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Co-Management of Forest Resources for Sustainable Livelihoods in Adaba/Dodola, Ethiopia



Photo Yemiru Tesfaye

- In a co-management project in Adaba-Dodola, Ethiopia local forest user groups are responsible to protect and manage the forest. In return they have the right to use the forest.
- A household survey study in the area investigated forest income, livelihood strategies, success factors for co-management, and people's attitudes to participatory forest management.
- Forest products contributed about one third of total per capita income in the form of firewood, timber, edible plants and medicinal plants. Forest income helped 20 % of the households over the poverty line.
- Five livelihood strategies were identified: Business, Livestock, Farming, Forest products, and a 'Mixed' strategy.
- The most successful user groups were situated closer to the town and depended less on forest income. Their forests were more degraded at the outset.
- Households are in general positive towards the collective activity – planting – but they are concerned with the low success rate of the plantations.

Many community forest projects have been implemented and tried in Ethiopia. These projects have mainly taken a 'top-down' approach failing to consider local people's traditional concerns and needs for forest products and services. Gradually, awareness has increased about the significance of forests for peoples' livelihoods, and that community forests must be managed based on a local decision making.

The participatory forest management (PFM) project at the Adaba-Dodola regional forest priority areas was initiated in 1999. Local Forest Dwellers' Associations were granted the right to use the forest while the groups were responsible for the forest's protection and management (Fact box). The underlying idea was to protect the forest while making it more useful for the local communities.

This study analysed the real importance of the PFM for households. Such knowledge will help planners and stakeholders combine sustainable use with conservation as future forest projects are initiated.

The general objective of the research was to investigate important aspects of local management of community forests and how they can contribute to poverty alleviation (Figure 1). Issues investigated were:

- the contribution of forest income in the livelihoods of local households
- livelihood strategies of households and their focus on forest uses
- factors influencing the success of collective forest management
- people's attitudes and perceptions affecting intent to participate in a specific collective action – tree planting.

Forest Income

On average one third of the households' incomes are forest incomes. The share of forest *cash* income was even higher, 53 %. Figure 2 shows how the relative share of forest income was largest in the poorest income quintiles. However, in absolute numbers, the more affluent households earned most forest income.

Forest income lifts 20 % of the population above the poverty line (1 USD/day) and constitutes consequently a *safety net* for the poorest forest inhabitants.

Forest incomes are also evenly distributed over the year – in contrast e.g. to agricultural revenues (Figure 3). Thus, the forest provides a reliable income source when other types of incomes are scarce.

The forest's role as a *safety-net* also means that it is the most important buffer in case of a crisis, such as sickness in the household, or a failed harvest.

Livelihood strategies

Five groups of livelihood strategies were identified in the study – crop-based, livestock-based, forest-based, business-based, and households with diversified strategies where no specific income type dominated (Table 1).

Forest incomes are especially high for the forest based and diversified strategies. These two strategies also include the highest share of poor households. The business oriented strategy presents on average a high forest income although it is of minor relative importance for these households. Crop-based and livestock based households also rely to some extent on the forest but more as a complementary income source.

FACT BOX

Participatory forest management in Adaba Dodola

The participatory forest management (PFM) project in Adaba-Dodola was created in 1999. Forest user groups were formed with 30 households per user group. The user groups protect the forest and carry out management activities like planting. Furthermore, they pay a user fee to the government. In exchange the user groups are entitled to use the forest for their own needs of fuelwood, grazing and other forest products. They are also allowed to farm as long as this does not degrade the forest. The main forest products are fuelwood, construction wood, charcoal, branches and wood for tools, to a lesser extent food products and medical plants. Some forest products are sold on the market whereas others are used in the household. The study was done in 22 different user groups including quarterly surveys among 352 households.

The study implies that initiatives focusing on the diversified and forest-based households have a higher potential for pro-poor impacts. Efforts towards improving market access, increasing the value of forest products through small scale enterprises and increased capacity of processing forest products could have a potential to improve livelihoods and alleviate poverty.

Co-management of forests

How should a participatory forest management regime be evaluated? Previous studies have mainly measured the forest condition. However, people's needs and their engagement should also be considered. The assessment of co-management in this study included several measures to emulate a successful co-management scenario: the forest condition, people's participation, and the forest's perceived impact on living conditions. These criteria were used both separately and in combination as an index (performance index). The study also investigated factors that could be associated with the success of participatory forest management.

Our survey showed that the community forest management had not brought palpable improvement for the local population. The community did not positively appreciate the change in their livelihoods after the PFM. However, forest degradation had been halted.

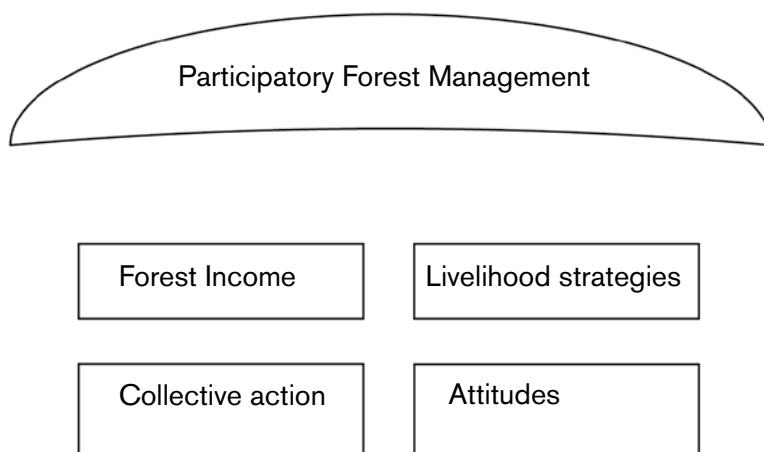


FIGURE 1. The sub-studies.

TABLE 1. Description of livelihood strategies. Incomes in ETB/capita, year.

	Diversified	Forest	Business	Livestock	Crop
n	96	34	20	48	138
Forest income (cash and subsistence)	560	1168	788	194	304
Forest cash income	334	901	576	82	131
Total income	1343	1547	2312	1387	2002
Diversity index	1.94	1.43	2.41	1.55	1.56
% under poverty line	42 %	50 %	20 %	29 %	19 %

The most successful user groups had a more degraded forest from the outset, and they were more diverse in terms of forest dependence, less dependent on the forest and on average less poor than the poorly performing user groups. The better performing user groups were also situated closer to the local town. On the other hand, the less successful user groups, according to the index, lived more remotely, the members were poorer, and the households were more diverse in terms of forest income and more dependent on the forest.

The study showed that collective action success depends on properties both of the resource and of the community itself. However, our findings suggest that to be able to participate in a co-management regime people first must have their most fundamental needs secured.

Attitudes

The survey investigated people's attitudes and perceptions of one collective activity: planting. Members of the user groups showed a positive attitude and intention to participate in the planting activity. Households appreciated the importance of planting new seedlings to maintain the supply of forest products and services in the future. Contributing to the collective action was perceived as a socially desirable behavior.

While households were confident enough about their ability to carry out planting, they also noticed the difficulty of ensuring positive outcomes due to destruction by wild animals. There was also a considerable dissatisfaction with the planting technique being practiced and frustration with the outcomes of the planting operations in the past.

Households who are heavily reliant on forests and who may have to reduce their off take of forest products are more negative to participate. The impact of the participatory arrangement in terms of benefits and costs to households appears to play a determinant role in influencing attitudes and intention to participate in collective action.

Conclusion

The study shows the importance of forests for the livelihoods of the poorest forest dwellers. The forest accounts for a large share of the people's incomes and this share is even larger for the poorest households. Forest income is also evenly distributed over the year and represents a complementary income in cases of sudden income losses.

People apply different livelihood strategies that are adapted to capabilities and resources. In our case, the forest-focused and the diversified strategies are especially dependent on forest income.

Success in collective action should be evaluated in terms of the development of the forest, household participation and quality of life. The most successful user groups started with a more degraded forest and they seemed to be more well off and less forest dependent than the poorly performing user groups.

People supported collective forest management activities (in this case: planting) but they were dissatisfied with the planting methods and the survival rate of plants.

The study highlights four pillars for a successful and sustainable forest management that also contribute to people's livelihoods. First, the actual economic importance of the forest must be assessed

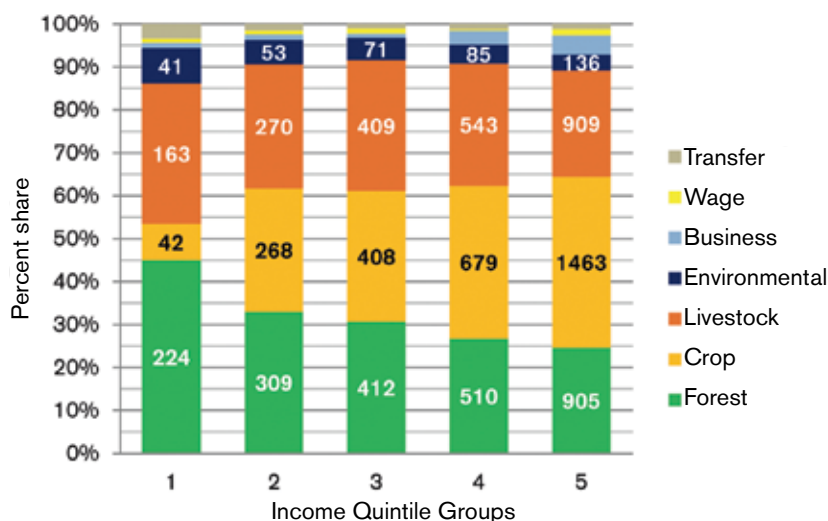


FIGURE 2. Income types for different income quintile groups (1=lowest income group ... 5=richest income group). Numbers in graph show income in ETB/capita, year (1 ETB = 1 Ethiopian Birr = 0.06 USD)

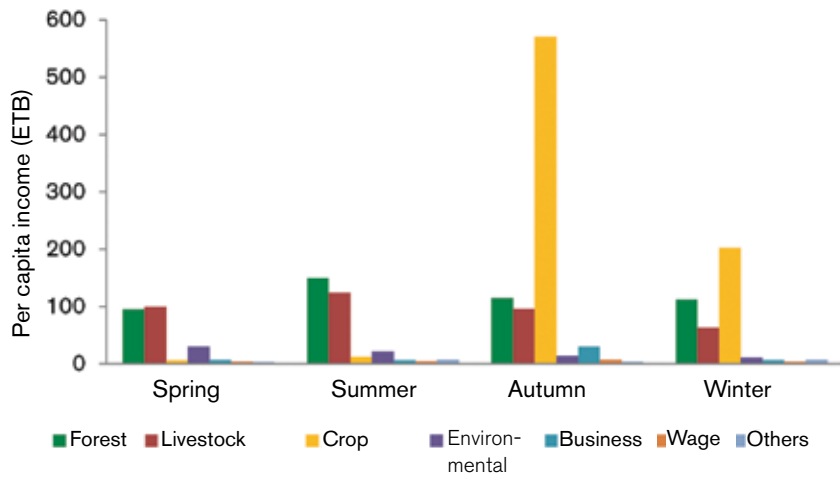


FIGURE 3. Distribution of income types over the year.

– and its significance for different income classes. Second, livelihood strategies, and the role of forests for each strategy, must be defined in order to design optimal policy and extension measures. Third, if the management is based on local decision-making and collaboration, prerequisites

for a successful collective action must be identified. And finally, discontent with forest management design and silvicultural methods have to be known and addressed before participation begins to decline and confidence in the co-management arrangement is jeopardized.



Photo Yemiru Tesfaye

Keywords

natural forest management, community forestry, collective action.

Read more

Tesfaye, Y. 2011. Participatory forest management for sustainable livelihoods in the Bale Mountains, Southern Ethiopia. *Acta Universitatis agriculturae Sueciae* nr 2011:64. ISBN 978-91-576-7608-5.
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