the capacity of institutions at local level is built and the Government is committed to supporting them. Based on the results of this study, it can be said that PFM is good both for the forest and for the participating people. PFM empowered local people as it enabled them to organize themselves and enhance their

participation in decision making regarding the management of the forest resources. Thus, free access to the forest has been regulated well than before. PFM also benefited the people as increased and more diversified income source led to better asset accumulation, and less dependence on the forest. The studies suggest that if designed properly, complementary activities to diversify income could help reduce pressure on the forest.

6.0 RECOMMENDATIONS

An appropriate balance is needed to maximize benefits from the forest resources so that communities would also have economic incentives to responsibly manage forests. The sustainability of PFM depends on the transparent partnership between the members of the forest users and their leaders on the one hand and between their institutions notably forestry bodies and the State. The State should show its commitment to supporting the efforts of communities and their institutions to responsibly manage these resources by creating enabling environments and ensuring technical and legal support to these institutions in their efforts to become strong and accountable to communities. Although the majority of the PFM members are optimistic about the sustainability of PFM, the post project sustainability of PFM requires monitoring and targeted support, and Governments need to mainstream PFM as one possible scheme in managing their country's dwindling forest and woodland resources.

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

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

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

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

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

7.0 REFERENCES

- Alam, M. 2009. Evolution of forest policies in Bangladesh: a critical analysis. *Int J Soc Forestry*, 2(2): 149–166.
- Ali,T., Ahmad,M., Shahbaz,B. and Suleri, A.(2007). Impact of participatory forest management on vulnerability and livelihood assets of forest-dependent communities in northern Pakistan. *International Journal of Sustainable Development & World Ecolog.*
- Amente, G. (2006). Integrated and participatory forest management in the Bale Mountains of Ethiopia. *International symposium towards sustainable livelihoods and ecosystems in mountainous regions.*
- DFID, (2001). Department for International Development. *Sustainable livelihoods guidance sheets.* Retrieved from www.livelihood.org/info/info_guidancesheets.htm; 2001

- Ezebile, E.E. (2011). Local participation in forest and biodiversity conservation in a Nigerian rain forest. *International Journal of Sustainable Development & World Ecology*
- FAO, (2002). *FAOSTAT on-line statistical service*. Retrived from <http://apps.fao.org>.
- Gobeze, T., Bekele, M., Lemenih, M. And Kassa, H. (2009). Participatory forest management and its impacts on livelihoods and forest status: the case of Bonga forest in Ethiopia *International Forestry Review* Vol.11(3).
- Grundy, M. , Campbell, B.M. , White, R.M., Prabhu, R. , Jensen, S. And Ngamile, T.N .(2004). *Participatory Forest Management In Conservation Areas: The Case Of Cwebe, South Africa*
- Islam, K.K, Sato, N and Hoogstra, M. (2010). Poverty alleviation in Bangladesh: the case of the participatory agroforestry program. *Int Forestry Rev.*, 12(5): 412–415.
- Islam, K.K, Rahman, G.M., Fujiwara, T. & Sato, N. (2013). People's participation in forest conservation and livelihoods improvement: experience from a forestry project in Bangladesh. *International Journal of Biodiversity Science, Ecosystem Services & Management*
- Manandhar, T.D. and Shin, M.Y (2013). How community-based forest management can improve rural livelihoods: A case of Kabhre district, Nepal.
- Mazur, R.E. and Stakhanov, O.V. (2008). Prospects for enhancing livelihoods, communities, and biodiversity in Africa through community-based forest management: a critical analysis. Los Angeles: Routledge group.
- Morgan-Brown, T., Jacobson, S. K., Wald, K., & Child, B. (2010). Quantitative assessment of a Tanzanian integrated conservation and development project involving butterfly farming. *Conservation Biology*, 24(2), 563–572.
- Mulwa, W.F (2010). *Demystifying Participatory Community Development*. Nairobi: Paulines
- Nath, T.K. and Inoue, M. (2010). *Impacts of Participatory Forestry on Livelihoods of Ethnic People: Experience from Bangladesh*.
- Rantala, S. , Bullock, R. , Mbegu, M.A. & Laura, A.G. (2012). Community-Based Forest Management: What Scope for Conservation and Livelihood Co-Benefits? Experience from the East Usambara Mountains, Tanzania. *Journal of Sustainable Forestry*.
- Schmitt, J. (2003). The contribution of community forest management to the rural household economy: a case study from Bale mountains, Ethiopia. I-TOO working paper No. 11, Freiburg, Germany, 73 pp.
- Sukwong, S. (2004). Equator Prize 2004, Pred Nai Community Forestry Nomination File,
- Toillier, A., Serpantie, G., Herve, D. and Lardon, S. (2011). Livelihood Strategies and Land Use Changes in Response to Conservation: Pitfalls of Community-Based Forest Management in Madagascar, *Journal of Sustainable Forestry: s: An International Journal*
UNDP.

Warah, S. (2008). Participatory management of forests and protected areas: a trainers' manual Bangkok.
Regional Community Forestry Training Center for Asia and the Pacific .

WHO, (2002). WHO traditional medicine strategy 2002-2005. WHO/EDM/TRM/ 2002, Geneva