4 RESEARCH AND PARTICIPATORY FOREST MANAGEMENT: COMPARING THE PRIORITIES OF RESOURCE USERS AND DEVELOPMENT PROFESSIONALS

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4.1 INTRODUCTION

Participatory Forest Management (PFM) is used as an umbrella term to include shared forest management, joint forest management, collaborative forest management and community forestry. PFM attempts to secure and improve the livelihoods of local people dependent on forest resources (Hobley, 1996), by involving all key stakeholders in the process of forest management, understanding their needs and situations, allowing them to influence decisions and receive benefits, and increasing transparency.

A wide range of institutions now participate in forest management coalitions with the aim of reducing poverty, including government forest services, local and international NGOs, international donor agencies, and local users associations. The vast majority of participatory forestry management has been described and documented from South Asia, with the remainder being largely based in other parts of Asia. There is also much more documentation of the social and institutional aspects of PFM, than of the technical aspects.

From the professional researcher's point of view, it is difficult to identify from these documented sources ways in which their activities can usefully contribute to participatory forest management. This chapter outlines a study which addressed these gaps in our understanding of PFM, by surveying the opinions of a wide range of stakeholders from six contrasting tropical countries, about their priorities for *what* should be researched, by *whom* and *how.* The emphasis here is on the consequences of including resource users in priority-setting for research; specific recommendations for research topics by professional researchers will be discussed in a later paper.

4.2 METHODOLOGY

A study of this type presents challenges because it seeks to identify issues perceived by people from widely varying backgrounds and in a wide range of socio-political and ecological contexts. We adopted an iterative methodology, beginning with a pilot email questionnaire sent to key informants (KIs) to ask for their views on the relative importance for research, of issues identified in the literature. We deliberately avoided defining the term 'research' in order to explore respondents' own perceptions. KIs were selected on the basis of their experience in natural resource management and participatory approaches. The questionnaire was modified and improved through feedback from the KIs, and then used with local stakeholders (project staff including foresters, and local resource users) in each of the six countries.

The countries which participated in the survey were Nepal, India, Brazil, Bolivia, the Philippines and Tanzania, chosen to incorporate a range of ecological, social and policy contexts. Within these countries, local consultants selected projects covering a wide range of institutional partnerships and forest types (including protected areas and buffer zones), where they conducted semi-structured interviews with both project staff and forest users.

The interview started with open questions, asking respondents to identify the key areas needing research in PFM. It then asked respondents to comment on all constraints, using a semi-structured format based on a list of pre-selected issues. Finally respondents were asked to score the identified issues on a scale of 1 (not important for research) to 5 (highly important for research), thereby allowing us to quantify results.

The results were analysed both quantitatively and qualitatively, based on data grouped according to stakeholder group (KI, project staff or forest user), and country. Quantitative analysis, using SPSS, was applied to the scores that respondents attributed to different research priorities and to the frequency with which respondents mentioned issues. Qualitative analysis was applied to the open and semi-structured parts of the interview; in particular we identified constraints that cut across issues, were mentioned frequently by respondents but not prioritised, were not considered researchable by respondents but may in fact be addressed by improved knowledge management, and those prioritised by a particular sub-group of respondents which may warrant further attention.

The complementary qualitative and quantitative approaches allow issues to be identified, and patterns identified, despite the distance and number of respondents involved.

Table 4.1: Research priorities of the different stakeholder groups in relation to the top six overall priorities; (1 is top priority; 2= indicates the priority was second in equal place with another)

Issue	*Overall rank*	Rank among KIs	Rank among project staff	Rank among forest users
Communication and extension	*1*	1	1	1
Organisation and decision-making	*2*	2	2=	3
Silviculture	*3*	7	2=	2
Sustainability	*4=*	4=	4	8=
Policy	*4=*	4=	12	5
Conflict	*4=*	6	11	4

4.3   RESULTS

4.3.1 Quantitative analysis: the issues ranked by respondents

The top four issues prioritised by respondents are

1. communication and extension,
2. organisation and partnerships,
3. silviculture, and
4. sustainability.

However there were marked differences between different groups of stakeholders (table 4.1). Communication was rated the top priority by all stakeholders (KIs, project staff and forest users), but silviculture was a higher priority at local level (project staff and forest users) than at international level. The high priority accorded to benefit distribution by KIs was not echoed by local respondents, while sustainability was not considered important by forest users among whom conflict management was instead given a high priority.

While there is relative consensus within stakeholder groups, there is considerable variation between countries (table 4.2), which to some extent can be linked with the different ecological and policy contexts. Notably in Bolivia and Brazil a high priority was given to market research reflecting a preoccupation with management for commercial timber production; in Tanzania a high priority for conflict management and tenure contrasts with the low priority given to silviculture, reflecting the fact that most of the projects surveyed were in protected areas; and in India and Nepal, which have had community forest legislation for more than ten years, communication and extension is rated more important.

Table 4.2: Research priorities of respondents in the six countries.

Brazil	Bolivia	Nepal	India	Philippines	Tanzania
1. Market	1= Market + Organisation and decision-making + Sustainability	1.Communic-ation and extension	1.Communic-ation and extension	1. Ecology	1= Tenure + Conflict
2= Ecology + Silviculture		2. Silviculture	2. M&E	2. Sustainability	
		3. Organisation and decision-making	3. Sustainability	3. Communic-ation and extension	3. Communic-ation and extension
4. Policy	4. Policy	4. Policy	4. Silviculture	4. Silviculture	4. Organisation and decision-making

4.3.2 Cross-cutting constraints

In PFM many of the constraints, whether social or technical, are interconnected, and consequently some of the issues raised by survey respondents do not fall neatly into one category or the other. Furthermore, themes arise which cut across several categories. We analysed these qualitatively using our own understanding of the background of respondents, and their interpretation of the meaning of 'research'. This qualitative analysis indicated that the principle cross-cutting constraints are:

1. *communication:* a large group of issues would benefit from enhanced sharing of experience, many of them methodological, including: the effects of policy and policy-making processes; means of sharing information and experience; learning strategies; appropriate information and dissemination pathways, and improved data collection methods responding to technical information needs;

2. *pluralistic monitoring and evaluation systems* which recognise the heterogeneity of community stakeholders or forest user groups, and the interests of outside stakeholders. Research is needed to use PM&E to strengthen organisational capacity to manage forests, improve policy implementation and transparency of decision-making, and enhance equity of benefit distribution.

We consider these cross-cutting constraints to be of particularly high priority, because they reflect the concern of respondents from a wide range of backgrounds, with the issues access to and use of information.

4.4   DISCUSSION

4.4.1 The contribution of research in PFM

Respondents differed in their conceptions of research, its purpose and capabilities, according to their background and discipline. Among most respondents, the value of research is undermined by a widespread perception that it is conducted and analysed at a distance, with little evidence that results have been disseminated to those who would find them most useful. Consequently some project staff and forest users rejected a need for 'research' but instead wanted methods for learning from experience in an iterative and locally relevant manner, while others held the view that the latter is also 'research', albeit participatory action research. Other responses balanced this with the view that multiple stakeholders should be involved in research to ensure joint learning, based on recognition particularly among the KIs that many PFM issues also have meaning at a wider level.

Some pointed out that donor funding can distort the value of research: rigid funding patterns requiring explicit goals to be fulfilled can result in project inflexibility which may lead to incompatibility with the goals of local people. Part of the problem is the widespread perception of research as a long term enterprise. Primary stakeholders often need to perceive short term and tangible benefits, and long term funding and support are seldom ensured.

Clearly the question of *who* conducts research will affect the methodologies that are considered to be appropriate. Although participatory research techniques were most commonly considered appropriate by project staff and KIs in all sample countries, case

studies and surveys were seen to be complementary to these methods. Many respondents emphasised the need to integrate these approaches with more traditional scientific methods, especially in areas such as silviculture, ecology, sustainability and technology development, although only one respondent equated research with the testing of hypotheses.

4.4.2 Communication and extension issues

The most significant finding of the survey was the agreement between all stakeholder groups in prioritising communication and extension issues. Despite being a survey looking at priorities for *research*, each stakeholder group identified communication and extension issues as the top priority. This is an issue which links in with others, notably policy (low awareness at field level, lack of consultation at policy-making level); silviculture (poor dissemination and implementation of research results); and benefit distribution (related to monitoring and evaluation of participation and benefits).

Within the wealth of comments made by respondents, we can identify three main areas of perceived weakness in research. Firstly, a lack of information was commonly reported as hindering the development of sound forest management practices. In particular, local forest users and project staff often stated that they were unaware of national forest policies and regulations affecting local forest management, the processes and partnerships required for PFM, and locally appropriate silvicultural methods and techniques.

Secondly, there seems to be a lack of learning opportunities between projects. Many of the issues which preoccupy practitioners in countries where PFM is new (e.g. Tanzania and Bolivia) are the same as those that have been discussed in Nepal and India for several decades. This point highlights the scope for learning by sharing experience between countries.

Finally, there is a lack of communication and extension tools and methods for PFM, such as those needed for disseminating information (often of a technical nature) to field level staff and users and for sharing information among a wide range of stakeholders.

4.4.3 Organisational issues

Overall this category of issues was the second priority for research, although there were some important differences of opinion between stakeholder groups. For example, several scientific key informants felt that organisation is not a forestry issue, whilst social researchers recognised the significant influence that organisational aspects can have on local resource management.

Many comments referred to the structural and organisational weaknesses of government forestry departments (i.e. they tend to be top-down, budget-driven and control-oriented), as well as the lack of real commitment these departments can show to the devolution of power and responsibility. Other points related to the abilities of local organisations to manage and protect forest resources; to generate and manage financial resources; to ensure appropriate levels of representation and participation by community members (particularly women and the poor); and to be flexible and innovative. PFM projects often create completely new organisations for the purpose of forest management, the

other option being to build on existing local organisations and develop their capacities for PFM. In many cases respondents were unclear about this process of establishing and developing local PFM organisations (such as Forest Users Groups in Nepal and India), and forest users in particular stated a need for guidelines to assist in identifying appropriate organisations for community forest management, and for forming user groups.

Some of these constraints are not obviously researchable, for example where they consist of rigid policies and institutions. However innovative approaches to research can help even with such complex issues. It is clear from the survey responses that much more needs to be known about the appropriateness of different institutional partnerships for effective PFM. Obviously the specific nature of any partnership will depend on the particular local context, but there is a role for exploring the range of different partnerships involved in PFM and for identifying some generic lessons from their experience to date, through analytical cases studies, and participatory monitoring and evaluation of organisational experience.

4.4.4 Silviculture

There was an interesting difference of opinion between stakeholders over the importance of silvicultural research. Local people (forest users and project staff) rated it within the top two priorities for research, but KIs (academics and international researchers) ranked it only eighth, apparently because they feel that a lot of research has already been undertaken, and that new research is not needed in this area. Clearly local people disagree, because the results of existing research are not being communicated properly to users, or are not appropriate to local level situations. This block in information access or relevance should be a key priority for research.

Local respondents appear to put their finger on the problem when they emphasised that existing research results are not being utilised, and highlighted a desire not for more research but for improved information flow, and improved application of existing knowledge. It may be the case that appropriate silvicultural research results are lying idle, but our impression is that there is both an under-appreciation of the way in which silviculture needs to be adapted to local conditions and resources, and a misapprehension that research conducted on research stations is of relevance to PFM.

Silviculture is an area where local research is clearly required, and more so in some countries than others. It is evident from our respondents that participatory silvicultural research is more advanced in Nepal and India, where a focus on dissemination will be more appropriate, but that new experimental methods will be needed elsewhere (particularly in the timber-rich forests of the Philippines, Bolivia and Brazil). While experiments must be conducted locally and (if the results are to address livelihood constraints of the very poor) must be designed with poor forest users, there is a clear role for international contributions towards developing and disseminating the methodology.

Finally, this section of the survey drew comments indicating a high priority for research on the silviculture of native species, and linked the current priorities with poor use of local knowledge, particularly in forest inventory.

4.4.5 Other issues

Sustainability was rated fourth overall. However it was apparent that respondents held different *concepts* of sustainability and it is therefore difficult to treat this as a single high-priority issue. It is clear that international and project staff are anxious to establish ways of knowing whether forest management can continue. Qualitative analysis of their comments suggests that the main concern for research, is to explore ways of improving *institutional* sustainability rather than *biological* sustainability, a concern which adds weight to the high priorities given to organisational issues.

Policy as a research priority had a mixed reaction. Respondents from a range of SH groups mentioned policy problems in connection with PFM, but less commonly as a *researchable* constraint. Instead, the frequency with which local respondents and forest users in all six countries commented that they did not know or understand forest policy suggests a *communication* problem. International and project respondents added comments on the often considerable overlap and contradiction between forestry policies, and between policies of different sectors. There is a need therefore to expose these contradictions, to find ways to clarify and simplify policy at various institutional levels and to provide pragmatic interpretations appropriate for community management. This is an approach which was identified by ourselves in analysing the results, and is not necessarily seen as a priority among the respondents.

Conflict management was another theme mentioned frequently in the literature, and hence included on the list of issues to be scored for research importance. We anticipated that it would not necessarily be perceived as a *researchable* constraint, and indeed conflicts were mentioned in all six countries, but only rated highly for research in Tanzania. This was perhaps due to the relative newness of the PFM approach in the projects selected, and their focus on protected area management.

4.5   CONCLUSIONS

The study provides a framework for thinking about how research in PFM can be most useful. It is constructive to separate issues which are widely understood and hence not considered 'researchable' in the academic sense, from those which can be taken on by research professionals.

Many of the priorities identified fall into the former category. Conflict management, institutional development, silvicultural management and monitoring sustainability, are all areas which can be informed by existing procedures, but for which respondents have expressed a clear need to adapt to new local conditions and institutions. Action research approaches are relevant here, where it is above all important that the local stakeholders in forest management trust in the research results and apply them to their own decisions and activities.

On the other hand, there are areas where a broader vision may be needed, and where more conventional research can contribute. Such topics include the implications of policy; and an overview of institutional arrangements for PFM leading to a framework to help planning in different contexts. Furthermore, although the *results* of research under many topics may be context specific, the *methodologies* developed and used

may be of much wider applicability. Our own meta-analysis of the results suggests that there is still a scarcity of appropriate methodologies for participatory silvicultural research, for developing local market information systems and for using participatory monitoring and evaluation in conflict management and institution-building. This is where there appears to be the strongest role for professional researchers.

In order for any of the above research to have a useful impact, in terms of improved forest management (whether more participatory, more sustainable or with more benefits for local users), the overwhelming need indicated by this survey is for better communication. That is, communication between researchers; between practitioners; between researchers and practitioners; and between stakeholders in a given PFM context. Not only is communication prioritised directly and explicitly by all stakeholders, and in all countries, as a research topic; it is also implied through an analysis of the needs of different stakeholders. New approaches will be needed to address such research; for example stakeholders in a PFM project may decide to monitor the effect of involving forest users in silvicultural experiments, and the rate at which results are taken up by other forest users and managers. It is clear that opportunities are being missed for new actors in participatory forest management to learn from the experience of those where models are well-established, and that existing research results are not being put to good use because dissemination is poor. The challenge for researchers is to explore, document and share ways of enhancing this learning process.

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