A way out of poverty? A review of the impacts of PFM on livelihoods

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Introduction

Over the last two decades the world has seen a wave of enthusiasm for participatory forest management (PFM), broadly defined as the involvement of local people in decision-making in some or all aspects of forest management. PFM has been implemented in many countries, often with significant donor support. While early interest in PFM centered on its ability to improve forest conservation, the current poverty reduction focus of the global development agenda has raised interest in the livelihood impact of PFM.

In this context, Ford Foundation and CARE International have funded a two-year research project 'Action Research on the Poverty Impact of PFM' (ARPIP), implemented by the Overseas Development Institute (ODI) in London together with partners in Kenya, Tanzania and Nepal. The project set out to answer three basic questions:

- Does PFM contribute to improving livelihoods?
- If yes, does it do so for all well-being groups?
- Looking at different types of PFM, which factors determine whether PFM has a poverty-reducing impact?

This paper draws on the ARPIP literature review, which included detailed analysis of the costs and benefits reported for about 40 PFM cases from around the world (Schreckenberg *et al.*, in press). We begin by outlining different ways in which PFM can contribute to livelihoods and then highlight some potential negative impacts. We go on to examine in turn a number of contextual and design factors that determine whether a particular type of PFM is likely to have more positive or negative impacts. Finally, we examine some of the challenges PFM faces in areas with high value environmental goods and services and provide some suggestions for how to ensure that PFM benefits the poorest in these situations.

How can PFM contribute to improving livelihoods?

In our review we chose to take a livelihood approach (Carney, 1998) which considers various types of capital or asset:

- Financial – this concerns income generation from PFM and may include subsistence activities such as fuelwood collection and commercial activities such as beekeeping. In addition to such forest-based activities, a number of non-forest income generating activities (IGAs) such as woodlots or other cultivation on private land are often introduced to a community along with PFM and these can also impact on people's financial well-being.
- Natural – in almost every PFM case we reviewed, participants perceived an improvement in the forest condition. This can have a direct impact on

livelihoods by ensuring the provision of a more sustainable flow of benefits (such as fuelwood, timber, water) or attracting ecotourists and researchers in the case of high biodiversity forest.

- Physical – the impact of PFM on physical capital tends to be through the use of income raised from PFM to improve infrastructure at either household level (e.g. paying for a tin roof) or community level (e.g. building a school).
- Human – there are a number of ways in which PFM can improve human capital. Frequently there is a direct impact on the skills of those people in the community who receive training as part of the PFM process and, where there is a focus on harvesting medicinal herbs, there may also be a direct impact on health. Less directly, the incomes raised from PFM may be used by households to fund school fees and by communities to invest in the education and health of their residents.
- Social and political – the process of being involved in PFM often has a positive impact on the capacity of individuals or communities to speak out for their rights and engage with other development actors to improve their livelihoods. The creation of institutions around PFM may also provide benefits such as social service provision and strengthening of social networks.

In addition to taking into consideration each of the five capitals listed above, a livelihoods approach also recognises the fact that livelihoods are dynamic, with people often shifting in and out of poverty for reasons such as illness or death in the family, crop failures or natural disasters. PFM can help to increase the stability of livelihoods by reducing risk and vulnerability, through the promotion of three types of activity:

- '*Safety net*' activities – by improving access to and supply of subsistence and emergency products, PFM can provide a fall-back option for people during periods of crisis and unusual need;
- '*Gap-filling*' activities – many PFM-related IGAs are seasonal (e.g. mushroom collection) and can provide an important supplemental income at a time when agricultural income is low;
- *'Stepping stone'* activities – a few PFM-related activities can provide sufficient income for participants to accumulate savings and re-invest in other activities, enabling them to move out of poverty altogether.

PFM can have a livelihood impact at several levels: the individual, the household and the community. It is important, therefore, to consider how impacts may vary between individuals in the same household (e.g. men and women, old and young), between households (e.g. those in richer or poorer well-being groups, from different ethnic groups or with different livelihood strategies) and between communities (e.g. at different distances from the forest).

The discussion in this paper is predominantly focussed around the impact on poverty at the local level. Another important strand of the discussion, which is not covered in this paper, is the poverty impact of PFM beyond the immediate community level, particularly in relation to national (and sub-national) development goals. Wider national benefits can accrue for example, through job creation, taxation or associated financial flows which provide capital for investment in rural areas and opportunities for wider growth. In Indonesia, for example, community based forest management (CBFM) is of vital importance to the woodworking industry with forests on titled land outside the National Forest Estate producing more than 6 million m^3 of timber a year in comparison to the 2006 allowable cut of 8.15 million m^3 for all commercial timber concessions (of which only a proportion remain active) (Indonesian Ministry of Forests Press Release (Siaran Pers) S259, 11 May 2006).

What potential negative effects can PFM have?

In recent years, there has been a growing awareness that, depending on how it is implemented, PFM may have negative impacts on some people (Malla, 2000). This is most obvious in cases in which whole groups of people are excluded from the process, perhaps because they are from a different ethnic group, a different well-being group or have a different livelihood strategy (e.g. pastoralists) or live further from the forest in question. In a community in Dak Lak, Vietnam, for example, migrants were excluded from the forest land allocation process (Thanh and Sikor, 2006). In some cases, loss of access to the resource is only temporary. Conroy *et al.* (2002) report on cases of self-initiated community forestry in Orissa, India, where the initial 3-4 year closures of the forest hit the poor hardest. Similar cases in the Nepal Middle Hills area highlight the problems this can pose for women or the landless who rely on the forest for collection of fuelwood and fodder (Malla *et al.*, 2003).

Studies have shown that the poorest are often unable to meet the costs required of being a member of a PFM group. Typically they do not have the time to attend all the meetings or to contribute their labour (e.g. for forest patrols) as they rely on wage labour to earn their living or may be too old and sick. While other people may be able to compensate for lack of time by paying towards the costs of the patrols, this is not an option for the poorest who therefore choose to leave the PFM process (Maharjan, 1998; Nhantumbo *et al.*, 2003).

Unless accountable institutions are in place, the increased value of the forest to the community under PFM, can lead to corruption (Oyono *et al.*, 2006). Mvondo *et al.* (2006) report misappropriation of funds in Kongo village, Cameroon, while Iversen *et al.* (2006) give petty corruption as the most common reason why elected forest user group officials in their study sites in the Nepal Terai region are forced to step down from their positions prematurely. In other cases, executive committee officials engage in unbeneficial collaboration with external actors, as reported from Indonesia, where they enter into agreements with loggers who bring capital to finance operations but also create dependency (MFP, 2006). In the Nepal Terai region, the problem has been so widespread that projects are introducing public audit practices and the degree to which misused funds can be recovered is an indicator of good governance (SAGUN Program, 2005). Even where there is no blatant corruption, the benefits of PFM may be disproportionately captured by the elite. This can happen because decision-making is often dominated by elites unless specific action is taken to ensure that poorer and disadvantaged community members are sufficiently represented on the executive committee. Elite capture may also be the result of benefit-sharing systems that do not take into account the specific needs and capacities of the poor. Several studies from Nepal report that the poorest are unable to make use of their timber allocations because they cannot pay the advance permit fees (Iversen *et al.*, 2006; Malla *et al.*, 2003). A similar situation exists in some municipalities in Honduras where advance logging fees discriminate against poor local loggers leading to logging being taken over by outside interests (Nygren, 2005). Training is another important benefit provided by PFM programmes that is frequently taken advantage of predominantly by wealthier community members who tend to be more educated and have more time available.

In many areas, local people may have been involved in managing the forest for many generations, as is the case of the tribal areas of India, for example. Unless handled in a way that is sensitive to local practices, the introduction of a formal PFM agreement may undermine or even destroy such traditional systems by introducing new

institutions and changing management practices. Forest land allocation in Dak Lak, Vietnam (Thanh and Sikor, 2006), and decollectivisation in Yunnan Province, China (Wenming *et al.*, 2002), for example, have led to the loss of customary rights for those people who have not been included in the process. In other cases, however, new systems have been able to build successfully upon traditional structures, as is the case amongst crofters in Scotland where management of new woodlands has built on an ancient system of elected grazing committees (Jeanrenaud, 2001).

Factors which determine the poverty impact of PFM

PFM is implemented in very different ways in different countries and even within the same country. Based on our case study review, we have identified a number of factors that seem to be particularly important in determining whether a specific form of PFM is more or less likely to have a positive impact on improving livelihoods. Some of these factors are 'contextual', meaning that they tend to be fixed in a particular context and are difficult to change. They include the objective of the PFM process, the value of the resource, tenure of the forest and the extent and maturity of the PFM system. 'Design' factors enable PFM implementers to adapt their form of PFM to achieve the best outcomes in a given context. They include benefit-sharing modalities, focus on commercial and/or subsistence production, levels of participation in decision-making and access to various resources and inputs. The two categories are not exclusive – depending on the circumstances some factors may be more or less amenable to change. The important point is to recognise which factors can and cannot be changed and to work from there.

(i) Objective and Motivation

PFM is motivated by three different objectives, with one or more dominating in any particular situation:

- *Conservation and sustainable forest management.* This was the motivation for all of the early PFM cases. It continues to be the main motivation for most forestry departments, many of whom recognise their own limited capacity to manage large areas of forest effectively and hope that involvement of local people, who in some cases are perceived as 'cheap labour', will assist them in carrying out this task. This motivation is particularly dominant in areas of severely degraded forest (e.g. the Nepal Middle Hills) where there are few products of any value to the forest department.
- *Improving livelihoods.* In recent years donors and national governments have become more concerned with achieving poverty reduction and activities of all kinds now need to show their poverty reduction credentials. The fact that poverty is often concentrated in forest areas and that poor people are known to rely on forests for many subsistence products has led to PFM being seen as an obvious route for achieving poverty reduction. In a few cases, projects even focus specifically on improving the livelihoods of the poorest in society. This is the case with taungya initiatives in Nusa Tenggara Barat province, Indonesia, which target the landless and single mothers (Suryadi, 2000). Some forest user groups in Nepal are also beginning to target activities specifically at their poorest members (Dev *et al.*, 2003b).
- *Decentralisation/indigenous rights.* In a few countries, PFM has taken place as part of a more general process of devolution of power to the local level or in recognition of the rights of indigenous people. The latter is the case in Guatemala, for example, where large areas of forest have been handed over to indigenous communities for management (Nittler and Tschinkel, 2005). In the Hoopa Valley Indian Reservation in California, USA, the struggle for

control of the land and forest was motivated by a battle for the survival of the Hupa culture and identity (Baker, 2003). In Mexico, massive agrarian reforms in the early 20th century gave communities control of over 50% of the national territory, and further reforms in 1992 strengthened community rights to exploit their forests (Bray *et al.*, 2005). In Indonesia, the state has sanctioned agreements for community involvement on state forest land and some recognition of *adat* (customary) law. These include community rights and responsibilities for forest management in 'rehabilitation areas', co-management of conservation areas and licenses for environmental service provision and/or subsistence harvesting of timber and non-timber forest products (MFP, 2006).

Perhaps not surprisingly, poverty reduction tends to be greatest in those cases with a clear objective to improve livelihoods. However, poverty reduction is not always an objective nor one which is shared by all stakeholders. Negotiation over objectives is an essential early step in any PFM implementation process to discuss and agree trade-offs that may be necessary between the different objectives. Where conservation is top of the agenda, for example, it may be necessary to limit harvesting by local people to products that can be collected non-destructively. There is an argument that in any situation, a minimum 'do no harm' approach should be taken to ensure that PFM implementation does not make life harder for people who are already very poor without providing adequate compensation.

(ii) Resource value

Our case studies show that attempts are being made to implement PFM in almost any kind of forest, from tropical high forest with very valuable timber in areas of Cameroon and Guatemala, to miombo-type forests with a diverse range of predominantly subsistence and lower value products and completely barren land that can be replanted (e.g. parts of Yunnan Province, China). The higher the current and potential value of the forest the greater the risk of elite capture. In Cameroon, the phenomenon of 'village return' which brings retirees and unemployed young graduates back to villages when community forests are allocated is well documented (Oyono *et al.*, 2006). While this can provide an important injection of skills and capital to the community, there is also the danger that such well-connected elites are more likely to capture the often significant benefits associated with community forestry in Cameroon.

Implementing PFM in low value forests can also be problematic: if the potential value of a forest is too low relative to the costs incurred for management, people will not be interested in participating in PFM. The key issue then is not the current or potential value of the forest, but that this information over possible returns should be openly discussed between stakeholders and the PFM system designed accordingly.

Design factors that can be manipulated to deal with differences in resource value include:

- *Resource size.* 'Moderate size' is one of four resource system characteristics listed by Ostrom (2004) as being conducive to the establishment of collective action; the others being resource scarcity, predictability of resource flow and the existence of reliable and valid indicators of the resource condition. What is considered 'moderate' depends on the context. In the Nepal Middle Hills, where community forests are managed very intensively as a complement to agricultural activities, a rule-of-thumb suggests that community forests should be around 1ha per participating family, with a target size of around 50ha (Maharjan, pers. comm.). In the high forest of Cameroon, the size of

community forests – initially envisaged as being for timber extraction – has been capped at 5000ha.

- *Balancing costs and benefits.* To ensure that the costs of forest management do not outweigh the potential benefits, the requirement for inventories and management plans can be adjusted. In both the Tanzanian CBFM and Nepal Middle Hills experience, inventories are participatory and focus on those products of interest to the communities. Management plans are simple and can be revised in the light of experience. In contrast, the management plan requirements for community forests in Cameroon exceed those imposed on much better financed independent contractors (Brown, 1999). The new guidelines in Cambodia require elaborate inventory and management planning even for low value forest where simple fuelwood collection systems might be more appropriate (Royal Government of Cambodia, 2006)
- *Appropriate institutions.* The greater the value of the forest, the more important it is that the local institutions are capable of managing both the forest and the benefits emerging from it. Thus higher value forest may require different forms of institutions which are robust enough to deal with larger benefit flows and to militate against corruption. In the Maya Biosphere Reserve in Guatemala, for example, most community forestry enterprises are managed by an elected board supported by an accountant. Over time many have progressed from selling standing timber to establishing local processing facilities, providing significant local employment and increasing the benefits for their members (Nittler and Tschinkel, 2005). A similar shareholder system applies in Nepal where newcomers to an area choose which of the nearby community forests to join and pay significant joining fees. These vary in line with the value of the forest and the benefits available to members. If people leave a community, they are paid back, taking into account their inputs in terms of time and permit payments, as well as any benefits received over the years. Taking this kind of enterprise approach focuses attention on achieving long-term sustainability, ensuring transparency of decision-making and public audits, and having skilled managers answerable to their 'shareholders'. While many businesses are run purely to make profits, there is also a long history of social enterprises which take into consideration the needs of certain poor and disadvantaged groups, and which could provide a good model for pro-poor PFM.

(iii) Tenure/Ownership of the forest

Tenure arrangements under PFM are very variable. A few instances exist of PFM between private land owners and their tenants (as is the case in Scotland) but the majority lie somewhere between the two extremes of complete community ownership (as in the case of *ejidos* in Mexico or village forest CBFM in Tanzania) and state ownership with a limited set of user rights given to the community. Several authors have emphasised the importance of tenure in determining the success of PFM (Alden Wily and Mbaya, 2001). Our review has confirmed that the lack of clarity over user rights (and the attendant responsibilities) is a recurrent theme in the case studies leading to unfulfilled expectations and conflict between different stakeholders.

The key types of right that exist with respect to a resource have been defined by Schlager and Ostrom (1992) and include:

- Rights of access – who is allowed to enter the forest?
- Rights of withdrawal – who is allowed to harvest which products? Can they be harvested for sale or only for subsistence?
- Rights to manage – who defines regulations and is responsible for implementing them?

- Rights to exclude others – who is responsible for excluding others from the forest?
- Rights to convert, sell or transfer land – who can decide about alternative uses of the land?

These different rights have implications for the level of benefits that can accrue to rights holders.

(iv) Maturity of the system and the case

Experience increases over time. It is inevitable therefore, that achievement of desired objectives (e.g. livelihood improvement) becomes more likely with time as community members are trained and become more skilled at forest and institutional management, and – in some cases – as the condition of the forest improves.

The maturity of the PFM programme at national level and the extent to which it has been applied across the country can also have an impact on the success of individual cases of PFM. A long and widespread body of experience of PFM implementation at national level can help to:

- Fine-tune relevant legislation and procedures such that they work in different socio-economic and ecological contexts. Nepal has begun to implement PFM in the lowland (and higher value) Terai forests and there has been much discussion (and legal battle) over whether the system, developed and widely implemented in the Middle Hills, is equally appropriate in the Terai.
- Ensure existence of a cadre of suitably qualified government, NGO and civil society personnel to support PFM. Many of the case studies reviewed emphasise the lack of capacity of key stakeholders as being an important constraint to PFM implementation. PFM is never an easy option and requires that not only Forest Department staff but also NGO staff, CBOs and community members are well versed in their rights and have the capacity to negotiate terms and implement the agreed management plan.
- Allow for the development of networks of user groups to exchange experience and advocate for policy change. In the Peten area of Guatemala, an Association of Forest Communities (ACOFOP) facilitates collaboration between its 22 member community forest enterprises and represents the communities jointly before the government, donors, buyers and the public (Nittler and Tschinkel, 2005). Such networks take time to develop and can only become self-sustaining when they can draw on a large enough membership base. The Federation of Community Forestry Users of Nepal (FECOFUN), for example, has over 11,000 user group members but membership fees still only account for 40% of its funding (www.fecofun.org). As important as its ability to sustain itself financially, is FECOFUN's ability to draw on a wide body of experience in implementing community forestry across the country which has allowed it to become an effective national advocate for forest users' rights.

What also became clear from the cases reviewed is that many problems have arisen where PFM has been rolled out too quickly and too rigidly. For example, many of the early community forests in Nepal faltered because foresters, under pressure to meet community forest implementation targets, had not taken the time to work with communities and their neighbours to agree boundaries properly (Springate-Baginski *et al.*, 2003).

(v) Benefit sharing

Within communities, benefit-sharing can be organised to be:

- *Equal or equitable.* In the 'equal' case, all households receive an equal share of products regardless of need. This may appear to be fair but can disadvantage the poorest if the products being shared out are rarely used by poor people. Thus the poorest in some communities in the Nepal Terai region (Iversen *et al.*, 2006) are unable to make use of their timber quota (because it requires paying upfront fees) while many wealthier people have sufficient private land to not need their fuelwood and fodder allocations. In the Middle Hills of Nepal, some community forest user groups are moving towards equitable allocation, a more needs-based approach that provides households with different levels of products they can actually use (Dev *et al.*, 2003b). Different systems may apply to different products as in the case of communities in Orissa, India, where grazing is permitted freely for all, scarce products are distributed on a needs-based system and products harvested communally are distributed equally (Conroy *et al.*, 2002).
- *In cash or kind.* In the case of subsistence products, communities frequently allow members to harvest specific amounts, e.g. a headload of fuel per day or a fixed number of poles per year. However, a community can also decide to organise the harvesting as a communal activity or with hired labour, sell the products and divide up the resulting benefits. This is typically the case in timber-producing cases such as Guatemalan community forest enterprises and some Mexican *ejidos*. Provision of employment to community members can be an important benefit – in the Mayan Biosphere Reserve, Guatemala, employment for community members varied from 10 to 160 days per year depending on the size of the forest and the degree of local processing (Nittler and Tschinkel, 2005).
- *Distributed to individuals or held at community level.* Communities can decide to use the bulk of their PFM funds centrally. In the Val di Fiemme in the Italian Alps, for example, the production of FSC-certified timber products provides revenue used for community development activities designed to keep young people in the valley (Jeanrenaud, 2001). Many communities in Nepal use their communal funds to build schools or health posts. However, as Timsina (2003) has shown, the poorest often do not send their children to school and therefore do not reap the benefits of these communal investments. Alternatively, the benefits can be distributed to individual members. This may be complicated if – as in the case of certain community forest enterprises in Guatemala – the community statutes are designed for not-for-profit organisations, which precludes payments of individual dividends (Nittler and Tschinkel, 2005). It also means that benefits are strictly limited to members, whereas expenditure on community projects would also help non-members.

Benefit-sharing between communities and the forest department or central government is an important issue to clarify. In the earliest cases of PFM in Nepal, the forests handed over to communities were so degraded that there was little discussion about returning any benefits to the forest department. This has changed since PFM has been implemented in the high value Terai region leading to national debate, and legal action by FECOFUN, to ensure that communities remain the prime beneficiaries of forest products. Following an initial decision by the government to impose a 40% tax on any surplus timber sold outside the community forest user group, this has now been reduced to 15% specifically for two species (*Shorea robusta* and *Acacia catechu*) (Maharjan, pers. comm. 2007). In addition, community forest user groups are required to spend 25% of their annual revenue on forest management activities (Iversen *et al.*, 2006). The split of benefits between community and government may depend on the division of labour as in Malawi, where a co-management arrangement in the Chimaliro Forest Reserve provides 30% of revenue to the community, while

the proportion is 80% in the Mangweru Village Forest Area on customary land (Kayambazinthu, 2000).

(vi) Subsistence versus commercial use

Whether or not commercial harvesting is permitted, depends to a great extent on the objectives of the PFM case. Where biodiversity conservation is a particular concern, it may be necessary to limit harvesting of certain products. But does this necessarily reduce the potential positive impact of PFM on livelihoods? Even without the ability to commercialise, the right to harvest subsistence products (e.g. fuelwood, fodder, poles and medicines) reliably and legally can greatly improve a household's livelihood, and enable it to engage in other income-generating activities.

As outlined earlier, the livelihood approach also highlights the importance of improvements in non-financial assets such as social or political capital. Many of the cases we reviewed reported that PFM led to an increase in social and political capital. In Guatemala, for example, the community forest enterprises have generated empowerment and interest in the development of other communal enterprises (Nittler and Tschinkel, 2005). In the Koshi Hills of Nepal, Dev *et al.* (2003b) found that Forest User Groups (FUGs) represented new and genuine social capital for most member households, providing a forum for community-level decision-making and also enabling them to engage with development actors at district level.

Nevertheless, the right to sell forest products, particularly timber, can make a real and sometimes dramatic difference to the financial capital of a household and/or community. In addition to employment, members of one Mexican *ejido* each received $690 per year (Klooster, 2000), while a community carrying out small-scale logging in Cameroon earned over $26,000 in one year (Oyono *et al.*, 2006).

(vii) Level of participation in the process of decision-making

Many case studies highlighted lack of stakeholder participation in the process of PFM design and establishment as an underlying reason for many of the problems witnessed during implementation (e.g. Yadav *et al.*, 2003; Thanh and Sikor, 2006). Effective participation is considered essential to ensure a strong sense of ownership by the community and identify potential problems. At the same time, lack of clarity over ownership of the resource has been found to reduce the incentive for participation in a case study in Uganda (Gombya-Ssembajjwe and Banana, 1999). Another point that came across clearly, e.g. in the case of Cambodia, was the important role that independent facilitators (from NGOs or civil society) can play in ensuring a level playing field in negotiations between forest departments and communities (Danith, 2001). The potential of NGOs to help participants receive adequate benefits is also evident in South African outgrower schemes, the implementation of which is sometimes contracted out to rural development NGOs on behalf of the industry (Mayers and Vermeulen, 2002).

When it comes to designing the decision-making structure for PFM, there are two main types of approach, each of which has its own drawbacks:

- *User groups.* These bring together some, or all, of those people who actively use a forest, requiring them to pay membership fees. In some cases they may be product-based (e.g. butterfly farmers or fuelwood harvesters) while others (e.g. Nepal) include all users of any forest product in one group. While this approach can ensure that it is the most active forest users who make decisions about the forest, it does raise the issue over who these people are accountable to and what rights they have to make decisions over the resource that may affect non-members. The need to pay membership fees (and transaction costs such as attending meetings) may also lead to poor

people, who are dependent on the forest, not being able to join the user group.

- *Existing community structures.* Tanzania (CBFM) and Mexico are both examples of where existing community structures take responsibility for PFM-related decision-making. Community institutions can reproduce traditional, and sometimes inegalitarian, power structures leading to decision-making biased in favour of certain groups. However, they can also enable people who may be less dependent on the forest to have an equal say in PFM decisions as more active forest users.

It is worth noting that community forestry in Nepal began in the late 1970s by handing management authority to *panchayats*, the lowest level of village government at the time, on the assumption that this would lead to good representation of local people. However, a decade later, a growing body of experience with implementing community forestry in Nepal, led to a fundamental shift towards user group forestry, in which the users themselves become responsible for forest resource management (Hobley, 1996).

A design factor that may affect the level and quality of participation is the size of the group. Research in Nepal has shown that taking decision-making down to the smallest unit (the hamlet) leads to the most effective participation (Dev *et al.*, 2003a). The larger the group, the more difficult it is to ensure that information is shared effectively with all members and that the quality of participation (i.e. the ability of people to make their needs heard) is high. In some countries (e.g. Nepal, Tanzania), PFM guidelines now suggest that certain disadvantaged groups (e.g. women, youth, lower castes) are included in decision-making structures. Recent experience in Nepal, however, suggests that a place on the committee is not enough – the needs of the disadvantaged will only be taken into consideration if they occupy one or more of the key positions of chairperson, secretary and treasurer (Maharjan, pers. comm. 2007).

(viii) Access to resources and inputs

The greater the difference between existing forest management practices and a new PFM system, the greater the need for start-up funding is likely to be, to help cover the costs of setting up and registering new institutions, carrying out inventories and preparing management plans. Pilot cases are frequently heavily supported by donors but similar financial support is less likely to be available to other PFM initiatives.

Although access to funding is important, the need for organisational capacity and skills in facilitation and process are as important. Following many years of experience in why PFM does or does not work in any particular situation, much of the support to PFM in Nepal is now focused on promoting good governance (with its four principles of transparency, accountability, participation and predictability) as this is considered to be at the heart of achieving PFM that effectively meets the needs of the poor (Maharjan, pers. comm. 2006). Unfortunately, as reported from Tanzania, there is often only limited capacity at the district level of the forest department to provide such facilitation, compounded by a shortage of staff and transportation, etc. (Sjoholm and Luono, 2002).

Experience in the Middle Hills of Nepal (Yadav *et al.*, 2003) has also shown that communities need to be assisted in developing the skills to manage forests actively for those products they use, as opposed to focusing only on ‘passive’ forest protection by fencing it off. Communities in southern Cameroon, as in other high forest areas, need external support and training to undertake high value timber extraction and processing (Fomété and Vermaat, 2001).

Finally, external legal support may be needed to safeguard communities from abuse by outsiders such as industrial loggers and village elites, as is reported from Cameroon by Fomété and Vermaat (2001). In the Buto-Buvuma Forest Reserve, Uganda, the community has rules but lacks the capacity to exclude outsiders as the elite, the Forest Department and the army do not recognise its authority (Gombya-Ssembajjwe and Banana, 1999). Similarly, the necessary legal support to help local communities combat illegal use has not always been forthcoming from the Kiteto District Court in Tanzania (Sjoholm and Luono, 2002).

How to make PFM pro-poor

Given the relatively recent interest in targeting the poorest members of society, there is very little experience of how to set up PFM specifically with this in mind. However, we can learn from what has helped to include or exclude the poor from receiving benefits to make a few suggestions as to how to proceed:

- Ensure the whole community and other stakeholders with rights and responsibilities over the resources agree the pro-poor objective and the trade-offs which this may entail.
- Identify the poorest through participatory well-being ranking. Although a sensitive issue, this step is critical if activities are to be targeted at the poorest.
- Agree a process to review the well-being ranking on a regular basis to take account of the fact that households may move in and out of the 'poorest' category depending on their circumstances.
- Ensure that the poorest are given an effective voice in decision-making structures.
- Understand how the poor use the forest and try to design the PFM process to minimise the constraints they face in participating in PFM.
- Implement activities of particular benefit to the poorest. Examples of these include:
    - Subsidised membership or payment in instalments;
    - Targeted activities (e.g. NTFP cultivation in Nepal, taungya in Indonesia);
    - Forest management focused on producing products used by the poor, e.g. firewood, fodder and poles rather than timber;
    - Providing the poor with higher quotas of usable products;
    - Equitable rather than equal sharing of benefits;
    - Use of community funds from PFM to support the poor in non-forest related activities such as livestock rearing, scholarships, loans for small businesses, etc.

While trying to fulfil the needs of the poorest, it is important to remember that others also depend on the forest. Thoms *et al.* (2003) found that, in Nepal, leasehold forestry targeted at the poorest inadvertently led to exclusion of the less poor from their sources of grazing and subsistence products and caused resentment of the poorest.

Implementing PFM in areas with high 'public good' value

Many forest areas have a high 'public good' value. This can be high biodiversity value or the provision of important environmental services (e.g. watersheds or carbon fixation) with benefits that accrue at national or international level. This does not necessarily translate into high value for local people. Thus many of the villages in the

Uluguru Mountains in Tanzania, which provide water and electricity for Dar es Salaam, have access to neither running water nor electricity. Similarly, areas of high biodiversity may obtain benefits from ecotourism, but this is only likely if the biodiversity concerned is 'charismatic' and sites are accessible, or from research fees, the large-scale potential for which is limited.

In these areas, it is essential to be explicit about the distribution of costs (which tend to fall primarily on the local population) and benefits (which are appreciated by more distant stakeholders) and examine ways of how they can be distributed more fairly. One way of compensating local people for the costs they bear is through schemes such as Payment for Environmental Services (PES). However, there are risks associated with such schemes, including:

- Elite capture of the benefits and restricted access for poor (Rosales, 2003);
- Payments may only made if certain conditions are met;
- The fact that a PES scheme is unlikely to have a pro-poor focus unless the market is prepared to pay the higher costs that this focus might entail.

Rather than increasing the benefits for local people through PES schemes, an alternative option may be to reduce the costs and the burden they face (Pagiola, 2004). These are usually related to establishing PFM institutions, preparing management plans, and undertaking forest patrols and could be avoided by opting for a simpler agreement between the Forestry Department and the local population that leaves management in the hands of the FD but allows the population limited non-damaging use (e.g. of firewood, fodder, poles).

Conclusions: lessons learned about improving the livelihood impact of PFM

Our review suggests that PFM can have significant and positive impacts on livelihoods, particularly if these are interpreted in the broadest sense, taking into consideration financial, natural, physical, human, social and political aspects. Depending on how it is implemented, the impacts of PFM can be more or less positive for different groups of people. Based on the cases reviewed we can draw a few conclusions about how to ensure that PFM has a more positive impact on livelihoods:

- It is important to understand the specific (and unchangeable) 'context factors' within which a specific PFM system has to operate and to focus on amending the 'design factors' to produce a form of PFM that results in the optimal cost/benefit ratio for local people.
- Acknowledging the varying interests of all stakeholders is an important first step to reaching agreement on objectives.
- An explicit 'pro-poor' objective at the start of the PFM process is the best way to ensure a flow of benefits to the poor
- The possible negative impacts of PFM can be reduced by early identification of the possible 'losers' through PFM and consideration of how they can be compensated or the system redesigned to avoid or reduce their losses.
- It is important to recognise that PFM is a dynamic process which requires long-term commitment from government agencies, NGOs and CBOs to support communities through inevitable crises (such as corrupt chairpersons, low levels of participation, internal and external conflicts, high cost/benefit ratios, etc.) and to help them ensure that PFM makes the greatest possible contribution to local livelihoods.
- At a national level, regulations and implementation guidelines should be kept flexible and should be reviewed regularly in the light of a growing body of

experience of how to improve the impact of PFM on livelihoods in different national contexts.

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