Constructing and sustaining Participatory Forest Management: lessons from Tanzania, Mozambique, Laos and Vietnam

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Abstract

The paper introduces an illustrative model, the 'house model', which contains a number of key elements for constructing and sustaining people's participation in forest management. The model is used as a tool for analysing four donor supported forestry projects in Tanzania, Mozambique, Laos and Vietnam. The study shows that the two core elements for sustaining participation in forest management, regardless of land tenure or forest management model, are: (a) attitude: local people in the specific context see themselves as responsible for the local resources and; (b) access: local people gain secured access to information and benefits from the resources.

Introduction

A variety of institutional and legal frameworks have been developed to involve local people in forest management and conservation, and more than 60 tropical countries have opted for a decentralised forest management where, at least in theory, authority over management, protection and utilisation is placed at the lower levels of society (Hobley 1996, Wily 2001, Agrawel and Gibon 1999, Ferguson and Chandransekharan 2004). Even though decentralised management aims to give local people the possibility to define their needs and make decisions affecting their livelihoods, the participatory initiatives in forest management have not always produced immediate economic benefits for the poorest households (Kumar 2002, Moss *et al.* 2005).

Ribot (2004) recognises the risk that the local elite may capture the benefits of decentralisation efforts and Mayers and Bass (2004) argue that, through decentralisation of forest management, the central-level problems are merely displaced to local level, and bureaucracy is transferred from central level to sub-national level. Several obstacles still exist at local and national levels that make it difficult for the rural poor all over the world to participate in natural resource management, secure their rights in decision making, gain access to land tenure, valuable natural resources and markets, and investment opportunities related to such resources (Sivaramakrishnan 2000, Larson 2003, Walker 2004,

Taylor 2005, Brown *et al.* 2002, Hyakumura and Inoue 2006). Campbell and Vainio-Mattila (2003) conclude that a more deliberate dialogue between community-based conservation and participatory development may move away from the goal of "getting people on-side" towards including local people in a meaningful discussion of what conservation should look like in their particular context.

This paper looks at the experiences of Finnish development assistance in supporting participatory development in forest management and conservation in four countries; Tanzania, Mozambique, Laos and Vietnam. There were two rounds of field work in each country. During the first round, it became clear that certain elements of participatory forest management (PFM) have to be in place to ensure the participation of rural poor in PFM. This led to a specific model, the 'house model', which guided the second round of field work in order to answer the following specific research question: how can participation of local people in forest management be sustained? The paper begins with defining 'PFM' and the analytical framework, choice of case study projects and methods. Next, the central findings of the study are presented and followed by a discussion section that analyses the findings and answers the research question. The conclusion gives some recommendations for organisations and donors working with PFM.

The conceptual framework

In this paper the term 'community forestry' is not used because the concept of community is difficult to define when the cases represent various cultural and historical contexts. Agrawal and Gibson (1999) and Virtanen (2004) argue that the concept of community is extremely unclear and rarely receives the attention or analysis it needs from those concerned with resource use and management. Local community often refers a sense of place and local knowledge of the area (Chambers 1998, Forbes 1999). Harres (2006) recognises that the term local knowledge often assumes that people are automatically experts on their surroundings.

Local people often do hold substantial knowledge of the local environment and they may conserve and manage natural resources successfully (Ylhäisi 2006, Grimble and Laidlaw 2002, Miah and Rahman 2006). Also,

decentralised forest management may improve access to economic benefits and thus improve rural livelihoods (Ribot 1998). However, it has also been recognised that local people will not promptly become conservation minded or economically oriented forest managers when their legal rights over natural resources have been legitimised (Pijnenburg 1999, Matakala and Kwesinga 2001, Ferguson and Chardasekharan 2004, Blomley and Ramadhani 2006). The key issue with regard to forest management and utilisation is how to achieve a balance between harvest, forest protection and tree planting, and to minimise the negative impacts on the poor and generate benefits for them (Steel 2005).

In this paper the term PFM will refer to: (a) village forest management carried out by elected village level institutions, (b) joint forest management between central government and local communities, and (c) individual's and households' participation in farm forestry and in management of natural and planted forest areas. It is a basic assumption of this paper that PFM aims at balancing the three aspects of sustainability: (a) environmental sustainability, (b) economic sustainability, and (c) social sustainability. However, it is recognised that PFM cannot guarantee sustainable forest management by the rural poor without simultaneously developing various other aspects of governance (Nhantumbo 2000, Ribot 2004, Schackleton *et al.* 2002). For example, implementation of land reforms, improvements in regulations of trade, organisational reforms at sector ministries and revenue authorities, and better salaries for civil servants such as extension officers, can have a greater effect on sustainability than specific forest policy and legislation (Mustalahti 2006, Bowles *et al.* 1998, Kellert *et al.* 2000, Cuco *et al.* 2003, Brown *et al.* 2005).

Ribot and Peluso (2003) present an access theory related to natural resources that focuses on ability rather than rights as in property theory. They emphasise a wider range of social relationships that can constrain or enable people to benefit from resources without focusing on property relations alone. Consideration of the theories mentioned above and the results from the first round of field work led to development of the following assumption: wider elements must be in place for making local people able to participate in forest management in the long-term and to sustain participation in forest management. These wider elements are illustrated in Figure 1: PFM includes 'a building site', 'four corner stones',

'walls' and 'roof'. The supportive institutions, laws and policy environment form the building site and the corner stones are: (1) attitude change towards forests, (2) feeling of ownership to forest resources, (3) benefits from forest management and protection, and (4) general improvements in livelihoods. The walls stand for long-term extension service provision which includes different areas of rural development and provides information needed. The roof represents markets for forest products and other products and services from the area, for example environment services which are paid by government or foreign funds. This illustrative model was used as a tool guiding the second round of case studies as an analytical framework: during the final study in 2005-2006, the 'house model' were used as a tool to examine the different forms of PFM associated with the selected case study projects.
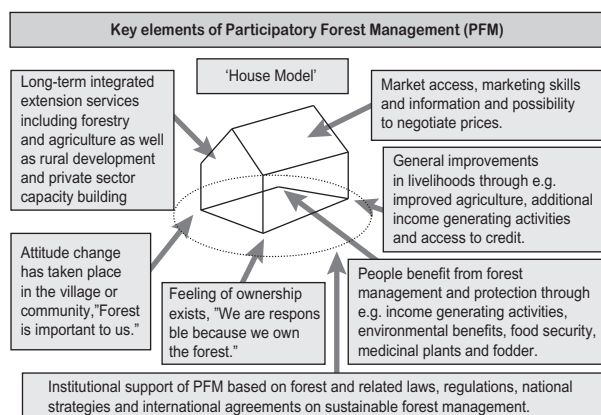

Fig. 1. A model of Participatory Forest Management (PFM) and its key elements.

Cases and methods

The case presents different forms of PFM: (a) village forest management carried out by an individual village or group of villages (a case from Tanzania), (b) joint forest management in central government forest areas where local people participate in forest management and protection activities (cases from Mozambique and Laos), and (c) individual farmers' participation in farm forestry and in management of natural and planted forest areas (a case from Vietnam). Following case study projects were selected during the first round of field work in 2003-2004:

Tanzania: The objective of East Usambara Conservation Area Management Programme (EUCAMP 1999-2002) in Tanga Region was to contribute to Tanzanian efforts to conserve biodiversity in harmony with the needs of local people. As a part of its project activities, EUCAMP worked with villages surrounding so-called Catchment Forest Reserve. On village land areas, outside of the government managed catchment forests, village councils may declare village land forest reserve VLFRs (URT 2002). During an action research process the case study area was Mfundia VLFR which is managed by five villages surrounding the forest area in Korogwe District. The establishment of VLFR were done in collaboration with District Councils: in 2002, the action research process started with facilitation of legal forest boundary process, forest management planning and the establishment of forest by-laws, and continued by following the implementation process of forest protection activities.

Mozambique: From 1999 until the end of 2004, Finland supported provincial forest services and forest inventories in Mozambique (Projecto de Maneio Sustentavel Recursos, PMSR). In Zambézia Province the project supported the capacity building of a local environmental association called ACODEMADE (Associação Communitária de Defesa e Saneamento do Meio Ambiente do Derre). The association was identified by the PMSR as a local coordinator of protection activities of Derre Forest Reserve in Morrumbala District. The case presents an example of a forest management model where the local community association, local communities, and provincial and district forest office jointly manage and conserve of a national forest reserve.

Laos: Forest Management and Conservation Programme (FOMACOP 1995-2000) and Village Forestry Sustaining Phase (2000-2001) have been hailed as one of the most innovative village forestry programmes (Williams and Heinonen 1998; Phadanouvong 2002). At present, the forest management units (FMUs) in participation with local villages under the district administration are responsible for carrying out production forest management on behalf of the central government. The on-going project is called Sustainable Forestry for Rural Development Project (SUFORD 2003-2008). The study aimed to compare the PFM models of FOMACOP and SUFORD implemented in three villages located Dong

Phousoi Production Forest in Xe Bang Fai District, Khammouane Province.

Vietnam: The Vietnam-Finland Forestry Sector Co-operation Programme (VinFinFor 1999-2003), focussed on allocation of forestland to households and micro-credit related to farm forestry and rural development initiatives in the communes of Bac Kan Province. Three villages in Cho Don District in Bac Kan Province were selected for the case study. In addition to the interviews, six households had a household diary and

Tab. 1. Methodological approaches during the study

Methodological approaches	Tanzania	Mozambique	Laos	Vietnam	Data collected
Open-ended interviews of central government forestry authorities, regional and local government authorities in case study regions and districts, and international and national PFM project team members (repeated two times per key informant)	Seven key informants	Seven key informants	Seven key informants	Seven key informants	Information related to institutional support of PFM, rural development and extension services, law-enforcement
Open-ended group interviews in community groups/committees (repeated two times per village/ community) and villages mapping etc. PRA exercises with community group/ committees	Three villages during action research process	Three communities	Three villages	Three villages	Implementation of PFM: villages histories, attitude change towards forest, land use issues, income generating activities
Transect walks (in 2003-2006 the walks were repeated two times per village/community and forest area)	Three transect walks in villages and forest areas	Three transect walks in communities and forest areas	Three transect walks in villages and forest areas	Six transect walks in households' forest areas	To cross-check information related to implementation of PFM
Semi-structured household interviews/ observation/ discussions	Six households	Six households	Six households	Six households	Households' livelihood and use of forest products
Household diaries (one-year period)	No	No	No	Six households	Forest management and utilisation, income generating activities
Literature reviews	2003 and 2006-2007	2003 and 2006-2007	2004 and 2006-2007	2004 and 2006-2007	Project documents and review reports, legal documents and articles
Stakeholder reflections through discussions, interviews, letters and emails. Some of them also commented on draft researchers papers and conference presentations.	Village chairman, two local foresters, two international consultants, a local senior researcher	Local carpentry expert, sawmill owner, two international consultants,	Project team members, two international consultants, a government office	Case study households, local PhD student, two international consultants	To understand the context of PFM, rural development, extension services, law-enforcement in the case study countries
Participant observations by the first author in the case study areas and projects (2000-2006)	Through the action research approach and consulting	A volunteer, a consultant and a researcher	A consultant and a researcher	A researcher and a volunteer	To develop experiential knowledge related to PFM and development assistance

recorded their agriculture and forestry activities during one year. This exercise helped to collect information on forest use, management and conservation activities, and incomes and costs of forest management and conservation. This exercise was also appreciated by the case study households because they obtained record-keeping skills and information of their monthly income, and became more aware of their day-to-day costs.

Applied methods are presented in Table 1. The methods of the study included participant observation, participatory learning and action research approaches (Chambers 1998, Greenwood and Levin 1998, Reason 2001, Stubbs 2004). Participant observations and a combination of interview and participatory methods offered the possibility to analyse the implementation of PFM from the internal point of view, to develop experiential knowledge, and to understand things as seen from the participants' point of view. Participant observation was carried out by the first author while she worked as a consultant, a volunteer and a researcher in the study countries and projects in question. Also the stakeholder reflections were important source of information during the field work and the writing process. Particularly in Tanzania, action research methods were used in order to self-critically analyse the PFM implementation through participant observations. In Mozambique, Laos and Vietnam, the main method was open-ended individual, household and group interviews of PFM project stake-

holders. Participatory Rural Appraisal (PRA) methods such as mapping exercises, village histories, household diaries, transect walks in villages and forests, were combined with the interviews in order to make interviews more analytical, reliable and straightforward.

The selection of case study areas was based on documentation and the first round of field work in 2003-2004. The final study in 2005-2006 was conducted in three villages in each of the four countries – one deemed 'successful', one 'average', and one 'problematic' from the point of view of project implementation, evaluations, and local people's willingness to participate in forest management and protection activities. This approach was also used in an impact study by the Centre for Development Research in Western Tanzania (Kaale and Nielsen 1999) and it gave an example how to select the case study villages based on the stakeholder reflections.

DISCUSSION OF THE CENTRAL FINDINGS

Table 2 presents central findings from the case studies. In the following sections an analysis of the contradiction and impacts of PFM is summarised here in 'take-home' points related to implementation of PFM and forestry assistance, with reference to the cases, and analyses problematic issues related to constructing and sustaining PFM.

Tab. 2. Analyses of the case study projects based on the key elements of PFM

Cases / Elements	Tanzania: villages' land forest reserve	Mozambique: joint forest protection of government forest reserve	Laos: joint forest management of government production forest	Vietnam: household level forestry
Building site of PFM: Institutional support for PFM (from villages'/communities' point of view)	Yes, laws and institutional frame are in place and a village can have permanent management and utilisation rights for the forest situated close to the village.	No, laws and regulations are clear but weakly implemented and do not guarantee permanent rights for communities to benefit from and utilise valuable forest areas	No, laws and regulations do not allow villages to have legal forest land allocations and to make decisions about valuable natural resources.	Yes/No, households are legalised managers but do not have permanent land allocations in case of forest land, and their access rights are limited e.g. timber in natural forests .
Attitude change taken place in the village/community:: "Forest is important for us"	Yes, attitude towards forest has changed partly because of the project but also because of other information sources.	No, apart from those people who were directly involved in the project activities.	Yes, attitude has changed because of tangible benefits from the forest during the project.	Yes, the project households are more aware of the importance of the forest.

Cases Elements	Tanzania: villages' land forest reserve	Mozambique: joint forest protection of government forest reserve	Laos: joint forest management of government production forest	Vietnam: household level forestry
Feeling of ownership by village/ community/ household: "We feel responsible because we own the forest"	Yes, the project helped villagers to obtain legal ownership of forest land and as a result villagers wanted to protect the area.	No, the project did not manage to help them to obtain legal ownership and people do not traditionally have strong ownership feelings towards forest.	Yes, they feel that villages traditionally own the forest land, although government does not recognise the traditional ownership of production forests.	Yes, as a result of the project activities, households have had 50 years allocation of forest land or short term forest protection contacts.
Benefits from forest management and protection	Yes, some monetary benefits through fines and fees. Benefits for those who participate in patrolling activities. Additional benefit through medicinal plants, honey, firewood and building materials for common use in village.	Yes, occasionally monetary benefits mainly through carpentry activities. Additionally benefits for individual villagers through firewood, building materials, food security, medicinal plants and honey	Yes, logging activities, environmental benefits, food security, building materials, medicinal plants and fodder for livestock. Previously high monetary benefits for whole village but also individual people who participate the forest management.	Yes, bamboo, firewood, carpentry materials, building materials, food security and medicinal plants and soil protection. Monetary benefits mainly through bamboo selling for individual households.
General improvements in livelihoods	No, except expected environmental benefits.	No, except trained carpenters have better skills and access to income.	Yes, the funds from logging were used for electrification, school buildings etc. Also additional income activities through revolving funds.	Yes, additional income activities through credit funds (goats, buffaloes, chickens, paddy field extension), and because of considerable stable income through selling bamboo.
Market access and marketing skills and information	No, the project did not have activities related to marketing.	No/Yes, during the project for carpentry products and honey but not since project phased out.	Yes, for timber but not for other products from the areas. The project aims to improve markets for NTFP.	No, after the project phased out farmers had difficulties over access to markets. Where there are markets (bamboo), prices are low and farmers can not negotiate prices.
Long-term integrated extension services	No, the project concentrated only on forestry extension and after the project there have been very little funds for any type of extension.	No/Yes, after the project local environmental association did not have human nor financial capacity to continue extension..	Yes, but in future funding will be difficult, after external funding from the current project ceases.	No/Yes, during the project integrated extension was provided but after the project there has been lack of human and financial capacity to ensure the extension.

Take-home points for implementation of PFM:

– The paper argues that neither property rights nor ability, local knowledge and skills based on short-term extension by donor supported projects are sufficient to ensure that PFM will continue to be implemented in the long run: PFM is driven by people's attitude to natural resources, and long-term access to information and benefits.

– Joint forest management between central government or sub-national governance and local communities still has a risk that local people will see themselves merely as a labour force for forest man-

agement and conservation activities, and their attitude towards the resources is different compared to the cases where local people can have legal management authority with decision-making rights over the local resources.

– Attitude change towards forest protection was most recognisable in those cases where local people's access to forest resources was legally secured by laws and allocation of land even though the resources available and benefits of PFM were still limited. Even in these cases, the implementation of PFM activities will be sustainable only if central governments institutionalise participation in forest management.

– It was recognised that a central issue was the attitude change of the local elite. The local elite is vulnerable to temptation to use their power in order to increase their own benefits. They are also role models for the community members. Where the local leaders were actively promoting tree planting, forest protection and forest fire management, the villagers were most motivated to participate in forest management activities.

– In all four case study countries the sustainability and scaling-up of PFM practices nation-wide is still questionable. Supportive institutions and implementation of several reforms are needed in order to ensure the implementation of PFM practices at national scales. This is especially so with regard to ensuring long-term extension services in rural areas through local institutions and national budget allocations.

– Forestry and rural development sectors, and developing countries in general, are many-headed creatures with actors on many levels, each with potentially widely differing reasons, for example resisting decentralised and participatory forest management. Under these conditions, participatory ideology which emphasises local people's rights comes unfavourable and is extremely hard to implement. Especially, concerning management of valuable timber resources, participatory practices seem to face resistance.

– Put simply, it seems that forestry as an economically profitable sector is what is driving forest conservation and forest management planning activities. A lot remains to been done in order to integrate forestry in a more holistic way in rural development, landscape

and people's livelihoods. The contradictions in legislation and implementation of PFM reflect insufficient understanding of the three real problems related to sustainable forest management: (a) a lack of incentives for local people to participate in control and management of natural resources, (b) a conservative attitude among the foresters and political decision – makers – the forest needs to be 'protected' from the people, and (c) a lack of incentives, motivation and demand for sub-national administrations to promote local people's rights and ability. These problem calls for continued efforts to unravel the motives for such contradictions.

Take-home points for forestry assistance:

– The lesson from the case study countries was that local people through the forest projects, experienced and came to understand that forests can provide monetary and non-monetary benefits, and this has resulted in an attitude change towards forest resources.

– PFM is contingent on the willingness of each country to invest financial and human resources in capacity building. The donors cannot drive the activities if there is no political commitment from recipient governments and their leaders. In principle, the recipient government and their political decision-makers should politically and financially support the ideology of decentralised natural resources management, and be ready to ensure the long-term financial sustainability of extension services focused on facilitating local people to carry out the related activities. If this political commitment is not there at the early stage of a donor-supported project, there is a risk that the initiatives introduced in pilot projects will not be continued after external funding has been exhausted.

– Donor aid can facilitate the development of different forms of PFM through which recipient governments and macro-level decision-makers are able to observe that participatory and sustainable forest management can be economically attractive and viable for the country. However, short project periods do not support the institutionalisation of PFM in local communities and into national development frameworks: the failures and shortly terminated donor projects give recipient governments

more reasons to look for other solutions in forest management, such as privatised concession under the management of private enterprises or government entities.

– Accordingly, it is important to make clear political analyses before the donor funding is released. The political environment and government structures need time to develop. If donors are serious in their desire to be development partners with countries like Tanzania, Mozambique, Laos and Vietnam and assist them in creating a model of PFM that fits local conditions, they must be ready to enter into long-term partnerships in the specific areas where the interventions have been started. And in this way create long-term experiential context-specific knowledge about the possibilities and contradiction related to decentralised natural resources management.

– PFM does not always fit overall culture or political circumstances: it might not be necessary to target the latest handbook techniques of participation and decentralisation, but rather to emphasise a common understanding of local politics and recipient government interests, so as to take a more committed approach to participation in forest management. However, the donor-supported projects should aim to ensure that villagers would be expected to play a more significant role than that of hired forestry labourers, and to receive more than wages alone in relation to their physical input.

– If the donors aim to create an interest, so-called national ownership, to support PFM, long-term donor commitment is needed to assist communities and their lobbying and advocacy organisations in building local civil society organisations and national policy coalitions that can assert the rights and ability of local communities.

– The trade issues are often more influential than aid: timber, legal and illegal, has growing markets and if the buyers have no interest in participatory and sustainable forest management, it is most likely that the decision-makers will not be ready to invest tax money in PFM. It should be recognised that governments and their decision-makers, in both developed and developing countries, base their decisions mainly on economic interests, international policies, investors' behaviour and trade issues. Opening and developing markets for certified forest products, environmental services and carbon dioxide sinks could increase interests in PFM.

CONCLUSIONS

What was learnt from the four projects with regard to how participation of local people in forest management can be sustained? The key lesson from the case study countries was that through the forest projects, local people experienced and came to understand that forests can provide, both monetary and non-monetary, benefits and this has resulted in an attitude change towards forest resources. The nature, value, amount and current availability of the benefits turned was less important: for the attitude change, it was more important that local people came to see themselves as participants in forest management and as conservers, and not as consumers only.

The assumption of the study was that the PFM projects should contain the key elements illustrated by the house model in Figure 1 in order to sustain participation in forest management. Table 2 shows that none of the four case study projects managed to build the whole 'house', nor did they have tangible impacts on all the elements. Despite this, it appeared that the two core elements for sustaining participation in forest management, regardless of land tenure or forest management model, are: (a) *attitude*: people in the specific context see themselves responsible over the local resources and; (b) *access*: local people gain secured access to information and benefits from the resources.

All case study projects had relatively limited tangible impacts on long-term access to information and benefits. The local people acknowledged that extension services, market access and marketing information were the important elements in PFM, and it turned out that these were the most difficult elements for the projects to sustain. In Tanzania, Mozambique and Vietnam, the main problem was that the projects could not ensure supportive institutions and funding in place to take care of these activities after the end of the projects. It is very likely that this will have consequences for people's attitude towards forest resource and the sustainability of PFM in all three cases. In Laos, the project is still on-going and long-term extension services need to be ensured through local institutions and national budget allocations after the project funding.

Due to the projects' inability to integrate the different elements in the house model into existing institutional structures, there is a genuine risk that under these unfavourable institutional and political conditions, participation tends to employ local people as a simple labour force in forest management and protection. Then local people lose the sense of ownership of the resources, which was promoted by the projects. The risk is that local people are used as labour force – often even without guarantee of being paid – do not feel responsible for the resources. Their attitude is different compared to the cases where they can make decisions over use of local resources and generate benefits from forests under the PFM.

In all case study countries the sustainability and scaling-up of PFM to nationwide practices is still debated. Supportive institutions and implementation of several reforms are still needed in order to ensure the implementation of PFM practices on national scales. Institutionalisation of PFM is contingent on the willingness of each country to invest financial and human resources in forestry. The governments must be ready to invest a reasonable amount of the funds generated through forest management and protection back into forestry sector and maintain participatory practices that rely on long-term extensive extension input. External funding such as donor aid or non-governmental organisations (NGOs) cannot be the only way to finance long-term forestry extension services, nor can it be expected to financially sustain the participation of local people. Nevertheless, donor aid and NGOs can facilitate the development of different forms of PFM through which recipient governments and macro-level decision-makers can experience that participatory and sustainable forest management can be economically attractive and viable for the country. However, this is only possible if the recipient governments secure local people's access to benefits from forest under the PFM. It is concluded that it is possible to construct PFM even if only some elements are present, but in order to sustain PFM, 'the house' must rest on a solid institutional foundation which as minimum secures local people's access to information and benefits from their particular environment.

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