

PEOPLE'S PARTICIPATION IN FOREST CONSERVATION: CONSIDERATIONS AND CASE STUDIES

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Introduction

Many people of a great variety of cultures and land-use practices live in or around tropical forests. Although these people are all in some way dependent on forests, they have little else in common. In recent years, however, it has become much harder for forest-dependent people to use local forests and their products, owing to deforestation, logging, population pressure or legal initiatives such as the declaration of state forests, national parks or wildlife reserves. In many countries, plans to protect forest ecosystems have failed to address the needs and knowledge of local forest-dependent communities (Anan 1996; Wily 1997; Tuxill & Nabhan 1998; Kumar 2000). Participation by local people is essential to any conservation effort.

In forest conservation, participation is often associated with community forestry, which refers to forest management or co-management by people living close to the forest. Legal, political and cultural settings for community forestry vary widely, and the term covers a wide range of experiences and practices. Community forestry is often associated with South and Southeast Asia, but it is also common in other regions (Wily 1997).

Although local participation is important in forest conservation, there are circumstances in which it is absolutely necessary, for example high population pressures and resource use conflicts, communal ownership and in smaller and more vulnerable protected areas (Roche & Dourojeanni 1984). In such cases, conservation without local participation is doomed to failure. Nevertheless, participation in itself provides no guarantee of success. The outcome of participatory processes often depends on additional factors such as institutional or legal frameworks, and the education or interests of local people and other stakeholders. As the case studies in this paper show, governments and their agencies play a significant role in participatory processes by providing—or not providing—an 'enabling environment'.

This paper deals with different perspectives of participatory processes and, briefly, the key elements of enabling environments, for example institutional and regulatory frameworks, land tenure regimes and various forms of capacity building. This paper is based on an earlier paper by Isager and Theilade (2001), which provides a more detailed discussion of participation and forest conservation. Our intention is to give an overview of political and cultural contexts in

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which participatory processes will inevitably take place. We also offer some practical suggestions for improving these processes.

What is participation?

The concept of participation originally grew out of radical criticism of mainstream development projects in the 1960s and 1970s. Critics who asked why development projects often failed to meet their objectives came to the conclusion that a lack of participation was the reason. Too many projects, they argued, were designed and implemented without consultation or cooperation with the people whose lives they affected. Since then, participation has become one of the buzz words of development. It now seems that every project description or plan adopts a 'participatory approach', often because this is required by donor organizations for political reasons. Unfortunately, project planners and implementers frequently use the word 'participation' while continuing a traditional style of management that does not involve local people (Wily 1997). Nevertheless, true participation may lead to more effective conservation of forest resources (Box 1).

Box 1. Joint forest management in India.

About half of the states in India have endorsed a strategy of joint forest management (JFM), in which forestry departments and communities jointly manage forests and share rights and responsibilities. The idea of JFM originated from the management of sal (*Shorea robusta*) forests in West Bengal. Here, community involvement had a remarkable effect on the rehabilitation of degraded sal forests. Landsat images have shown that the area of closed sal forest increased from 11% to 20% in Midnapore District alone, and that many square kilometres of degraded scrub forest have been restored to open forest.

Encouraged by this success, the Indian government expanded the programme during the 1990s. Under JFM, the ownership of the land remains with the government. Village committees, who are the co-managers, are entitled to the benefits from forest products. Forest protection committees control access to jointly managed forests. These local institutions are demonstrably more effective in protecting forests than the state forest departments.

The JFM strategy has required a change of attitude from both forest departments and rural communities. Rural communities have had to organize themselves in new ways, overcome village and inter-village conflicts, and work together with forestry officials. Foresters have had to communicate with local people and share the responsibility for decision-making. To facilitate this process, the Indian government has provided legal and institutional backing, including land reforms, social forestry programmes, sharing of user rights with local people and educating foresters in participatory processes.

A key lesson of the JFM experience in India is that involving local communities in forest management can lead to more effective forest protection. Another lesson is that successful conservation depends on cooperation from local people and forestry officials, and on legal and institutional backing from the State.

Source: Based on Singh (1996).

When developers and conservation planners use the term participation, they often mean very different things. Adnan *et al.* (1992) have defined three basic meanings of participation:

- i) Participation is a process in which information on a planned project is made available to the public. This type of participation often involves only community leaders. These people are consulted but decision-making power rests with external planners and project implementers.

- ii) Participation includes project-related activities and not merely the flow of information. These might involve community labour or a longer-term commitment by local groups to maintain services or facilities, or even to plan for their future use. Although involved, people are not in control.
- iii) Participation means that a project is a direct outcome of people's initiatives. A famous example of this is the Chipko movement, which began in the Himalayas in the 1970s when local women mobilized themselves to protect trees that were vital to the local economy (Shiva 1988).

Of course, we find many intermediate forms between these three categories. Some people have even claimed that participation has become a meaningless term, too often used to disguise continued top-down planning (Rahnema 1992). Others have argued that it is unreasonable to describe a process as participatory if local people are merely asked to supply information or labour to a project already designed and decided by planners (Gardner & Lewis 1996). Following these arguments, we only consider participation as genuine if local people are involved in the planning, organization and decision-making of a project from the outset.

Participation as a social process

If effective participation in conservation means involving people throughout the organization and decision-making processes, how can we promote this kind of participation? To begin with, it is helpful to think of participation as a process. Participation means communicating and working together with different people and groups in order to achieve common goals. Participation also means learning from each other's knowledge and mistakes. It is a series of steps or phases, each of which presents new insights and challenges.

Participation is sometimes difficult but the rewards of truly participatory processes can be impressive, particularly if forests are conserved effectively (Lutz & Caldecott 1996; Wily 1997). Conserving forest resources requires that stakeholders trust one another and commit themselves to sustainable forest use. Legal or administrative procedures may have to be reformed or power redistributed to build relations of trust. Mutual trust often takes time to develop, especially if stakeholders have no previous experience of sharing decision-making or management responsibilities. It is the concrete actions taken by stakeholders in relation to each other—rather than their words or promises—which ultimately determine whether trust will evolve or not.

It is important to consider how the conservation process itself may or may not help to catalyse relations of trust and commitment between stakeholders. An ambitious timetable of limited duration for a given conservation activity may, for example, make it difficult to ensure the trust and commitment of all stakeholders. This is often the case if conservation activities involve external personnel. Such projects are often expected to last only a few years before the 'outsiders' leave. If local people have no previous experience of participating and cooperating, or if their tenure rights are not secure, the process of building trust and commitment may take much longer than permitted by such a timetable. Similarly, if project personnel depart before the positive effects of conservation activities become visible to local stakeholders, the latter are less likely to remain committed to the conservation process.

The preference of donors for large-scale rather than small-scale projects can also inadvertently create barriers to trust and commitment. This is especially true if project managers (be they local people or 'outsiders') want other stakeholders to commit themselves at a level beyond

their capacities and aspirations. Such an approach can make other stakeholders insecure, leading to minimal commitment or no involvement at all. To avoid such situations, stakeholders must be allowed to commit themselves gradually, task by task, and to build up relations of trust in a progressive manner.

The participatory approach in conservation of forest genetic resources

No two participatory processes are identical, because people, forests and other circumstances vary from place to place and from time to time. Most participatory processes, however, involve a number of similar steps or phases (Figure 1):

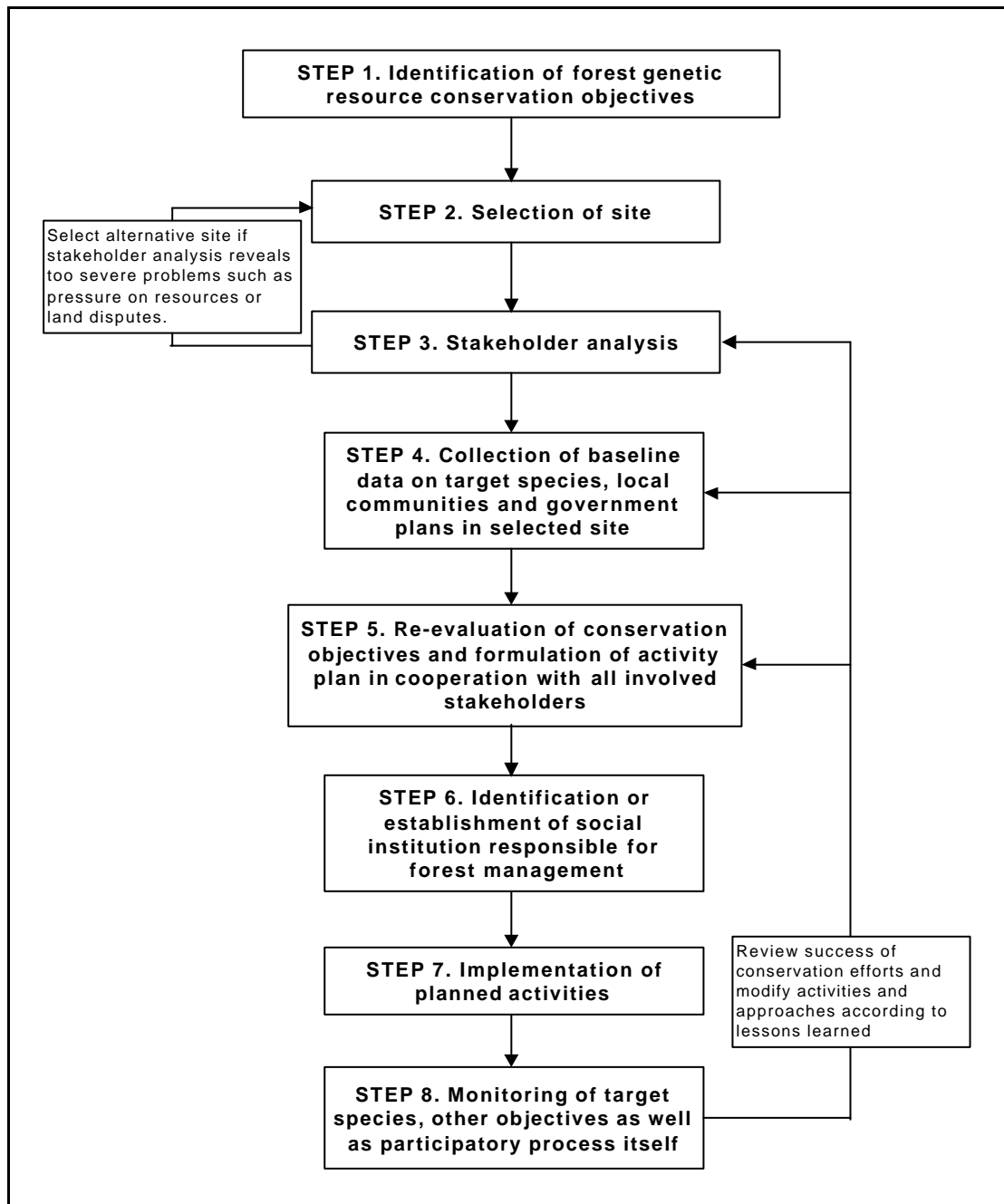


Figure 1. A model participatory process for conserving forest genetic resources

Step 1. The first step is to identify objectives, including the priority species and areas to be protected. It is debatable whether this activity can be genuinely participatory because conservation objectives tend to be defined, at least initially, by government officials or scientists. There are cases, however, such as the Chipko movement and the South Pacific Biodiversity Conservation Programme, where people have defined their own conservation goals, which were then brought to the attention of government. Whether or not the initial formulation of conservation objectives comes from government planners or local groups, it is important that these objectives remain open to discussion and reformulation once other stakeholders become involved in the planning process.

Step 2 The second step in conserving forest genetic resources is to identify suitable sites. Like step one, this phase may not always be participatory in the true sense of the word. If government planners make the initial site selection, for example, it is crucial that other stakeholders are able to challenge or change this decision later on.

Step 3. The third step is sometimes referred to as an interest-holder or stakeholder analysis (see Grimble *et al.* 1995; Danida 1996; also Table 1). In this phase, several questions must be addressed:

- Who will be affected by conservation activities?
- What are their interests?
- Who has a right to participate?
- How do different stakeholders affect the conservation area?

It is important to bear in mind that people's interests in a particular species or forest area are often more than financial. Trees and forests also have cultural, spiritual, recreational and aesthetic values. Depending on how they feel towards conservation activities, different stakeholders may want to participate in different ways. If a group of people or a local community is defined as one stakeholder, it should be remembered that not all members of this group will share the same interests. Furthermore, in most countries, many different government departments and agencies are involved in land and forest management. These institutions often have divergent objectives and interests, and are best regarded as separate stakeholders (Table 1).

Table 1. Stakeholder analysis, Khong Chiam *in situ* conservation area, Thailand

Stakeholders	Interests	Activities	Influence on forest genetic resources
Local villagers (Long-term residents, recent immigrants and forest users)	Food	Harvest of subsistence food sources (including nuts, fruits, tubers and fungi)	Minimal impact
	Timber	Harvest of timber for construction and other purposes.	Threat to preferred species
	New land for growing crops	Forest clearing	Threat to ecosystem
Medicinal plant harvesters	Medicinal plants	Harvest of leaves and bark for traditional medicines	Very limited impact
Resin tappers	Resin	Tapping of dipterocarps for resin production	Limited impact
Fire-stick collectors	Fire-sticks	Harvest of <i>Pinus merkusii</i> sticks for sale	Major impact that threatens <i>P. merkusii</i>
Charcoal producers	Charcoal	Cutting of timber for making charcoal	Threat to preferred species
NGO Nature Care	Forest conservation Well-being of local villagers Equal benefit sharing	Public education	Maintain genetic resources through use
Government			
In Thailand, 19 different government departments and agencies are involved in land management, including:			
Royal Forest Department (RFD)	Forest management and conservation Research Pilot area in partnership in conservation	Enforcement of forest laws and regulations Research Workshops with local people	Conservation of forest genetic resources <i>in situ</i> and <i>ex situ</i> Programmes of domestication and improvement for priority tree species
Provincial government	Development	Local infrastructure and provision of government services	Various impacts, often negative, depending on activities
Donor Project FORGENMAP/ DANCED	Conservation of forest genetic resources and ecosystems Pilot area in partnership in conservation	Training of RFD staff Seed supply Workshops with local people	Conservation and improved use of forest genetic resources

Step 4. The fourth step in the participatory process is to collect baseline data on the selected site. At least three different types of data are necessary: i) government policies and plans regarding the sites proposed for conservation; ii) data on and from local communities; and iii) data on the forest genetic resources. Ideally, a team of professionals and other stakeholders, including members of local communities, should work together to collect baseline data.

As already noted, different government agencies may hold authority in a particular area and their plans for that area may not be compatible. For example, a forestry department may plan to protect a forest area while another government department may plan to build a road in the same area. It is crucial for planners to know whether existing government plans will conflict

inadvertently with conservation objectives. If this is the case, alternative conservation sites must be considered unless other government departments are willing to change their plans.

Similarly, it is important to obtain information on local communities. Much of this can be collected together with the people themselves and supplemented from official information sources. How do people organize land and forest use? What is the local land-use history? Do people hold user rights to the forest? Will they benefit from forest genetic resource conservation? What are the trends in population growth? What are people's subsistence needs? Obviously, conservation measures in which the benefits for local people outweigh the associated costs will have a better chance of success. Using people's needs and present forest management practices as a starting point will make conservation more successful in the long run.

Baseline data on a forest and its resources are obviously necessary for conservation planning. Forest surveys and inventories should be undertaken and historical trends be established (Have particular tree species disappeared or become rarer? Is regeneration adequate?).

Step 5. After all stakeholders have been identified and baseline data collected, a meeting of stakeholders should be held to re-evaluate the conservation objectives. Specific conservation activities, timetables and resources should also be defined at this stage. If conservation sites and objectives have already been selected by government officials or other conservation planners, it is crucial that hitherto uninvolved stakeholders are included in this stage of the conservation process. True participation means more than simply being informed about other people's decisions. It means having the opportunity and power to change these decisions and, perhaps, to add new goals to the agenda.

Step 6. In this step, the social institution responsible for implementing and monitoring conservation activities is identified or established. In some cases, appropriate institutions may already exist and can take up such responsibilities. In other cases it may be necessary to establish a forest management committee or similar institution. It is important to ensure that the social organization of a conservation project is decided before specific activities are undertaken.

Steps 7 & 8. These are the implementation and monitoring phases. During these phases, a conservation project will develop and mature as various activities progress. Implementation of activities or monitoring of target species and the social or political aspects of the conservation process will automatically lead back to previous steps in the participatory process. It may be necessary to carry out a new stakeholder analysis if new groups appear or if existing groups acquire or lose interest in a particular species or geographic area. Similarly, stakeholders may wish to revise or augment the baseline data at any time during a participatory process. The need to re-evaluate goals or activities may also arise. Projects must be designed with a high degree of flexibility to accommodate such changes. Implementation and monitoring should also be participatory.

Local communities and local people

In conservation projects, villages or local communities are sometimes identified rather broadly as a single stakeholder. It is important to question this assumption and others about local communities. Some frequently held assumptions are:

- **Local communities are homogeneous entities.** In terms of land holding, power, and knowledge, most communities are characterized more by their differences than their similarities. Women and men may have different interests in a forest. Landless people may desire access to the forest and its resources for other purposes than landholders. If only community leaders (who are usually male landholders) are involved in a participatory process, other interest groups within the community risk being neglected. A common source of conflict is the failure to consider the views of all community members.
- **Local communities live according to stable traditional values.** The idea that rural communities do not change or acquire new knowledge, habits and interests is wrong. Social and cultural traditions change as people are exposed to new options, ideas and technologies.
- **Local communities depend on the forest for their livelihood and therefore have an interest in protecting it.** It is true that many people living in tropical forest areas are highly dependent on forest resources. In many countries, however, infrastructure development and access to urban labour markets have reduced local dependence on forests and forest products.
- **Local people like the forest and therefore want to protect it.** Cultural perceptions of forests differ from group to group and from country to country. Many social groups have ways of thinking about and acting towards forests which may seem unintelligible or conflicting to outside observers. For example, although people may 'like' and value forests for providing fuelwood, food, medicine or timber, they may at the same time associate them with negative meanings. In Southeast Asia, for example, the forest has traditionally been perceived as the sphere of uncivilized and immoral beings such as spirits, wild animals and ethnic minorities. Thus forests are linked to notions of backwardness and danger, and have negative connotations for many people in this region (Davis 1984; Stott 1991; Isager 2001). People may be keen to clear forests and expand agricultural production, an activity which may be seen as more civilized and desirable.
- **Local people destroy the forest because they do not care about it.** This assumption is almost as common as the previous assumption. Both ideas rest on the incorrect notion that people's perceptions and feelings about forests are straightforward and unambiguous, and cause them to act in well-defined, predictable ways. In reality, people's knowledge (e.g. of forests), and the relationship between their knowledge and their actions, are highly complex and oversimplification should be avoided (see Bourdieu 1990 and Barth 1993).
- **Local people have a detailed knowledge of their environment.** This assumption is as common as the counter-assumption that **local people's knowledge about forests and biodiversity is irrelevant to conservation planners.** In fact, forest dwellers do have considerable knowledge of forest resources and ecology. Government planners or external advisers often underestimate this knowledge. At the same time, however, it should not be assumed that all people labelled as local or indigenous have in-depth knowledge of their natural environment.

- **Local people practise superior forms of landscape management.** Some groups have developed remarkably precise landscape management systems. Recent studies of indigenous forest management systems have shown that they can retain 50–80% of the biodiversity found in neighbouring natural forest ecosystems (Lawrence *et al.* 1998, cited by Poffenberger 2000). Such examples notwithstanding, traditional management systems have often been sustained in the past not by ecological considerations but by low population pressures, geographic isolation and a lack of modern technology and machinery (Ellen 1986; Milton 1996). Local or indigenous people's knowledge should not be idealized and it should not be assumed that their knowledge or culture alone has sustained their management systems. Rather, traditional management systems should be assessed together with local people to determine which aspects can be most effectively incorporated into conservation efforts.

How governments create an enabling environment

Top-down conservation management is seldom effective, except where large budgets are available for enforcement and the society concerned is willing or forced to accept an undemocratic conservation process (Lutz & Caldecott 1996). However, without government support in the form of law enforcement and cooperation between different government agencies, such improvements in local forest management are unlikely to be sustained (Tyler 1999). Attention must be paid, therefore, to the crucial role of government action in participatory conservation processes.

A government can provide an enabling environment for participatory forest conservation through: i) decentralizing political, fiscal and administrative power; ii) securing land tenure and user rights for involved stakeholders; and iii) education and other forms of capacity building. These aspects are discussed in the following sections.

Decentralization

One form of decentralization or power transfer occurs when specific stakeholder groups, rather than government officials, are given the right to collect revenues and decide how they will be spent. Such autonomy is the key to the strength of the joint forest management areas in India where local communities can retain all or part of the revenue from forest products (see Box 1 above). In Nepal, the government has granted rights of use and management to many local forest user groups. This decentralization of power has had promising results in terms of both forest protection and local people's willingness to participate in communal forest management and develop their management capacities (Tumbahanphe 1998).

The experiences in countries where new rights and responsibilities related to conservation have been given to local government units and non-governmental organizations suggest that there are both opportunities and potential problems (Lutz & Caldecott 1996). Poorly planned and implemented decentralization can give power to local societies that lack the skills and accountability to use it 'properly'. Decentralization may also lead inadvertently to a situation where the costs of biodiversity conservation are borne locally, whereas its benefits accrue at regional, national or global levels. One example of a successful decentralization process is the Kayan Mentarang National Park in Indonesia (Box 2).

Box 2. Biodiversity conservation by indigenous people.

Local Dayak communities and WWF Indonesia have worked together for some years in the Kayan Mentarang National Park in Kalimantan, Indonesia. Their aim has been to develop a plan for community-based management of the park. This plan has now been submitted to the Indonesian government, and it is hoped that it will be endorsed and implemented in the near future.

In 1992, the Dayak people of Kayan Mentarang began to map their communities on an experimental basis, aided by WWF Indonesia. In 1996, the Indonesian government agreed to change the status of the Kayan Mentarang area from a strict nature reserve to a national park. Subsequently, the status of the Dayaks was changed from illegal settlers to communities that could be legally involved in the management of the area.

Encouraged by the government decision and the support from WWF Indonesia and the Indonesian Agency for Nature Conservation, the Dayaks conducted an extensive mapping of their natural resources in 1997–98. They drew detailed maps of the flora and fauna in their area, showing where they collected plants or used trees, which areas they cultivated and where their traditional hunting grounds were located. Using participatory rural appraisal (PRA) techniques, WWF personnel helped the communities to document information about their land-use systems, historical trends in resources, traditional forest regulations and knowledge on forest resources. All of this information was used in the development of the management plan for the national park.

Kayan Mentarang provides a good example of participation as a continuing process in which each party is obliged by circumstances to be flexible and accept new ideas. The Indonesian government accepted changes to create an enabling environment. The boundaries of the national park were redefined to accommodate the Dayak villages and their rice fields outside the park. It is hoped that the Dayak's traditional rules of forest management will eventually be recognized.

Sources: Worm and Morris (1997); Eghenter (2000); WWF (2000).

Land-tenure security and user rights

The lack of secure land tenure or forest user rights is a key reason why local people do not commit themselves to participatory forest conservation. People without such rights face an uncertain future and are less willing to invest their labour in conserving forests. Once local people gain land or user rights, however, they often become interested in forest conservation. Granting such rights, however, can be a highly controversial move. This is partly because user rights themselves provide no guarantee that 'new' private or communal land owners will manage forest resources in more sustainable and socially accountable ways than governments. There are discouraging signs from the states of northeast India, for example, where most forests are owned by tribal peoples. These states have had the highest deforestation rates in India during the past few years. Analysis of these cases has led to the conclusion that joint control and management by the government and local people is possibly the optimal formula for conservation (Singh 1996). This conclusion is reinforced by Hirsch *et al.* (1999), whose study in Lao PDR demonstrated that a community cannot alone implement or enforce sustainable natural resource management without the legitimate sanctions set by government.

Capacity building and participatory approaches

The case studies presented in this paper all show that participation entails changing social relationships, redistribution of power and new responsibilities for all parties involved. Often, these changes create a need for new skills, new ways of thinking and new ways of organizing. A participatory process inevitably involves different kinds of challenges for different stakeholders.

Communities often need to strengthen their organizational capacity in order to reclaim responsibilities for managing and conserving forest genetic resources (Box 3). This may

include developing competence in areas such as keeping records and minutes of meetings, or mastering certain technical aspects of forestry and conservation. Communities that acquire user rights over forest resources and start income-generating activities need to develop skills in accounting for and sharing benefits. In practice, community needs may range from basic education to training in mapping, conservation planning or the use of geographic information systems. For these reasons, training needs must be identified on a case-by-case basis.

Box 3. Participatory land use planning in Thailand.

Sam Mun is an integrated development project in northern Thailand. The project has four development components: local administration, social and economic development, natural resources management and drug control. The project involves 60 villages of about 12,000 people from five ethnic groups, and covers an area of 18,000km² in five districts and two provinces. Substantial parts of this area are under three overlapping protected area regimes (watershed protection, national park and wildlife sanctuary), and are managed by the Royal Forest Department (RFD). Technically, the communities in this area have no legal right to live there.

Soon after the project was initiated, a tripartite institutional model was set up to combine the efforts of Chiang Mai University, the communities and RFD. Since then, capacity building has been a key objective of the project. The University and RFD have collaborated closely at both national and regional levels. The University provides technical support for research, information and training systems. Its main task has been to develop tools for RFD to understand and incorporate local culture and knowledge into watershed and forest management.

The project has experienced rapid social change and has had to change and improve its methods regularly. Stakeholders have been involved in continuous training. A general principle in Sam Mun is that information should be made accessible to all parties. In practice, this requires a simplified form of information that is highly visual in nature. For example, three-dimensional models of watersheds have been used to assist community members in expressing their ideas. Scientific language is avoided in favour of local names and meanings.

In Sam Mun, ethnic communities jointly manage watersheds with different government agencies. The communities have gradually improved the condition of these watersheds, thus rendering strict enforcement of regulations or community resettlement unnecessary. The project has allowed many ethnic groups to maintain their traditional land use systems within the protected areas. In some sub-districts, the proposals of local watershed network committees have been incorporated into sub-district development plans. Capacity building among government agencies and local groups alike has been the key to establishing mutual understanding and collaboration among various stakeholders.

Source: Uraiwan (2000).

A major challenge for government agencies such as forest departments is to ensure that all staff members are well-trained and informed in the more technical areas of conserving, managing and using forest genetic resources. Moreover, progress towards greater participation in forestry and conservation will require knowledge of participatory approaches and means of implementing them. It is crucial that staff members who deal with local communities are trained in these matters. Another challenge is to avoid bureaucratic bottlenecks that hinder problem solution and communication not only between officials and local communities, but also between different levels within bureaucracies.

Conclusions

Natural resources management is increasingly the subject of social and political power struggles between groups claiming an interest in specific resources. Today, it is not possible to conserve forest genetic resources unless technical expertise is combined with an understanding and consideration of the underlying political and cultural processes. In this paper, we have discussed key aspects of these processes. We argue that successful

conservation of forest genetic resources requires the participation of local people, and that governments play a key role in this process by providing—or not providing—a supportive legal and institutional environment. Many studies show that the optimal formula for successful forest conservation is joint control and management by government and local people.

A notable feature of many case studies is that non-governmental organizations have played important roles as mediators between governments and other stakeholders in forest conservation. Like the communities and states in which they operate, non-governmental organizations differ widely in terms of their ideology, political and economic power, and organizational capacity. It is not possible, therefore, to evaluate their role *en bloc*, but the fact remains that they often play a critical role in successful negotiation and joint management between people and governments. The presence of capable and environmentally concerned non-governmental organizations in many countries indicates that changes are taking place in response to growing struggles over natural resources. These open our eyes to the social and political complexities of forest genetic resource conservation, and raise our hopes that sustainable forest management is possible through people's participation.

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