



FORESTS *and* PEOPLE:

25 years *of*
Community
Forestry

by J.E.M. Arnold



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Foreword

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ALMOST TWENTY-FIVE YEARS have elapsed since the concept of community-based forest management emerged as a focus for addressing the linkages between forestry and rural people. Many countries are still at an early stage in the process of developing and introducing the concepts used in community forestry that may be appropriate to their situations. In others, community forestry has become central to the way forest resources are managed.

The experience of some of the longer-established and more flexible of these community forestry initiatives has been encouraging. It has become clear that, in the right circumstances, local or joint control can result in increased flow of products and other benefits to local users, and can bring about an improvement in the condition of the resource.

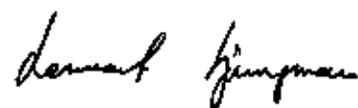
The importance of the roles that forests and forestry play in rural livelihoods, especially of the poor, is well recognized. The need to involve rural users who depend upon forests in decision-making and activities related to the management of forest resources is becoming widely accepted. Furthermore, the experiences and knowledge gained through community forestry have proven to be indispensable for sustainable forest management in a much wider context. The last decade of international dialogue on forests has focused on the social, economic and environmental functions for sustainable forest management. Participatory approaches are central to this concept, and practical implementation is relying heavily on community forestry experiences. This concept also gives a sharper focus on poverty alleviation and the livelihoods of the rural poor.

A major theme of this publication is that community-based participatory forestry is part of the overall process of adapting forestry and forest management to make it more

responsive and relevant to the needs and interests of rural people with a stake in forests. Community forestry is being redefined, not as a separate form of forestry but as part of the process whereby forestry itself is meeting broader societal, environmental and economic challenges and changes.

This publication was supported and funded by FAO and the multidonor trust fund, the Forests, Trees and People Programme (FTPP). It was prepared to fill a gap in the current documentation on community-based forest management. One of the most highly requested and widely distributed of the FFTP publications has been *Community Forestry Note 7, Community Forestry: Ten Years in Review*, which provides a synthesis of the experience gained in community forestry by the end of the 1980s. Given the strong, continuing demand for *Ten Years in Review*, we decided that a new review was needed to record recent changes. Like the previous one, this publication not only describes developments in community forestry over the past 25 years, but also looks to the future, highlighting some of the principal issues that are likely to influence community-based forest management.

We would like to pay special tribute to the author of this publication, Mr J.E.M. Arnold, a well-known authority on community-based forest management. He has been closely involved with community forestry at FAO since the outset, with the launch of the Forestry for Local Community Development Programme in the late 1970s. We are grateful to him for having undertaken this comprehensive review of the state-of-the-art in community forestry.



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Acronyms

CAMPFIRE	Communal Areas Management Programme for Indigenous Resources	JFM	Joint Forest Management
CARE	Cooperative for Assistance and Relief Everywhere	MIQRO	Maderas Industriales de Quintana Roo
CIFOR	Center for International Forestry Research	NAFTA	North American Free Trade Agreement
CSIR	Council for Scientific and Industrial Research	NAS	National Academy of Sciences
ESCOR	Economic and Social Committee for Overseas Research	NGO	Non-governmental organization
FECOFUN	Federation of Community Forestry Users in Nepal	OCEES	Oxford Centre for the Environment, Ethics and Society
FTPP	Forests, Trees and People Programme	ODA	Overseas Development Administration
FUG	Forest user group	ODI	Overseas Development Institute
GEMINI	Growth and Equity through Microenterprise Investments and Institutions	PPF	Plan Piloto Forestal
GTZ	German Agency for Technical Cooperation	PRA	Participatory Rural Appraisal
ICIMOD	International Centre for Integrated Mountain Development	PRODEFOR	A government financial incentive plan
IFPRI	International Food Policy Research Institute	RECOFTC	Regional Community Forestry Training Center
IIED	International Institute for Environment and Development	UCODEFO	Unit of Conservation and Forestry Development
ITTO	International Tropical Timber Organization	UNDP	United Nations Development Programme
IUCN	World Conservation Union	UNOFOC	A network of forestry associations in Mexico
		USAID	United States Agency for International Development
		VFC	Village Forest Committee
		WWF	World Wide Fund for Nature



Introduction

This publication sets out to provide a review of how community forestry has evolved over the period since it first came to prominence in the mid-1970s. ‘Community forestry’ is interpreted as “any situation that intimately involves local people in forestry activity” (FAO, 1978). It therefore covers a broad range of linkages among people, forests and the outputs of forests, from forest-dwelling communities to populations who draw on nearby forests for part of their livelihood needs, and to those outside forests who manage tree stocks on farmland in order to sustain flows of forest outputs, or who engage in artisanal and other local small-scale commercial production and trade of forest products.¹

A major theme of the publication is that community forestry is part of the overall process of adapting forestry and forest management to make it more responsive and relevant to the needs and interests of rural people with a stake

¹ For discussion of various interpretations of the term ‘community forestry’ and of other terms, such as ‘social forestry’, ‘participatory forestry’ and ‘collaborative forestry’, which have also been used to describe initiatives that involve people in forestry, see Wiersum, 1999; and Gilmour and Fisher, 1997.

in forests. Community forestry thus is interpreted not as a separate form of forestry, but as part of the process whereby forestry is being refashioned in line with broader societal and economic changes. Part 1 of the publication is devoted to exploring its evolution in terms of these changes. As the impact on forests and rural populations of key forces for such change, such as greater devolution and local participation, has varied throughout the world, the impact of community forestry has differed. Though of real relevance to industrialized as well as developing countries, it has generally been more important in the latter, and this is reflected in the balance of the publication.

Rural people have often practised some form of control and management of local forests in the past, and there are many instances of historical systems that still exist, if only in reduced forms. As these have been extensively reviewed elsewhere, they are not dealt with at length here.² Instead, this publication focuses primarily on initiatives that governments and donors, and civil society, have taken in recent times to create forms of community forestry relevant to circumstances prevailing at present. The publication reflects the reality that some of these contemporary systems are longer established and more fully developed than others, and hence provide more experience from which lessons may be drawn. Though the discussion in the publication draws heavily on this experience, and in particular on that in Asia, it is important to keep in mind that much

community forestry is at an earlier and more tentative stage.

Part 1 examines the main features of relationships between people and forests. Chapter 1 reviews the causes and consequences of the decline in locally managed systems of forest management and use that were widespread in the past. It then examines the factors underlying the changes in both government and local-level attitudes towards community forestry that began to attract attention in the 1970s. The chapter concludes with a summary account of the lessons learned in the early years of community forestry initiatives, and of how this led to the main thrusts evident in the 1990s.

Chapter 2 outlines the information available on the nature of people's linkages with forests and forest products, highlighting the issue of choice versus dependency on forests, and the nature and consequences of the changes in these relationships that are

taking place and will continue to take place. It also records the shifts that are taking place in patterns of supply of the products that rural people use (particularly the shifts from forests to bush fallow, farm trees and other tree stocks), which result from the ways in which people transform the natural resources available to them. A framework is developed to explore how the linkages differ across major categories of resource, land use and livelihood systems.

Against this background of information on past trends, and on needs and resources, Part 2 explores contemporary forms of community forestry systems. Chapter 3 explores different forms of collective governance and support measures that have been developed in different people-forest situations, and the measures that have been taken to encourage and support them. Similarly, Chapter 4 examines systems based on smallholder rather than collective management, including farmer management of

trees as part of farm systems, and small-scale production and trade of forest products. Both chapters discuss the extent to which such approaches appear to have been successful, and the main factors explaining their performance.

Part 3 discusses some of the principal issues that are likely to influence the ways in which community forestry continues to change. These include changing perspectives on the balance between conservation and development that may realistically be achieved in community forest management, the growing impact of market liberalization and the private sector, and the debate on how to move towards approaches to collaborative management that accommodate multiple stakeholders and interests. The publication concludes with an examination of the changing roles of governments and civil society in forestry as they adapt to community forestry, and the implications of this for forest departments.

² For regional and global reviews of this literature, see Wiersum, 1999; Ascher, 1995; Messerschmidt, 1993; Davis and Wali, 1993; Shepherd, 1992; Arnold and Stewart, 1991; Ostrom, 1990; and Poffenberger, 1990.



Part 1

PEOPLE AND FORESTS

FORESTS AND FOREST PRODUCTS have almost everywhere formed part of rural livelihood systems. Historically, they have been important to local people in two main situations, which often overlap. In one, forests and woodland formed part of broader livelihood systems based on rotational agriculture, with periods of cultivation alternating with longer periods of forest fallow. In the other, rural households filled gaps in the material and income flows from their on-farm resources by drawing on nearby areas of forest, woodland or scrubland.

As long as forest resources were abundant, unregulated 'open access' use was likely to prevail. However, as populations and economies grew, pressures on the resource, or the land, increased, and some form of control over rights of access and use was usually imposed. Many such systems of control incorporated at least a measure of local management by the user community.

The willingness and ability of people to involve themselves in the management of a forest or other tree resource is evidently linked to the nature and extent of their needs for forest products, and to their access to the resource. The incentive for those who are dependent on forest outputs (in the sense that they would suffer a decline in livelihood standards if they no longer had access to them) is likely to be greater than for those for whom these products are just one of several equivalent options from which they can choose.

In order to be able to understand what role community forestry might play in a particular situation, and what form it might take, it is therefore important to know how forests and forest outputs contribute to local livelihoods, how supply and use patterns are changing, and the reasons for, and consequences of, these changes.



CHAPTER 1

Historical overview

Decline in historical systems of local forest management

Over time, increasing pressures for land to cultivate, together with the effects of economic and political changes, have often greatly reduced the availability of forest resources for use by local people. While the consequent increase in pressures on remaining forests has sometimes served to strengthen incentives to bring or keep them under local control, it has often meant that existing systems for controlling access and use have also come under pressure and have been severely weakened or have ceased to function altogether. Frequently, increasing use of the resources that remain has then led to their progressive degradation.

One of the main factors underlying these trends has been expropriation of forests by governments as forest reserves or as some other form

of State property. During the colonial period in India, for instance, governments started to lay legal claim to use of much of the forest estate and to exercise these new powers. In the post-independence period, with the abolition of the princely states and the expropriation of their forests, control by the central government was greatly extended. Many local people lost their rights of access to the forests during the process of forest reservation. Those 'rights' which were legally recognized at that time have tended to be progressively circumscribed, and downgraded from 'rights' to 'privileges', or have been extinguished by subsequent legislation and practices. By 1980, nearly 23 percent of India's total land area was under State management, while the rights of an estimated 300 million resource users had become increasingly unclear (Poffenberger and Singh, 1996; Lindsay, 1994).

Comparable intrusions by governments occurred elsewhere. In Africa south of the Sahara, failure by colonial powers to understand the resource tenure systems they encountered frequently led them to impose changes that were detrimental to the functioning and evolution of existing resource management systems, e.g. by classifying fallow and common pool land as unoccupied and as the property of the State (Shepherd, 1992; Lawry, 1989). In South America, traditional systems of forest management and use have been undermined since the colonial era by policies that encourage settlement by colonists, with

property rights linked to land clearance, and that cede resources to logging, mining and other outside interests (Perl *et al.*, 1991; Southgate and Runge, 1990). The expansion in the areas designated as State forests in some of the main countries of Southeast Asia in recent times reflects increasing pressures to exercise physical control over upland areas for strategic reasons, either because of their importance as a land bank for surplus lowland populations, or because of growing concerns to prevent downstream damage resulting from alleged overuse of upland areas (Peluso *et al.*, 1995; Lynch and Talbott, 1995).

In addition, in all regions economic and demographic pressures have led to the progressive conversion of forest areas for agricultural and grazing use. These shifts have often been encouraged by land re-allocation programmes and the practice of distributing land to the landless, and by widespread encroachment and spontaneous settlement in forest areas. In recent times, land titling to promote private tenure on farmland (on the grounds that this would stimulate agricultural productivity), has further reduced access to resources to which people previously had access under the systems of overlapping and interpenetrating rights that have been common, particularly in parts of Africa (Neumann, 1996).

The impact of such pressures and changes is evident in the results of a seminal study of village common pool resources in the dry areas of India (see Box 1). In the 30-year period up to 1980, there were huge reductions in these resources. The much-reduced areas of village land that remained were typically heavily degraded and under open access usage with little, if any, local control of use being exercised any longer (Jodha, 1990).

The usual rationale behind the claim of the State on forest lands has been that this ensures their sustainable use for environmental and economic outputs. The potential value of forests as a source of rent to governments helps to explain the reasons for breaking down existing use and management systems, and the bias towards forest management systems designed to meet industrial rather than

local requirements. As development theory came to accentuate industry-led development in the 1950s and 1960s, this priority in forest policy and practice became even stronger.

Governments have also tended to increase their control over local activities more generally, as they tried to exert control over often diverse, fragmented and dispersed populations. Inevitable conflicts with existing power structures and allegiances resulted in measures to undermine and remove previously functioning local governance and management systems, and to replace them with political and bureaucratic structures and regulations. This has not been confined to forestry, but it has had a particular impact in this sector because the State has usually been unable to provide effective control over large areas of forest. Existing systems have consequently been undermined or suppressed, but they have not been replaced by an effective alternative (Baland and Platteau, 1996; Thomson, 1992).

Particularly in Africa, indigenous local systems of governance of forest and woodland resources have also been eroded because of a lack of clarity about the rights involved under overlapping and poorly reconciled systems of national and community land law and custom (Bruce, 1999). In order to avoid the high social transaction costs of organizing the management of small areas of forest in such difficult and adverse circumstances, people increasingly leave management of local tree resources to the State (Shepherd, 1992; Lawry, 1989).

Common property management and use in dry areas of India

BOX 1

In the dry, rainfed plain areas of India, the main role of common property resources historically has been to complement the highly variable level of private agricultural production. Traditionally, the sustainability of these common property resources was protected by an array of controls, designed and enforced mainly at the local level. However, a major study by Jodha has shown that in recent times there have been huge changes in the availability, management and use of these common property resources.

In the 21 villages studied across seven states, it was found that the area of common land had been reduced by an average of 42 percent in the 30 years prior to 1980-1982, while population per hectare in most villages had increased at least threefold. This reduction was a result of land reforms (which led to abolition of a number of levies and taxes on common property resource users), replacement of traditional village leadership with elected village councils (which resulted in decreased regulation of common land use), expanded private landownership, expanded credit and subsidies for animals, and more marketing links for common property-related products related (mainly milk, meat, wool, fuelwood, and various other bush and tree products). Of the communities that in 1950 had exercised controls, such as rotational grazing, seasonal restrictions and watchmen, only 10 percent had such controls in 1980, while use of fines, taxes and fees had ceased altogether.

The remaining area is typically severely degraded and under open access usage, and the range, quality and quantity of products collected have often been sharply reduced. Nevertheless, the rural poor are still heavily dependent on the remaining common property resources.

In the study villages, Jodha found that from 84 to 100 percent of poor households depended on them for fuel, fodder and food items (compared with no more than 20 percent of richer households). Poor households also obtained from 14 to 23 percent of their income from products harvested from common property resources.

With increasing differentiation between the richer and the poorer people within villages has come increasing conflict about the use to which the common property resources should be put. However, some local management systems have survived, at least in part. From his analysis of 176 specific common property resources that showed at least one instance of local concern about their protection, Jodha suggests that small size, isolation and maintenance of traditional social sanctions are village-level factors associated with preservation of common property management. More specifically, greater distance from market centres, smaller and more visible common property resources, less occupational change, less factionalism, less socio-economic differentiation, and less dependence on state patronage were found to be important in this respect.

Source: Jodha, 1990

Origins of the revival of community forestry

In developing countries, despite the widespread erosion of the size and quality of forest resources that rural people can draw upon, most people still rely on forest products to some extent. Even in the Indian villages described in Box 1, from 84 to 100 percent of poor households still depended on the remaining biomass resources on nearby village lands for much of their fuel and fodder, and for some of their food and income, at the end of the period covered (Jodha, 1990).

Though much of such use was achieved by 'mining' remaining resources, investigation has increasingly revealed the existence of at least vestiges of collective systems for managing use of woody resources, coexisting with State and private rights. It has also become clear that in some situations user groups have been trying to strengthen remaining existing control systems, or to create new arrangements to bring resources under more effective local control (Messerschmidt, 1993). In addition, people were found to be widely responding to a decline in access to supplies of forest products by increasing the stock of trees on their farmland (Arnold and Dewees, 1997).

Therefore, in the past 30 years or more, there have often been self-initiated local actions to stabilize use of forest resources or to increase supplies of forest products. This has been paralleled by changes in the



Local needs for fuelwood, grazing and other things need to be accommodated to halt deterioration of forests.

approach to forest management, first by a number of countries, and then by the donor community. The countries that pioneered the changes tended to be ones where governments had acknowledged that centralized management of forests had failed in its primary purpose of conserving the essential productive and protective values of forest resources. This led to recognition that deterioration in the forest condition could only be halted if action were taken to accommodate local needs for fuelwood, grazing and other things in some other manner. This analysis, and a perception of the large scale and immediacy of the problem, shaped the nature of responses that concentrated on acting quickly to create new

supplies of forest products to relieve the pressures on deteriorating and threatened forests (FAO, 1978).

Thus, the large-scale initiative taken by the South Korean Government in the 1970s to encourage villages to create collective woodlots on their lands was stimulated by the perception that this was necessary in order to stop destructive use, by those in need of fuelwood, of hill forests that protected downstream agricultural lands. Similarly, community forestry in the hills of Nepal stemmed from increasing concern about deforestation of watershed areas. The even larger Social Forestry programme in India had its origins in a 1976 report of the National Commission of Agriculture, which recommended that people be encouraged to grow trees on their village land and farmlands in order to reduce the pressures on production forests caused by mounting rural demands for fuel and other forest products, and by forest uses such as grazing. In the same period, comparable initiatives included the Village Forestry programme in Thailand, in forest areas heavily encroached by people seeking land to cultivate, and the Village Afforestation initiative in parts of the United Republic of Tanzania that were being stripped of natural tree cover.

Such thinking within the forest sector was given added impetus by a number of major, broader changes in development thinking and strategy. The 1970s saw a shift in development theory and practice towards a greater emphasis on agriculture, mobilizing the rural sector and meeting the basic

needs of the rural poor. Recognition, as a consequence of the increased attention given to the energy sector following the 1973 rise in fossil fuel prices, that woodfuels were the principal source of energy used by households to cook food, highlighted the role of forests in meeting such needs. This added a humanitarian and developmental dimension to the earlier conservation concerns that more attention needed to be paid to meeting rural demands for wood, and to doing so in a more sustainable fashion (Wiersum, 1999; Arnold, 1992).

AN INITIAL FOCUS ON AFFORESTATION

Much of the early effort to respond to these concerns focused on creating farm and collectively managed woodlots. One reason advanced for this was that such tree planting could reverse or offset deforestation, and mitigate the environmental damage caused by the excessive removal of tree cover. Another was that tree planting could help meet people's needs for fuel, and other basic self-sufficiency needs, at minimal cost. A third was the view that trees could be a potential tool for resource-poor farmers to help them stabilize and improve their farm systems. Tree crops could help to increase output and generate income, and to secure a greater degree of self-sufficiency, with low inputs of capital and labour.

In practice, it was found that while tree growing by farmers may be an indirect or direct response to

deforestation, and can create additional supplies of wood and other forest products, it does not recreate many of the broader protective functions of forests. It is rare for farmers to decide to plant trees for environmental reasons if they are not facing serious soil loss or site deterioration. Trees in farming systems are more accurately seen not as part of the forest resource, but in the context of farm household livelihood needs and strategies.

The relationship of the perceived fuelwood shortage to farmers' priorities also proved to be quite different in practice from what had been assumed initially. Fuelwood 'gap' analyses extrapolated present consumption and supply patterns without recognizing the various ways in which people actually adjust to decreases in fuelwood supplies, or the fact that fuel shortages are often due to constraints other than shortages of wood (e.g. shortages of labour that can limit a household's ability to collect fuelwood). Also, tree growing always involves some cost in terms of land, labour and capital, and makes sense only if it produces outputs of commensurate value to the farm household. Where farmers were planting trees, these were species that would produce fruit, fodder, protection, construction timbers or products for sale. Fuel, everywhere a low-value commodity, was being supplied from lower-cost sources, such as existing woody material or agricultural waste products, or as a by-product or co-product of trees grown for other purposes. It became clear that there were few situations where farmers had been growing trees to use solely for fuel (Deweese, 1989).

Consequently, the very large-scale programmes that were often set in place to encourage and support tree growing by farmers, in order to increase local fuelwood supplies, often had disappointing results. Interventions narrowly focused on just one tree-related issue, such as fuelwood supplies, were likely to encourage tree growing where trees were not an appropriate component of the farm household economy, or to induce growing of inappropriate trees, or to require changes in the institutional or social framework that could not realistically be achieved in connection only with tree growing (Deweese, 1997).



Many early community forestry initiatives focused only on increasing local fuelwood supplies.

Social Forestry woodlot projects in India

BOX 2

A major element of India's Social Forestry programme in the late 1970s and 1980s was to create woodlots on non-arable communal land, to be managed collectively by the user community (*panchayat*) in accordance with rules prescribed by the forest department and a management plan drawn up jointly with the latter. Benefits and costs were to be split between the forest department and the community.

However, the woodlots were usually established by the state forest departments, and the village lands to be planted were frequently transferred into the temporary control of the department for this purpose. Under forest department management, the projects have primarily created tree stocks and wood products of commercial value, with few intermediate products, such as fuelwood and grass, which previously were harvested from the areas and used by villagers. The woodlots, therefore, have had the effect of changing land use and shifting benefit flows away from local subsistence users. The main benefit to the poor has usually been from the wage employment created.

Though tens of thousands of woodlots have been established in this way, there has been reluctance on the part of *panchayats* to assume control of them. This was because control carried financial responsibilities that villages and *panchayats* have difficulty meeting; because woodlot management plans, village forest rules, etc. were often complex and unclear, and required skills and experience that *panchayats* do not possess; because continued involvement of the forest department discouraged local

bodies from taking over and encouraged them to opt for extending forest department management; and because the small size of the woodlots, relative to local needs, together with difficulties in ensuring satisfactory distribution of benefits, and uncertainties about their status and access to the benefits, weakened local interest in them. Villagers and *panchayat* bodies came to perceive the woodlots primarily as sources of communal income, rather than as sources of produce to meet household subsistence needs.

Consequently, though successful in increasing production of forest products from many of the sites used, and also in generating a resource of considerable value to the communities, the interventions did not have the intended outcome of involving local users, strengthening local management capabilities, or creating alternative sources to meet their subsistence needs for forest products. In practice, government involvement in resource management increased rather than decreased, and costs per unit of output have been high.

Source: Arnold and Stewart, 1991

Consequently, the early efforts to increase locally available supplies of tree products to meet subsistence needs of the rural poor by creating village or communal woodlots often had results other than those originally intended. As is evident in the Social Forestry experience in India (see Box 2), this was because the growing of trees in this way was not effective in providing subsistence products; because the change in land use deprived users of existing subsistence supplies of fodder, fuel, etc.; and because the resource created was often one from which the poor could obtain little, if any, benefit. Many woodlots failed, or were captured by interests other than those they were intended to benefit, or ended up being managed by default by forest departments, rather than by the user communities.

SHIFTING THE FOCUS TO THE NATURAL FOREST

As the limitations and shortcomings of the early focus on afforestation became apparent, recognition grew that the approach of targeting particular needs, such as fuelwood, needed to be replaced by an approach centred on understanding the strategies that households pursue in order to sustain their livelihoods. The term 'livelihood' comprises the capabilities, assets and activities required to achieve the means for living; and a livelihood is sustainable when it can cope with, and recover from, stresses and shocks, and maintain or enhance its capabilities both now and in the future (Carney, 1998). By focusing on the five different types of wealth that are needed

for sustainable livelihoods (i.e. natural, physical, financial, human and social capital), and on an analysis of what is possible with a household's existing assets, the concept permits a more holistic and situation-specific approach to identifying the possible role of trees and forest products and how tree-based solutions compare with alternative courses of action.

As understanding grew of the nature of the relationships between people and the ways in which they draw upon forest outputs in their livelihood systems, the importance of products from forests, as distinct from planted tree stocks, became apparent. As approaches to rural development broadened out from the earlier concentration on meeting 'basic needs' to a recognition of the importance of income in securing household 'food and livelihood security', the importance of forest product activities in rural incomes became more apparent. By the mid-1980s, surveys of non-farm sources of rural household income had shown that forest products production, processing and trading consistently ranked among the three largest sources of employment from rural manufacturing (Fisseha, 1987). The large amount and variety of wood and wood products traded showed this to be a very important part of the overall value of forests in developing countries, and one that needed to figure more prominently in forest management and policy (FAO, 1987).

The increased attention given to meeting rural needs through changes in the management of existing forests and woodland was reinforced by



Tapping trees for gum-milk in Brazil. Several studies have argued that harvesting of non-timber forest products by local people is less ecologically destructive than timber harvesting.

growing environmental concerns about the conservation of forest biodiversity, and developments related to the management of protected areas. At the 1982 World Congress on National Parks, it was recognized that these could only be protected if the conflicts that arose when people who relied on use of the resources in these areas were excluded from them were addressed. This led to the development of programmes to introduce new livelihood activities in, and adjacent to, protected areas that would compensate those living in them for the loss of use, and encourage them to participate in the protection of the resource (Fisher, 1995; Wells and Brandon, 1992).

In the late 1980s, a much broader concept of management of forests jointly for conservation and development gained prominence. This stemmed from the argument that harvesting of the non-timber forest products that rural people exploit and use is less ecologically destructive than timber harvesting, and therefore provides a sounder basis for sustainable forest management. It was further argued that increased commercial harvesting of non-timber forest products should add to the perceived value of the tropical forest, at both local and national levels, thereby increasing the incentive to retain the forest resource rather than clear it to use the land for agriculture or livestock. This argument seemed to be

reinforced by the results of valuation studies, which appeared to show that the potential income from sustainable harvesting of non-timber forest products could be considerably higher than timber income or than the income from agricultural or plantation uses of those forest sites (e.g. Peters *et al.*, 1989).

This thesis was interpreted as pointing the way to a form of forest management that could serve both conservation and development interests (Plotkin and Famolare, 1992). One result was a considerable number of initiatives to expand and provide markets for more locally produced non-timber forest products, in order to tap more of this apparently sustainably harvestable wealth in tropical forests, by pursuing a 'Conservation by Commercialization' strategy (Evans, 1993). Many of these initiatives proved to be based on insufficient understanding of the commercial viability of the production systems in question, and have not yet emerged in sustainable form. In addition, as is addressed below in this publication, it became increasingly clear that conservation and development objectives and practices usually do conflict, and that management for non-timber forest products requires an understanding of the appropriate balance between the two. Nevertheless, these initiatives served to focus much more attention on the importance of forest products other than timber, and on their role in rural livelihoods.

A number of other factors reinforced this increasing focus on local management and use. One was recognition of the advantages to be gained by drawing on indigenous knowledge of the forests and forest prod-

ucts, and by building on the sustainable systems of use that local people often seemed to have created (e.g. Posey, 1982; Redford and Mansour, 1996). Another was the growing strength of arguments relating to people's rights to be involved in decisions and actions concerning them (Fisher, 1995). Recognition that forest management needs to be 'participatory' moved steadily from passive interpretations of participation, requiring little more than that those affected be informed of decisions made about them, to more substantive measures involving local people in decision-making and, increasingly, in control and management of the forests they drew upon. However, though this has resulted in a move away from the previous top-down approach, in practice it has tended to take the form more of devolution of responsibility for local forest management than of devolution of meaningful authority.

In 1985, the Conference on Common Property Resource Management organized by the US National Academy of Sciences (NAS) provided another major stimulus to the move towards a greater degree of local involvement in forest management. Collective management of forests (and other natural resources) by user groups was shown to be viable and appropriate in certain circumstances (NAS, 1986). Subsequent work provided growing evidence, in a range of different situations, of continuing, spontaneous indigenous efforts to strengthen remaining existing control systems or to create new arrangements, in order to bring resources under more effective local control (Messerschmidt, 1993). Many of these were found



A forester working with a farming association in Ecuador. There have been steadily growing pressures to increase the participation of local people in forest management.

to reflect responses to growing shortages of forest products and other forest outputs of value to the user community, or to reflect increased pressures from outside interests to use forest resources that are still important to the community, and they were found to be where user communities are still relatively stable and cohesive. Increased recognition of the continuing role of forests as common pool resources, and of such local initiatives in management, contributed to the revival in interest in local collective management that is reflected in recent government and donor initiatives of the kind discussed below in this publication.

It would appear that in some countries these shifts also reflected a declining importance of the forest

sector as a source of revenue to national governments, thus diminishing their interest in retaining such strong control over it. A more widespread reason for the increase in governments' interest in shifting more responsibility for forest management to the local level has been its relevance to the devolution and decentralization policies that many States were pursuing in the 1990s, as part of strategies to bring about structural adjustment and a reduction in the size and the role of government. Transferring management and protection responsibilities to the community level can help offset the reduction in budgetary resources available to forest departments and, in principle, it shifts control to a level at which it may be carried out more efficiently. Such arguments were influential, for instance, in the moves to pursue resource conservation in Africa through community management (Adams and Hulme, 1999). However, much of what has been emerging in practice has taken the form of joint management between government and local user communities, rather than devolution of responsibility solely to the latter.

Community forestry by the mid-1990s

By the mid-1990s, in the 20 or so years since it had first become prominent, community forestry had thus moved through a number of phases. An initial, exploratory phase, which attempted to scale conventional forestry

down to the community level, was followed by a period concentrated on mobilizing users to create new forests in order to address particular, perceived developmental and environmental needs. As assessment shifted from a needs to a livelihood basis, this gave way, on the one hand, to a focus on integration of trees and agriculture in agroforestry systems and, on the other, to approaches based on collective or collaborative management of existing forests. Over the period, top-down approaches have been modified by steadily growing pressures to increase the participation of those involved. At the same time, community forestry has moved from being a largely experimental process, pursued on a project and pilot scale, to becoming a mainstream component of many national forestry strategies.

The rationale for devolving more responsibility for, and participation in, forest management from the State to local users of outputs of that forest has by now been firmly established (see Box 3). This should strengthen the rights of those for whom the forest plays an important role in their livelihood strategies. Their involvement and proximity should result in more effective protection of the resource. It is also consistent with the principle of 'subsidiarity', according to which a central authority should only undertake tasks that cannot be undertaken at a more local level.

However, the commitment to community forestry in a particular situation tends to reflect the extent to which it is seen as being important and relevant to a

number of contemporary issues. Thus, it has been variously argued, by the different interest groups supporting it, that community forestry is:

- an important contribution to sustainable rural livelihoods for large numbers of rural households;
- a philosophical commitment to people's participation in their own affairs, and to the principles of self-determination and democracy;
- an efficient way of managing forests by harnessing the skills, motivation and labour of interested local populations; and
- a means of reducing the role of, and cost to, the State of protecting forests and the conservation values of forests.

The pursuit of such a diverse, and not necessarily congruent, set of ideological and pragmatic considerations inevitably generates much debate (Brown, 1999; Wiersum, 1999; Wollenberg, 1998), which is further discussed in this publication. However, there is general recognition that the effectiveness of community forestry, for whatever purpose, rests on its relevance to rural livelihoods, and on being able to put in place functioning arrangements for governance that reflect this. The first of these key elements is examined in more depth in Chapter 2. Examination of progress with different approaches to creating governance systems appropriate to the main forms taken by community forestry is the subject of Part 2 of this publication.



The rationale behind community involvement in forest management

BOX 3

- **PROXIMITY:** The local populations are the immediate custodians of the forest. They are the stakeholders in closest touch with the forest, and are dependent on it in a wide range of ways. Hence they are best placed to ensure its effective husbandry.
- **IMPACT:** Their livelihood activities likewise have a very direct effect on the condition of the forest; thus, their involvement in its management makes sound practical sense.
- **EQUITY:** There may be important considerations of equity and social justice in the exploitation of forests. Community-based forest management may be expected to increase the resource flows to rural populations, leading to important effects on poverty alleviation and income distribution.
- **LIVELIHOODS:** Local needs and interests should likewise not be ignored, particularly where forest products provide key elements of livelihoods or (as is often

the case with non-timber forest products) important safety nets. There is evidence that the development of the forest sector for single-purpose industrial usage damages livelihood interests, shifts benefits away from the poor, and disadvantages important categories of forest users (such as women). Community involvement in forest management, in which forests play important roles in rural livelihoods, is likely to lead to substantial changes in the ways forests are managed, ensuring the safeguarding and/or diversification of their multiple benefits. The social security component of community forest management may thus be significant.

- **CAPACITY:** In recent years, the management capacity of forest dwellers has been strongly promoted in social science literature, while that of governments has increasingly been questioned. Community roles in forest management have been well documented in the past; equally, there is evidence from recent experience of community involvement that this can substantially improve the quality and condition of the forest, over and above the levels that governments are able to establish independently.
- **BIODIVERSITY:** Because of their interests in multiple-purpose management, local users are likely to be much better conservers of biodiversity than either

single-interest industrial concerns or the interests that serve them. Despite frequent assumptions to the contrary, biodiversity may well be enriched, instead of diminished, by the activities of forest dwellers.

- **COST-EFFECTIVENESS:** In relation to efficiency considerations, there may often be few alternatives to involving communities in forest management. In many instances in the developing world, there is very limited capacity for effective management of the forest resource by the public sector. Even where public sector management is feasible, the costs of exclusive direct management by the State may be prohibitively high, and local management may be an important way of cutting costs.
- **ADAPTATION:** Growing recognition of cultural and livelihoods diversity encourages an approach centred on local participation and contextual adaptation. Almost by definition, flexible and adaptive management cannot be delivered centrally, and local pressures and interests must be brought to bear.
- **GOVERNANCE:** Involving communities and community institutions in forest management (a sector often noticeably lacking in 'good governance') may help to introduce discipline into the management of the sector and offer significant checks and balances on oth-

erwise unregulated public services. Several writers have emphasized the important roles that civil society organizations can play in augmenting public 'voice' and acting as 'voice surrogates'; because of the way the forest sector impinges on many aspects of local life, it may be an important arena for the exercise of such public voice.

- **DEVELOPMENT PHILOSOPHY:** Community forest management is likely to fit in well with the wider development assistance strategies of the international community. These give high priority to principles of local participation, decentralization and 'subsidiarity' (the view that decisions should be taken as close as possible to the affected citizens), as well as to the promotion of civil society, all of which are potential benefits of community forest management.

Source: Brown, 1999



CHAPTER 2

Forests and rural livelihoods



Most past information about the forest products that local people harvest and use has been narrowly situation specific and of limited relevance in understanding the broader role of such products in livelihoods. However, some recent exercises have focused on identifying patterns of people-forest interactions in different situations, and over time. The present chapter draws on findings from this work³ to examine three main facets of the interactions. The first is the nature of forest-derived inputs into livelihood strategies of different kinds, and how these are changing over time as people's needs and opportunities change. The second concerns the changes that are taking place in forest and tree resources to

³ The principal sources are Townson, 1995a; FAO, 1995; Falconer, 1990; de Beer and McDermott, 1989; Falconer and Arnold, 1989; and other reports cited in these review studies.

which rural people have access. The third relates this information to different degrees of 'dependence' on such inputs, and to other features of the linkages that provide a framework for examining what form of community forestry system and interventions might be appropriate to each.

Forest products in changing rural livelihood systems

Box 4 provides a summary overview of the main features of the relationships between forest outputs and rural livelihoods, and the ways in which they are changing. Forests nearly everywhere provide inputs into rural households' subsistence use, and into their agricultural systems; for many, they also provide a source of income. Access to forest or tree resources can also help rural households diversify their livelihood base and reduce their exposure to risk.

People who live in a forest environment and who practise hunting, gathering and shifting cultivation are likely to draw heavily on that forest and its outputs. In addition to providing a wealth of material outputs of subsistence or commercial value, and the basis for rotational agriculture systems that depend on the ability of bush fallow to revive the productivity of the land, the forest constitutes an integral part

of the social and cultural framework of those living within it. For some, the main importance of the forest is that the energy released by the conversion of forest to farm and bush is a major source of power in society (Davies and Richards, 1991). Or particular areas may be maintained as sacred groves, or forests, or individual species, both animal and plant, have spiritual or other cultural significance.

Elsewhere, the importance of forest products is likely to be mainly in the way they complement other sources of subsistence inputs and income. Though they often do not account for a large share of overall household inputs, these inputs can be particularly important in bridging seasonal gaps, meeting particular needs, helping households tide themselves over longer periods of shortage, and maintaining agricultural productivity.

Some subsistence use is now declining, as households move to a different livelihood stage in which forest inputs have a lesser role. Some use is also declining because of pressures that make it less possible for households to maintain the same level of use as a result of changes such as those summarized

in Box 4. In general, though, subsistence use continues to be widespread, even where people are becoming increasingly integrated into the market economy. Also, the buffer role of the forest as a resource that people can draw upon during periods of agricultural shortfalls or unemployment continues to be very important for many people.

In addition, ease of access to forests, low capital and skill thresholds of entry, and proximity to widely dispersed rural markets for the products enable large numbers of people to generate some income from forest products (FAO, 1987). Income from forest products seldom seems to account for a large share of a household's total income, but it is often important in filling seasonal or other cash flow gaps, in taking advantage of seasonal fluctuations in availability of labour, and in helping people to cope with particular expenses or respond to unusual opportunities (see Box 5). Forest products can also provide a source of 'windfall' income, as when a good crop provides a valuable injection of cash, enabling people to clear their debts or accumulate some capital. In addition, forest product activities may provide an important supplemental source of income that people can fall back on.

These activities can therefore be very important to the poor when they are unable to obtain income, or sufficient income, from agriculture or wage employment, and few other options exist. Though it is often the wealthier people in a community (with greater resources to devote to forest product gathering and production) who are the most frequent users

(Cavendish, 1997; Ogle, 1996; Madge, 1990), the poor usually derive a greater share of their overall needs from forest products and activities.

The activities engaged in by the poor are likely to be labour-intensive, household-based processes, such as collecting and mat making. Many face weak market demand and strong competition. Such activities typically generate low returns, providing little, if any, surplus to invest in livelihood improvement, and they are often tedious and arduous. Therefore, they are likely to be abandoned as more rewarding and congenial alternatives become available, or as rising incomes lead to displacement of the product in the market by



Women processing nuts that will be made into butter. Surveys in six African countries found that small forest product enterprises are often run by women.

Forest outputs and rural livelihoods

BOX 4

LIVELIHOOD INPUT CHARACTERISTICS

IMPACTS OF CHANGE

Income (cont.)

Many forest product activities have the following characteristics: there is easy access to the resource, with low-capital and low-skill entry thresholds; they are overwhelmingly very small, usually household-based, activities; they are mainly low return; they produce for local markets; they are engaged in by rural households part time, often to fill particular income gaps or needs; they have limited growth potential, but are very important in coping strategies of the poor, and are often particularly important for women (as entrepreneurs as well as employees).

Some forest products provide the basis for more full-time and higher-return activities usually associated with higher skill and capital entry thresholds and growing demand.

With increasing commercialization of rural use patterns, some low-input, low-return activities can grow. However, others may produce 'inferior goods' and decline, some are displaced by factory-made alternatives, and others become unprofitable and are abandoned as labour costs rise. Gathered industrial raw materials tend to be displaced by domesticated supplies or synthetic substitutes.

The activities are likely to prosper, particularly those serving urban as well as rural markets; as this happens, an increasing proportion of processing and trading activity becomes centred in small rural centres and urban locations.

purchased alternatives, or as increasing pressures on household labour resources make such low-value, labour-intensive activities no longer competitive. Other activities are likely to be attractive only temporarily, such as woodfuel production and sales engaged in by immigrants or young men in the process of clearing land in order to create their own farms.

The characteristics of easy access to the resource and low entry thresholds enable many women to generate income from forest product activities. Surveys in six African countries found that 42 percent

of the proprietors and 41 percent of the total workforce in small forest product enterprises were women, who dominated in grass, cane and bamboo activities and in forest products trade (Arnold *et al.*, 1994). Forest product processing may often be performed at or near the home, allowing women to combine these income-earning activities with other household chores (such as child care), and gathering of forest products for the market can often be accomplished in conjunction with other collecting activities. Such activities are often an important source of the income that women need to meet the

LIVELIHOOD INPUT CHARACTERISTICS

IMPACTS OF CHANGE

Subsistence and cultural

They are an integral part of their social and cultural framework for forest dwellers.

For agricultural populations, forest products supplement or complement inputs of fuel, food, medicinal plant products, etc. from the farm system. They are often important in filling seasonal and other food gaps, particularly in hard times. Forest foods enhance palatability of staple diets and provide vitamins and proteins.

Their importance is likely to decrease, but can persist in some uses (e.g. medicinal).

They can become more important where farm output and/or non-farm income declines. They are likely to decline in importance as government relief programmes or new agricultural crops make it less necessary to fall back on forest resources, as incomes rise and supplies come increasingly from purchased inputs, or as increasing labour shortages and costs militate against gathering activities or divert subsistence supplies to income-generating outlets.

Agricultural inputs

Forests provide a starting-point for rotational agriculture and protection. On-farm trees also provide shade, windbreaks and contour vegetation. Trees/forests also provide low-cost soil nutrient recycling and mulch. Other inputs include arboreal fodder and forage, fibre baskets for storing agricultural products, wooden ploughs and other farm implements, etc.

Trees can become increasingly important as a low-capital means of combating declining site productivity, and as a low-labour means of keeping land in productive use (e.g. home gardens). However, increased capital availability and access to purchased products are likely to lead to substitution of forest products by other materials (such as pasture crops, fertilizer and plastic packaging).

Income

Forest products help to diversify the farm household economy, provide counterseasonal sources of income, and are a source of income in hard times.

They are of continuing importance in coping strategies, and in reducing household vulnerability.

cost of feeding and clothing the family and their other needs for cash; more than men, they can rely on forest-based activities for the generation of income (see Box 5).

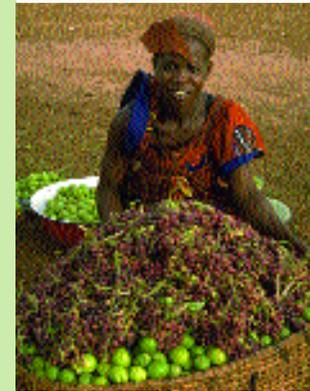
Expanding and growing forest product activities are more likely to be found where per capita incomes are rising, and where there is growing demand from rural and urban markets. Where this is happening, production and selling of forest products increasingly shift from being part-time activities engaged in by large numbers of people to being more specialized year-round operations engaged in by a smaller part of the population (Liedholm and Mead, 1993; Haggblade and Liedholm, 1991). As the production and vending activities characteristic of such situations frequently require skill and capital, they are often not available to those who were previously engaged in the simpler forest product activities. They are more likely to be captured by the wealthier and better-educated members of rural communities, who are responding to market opportunities rather than to pressures to find some source of income.

It is therefore often necessary to be able to distinguish between the forest product activities that feature in the survival strategies of the very poor and those that can help to increase the incomes of households operating in a more dynamic economic environment. This can be very important in determining what support and intervention measures may be appropriate. A single region can contain both stagnant and growing activities (see Box 6).

Changes in patterns of supply of forest raw materials

Clearance for agriculture, destruction and degradation due to logging, and overuse of remaining forest and tree resources, reduce the options available to local users. As market opportunities increase the value of forest products, de facto privatization by the wealthier and more powerful users, or appropriation by the State or industrial interests, can exclude many users from access to what is left. Where reliance of rural people on wage labour is increasing, it is likely that they are not able to devote as much labour to gathering or trading forest products, effectively reducing access to more distant forest resources.

Combinations of these factors mean that rural people have often increasingly been concentrating their harvest of forest products in areas of bush fallow and farm fallow on their own lands, and on resources they can create by growing trees on, or adjacent to, their farms. In a recent study of populations in the forest zone in southern Ghana, for instance, nearly half of those surveyed reported the farm bush as being their most important source of forest products, and more than a quarter drew mainly on the farm. Some of the forest products that contributed most to household incomes, in fact, proved to be by-products of farm activities, such as palm wine and distilled spirit produced from



The role of forest products income in selected rural household situations

BOX 5

- A study in Sierra Leone found that the sale of fuelwood provided the first cash income from land cleared for rice production. Subsequently, fuelwood collection for the market was concentrated in the off-peak agriculture period, providing cash income during a period when food supplies are generally at their lowest (Kamara, 1986).
- Income from the collection and processing of babaçu palm kernels in northeastern Brazil was shown to account for 39 percent of cash income and 34 percent of total household income during the seasonal slack period in agriculture. Many of the poorer farmers were dependent on this cash for purchasing seed and other inputs for the new season's planting (May *et al.*, 1985).
- A study in the forest-savannah zone of Guinea found that needs for fuelwood and poles are mainly met from by-products of the agricultural cycle, and that farmers sequence their wild plant collection and trading incomes with seasonal needs (e.g. the need to purchase seeds, to hire labour for cultivation, and to buy food at harvest to be processed and sold during the dry season). Many women traders generate their working capital from cropping, gathering and processing, in sequences in which one activity's output becomes another's input (Leach and Fairhead, 1994).
- In western Niger it was found that income from forest products from the commons rose as a share of household income from 2 percent in the harvest season to 9 percent in the hot and rainy seasons and 11 percent in the cold season. Cash income from these sources was sufficient to purchase between 9 and 28 percent of the household's annual caloric needs. The poorest third of households was more dependent on this source of income than the richest third, and women (for whom it represented 27 percent of their income) were more dependent than men (for whom it represented 10 percent) (Hopkins *et al.*, 1994).



Differences in performance of small woodworking and grass/cane/bamboo enterprise activities in Africa BOX 6

In six countries surveyed recently in southern and eastern Africa (Botswana, Kenya, Lesotho, Malawi, Swaziland and Zimbabwe), an estimated 321 600 people were engaged in small-scale grass, cane and bamboo production and vending activities, and 202 500

in small-scale woodworking activities.

Enterprise birth rates were very high, but so were closure rates, particularly in the early years of the enterprise. Employment in those enterprises that had survived had been growing at 30.6 percent per year in woodworking, but at only 3.1 percent in grass, cane and bamboo. However, only a minority of small forest product enterprises had grown at all. At the time of the surveys, about 80 percent of jobs existing in grass, cane and bamboo enterprises came from new start-ups. In woodworking, in contrast, 55 percent came from expansion of existing enterprises. Of those that did grow by adding to the workforce, most grew only by small amounts. Only in woodworking did a substantial share (30 percent) of the growth in employment come from enterprises that developed from being very small to being intermediate in size.

The faster growth in woodworking enterprises reflects: (a) a low-cost technology that allows units to expand and upgrade incrementally by adding more and better equipment; (b) the improved efficiency that comes with increase in unit size; (c) growth in urban as well as rural demand for their products; and (d) a high proportion operating in premises outside the home in locations closer to markets and services. In contrast, grass, cane and bamboo activities are overwhelmingly single-person activities operating from the home, and they produce products (baskets and mats) that are being displaced in their rural markets by alternative products. Their poor competitive position tends to be aggravated by low skill and capital barriers to entry to these activities, resulting in excessive numbers of producers, intense internal competition and marginal returns to labour, and by lack of affordable technology options to improve returns to labour.

Source: Arnold et al., 1994

oil-palm grown as an agricultural crop, and wood-fuels from wood generated in clearing fields for cultivation (Townson, 1995b).

Often the process of clearing land for cultivation, which is followed by a fallow period, involves a measure of manipulation of the tree cover to favour species and products of local value. In addition, the planting of trees by farmers is observed to be increasing nearly everywhere. As discussed in Chapter 4, this is done not only to maintain supplies of tree products as access to off-farm supplies declines, but also to improve the efficiency with which farm household resources are used (Arnold and Dewees, 1997).

Notable features of the changing context within which people presently use and manage forest products are, thus, this progressive shift from forest to non-forest tree resources as a source of supply, and the shift within forest resources to stocks that the individuals can control in conjunction with their agricultural activities. Community forestry can therefore have as much to do with agriculture and agroforests as with forests.

However, where fallow cycles are declining, bush fallow and farm bush are also likely to be diminishing as a resource. Moreover, the shift from forest to farm as a source of forest products is only possible for those who have access to land and sufficient resources to work that land. In addition, in many situations, poor farmers still need to look to off-farm resources to help supplement what they can pro-

duce on farm. Consequently, access to forests that are available as common pool resources continues to be important for many rural households.

Evolving patterns of people, resource and product interactions

The main trends discussed above can be summarized as follows.

- Large numbers of rural households in developing countries are still subsistence users of forest or tree products. Though the role of such products in their livelihood systems may often be declining, and though supplies often come from managed tree stocks as well as from natural forests, forests often continue to serve as an important source, and as a reserve to be drawn on more heavily in difficult times.
- Labour-intensive, easily accessed activities producing simple, low-cost forest products can be an important source of income in the survival strategies of poor households unable to obtain sufficient income from agriculture or wage employment. However, these activities have less potential to contribute to livelihood enhancement.
- Where per capita incomes are rising, such labour-intensive, low-return activities tend to



Women with medicinal plants in Guinea. Large numbers of rural households in developing countries are still subsistence users of forest and tree products.

give way to more productive and remunerative activities that meet growing and diversifying rural and urban demands. Production and selling of forest products thus increasingly shifts from being a part-time activity engaged in by large numbers of people to being a more specialized year-round activity that is carried out by a smaller part of the population.

These patterns can be modified in a number of ways as, for example, where worsening urban poverty temporarily increases demand for low-cost forest products that would normally have been displaced in urban markets. Over time, however, though some forest products can be expected to become increasingly important, others will fall out of use. As a result, some forest product activities will become redundant and will decline. In particular, as costs

rise and competition intensifies, activities that generate only marginal returns for those engaged in their harvest and sale are unlikely to survive, and will persist only so long as the participants have no better option.

These features and trends also have different implications for households that are literally dependent on the livelihood inputs from forests and trees, and for those that have alternatives and that use forest products by choice rather than by necessity. Though the forest product activities to which they have access may provide little opportunity for livelihood enhancement, they can be critically important for the very poor, for whom they can be as important as the potentials for income growth that forests and trees can provide to those able to benefit from such opportunities.

The challenge for community forest management can therefore be manifold. In any particular situation, different categories of user are likely to possess different combinations of assets and opportunities, and will consequently place different demands upon the forest resource. It may be necessary to manage an area of forest to meet the needs both of those wishing to expand commercial activities and of those seeking to maintain subsistence and coping uses (and to do so in an equitable manner). Managing for sustainable flows from forests may need to be harmonized with the growth

of new sources of supply from tree resources outside the forest. In addition, as both needs and opportunities are continuously evolving, it becomes necessary to try to devise management and governance systems that are not only appropriate to the present situation, but are also capable of adapting to future change. One of the questions that needs to be asked about the community forestry systems reviewed in Part 2 of this publication, therefore, is whether they are likely to be able to respond to the kinds of shifts in patterns of supply and demand outlined in this chapter.





Part 2

CONTEMPORARY FORMS OF COMMUNITY FORESTRY

PART 2 DEALS WITH community forestry systems that result, at least in part, from interventions by governments, donors and civil society organizations to stimulate and support local management of forest and tree resources. These interventions encompass a wide variety of approaches, from minimal adjustments designed to improve the enabling environment of existing systems and practices, to initiatives to bring about fundamental changes in favour of increased local ownership or rights.

The assessment in Part 2 focuses on longer-running programmes that have acquired enough of a track record, and a sufficiently documented assessment of their record, to allow them to be described and evaluated with some confidence. Therefore, it should not be assumed that these case studies necessarily reflect the present state of community forestry as a whole. In some countries and regions, community forestry is at an earlier and more fluid stage. While it is likely that some of these newer programmes will develop along lines similar to the earlier, more established experiences discussed here, some involve innovative approaches that could result in community forestry that follows other development paths.

It is evident that community forestry can take many different forms, involving different combinations of users, resources and institutional arrangements, which can be organized, for purposes of presentation and analysis, in a number of different ways (Wiersum, 1999; Byron and Arnold, 1999; Wollenberg, 1998). In the present publication we use a classification that distinguishes four broad categories of user/resource relationship.

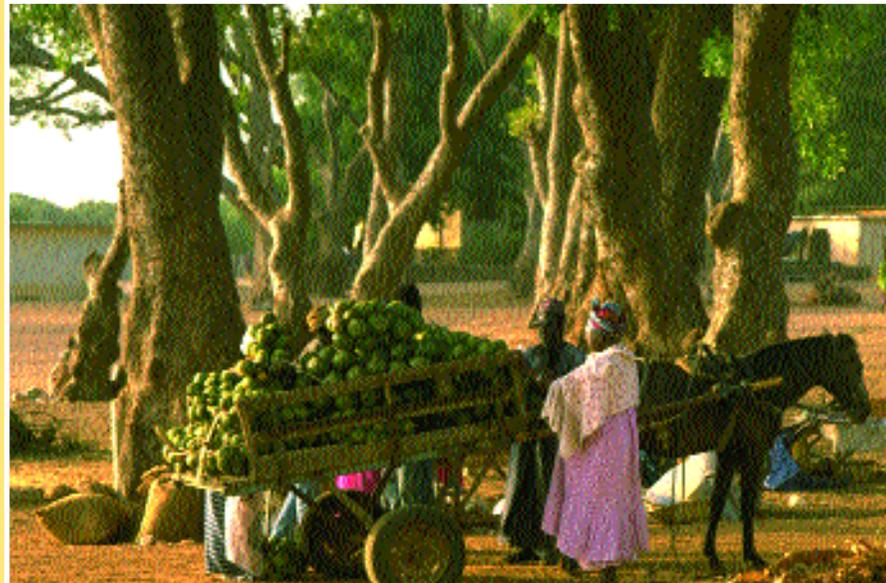
- Forests are managed by users as common property, through collective management and control.
- There are several categories of users and stakeholders with different interests in the resource requiring joint management and control.
- Users obtain their forest product supplies largely from agroforestry sources, managed as part of farm rather than forest resources.
- Involvement is through processing and trade of forest products, rather than through management and use of the primary resource.

Box 7 contains a summary of the main characteristics of these categories.

Key characteristics of the main categories of community forestry system

BOX 7

FORESTS ARE MANAGED BY USERS AS COMMON PROPERTY		
<p>Stakeholder groups</p> <p>There are homogeneous user communities, with shared attitudes to resource use.</p>	<p>Livelihood connections</p> <p>Forests are central to the livelihood system, which has often been historically stable but difficult to sustain in the face of current market and other pressures.</p>	<p>Community forestry features</p> <p>There is collective management and control, if assured of real empowerment and effective government support (e.g. against forest industry, encroachment, and countervailing sector policies such as settlement).</p>
FORESTS ARE USED BY MULTIPLE STAKEHOLDERS WITH DIFFERENT INTERESTS		
<p>Stakeholder groups</p> <p>Multiple user groups have overlapping/competing claims on the forests. This is the case both among local and other users and among different categories of local user; consequently there is a lack of shared attitudes towards resource use, and a potential for conflict.</p>	<p>Livelihood connections</p> <p>Forests are of continuing importance in coping strategies of the very poor. With growth, the poor risk losing access to the resource because it passes into the control of wealthier or more powerful elements who are better able to exploit market opportunities, or to privatize forest land and put it to non-forest uses.</p>	<p>Community forestry features</p> <p>Fragmented, internally differentiated user groups are likely to lack capacity to manage competing users unaided. Further work is needed to develop and support appropriate management approaches. Incentives to local participation need to be matched to the changing role of forest products. Policy-based impediments may include tenurial change that threatens existing rights, and restrictions on smallholder harvesting and trading of forest products.</p>
FOREST PRODUCTS ARE SUPPLIED LARGELY FROM AGROFORESTRY SOURCES		
<p>Stakeholder groups</p> <p>Tree growing is only available to those with access to land that they can farm. It may also not be possible for sharecroppers and other farmers with tenurial constraints.</p>	<p>Livelihood connections</p> <p>Farm trees can provide poor farmers with a low-cost means of enhancing site productivity, of diversifying to reduce exposure to risk, and of meeting household needs with lower labour inputs. Commercial production of tree crops is more likely to be suited to farmers who do not rely on the land for food, and/or farmers who have other sources of income.</p>	<p>Community forestry features</p> <p>Tenurial conditions that constrain (or appear to constrain) tree growing may need to be clarified or modified. Policy needs to focus more on matching supply with demand. Impediments that restrict farmer access to markets (and that depress prices for their forest/tree products) need attention (these include poorly functioning trading systems and competition from subsidized supplies from State forests).</p>
PROCESSING AND TRADE ARE IMPORTANT SOURCES OF EMPLOYMENT AND INCOME		
<p>Stakeholder groups</p> <p>Small-scale forest products manufacturing and trade can be available to the landless as well as to those with access to the land, to women as well as to men, and to some of the urban poor.</p>	<p>Livelihood connections</p> <p>These activities can be important components of coping strategies of the very poor, but they often generate low returns and poor growth prospects. More profitable activities often require skills and inputs not available to the poorest. Wage employment in forest industry can help the poor move away from stagnant activities, if only temporarily.</p>	<p>Community forestry features</p> <p>There may be a need to remove biases in favour of competing industrial and State producers. Different potential target groups have different support needs in order to progress (credit, training, etc.). It may be better to help people faced with declining prospects in their current activity to move into more rewarding options (e.g. employment in logging may not prove sustainable).</p> <p style="text-align: right;"><i>Source: Developed from Byron and Arnold, 1999</i></p>



Selling palm fruits in Senegal. Tree and forest products often play an important role in local livelihood systems.

The literature on community forestry tends to focus primarily on experiences that involve some form of collective management of a forest resource by the local population. However, as is evident in the categories of user/resource relationship described above, and the discussion in Chapter 2, community forestry can equally involve activities on an individual, or on an individual household basis, such as tree growing on farms or small-scale processing and trading of forest and tree products. Moreover, there are no clear-cut boundaries between the different forms that community forestry takes. Many people who draw upon collectively used forest resources for some of their needs also create or maintain tree resources on their farms. Individual producers may also come together in collective groupings, such as cooperatives.

In practice, the various forms of community forestry coexist and are often linked, and many community forestry support programmes contain several different

components in response to such patterns. This reflects the fact that collective or individual forms of organization of community forestry, and the management of forest or farm tree resources, introduce a number of very different issues that need to be addressed separately. Therefore, Chapter 3 first examines collective forms of community forestry, which encompass both management of the resource as common property by a group of users, and joint management by multiple stakeholders. Chapter 4 then examines systems involving management at an individual or household level, such as trees in forest areas adjoining farmland, trees managed as part of farm resources, and trees for small-scale processing and trade. For each, the circumstances under which they have proved to be appropriate, and the strengths and weaknesses of present and past support policies and practices, are assessed. Issues that affect community forestry as a whole, and that straddle both collective and individual forms, are discussed in the final part of the publication.



CHAPTER 3

Collaborative management

The case for collective (and joint) management

Collective management regimes for forest resources can be appropriate when the demand on a resource has become so great that it can no longer tolerate unregulated (open access) use, with the result that property rights in the resource have to be created, but other factors make it impossible or undesirable to allocate the resource to individuals (McKean, 2000). A common property regime can also emerge as a way to secure control over a territory or a resource, to exclude outsiders, or to regulate use by individual members of the community. As pressures on the resource increase over time, collective control may be replaced by private property rights or by government control, or control may collapse and be replaced by open access use.

Choice of management of forests as common property has in the past been strongly affected by arguments that it is inefficient, and unsustainable, compared with private property or State ownership. This argument was dramatically expounded in Garrett Hardin's article entitled "Tragedy of the Commons" (Hardin, 1968), which was interpreted as postulating that overuse among those using a 'commons' was inevitable, because each would seek to extract more than their share of the benefits, knowing that the gain from doing so would more than offset the costs to them of this overuse. Wide acceptance of this thesis contributed to the pursuit of land distribution policies that favour individual private landholdings, and to the justification of State control of forest resources.

In the past two decades, growing evidence has accumulated to show that, while this thesis can, and often does, apply, it should not be held to be of general application. In appropriate situations, users often prove to be able to create and sustain collective arrangements that avoid overuse. A growing body of knowledge gained from research into existing collective management systems, and experience with programmes to support new systems, has resulted in fuller understanding of the attributes of resources and users that appear to be conducive to the formation and functioning of successful self-governing arrangements of this nature (Ostrom, 1999). This information is summarized in Box 8.

Three characteristics of attributes identified in Box 8 are of particular significance to understanding the scope for community forestry as collective management (Ostrom, 1999; Arnold, 1998; Baland and Platteau, 1996; McKean and Ostrom, 1995).

(1) The nature of the resource and its value to the users. There are resources that are more logically managed as a whole rather than as individual plots, as, for instance, (a) where they need to be maintained on a scale large enough to function as a productive ecosystem; (b) where coordination among users may be necessary to deal with multiple uses and externalities; or (c) where group control can be the most efficient way of coping with the costs of

Attributes of common pool resources and of users that are conducive to self-government BOX 8

ATTRIBUTES OF THE RESOURCE

- **FEASIBILITY OF IMPROVEMENT:** The resource is not so deteriorated that it is useless to organize, nor is it so underutilized that there is little advantage involved in organizing it.
- **INDICATORS:** Reliable and valid information about the general condition of the resource is available at reasonable costs.
- **PREDICTABILITY:** The availability of resource units is relatively predictable.
- **SPATIAL EXTENT:** The resource is small enough, given the transportation and communication technology in use, to allow users to develop accurate knowledge of external boundaries and internal micro-environments.

ATTRIBUTES OF THE USERS

- **SALIENCE:** Users are dependent on the resource for a major portion of their livelihood or for other variables that are of importance to them.
- **COMMON UNDERSTANDING:** Users have a shared image of the resource and of how their actions affect each other and the resource.
- **DISCOUNT RATE:** Users discount the likely value of future benefits to be achieved from the resource at a sufficiently low rate (i.e. they expect satisfactory levels of future benefits).
- **DISTRIBUTION OF INTERESTS:** Users with higher economic and political assets are similarly affected by a current pattern of use.
- **TRUST:** Users trust one another to keep promises and relate to one another with reciprocity.
- **AUTONOMY:** Users are able to determine access and harvesting rules that will not be countermanded by external authorities.
- **PRIOR ORGANIZATIONAL EXPERIENCE:** Users have learned at least minimal skills of organization through participation in other local associations or through learning about organizational methods of neighbouring groups.

Source: Ostrom, 1999

monitoring porous boundaries and enforcement within those boundaries (McKean, 2000). Also, there are resources that make an important contribution to the livelihood systems of the users. Collective management has historically been particularly prevalent where forests have provided critically important inputs into agriculture (e.g. providing replenishment of soil nutrients through green mulch or tree fallow), where livestock management depends on access to woodland or forest (as in arid Africa and Asia), or where forests provide important dietary inputs (e.g. in high forest regions without livestock). The quality of the resource, and its capacity to yield returns that are commensurate with the costs incurred in protecting and managing it, are also likely to be important factors.

(2) Collective capability for resource management.

There is the presence of, or ability to create, a local institution able to effectively control and manage the resource on behalf of the community of users. Effectiveness or ineffectiveness in this respect can often be linked to the size of the group and commonality of interests about the resource within it, the powers to define membership and create and implement group management rules vested in the institution, and the availability of functioning conflict management and resolution mechanisms. Much of recent research and experimentation with collective community forestry has focused on trying to clarify the circumstances in which increasingly heterogeneous rural populations might be able to create and operate effective collective management regimes.

(3) A supportive policy and support framework.

There is the willingness and ability of governments to create a policy and legal basis that creates or reinforces the local rights with respect to forest resources, that empowers the local institutions to control and manage the exercising of these rights, and that authorizes the relevant government institutions to effect and support this transfer of responsibilities and rights. Of equal importance is the willingness of the political and administrative machinery of governments to implement such changes in ways that transfer real power to community forestry groups, and not to thwart this by interpreting change in ways that effectively leave control in the hands of forest departments and the local extensions of governing political interests, or of industrial or other external interests.

The wide range of community forestry forms that have emerged in part reflect substantial differences in the importance of the factors outlined above in the various situations. Governments still seeking to extend their political presence across relatively new nations are likely to view transfer of authority over forest areas differently from those seeking to devolve responsibilities away from the centre. Where forest resources are no longer of significant revenue or strategic value to governments, the potential for community forestry that increases the share of benefits from forest resources that accrues locally is likely to be greater than where they are still important centrally. Situations with strong, well-entrenched forest departments present different

potentials, and constraints, from situations where the government presence in forestry is weak.

In practice, collaborative systems range from situations where full control, and even ownership of the forest, is transferred to a local body through a community forestry programme, to situations that do no more than create, or legitimize, limited local rights to particular forest product usages. Most lie somewhere in between; with the State granting additional rights and powers, but often retaining ownership and a share of the resource and benefits, and rights of approval and enforcement of the agreement for such co-management.

The arguments in favour of co-management, or joint management, by governments and resource users have become more prominent as it has become apparent that often user communities and institutions are unable to take on responsibility for control and management unaided, and that the alternatives of continued State control or privatization are also unsatisfactory. The concept of co-management, therefore, promotes the idea of trying to develop equitable partnerships, drawing upon the complementary strengths of forest departments and local users. In principle, the government, rather than withdrawing from forest control and management in favour of local users, would reshape its responsibilities to ensure the largest measure possible of involvement by the latter, and to ensure collaboration rather than conflict between the two (Berkes, 1997; Baland and Platteau, 1996).

Within forestry, co-management has become increasingly prevalent because it appears to offer, among others, the following advantages to the State.

- It enables the government to continue to exercise a regulatory role (this is important where there are significant environmental externalities associated with the use of forests or forest lands).
- In State forests it transfers some of the responsibility for, and cost of, forest protection to local user communities, and also enables the forest department to retain control over components of the resource that are of direct value to the State (e.g. timber and forest land).
- It can facilitate the provision of government support (e.g. investment, technical assistance and strengthening of local institutional capability) to user communities.
- It may enable the forest department to act as an adjudicator in disputes among stakeholders who have conflicting claims on the forest.

The danger is that, in practice, co-management may result in a situation in which government agencies continue to exert too great a measure of control. To be effective as a vehicle for real *community* forestry, it must achieve the right balance between the main parties involved.

Co-management in practice

The four programmes, or groups of programmes, discussed in this section represent relatively long-established and substantial examples of community forestry co-management. They cover a range of different resource, user, institutional and policy combinations. The first two represent government initiatives to increase local involvement in management of State forests. The India programme reflects a situation in which there is a strong, relatively well-resourced forest department, whereas the programmes in West Africa reflect a situation where this is not the case. In the other two examples, changes have been effected that have resulted in a greater level of local empowerment, reflecting a greater measure of local rights prior to the community forestry initiatives. In the case of Mexico, these changes have also enabled local users to become actively involved in industrial forestry.

FOREST CO-MANAGEMENT IN WEST AFRICA⁴

Historically, much of the forest resource in the region was controlled by traditional authorities, as part of broader systems of control of land and use of land. In most countries, these systems became over-

laid in the colonial and postcolonial periods with varying degrees of State tenure and control over forest and tree resources, and often over tree-bearing land. Particularly in the high forest zone, timber-rich forests have been important sources of government revenue, dedicated to industrial rather than local use.

The move towards more participatory forestry began in the late 1980s, encouraged by donor interests in conservation and more sustainable management of natural resources, and in community management as a means of achieving this. For governments lacking the resources to administer large and remote areas, community forestry had the added attraction that it could shift some of the cost of forest protection and management to communities, and has the potential of reducing destructive actions of rural populations that earlier felt excluded from access to forest benefits. However, the budgetary weaknesses that encourage forest departments to devolve responsibilities for local forest management can mean that they are unable to provide the support services needed to make community forestry effective.

The process varies from country to country, but usually involves contracts with community-level institutions that set out commitments (such as provision of labour for protection and planting) in return for rights and benefits (such as the right to harvest and sell forest produce, and exemptions from fee, royalty and licensing requirements). However, the benefits to participating communities are often limited by

the fact that areas available for community forestry are concentrated in poorer forests, whereas any benefits from richer areas that continue to be reserved for industrial use are confined to transfers of some of the revenue generated from timber sales.

Progress towards arrangements for forest management and control that favour local populations has also been constrained in practice by difficulties in securing effective, representative and equitable control at the local level, and because of problems of multiple users and poorly functioning local institutions. In French-speaking countries, such as Burkina Faso, Guinea, the Niger, Mali and Senegal, the initiatives to decentralize forest management to local groups have been strongly shaped by codes and constitutions that set up levels of national, regional and local government, and by electoral codes and technical codes such as land tenure and forest laws, which between them determine who gets to make which decisions. The way that these intersecting laws are interpreted and operate in practice has often meant that decentralization of forest management has not resulted in the passing on of rights and powers of decision to representative local bodies.

Devolution in these countries has usually involved village chiefs or rural councils. However, chiefs, who are chosen by government-sanctioned processes, are often effectively part of the administrative system. Though rural councils are usually made up of elected representatives, these often tend to be linked to national political parties or in other ways



In West Africa, local forest management usually involves commitments, such as protection and planting, in exchange for rights and benefits, such as the right to harvest and sell forest products.

are not independent of the government administration. The result is that local bodies tend to be responsive to the administration and the State, rather than to their members. In English-speaking countries, such as Ghana, traditional authorities are often stronger, a situation that reflects their role in colonial strategies of 'indirect rule'. However, chiefs are often among the wealthier and more entrepreneurial members of the community, and their interests can be more closely allied to the interests of traders and loggers than to those of their constituency members. Elected local bodies are not likely to be dominated by members linked to national political parties, but they generally cover quite large geographical areas; this makes them less than optimal

⁴ Based on Adams and Hulme, 1999; Brown, 1999; Leach, 1999; and Ribot, 1999.



A forester meeting with a community group in Mali to help them develop a forest management plan.

for handling village forests. In practice, devolution either through leaderships or local government can mean that control and benefits are passed to local élites and outsiders.

The problem of securing effective representation of local interests is compounded by the highly differentiated nature of many rural populations. The development of rural areas in much of West Africa has been heavily dependent on labour provided by groups that migrate from other parts of the region. It is now not uncommon for populations to comprise

several different ethnic and cultural groups, which have markedly different interests with respect to local forest resources and land. Transferring ownership or increased use and control rights to such communities, where there are multiple conflicting interests within the community, will not by itself ensure sustainable or equitable community forestry.

Progress with devolved community forestry has also been shaped by a framework of forest department rules and regulations that limit rights and benefits, and effectively circumscribe the authority and freedom of action of the recipients. In French-speaking countries, policies dating from French colonial times concentrated control in the hands of forest departments and urban traders. Even where subsequent devolution policies have transferred a measure of authority to local bodies, commercial forestry activities are often still subject to forest department approval, supervision and even control. In Mali, for instance, an individual or group wishing to engage in commercial fuelwood harvesting must form an organization recognized by the government and apply to the forest department to develop a forest management plan. This must be approved by the local government, if the forest is within its jurisdiction, but the forest department retains powers of adjudication. In some other countries, the local government does not even have the right of approval or rejection (Ribot, 1999). Forest departments can, therefore, continue to exert strong control, to the extent that it is argued that community forestry can in practice increase rather than diminish forest department control.

Due to these problems in achieving devolution that delivers effective benefits to heterogeneous user populations through existing institutional structures, some countries have focused on granting legal recognition and decision-making authority to smaller, area-based groups, as in the ‘village territories’ approach in some French-speaking countries. This has been a positive departure from the top-down, centralized approaches of the past, but it is not necessarily more effective in communities where there is a diversity of interests among users of local forest resources, and there is no mechanism for resolving conflicts arising from this diversity. Another approach, often project-based, has been to encourage the emergence of smaller, more homogeneous groups to which rights of management and use can be granted. The formation of *groupements forestiers* can give them clearer and stronger rights, but within a framework of tighter forest department regulations. As one observer has noted, this can lead to “real tension over whether the approach represents decentralization or further centralization of control over forests” (Leach, 1999).

In brief, moves to develop forest co-management in the region have been constrained by a number of factors that make it complex to implement without measures to deal with the presence, and differing interests, of multiple stakeholders. This suggests that, to be effective, community forestry may need at least as much support from the government as traditional forestry, though in different forms.

JOINT FOREST MANAGEMENT IN INDIA⁵

The Joint Forest Management (JFM) programme in India provides one of the largest and more fully developed bodies of experience with co-management in community forestry. It has been developed in a category of State forest lands, Protected Forests, in which local rights were recognized, but which historically had been managed by a large and well-resourced forest department, with extensive experience of conventional territorial forestry.

JFM evolved from the Social Forestry programmes discussed in Chapter 1, which attempted to meet rural needs and to prevent overuse of forest resources by encouraging the creation of village and farm tree resources on land outside forests. The shift in focus to co-management in State forests occurred when the 1988 Forest Policy brought about a radical change in the priorities for the forest sector. The Forest Policy subordinated direct economic benefit to environmental stability and provision for subsistence needs, and it stated that forests were not to be commercially exploited for industrial uses. For the first time, environmental stability and provision for the subsistence requirements of local people were given greater prominence than industrial use and generation of government revenue; the policy document included specific reference to providing for the domestic requirements of “tribals and other poor living within and near forest”.

⁵ Based on Khare *et al.*, 2000; Kumar *et al.*, 2000; Sarin, 1998; World Bank, 1998; Saxena, 1997; Hobley, 1996; and Poffenberger and McGean, 1996.

In June 1990, the Government of India followed this up with a circular to state governments recommending the adoption of JFM on areas of state forest land. The principal features of the circular were the following.

- JFM should be an arrangement between the village community, non-governmental organizations (NGOs) and the state forest department, with management plans established and supervised by the forest department, which has the authority to cancel the agreement if it becomes dissatisfied with the way it is being implemented.
- Only people who are organized in village groups specifically for forest protection are to be granted access and benefits (which cannot be granted to individuals); anyone who has an existing claim to forest produce should be given the opportunity to join.
- Beneficiaries should be entitled to usufructuary rights to grass and minor forest products (and potentially to a share of the income from the timber and other products sold by the forest department); grazing or agriculture is prohibited (though grass can be cut for feeding to livestock, and fruit-trees may be planted).
- Only degraded forest areas in Protected Forests are eligible.

By 1997, 17 states had adopted such collaborative programmes involving local communities in the



FAO PHOTO FO-0258/T. Heier

Gathering and selling fuelwood is often an important source of income for the poorest women in areas covered by the JFM programme in India.

management and protection of forest lands in return for rights to use specified forest products. In each, the local vehicle for implementing JFM has been some form of Village Forest Committee (VFC), set up for this purpose.

Not surprisingly, in such a large and diverse country, the results of applying the JFM approach have var-

ied considerably. In the original area, in the south-west part of the State of West Bengal, where the underlying approach was first developed in the 1970s, there have been tangible results. This is an area where most of the land was previously a mixed forest dominated by sal (*Shorea robusta*) that had been heavily cut for fuelwood, poles and other products. The process of resource degradation was depleting subsistence and income flows, and was adversely affecting agricultural productivity. Under the JFM programme, villagers would refrain from fuelwood cutting and grazing and take on more responsibility for protecting the forest, in return for a substantially greater share of the proceeds from the restored resource.

Case studies show that, under the programme, fuelwood availability has increased, there has been a significant improvement in the local environment (including reduced erosion and improved water supplies), and there has been a reduction in seasonal out-migration, suggesting that incomes from employment and from sale of non-timber products have increased. Moreover, this appears to have been of greater proportional benefit to many of the poor (Pattnaik and Dutta, 1997).

The approach has been most successful in villages bordering extensive tracts of degraded forest land, where the forest-to-household ratio is relatively high, there are ethnically homogeneous communities possessing local forestry knowledge, and benefits accrue from minor forest products at a relatively early stage.

JFM has also been successful in the mangrove forest areas in the southern part of the state, due to the protection that it offers against flooding and erosion brought about by improved management. Much less progress was made in trying to extend the approach to the northern region of West Bengal. There, the forests are less severely degraded and contain substantial timber components of continuing value to the forest department, but fewer non-timber forest products of interest to villagers who have more attractive non-forest alternatives available to them.

Thus, even within the confines of a single state, it is evident that the potential for collaborative management of this nature varies considerably. As a consequence of such experiences, JFM is now coming to be seen less as a pre-set formula and more as a set of principles and a process, to be modified and adapted to local circumstances. Some states (and some parts of individual state forest departments) have shown considerable flexibility and innovation in interpreting and applying JFM. This is a conclusion that needs to be underscored, because JFM has provided a model for co-management arrangements not only in India, but also in other countries, and particularly in Africa. It is important, therefore, to recognize that such approaches need to be designed to fit the particular characteristics of each situation.

Some of the issues that have arisen are summarized in Box 9. Some relate to difficulties in ensuring sufficient incentives to local participation in JFM. Pursuit of sustainable forest management usually means

Some issues that have arisen during implementation of Joint Forest Management in India

BOX 9

RESOURCE FACTORS

- Restriction of JFM only to degraded forests limits the potential benefits users can obtain, which can reduce their commitment to forest management.
- Pursuit of conservation usually means restricting or prohibiting existing gathering or harvesting activities that are of importance to sections of the poor. Subsequent changes in the composition of protected forests can have a detrimental impact on the poorest and most vulnerable in the community, unless measures are taken to offset the impacts of the changes.
- If protection through JFM is introduced only to individual communities and forest areas, the pressures of overuse are likely to be transferred to other areas.
- A focus on producing plantation products can mean that the benefits local people obtain from forests can shift from products that help meet immediate subsistence needs to commercial products that can be sold, and generate income, in the future. (Creating plantations can also displace present grazing and gathering users.)
- Plantations can create important benefits from employment and wages in their early years, but it can be difficult to provide a continuing flow of benefits in the years between the establishment and harvesting phases (employment as a benefit can also distort

incentives for participation away from forest management, and it risks diverting people from other activities that may provide a more even flow of benefits).

- Management plans developed by forest departments for plantations tend to require forestry skills, reducing the potential for user participation in the planning process.

VILLAGE FOREST COMMITTEES AS THE LOCAL IMPLEMENTING ORGANIZATION

- Some VFCs tend to be dominated by the local élite, and consequently may not adequately represent the interests of some of those most dependent on forest products.
- Where a VFC exists just as a committee of the forest department, without links with the *panchayat*, or without a recognized legal status, it may lack authority in dealing with the intragroup and intergroup conflicts that JFM can generate.
- The need for self-initiated forest protection groups to bring their procedures into line with those of JFM, in order to benefit from the legitimization of their rights to use the forest that this would bring, can lead to a considerable reduction in direct benefits to their members.

- There is no national legislation: the 1988 Forest Policy is a non-statutory and advisory statement issued by the government, and it can be challenged in courts of law. State-level JFM programmes are embodied in administrative notifications, and they do not have the firm legal basis that they would have if they were included in forestry legislation proper.

REVENUE SHARING AND ACCESS TO INCOME

- VFCs in some states get only small shares of the revenue, and forest departments can be slow to transfer these funds to them.
- JFM regulations can mean that some revenue that previously accrued to gatherers now has to be shared with the VFC and the forest department, and product flows previously used to meet subsistence needs may be diverted to sales.
- Regulations encouraging and enabling wide membership in the VFCs can mean that people join just to share in the income accruing to them.
- JFM areas are not exempt from existing regulations that require producers of non-timber forest products to sell to government forest corporations and other authorized organizations.

restricting or prohibiting existing gathering or harvesting activities that are important to some of the poor members of the community, at least temporarily. Though subsequent management of the forests can be structured to favour species and products of local value, the resulting changes in the composition of protected forests are likely to have different impacts on different categories of user. Even in the generally successful experience of southwest West Bengal, fuel-wood headloaders, among the poorest in most communities, did not share in the increase in benefits (Hill and Shields, 1998). Unless measures are taken to offset the negative impacts of the changes it brings about, the introduction of JFM may, therefore, be detrimental to the most vulnerable in the community.

In addition, exclusion of richer and more productive areas of forest limits the potential benefits users can obtain. In some areas, the forest available for JFM has proved to be unable to generate benefits commensurate with the costs local people are being asked to bear. In some JFM programmes, therefore, additional benefits have been introduced. These can take the form of wage employment in forest department activities, provision of services such as improved roads and water supplies, and provision of financial and technical support to self-help groups to enable them to develop non-forestry livelihood enhancement activities. However, questions arise as to how sustainable such measures can be.

Issues also arise over the distribution of costs and benefits among the forest department, the VFC and individual members of the committee. Bringing



An important issue facing forest protection committees is how to create effective venues where women users can express their concerns.

production of more valuable products under JFM regulations can mean that some revenue that previously accrued to gatherers now has to be shared between the forest protection committee and the forest department. Some states have acted to reduce this disincentive by substantially increasing the share of the revenue that goes to the village committee.

Other problems relate to the presence of multiple stakeholders with overlapping or conflicting interests. Issues include:

- how to create forest protection committees that are representative of the different categories of

user within a community (often with particular concern about providing an effective venue where women users can express their concerns);

- conflicts that arise with prior users of the forest who have been excluded from membership in the committee;
- how to avoid 'free riders', people who become members of the committee solely to get access to the income and other benefit flows it controls; and
- the nature of the relationship of the VFCs (which are recognized only by the forest department) with other community institutions, particularly the *panchayat* system of local-level political and administrative institutions.

Perhaps the most fundamental issues are those concerning the balance between forest departments and villagers in the functioning of JFM. The state retains legal title to the forest areas allocated to JFM, and specifies which areas may be included. The VFCs are initiated by the forest department, which assigns a forest department staff member to the committee, supervises the application of their operational rules, and can dissolve them at will (without compensation). The JFM arrangement is consequently one that is ultimately controlled by the forest department. There is thus a danger that, in practice, JFM could result in an extension rather than a devolution of forest department control and influence, and could serve to promote a

protection agenda rather than the interests of village members. However, recent studies increasingly show that, at least in the more progressive state programmes, JFM has achieved considerable progress in moving towards forms of implementation that are more responsive to local needs and concerns. In the process, there has often been a marked improvement in the relationships and understanding between foresters and local people (Jeffery *et al.*, 1998).

HILL COMMUNITY FORESTRY IN NEPAL⁶

In the Middle Hills of Nepal an unusually strong system of co-management of community forests has evolved, well backed by legislation, in an area where there remain high levels of dependence on forest products and well-entrenched traditions of self-sufficiency. Historically, hill forests were controlled under various forms of tenure, some feudal, some in the name of the State, and some communal. As a result of the overthrow of the feudal system in the 1950s, the forests of feudal owners were brought under the control of the State, under the Private Forests Nationalization Act of 1957. Where local leadership was strong, more local groups appear to have taken steps to bring the forest areas that they used under their own *de facto* communal control during that period, in order to secure their continued access to them.

⁶ Based on Shepherd and Gill, 1999; Shrestha and Britt, 1997; Malla, 1997; Gilmour, 1997; Hobley, 1996; Shrestha, 1996; and Gilmour and Fisher, 1991.

In 1978, the government passed legislation enabling substantial amounts of public forest land in the Middle Hills to be handed over to local communities to manage, in recognition of the practical difficulties of managing the country's dispersed forest resources through the forest department. Local management was to be achieved through the *panchayats*, the lowest level of political and administrative organization, which would enter into agreements with the government to manage local areas under agreed forest management plans.

Initially, progress was slow. Villagers were suspicious that it was just another way of abrogating their customary rights. Procedures were cumbersome, and *panchayats* usually proved to be unsuitable bodies for undertaking local forest management, as the areas they administered seldom coincided with user group boundaries. Though forest management committees were formed, they seldom functioned as representative discussion and decision-making bodies.

Following passage of the Decentralization Act in 1982, responsibility for management began to be transferred to forest user groups, incorporating features of the indigenous control and management systems that many communities in the Middle Hill areas were already practising. With the abolition of the *panchayat* system in 1990, more authority and responsibility were progressively devolved to these groups. These new institutional formats were formalized in the 1989 Master Plan for the Forestry Sector, and the user group approach was given legal authority in the 1993 Forest Act. Ownership of the

land remains with the State, but trees legally belong to forest user groups, though the State reserves the right to take back possession of the community forest if the terms and conditions of handover are not met. Management control rests solely with the users of the resource, who now develop their own operational plans (which have to be approved by the forest department), set the prices at which the produce is sold, and determine how surplus income is spent.

By January 2000, there were 8 900 registered forest user groups (FUGs), managing 652 000 ha of forest, and many more were waiting to be registered. User groups are now coming together and forming larger



Villagers in Nepal meeting to decide what kinds of trees to plant.

network organizations. The largest network, the Federation of Community Forestry Users in Nepal (FECOFUN), with more than 1 000 user group members, is taking on a negotiating and mediating role, and is providing members with some services previously provided by the forest department.

Issues still arise, both within user groups and among them, and with the forest department. Concerns have been expressed about several issues: possible domination of user groups by local élites; the question of whether women are properly and effectively represented within groups; potential conflicts over responsibilities between FUGs and the evolving system of local government bodies with overlapping mandates; and recent moves by the forest department to increase the level of control its staff can exercise over management decisions in user group forests. Nevertheless, the Nepal experience has been encouraging; advancing democratic management of forests by local users is to be found in most situations, giving it a strong institutional basis and bringing about an attitudinal shift within the forest department towards facilitating local efforts.

Moreover, where user group management is active, illegal logging, overgrazing and forest fires have usually declined, and the condition of the managed forests has often improved. This has generally been achieved by user groups that adopt conservative, protective management practices. Concerns have arisen that the resulting reduction in harvests by comparison with earlier practices could mean that pressures are being diverted to areas of forest outside commu-

nity forests, and could be disadvantaging some of those users who drew most heavily upon the community forests. A challenge to the system at present, therefore, is to encourage more productive community forest management.

The considerable measure of success of community forestry in hill areas of Nepal evidently reflects both well-focused and well-delivered government interventions, and also the fact that the hill areas of the country demonstrate many of the resource and user attributes favourable to this form of governance. Forests are very important to the functioning of hill systems; they provide fodder and bedding for the livestock that are critical to hill agriculture, fuel and construction materials, and sources of income. Both richer and poorer among users have historically had a shared interest in these outputs from the forest and, as a consequence of their isolation, many hill communities have a long history of managing their local resources.

However, the hills are being exposed to changes in these attributes. People are migrating to take advantage of employment opportunities elsewhere; the hill areas are gaining access to markets and supplies of purchased goods; and children are spending more time in school. These are some of the changes that are altering the conditions that have favoured collective management of local forests. With less labour available on farm, more marginal agricultural areas are being withdrawn and are often recolonized by, or planted to, trees, thus creating sources of tree products nearer to the home. Expanding market

opportunities and alternative livelihood opportunities for some can increase internal differentiation within FUGs, leading to conflicts over objectives to be pursued in managing their forests (e.g. disagreements over whether income from community forests should be distributed to members or spent on community welfare). It is too early to say how these developments will evolve. However, the fact that user group forestry is by now well established, and is growing so vigorously, encourages the idea that it will be able to adapt to such changes.

COMMUNITY MANAGEMENT OF FORESTS IN MEXICO⁷

The recent experience of Mexico in developing stronger and more effectively participatory community forestry institutions and practices has been among the most advanced and important, involving resources that often have the potential to generate substantial economic benefits locally. Much of the country's forest resources (up to 90 percent in some states) is on community land, and 17 million of the country's poorest live in these forested areas (Wentzel, 1999). Rights to these lands were granted to communities (*ejidos*) after the 1910 revolution. Arable land was typically assigned to individuals, but forest and pasture land was held in common. *Ejidos* owned the forests, but were not permitted to sell or transfer the land.

⁷ Based on Taylor and Zabin, 2000; Chapela, 1999; Wentzel, 1999; Landell-Mills et al., 1999; Richards et al., 1995; and Richards, 1992.

However, in practice, these community forest resources were controlled by the government, which granted logging concessions to private sector and parastatal forest industry companies. The members (*ejidatarios*) of the *ejidos* benefited very little, as regards both income and employment. A nominal stumpage fee was paid into a community development fund administered by the Ministry of Agrarian Reform, but little was transferred to the *ejidos*. Because it generated so little benefit for them, the concession system in effect pushed *ejidatarios* towards conversion of forest land to agriculture and animal husbandry. This form of management was thus encouraging deforestation rather than conservation.

Control over natural resources became a component of peasant unrest (Castanos, 1994). In the mid-1970s, peasant organizations, supported by policy reformers within government, campaigned to change the system so they could participate more directly in control and exploitation of their forests, and benefit more substantially and sustainably from the proceeds. In the mid-1980s, new legislation, culminating in the 1986 Forestry Law, transferred decision-making power over forest harvesting to the *ejidos*, on condition that they meet sustainable forest management requirements (such as a management plan drawn up by a forester), to be monitored by government Units of Conservation and Forestry Development (UCODEFOs). Stumpage fees, set by the market, were to accrue directly to the *ejidos*.

The technical assistance functions previously assumed by the government were decentralized, and the role of the State was reduced essentially to one of supervision and support. *Ejido* organizations that took on management and operational roles were encouraged to participate in cooperative federations set up to provide technical and organizational support, particularly technical assistance, marketing and liaison with government. Initially, government provided considerable subsidized support to these 'forestry civil societies', as part of its broader efforts to actively encourage and help *ejidos* to assume responsibility for production. By the early 1990s, 40 percent of forests with commercial value had management plans for extraction; of these, 40 percent sold timber standing, another 20 percent extracted and sold timber themselves, and another 20 percent had sawmills.

By the early 1990s, demands for market liberalization had become another powerful force for change in the country and in the forest sector. Following modification of Constitutional Article 27 in 1991, the 1992 Agrarian Law allowed *ejidos* to divide communal land that could be purchased and sold, and permitted groups of *ejidatarios* to use their share of the communal resource to engage in commercial activities, and also to enter into joint ventures. Concerns have been raised that this could undermine community-level forestry, encouraging *ejidos* to convert forest land to other uses, but actual change of this kind has been limited. However, it has encouraged more *ejido* involvement in logging and processing, and in investment in plantation establishment.

A new Forestry Law in 1992 greatly reduced government involvement in forestry, not only removing unwieldy bureaucratic regulations but also eliminating subsidies and technical assistance to community enterprises. Provision of technical services to communal landowners was privatized, and *ejidos* had to contract such services from private contractors or their forestry associations. Forest management requirements were to be enforced through harvesting permits, subject to the approved management plans, and a network of forestry associations (UNO-FOC) to promote sustainable forest management.

Market liberalization also exposed community enterprises to global competitive forces. Competition with low-cost imported timber as a result of the North American Free Trade Agreement (NAFTA) has made it difficult for many of them to operate profitably. Lack of business and marketing skills within *ejido* forest enterprises, and lack of adequate capitalization at the *ejido* enterprise level, are other problems they confront. In recognition of the difficulties *ejidos* face as a result of the shift from rural development to market liberalization policies, a government financial incentive plan (PRODEFOR) was introduced in 1997 to facilitate measures such as making management plans, and providing access to information and training.

The impact of this succession of changes on one of the most highly developed groups of *ejido* forest management enterprises, in the tropical State of Quintana Roo, is summarized in Box 10. This, and

other comparable experiences elsewhere in the country, indicate that the earlier radical expansion of peasant participation in forest management and control often resulted in incomes being raised, and forest loss being slowed down. However, the subsequent changes in favour of market liberalization have opened the way for new types of economic organization within *ejidos*, and transfer of technical functions to the private sector, which tend to weaken forestry civil societies' ability to perform delivery, advocacy and regulatory roles. In many situations, there is a shift away from community control towards private interests and market-based initiatives. There are concerns that this is a process from which only some *ejido* members are likely to benefit, and that could disadvantage the poor.

Conditions that favour collective and joint management

Though devolution to collective management at the local level has attracted much attention over the past 15 years or so, relatively few studies have focused on understanding the conditions in which it may actually be accomplished successfully (Agrawal and Ostrom, 1999). Similarly, little scholarly work addresses the issue of when co-management is feasible (Berkes, 1997). Therefore, there are few clear explanations

Plan Piloto Forestal, Quintana Roo, Mexico BOX 10

In the forest areas of the tropical State of Quintana Roo, there has been a long history of exploitation for chicle and mahogany, and other timber and non-timber forest products. An earlier pattern, in which small logging contractors worked with local communities (*ejidos*), was replaced in the 1950s by a 30-year concession to work 550 000 ha of these forests; the concession was awarded to a large parastatal company, Maderas Industriales de Quintana Roo (MIQRO). In the early 1980s, as this concession was approaching its end, a state government supportive of rural development cancelled it and turned over responsibility for management of the forests to local *ejidos*.

In 1982, a Plan Piloto Forestal (PPF) project was set up, initially to support ten *ejidos* that had progressively taken over responsibility for management and exploitation of their forest resources. Subsequently, the coverage of the plan was expanded, and by 1995 about 50 *ejidos* covering 500 000 ha were involved. Each *ejido* created its own operational cooperative. In organizing and running their operations, many *ejidos* have been able to draw on a long experience with chicle cooperatives. The general assembly of the *ejido* allocates jobs and decides on disposition of revenue. This can give rise to conflicts between business imperatives and the socio-political context of the *ejido*; there can be pressures to distribute profits to members, or to meet non-forestry needs of the community, rather than to reinvest in the forestry enterprise. As a result, the latter have often been undercapitalized. Rotation of jobs, in accordance with traditional practices, encourages social cohesion but can weaken business efficiency.

Four cooperative forestry civil society associations were set up, covering different areas. The first covers an area with relatively rich mahogany forests that have provided

substantial benefit flows to member *ejidos*. This is a large group, and some of the larger member *ejidos* have been able to invest in processing. The second association is in an area with a less mahogany-rich resource, and with fewer members, and it has had to focus production and marketing on railway sleepers, a less remunerative product. The last two associations have fewer *ejido* members and even fewer timber resources, and they have had to focus on developing other forest-based activities, such as agroforestry and non-timber forest products. Because their leaderships are elected, the associations have internal credibility and can help resolve internal social and political issues, and they can push through unpopular measures such as reduction in allowable cut. Therefore, they play a very important role.

In its early years, the PPF generated rapid increases in local benefits. Active marketing increased prices and expanded the range of species sold, ensuring larger income flows. In addition, deforestation slowed down sharply. More recently, there has been a decline in the quantity and quality of the resource available, which has

resulted in lower returns from forestry and has reduced the incentive to *ejidos* to pursue sustainable forest management. Those associations and *ejidos* with a poor forest resource base have often found it difficult to maintain their members' interest in forest management, which consequently has declined in favour of agriculture.

Market-oriented pressures to convert *ejido* enterprises into modern business enterprises have put a premium on efficiency, and this can conflict with the welfare function of *ejido* institutions. Some *ejido* forestry enterprise organizations have taken advantage of the opportunities provided by the 1992 Agrarian Reform for new forms of organizing forestry activities, and have reorganized as self-contained semi-autonomous work groups, each of which is allocated a proportion of the forest resource, in order to address these efficiency problems. Concerns have arisen that this could lead to division of the forest land, and that, together with the exclusion of non-group members from forest benefits, it could undermine the unity of the *ejido*.

Smaller associations, with lower-value resources against which to charge costs, are also finding it difficult to fund technical assistance, now that the earlier government subsidies have been withdrawn. In addition, some richer *ejidos* are leaving their association, and are contracting technical assistance and marketing services from private-sector organizations in order to avoid subsidizing poorer *ejido* members of the association. The associations are consequently becoming weaker and less effective, as the broader development focus shifts towards approaches that are more driven by market forces.

Sources: Taylor and Zabin, 2000; Wentzel, 1998; Richards et al., 1995; and Richards, 1992

as to why, in practice, devolution does not necessarily ensure more equitable access to forest benefits, or lead to sustainable forest development, or result in satisfactorily functioning institutional arrangements.

In assessing what lessons might be learned from experiences such as those outlined in the previous section, the following discussion is organized around three issues that often appear to be central to the success, or lack of success, of co-management of forest resources in practice.

- (1) Incentives for rural populations to conserve and manage their local forest resources are often weak, or are offset by substantial disincentives.
- (2) Governments often fail to provide the local organizations to which they devolve responsibility with sufficient real authority and support to enable them to exercise their rights and manage their forests effectively.
- (3) User populations can face constraints and problems that make it difficult for them to organize and function satisfactorily as collective managers of local forest resources.

INCENTIVES AND DISINCENTIVES

The issue of incentives and disincentives for user groups to engage in collective management of local forests revolves around the questions of whether sustainable forest management will produce

sufficient benefits for the participants to make this worth while and, if so, whether management is best achieved through collective arrangements. In this section, three aspects of this issue are examined. The first is the potential of the resource to produce forest product flows, and the question of whether these compare favourably with alternative uses of the land. The second is the impact of regulatory constraints, in particular those associated with conservation of the resource, on the cost-benefit balance. The third is the impact of growing exposure to market forces, in particular the impact on the choice between collective and private forms of management.

Adequacy of benefit flows from a forest resource

Communities are likely to be prepared to bring a local forest resource under management for forest products only if this appears to offer greater benefit to them than other uses of the land on which the forests are located. Where rural development has been based on the expansion of the area under agriculture, it is more likely that forests will be cleared rather than conserved and managed.

Areas that have resources of sufficient size and quality to provide benefit flows commensurate with the costs of management, areas that are not so heavily degraded or reduced in size as to require a sizeable investment of time and effort in order to become productive, and areas that local users know how to manage, are evidently more likely to form the basis for successful collective forest management

than areas that do not have these attributes. The strength of community forestry in mahogany-rich areas in Quintana Roo, and in sal-rich areas of West Bengal, relative to neighbouring areas that are less well endowed with resources, emphasizes the importance of resource quality and abundance in encouraging users to commit themselves to local management.

This suggests that the widespread practice of restricting community forestry to degraded or poorer areas of forest has often weakened its attractiveness to local users. Though programmes such as JFM in India can often improve the quality of the resource through enrichment planting on the degraded areas that are available, and provide wage employment in so doing, issues arise as to whether this can provide a sufficiently valuable resource to sustain local interest. Queries have also been raised as to whether those who are most affected by the change share proportionately in the benefits (Hill and Shields, 1998). Another concern is whether wage income from forest department work really creates a local sense of involvement and commitment to sustainable forest management, or whether it is merely “paying communities to protect forest resources” (Kumar *et al.*, 2000).

Another issue, given the relatively long-term nature of much forest management, is whether changes in the demand for forest products, and in the competitiveness of forest product activities relative to other sources of income, of the kind reviewed in Chapter 2, are likely to increase or diminish local interest in the

forest resource in the future (Byron and Arnold, 1999). In a recent study in an area in western Malaysia, for instance, it was found that the number of forest species used or sold as food, medicines, etc., had declined during living memory from 279 to 71 (Lim Hin Fui and Jamaluddin Ismail, 1994). Incentives to engage in collective control and management of a local common pool forest resource are evidently likely to become weaker as the role of its products in local livelihood systems declines in this way.

Benefit flows to local people can also be reduced by government regulations and practices that reserve significant shares of the benefit flows to the State. This can take the form of revenue-sharing arrangements, or imposing stumpage charges or other forms of taxation, or requiring local producers to sell their produce through government marketing bodies, as has been the practice in parts of India. Or, as has often happened, forest departments may retain control over the timber or other important commercial product components of forests allocated for joint management. In contrast, an important feature of the recent advance of community forestry in Latin America has been the inclusion of timber in the resource available to communities for exploitation (Wentzel, 1999).

Disincentives created by conservation restrictions

Restrictions placed on forest use in order to protect forests brought into community forestry schemes and put under sustainable forest management can



An important advance in community forestry in Latin America has been the inclusion of timber in resources available to communities for exploitation.

impose costs on local people that reduce their incentive to become involved. Allowable harvests may be reduced and the structure of benefits may be changed, as the composition of the forest changes under management. In fact, it is difficult to find programmes that have not had at least a transitional adverse impact on those who have had to cut back or give up earlier gathering or grazing activities. This has sometimes occurred in unexpected ways. Recent research in Nepal, for instance, showed that the structuring of community forests to yield products such as fodder, mulch and fuel, which appeared to be most used locally, could in practice favour the landed and those with livestock, rather than the landless, who need saleable products from the forest (Richards *et al.*, 1999).

Restrictions placed on forest use in pursuit of conservation objectives can also significantly reduce the potential to generate satisfactory returns to local users. A recent study of experience with initiatives to encourage conservation-compatible types of forest production in Latin America concluded that these provide only limited scope for enhancement of the incomes of those engaged in them, and so can have the effect of discouraging sustainable forest management. Thus, with the exception of some situations that are well endowed with commercially exploitable products and well placed with respect to access to markets, confining local commercial use to harvesting and sale of non-timber forest products was found not to be financially rewarding. Similarly, the additional costs of logging practices designed to reduce damage to the remaining forest were found to make timber production uncompetitive (Southgate, 1998).

The difficulties encountered by communities in Mexico in continuing to manage *ejido* forests sustainably in an increasingly competitive environment raise a general issue in this respect: namely, that sustainable forest management, as it is usually defined, reflects global rather than local conservation values. Therefore, there is a need to consider what forms of external support local user groups need in order to be able to accommodate such broader values. This issue, and the related argument that community forestry interventions should give greater weight to conserving the attributes of forest resources that local people value and seek to conserve, is discussed further in Part 3.

Market-related disincentives to manage collectively

In principle, by giving added value to forest products, market opportunities should increase the incentive to control the use and management of forest resources. In practice, market forces can also result in intensive pressures on collective management systems. Thus, the Mexico experience shows that opportunities to use the resource for commercial ends are likely to introduce potential conflicts between the pursuit of profitability and the welfare objectives of collective control of forests. In the process, market forces are likely to increase the transaction costs associated with maintaining a collective management system.

Where market opportunities lead to greater pressures on the resource from users both inside and outside the user group, increased conflicts of interest are likely to arise, as has been seen frequently in the case studies in West Africa, making the process of control more difficult. This can cause breakdown of the mechanisms for exclusion and control, leading to overharvesting and degradation of the resource. More complex controls and institutional measures are then likely to be needed, if collective control arrangements are to be able to cope with the increased pressures (Thomson, 1992).

It has been argued that, given these features, collective management is best suited to meeting subsistence demand, rather than production for the market (Baland and Platteau, 1996). Nevertheless, there are

many functioning commercial activities based on collectively managed forest resources. A study of factors explaining the ability or the failure to adapt collective management systems to deal with producing for the market, as well as for subsistence needs, concluded that: "Communities who seem best able to adapt to commercialization are those with flexibility in determining whether to participate, which allows control over the degree of change, or those in which change has been less rapid" (McElwee, 1994). The greater resilience of the longer-established chicle cooperatives in Quintana Roo, by comparison with the newer *ejido* timber enterprises, when confronted with recent market liberalization policies, appears consistent with this finding.

In some situations, more complex mechanisms that can cope with additional dimensions have been successfully developed. In some, these involve setting up separate arrangements for the subsistence and commercial activities based on a collectively controlled resource. In the Sukhomajri project in the Shivalik Hills in northern India, for instance, fodder grass for local self-use is protected collectively and distributed to all member households, while the rights to commercially valuable bhabbar grass are auctioned to private contractors (Saxena, 1997). In the Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) programme in Zimbabwe, communities have formed joint ventures with the private sector to get access to the specialized safari and hunting skills and experience needed to generate commercial revenues from the wildlife resources that they manage (Murphree, 1996). In



Some communities have formed joint ventures with the private sector in order to generate commercial revenues from wildlife resources.

others, marketing (and sometimes production) has been handled by cooperatives of one kind or another. Nevertheless, the recent developments in community timber production in Mexico show how the need to compete with modern-sector producers can accelerate a transformation from collective to private control.

TRANSFERRING EFFECTIVE POWER

One of the most frequently expressed concerns about initiatives to devolve authority to manage forest resources to local bodies is that, in practice, many of them fail to transfer real, or sufficient,

power and authority to those expected to take on the responsibility for forest management. Policies and programmes that actually empower local people to make decisions and set objectives, or at least to have a genuine role in decision-making, are rare. As a result, collective or joint management does not achieve a real transfer of power, which effectively remains centralized (Fisher, 1999).

This can come about for various reasons, but the most common is inability, or unwillingness, on the part of governments to let go. This may be because insufficient attention has been paid to the conditions under which devolution of authority can be accomplished successfully. Devolution involves the willingness of central authorities to give up power to those at the local level, a course of action that often clearly presents difficult choices. In the forest sector, as has been pointed out in commentary on the process in Nepal, “a major problem is that the organization which has been given the responsibility for devolving control of forests to local communities also represents the interests of those who have most to gain by maintaining control of the forests themselves. The Forest Department is being asked to use its authority to give away its authority!” (Gilmour and Fisher, 1991).

Devolution is more likely actually to take place when it provides a strategy whereby central government can pursue its goals more effectively than at present (Agrawal and Ostrom, 1999). As was mentioned in Chapter 1, it is noteworthy that the coun-

tries where collective forestry is most developed (and is strongest) such as India, Nepal and Mexico, tend to have been those that recognized that their existing forestry strategies and practices were failing to conserve essential functions associated with forests, and to contribute to key national objectives, such as rural development, and those where governments had determined to rectify the situation.

Similarly, devolution has been pursued where it has been seen as a less costly strategy for maintaining sustainable forest management at a time when central budgets are shrinking. More proactively, it can be pursued as a means of increasing the influence of the central State at the local level by inserting its presence into the mechanisms of local governance. Devolution is also likely to be favoured where local interests and the interests of the devolving authority are compatible.

There are also several factors that cause devolution not to work satisfactorily in practice. One is that other interests may prove to be stronger than those favouring transfer of control of forest management to local user institutions. In Thailand, for instance, although a logging ban had reduced the commercial and revenue arguments in favour of central control of upland forests, the growing strength of environmental interests, concerned about water supplies for Bangkok, resulted in stricter protective regimes that have hampered rather than strengthened moves towards empowering communal management in these forest areas (Vandergeest, 1996; Wittayapak, 1996).

For there to be actual devolution of authority requires the transfer of significant property rights, though not necessarily rights of ownership, as has sometimes been argued (Agrawal and Ostrom, 1999; Baland and Platteau, 1996). Even where this has been specified in devolution policies, it has often failed to materialize in practice. For instance, policy provisions have not been followed through with the necessary changes in legislation and institutional structures. Though some progress has often occurred without such changes (Fox, 1996), without legislation that provides authority to government agencies and communities to generate and implement the necessary rules, regulations and operational measures, local forest management can be challenged in courts of law, and local groups can encounter difficulties in asserting their rights. Such problems are often aggravated because the legal base is weak and confused. In most countries, Western tenure and more recent systems designed to transfer control over land from local to the new political élites, coexist with community systems, undermining the latter but seldom providing a satisfactory alternative because they are not enforced. This causes confusion, because the legal status of land and forest resources becomes unclear, and this can mean that people can be faced with different fora for settling a dispute under different legal systems (Bruce, 1999).

There have often also been shortcomings in the processes undertaken in order to enable local people to participate in decision-making. The concept of participation, in the sense of ‘having a share or taking part’, has been central to the main thrust of

community forestry. It embodies the underlying aim of ensuring that those who are ‘dependent’ on the forest or its products have a commensurate say in decisions about how it should be used, and an equitable share in its benefits. But participation has been primarily a donor objective, not always shared by governments of *rentier* States without much incentive to stimulate the rural sector. Nor has its pursuit always reflected the realities of the conditions of profound political imbalance within which it is intended that such participation by the weaker segments of society take place (Brown, 1999).

The result has frequently been ‘participation’ that is more apparent than real. ‘Participatory’ mechanisms emerge that enable forest departments to create local partners that become their proxies, rather than representatives of local users able to challenge their actions when necessary (Hobley, 1996). People may acquiesce in such changes, because they have no choice to do otherwise, but they are not empowered by them (Ribot, 1999).

As has been seen in most of the case studies reviewed above, forest departments all too often remain as active (and frequently dominant) partners in local forest management, acting as stakeholders with material interests in the resource as well as government regulators. This frequently results in their prescribing rules and regulations that limit the rights and benefits of user communities and that effectively circumscribe the authority and freedom of the recipients to act (Ribot, 1999; Brown, 1999; Hobley, 1996).

This is likely to undermine the very process of empowering a local institution to deal with its particular situation. Pre-set formulaic rules are unlikely to match the needs of many of the groups to whom they are applied. Rules that cannot be altered by a group can freeze a continuously evolving relationship between people and the resource they draw upon at a particular point in time, preventing its adaptation to further change (Hirsch, 1997). Even in Nepal, considerable disagreement and friction still exist between user groups and the forest department over the rules laid down and monitored by the latter (Shrestha, 1996).

Nor is it just the continuing involvement of the forest department that can affect the extent to which real power over use of forest resources accrues to local users. Others wishing to have a say may include other branches of central government, local government, forest industries and commercial companies, NGOs and other forms of civil society with interests in particular environmental or developmental aspects of the ways the forests are managed and used, donors and international biodiversity interests.

THE SOCIAL AND INSTITUTIONAL FRAMEWORK FOR LOCAL COLLECTIVE MANAGEMENT

Implicit in much of the pursuit of participatory community forestry has been the assumption that the conditions of homogeneous communities that in the past often favoured collective management still

exist, or can be recreated (Campbell, 1990). As has become evident in all the cases reviewed, and from much other experience, this assumption needs to be critically reassessed.

In many situations, migration, market integration, changing attitudes, and differences in asset endowments and access to opportunities, have resulted in communities whose component parts have varying interests in the forest resources in their locality. In reality, communities are often internally differentiated by wealth, power, class, gender and ethnic identity, and are unlikely to share a consensus about how the forest should be managed and used. There can be conflicting interests among the poor between pastoral and settled users, between landed and landless, and because of gender. The need of the poor for continued access to a common pool biomass resource to help sustain predominantly subsistence-based coping strategies can increasingly conflict with the interests of those who are better off and who wish to privatize forest output flows in order to benefit from the opportunities that increasing commercialization of forest products presents, or of those who seek to privatize the land and put it to non-forest uses. All too often, control over access to the forest resource is captured, or usurped, by an emergent élite within the broader community.

Securing the rights of access of the poor to forest product resources in such fractured and often conflict-ridden communities has proved problematic. Exercises in participatory appraisal, relying on methods such as Participatory Rural Appraisal (PRA), which



The particular needs and constraints that women face with respect to access to forest products and control over tree resources are all too often neglected.

are likely to reflect disproportionately the views of the vocal and the powerful, run the risk of failing to represent equitably the interests of those who do not have an effective voice (Brown, 1999). Moreover, participatory models based on assumptions of social and cultural homogeneity can be at variance with the reality, for example, of the scope for women's participation. Equally, attempts to recreate, or build upon, collective systems with their origins in the past run the risk of perpetuating relationships that are not consistent with contemporary values with respect to gender or class (Hobley, 1996).

Almost everywhere, the interests of women are inadequately heard or acted upon. Prevailing cultural attitudes and forms of local governance generally mean that decisions are made by men and therefore

frequently reflect the views and interests of only the male members of households. Even where community forestry programmes require that women be represented in local user group institutions, this does not necessarily result in their being able to effectively voice their concerns where custom and practice militate against women engaging in the work of such communal institutions. As a result, the particular needs and constraints that women face with respect to access to forest products and control over tree resources are all too often neglected.⁸

Another issue that emerges strongly from much of the experience that has been documented is that of

⁸ For community forestry publications on gender issues, see Wilde and Vainio-Mattila, 1995; Rojas, 1994; Rojas, 1989; and Clarke, 1987.

the difficulty of creating, or maintaining, in heterogeneous populations, a local institution capable of taking responsibility for the management of the resource. Earlier systems of control and management at the community level have often become eroded or broken down by the pressures brought about by change, or represent only some of the stakeholders with claims on the resource. The high transaction costs associated with organizing in order to take on such responsibilities anew within fragmented communities can mean that people are reluctant to do so, often preferring to leave it to forest departments to manage the forest, or to allow the forest to become an unregulated open access resource (Shepherd, 1992).

Equally widespread is the problem of local institutions that, in practice, prove not to represent the interests of their constituents. As was noted in the section on West Africa, traditional leaderships can pursue agendas that focus on their own rather than the community's interests. Even in the programme of ancestral domain certification in the Philippines, which was designed specifically to restore local rights and authority to indigenous peoples, one of the main constraints to progress has proved to be community groups' lack of trust in their leaders (Hilario and Sabban, 1997). Devolving control or decision-making powers to bodies that do not have accountable leaders is likely to give power over the resource to particular individuals or groups of individuals within the community, effectively privatizing use rights in their favour. It thus risks defeating the social objectives of community forestry.

As was seen in much of the case-study material, local government institutions have often also proved to be unsatisfactory as a basis for local forest management because of their predominantly political and bureaucratic agendas. This can make them more responsive to the concerns of the administration than to the needs and wishes of their constituents. Local government bodies also generally cover much larger areas and populations than a forest user group, and may lack the technical knowledge or the resources to control forestry activities. This proved to be the case, for instance, when the central government in Bolivia devolved responsibility for forestry to municipal governments (Kaimowitz *et al.*, 1998/1999).

Thus increasingly it has become recognized that community-wide institutions, favoured in so many early community forestry programmes, may not be the bodies best suited to manage directly situations characterized by several different groups of users with conflicting claims on local forest resources. One response has been the move to smaller, more homogeneous groups that are better able to secure consensus, such as the FUGs in Nepal and the cooperative *groupements* in some West African countries. However, smaller groups are likely to have fewer resources and less leverage in accessing the support available from the State. If divorced from the formal institutional infrastructure, they may also risk being seen to lack legitimacy. One solution can be to 'nest' local user group organizations within a hierarchy of organizations that between them can provide these facilities and

services (Ostrom, 1999). In some JFM programmes in India the VFCs have this kind of linkage to the *panchayats* within which they are located. Forming associations of user group organizations, such as FECOFUN in Nepal and the 'forestry civil society' associations in Mexico, can be another way to give small groups greater strength and access to support and external partners.

Another approach focuses on ways of creating better systems of negotiation and mutually acceptable collaborative use among different stakeholders within larger, more heterogeneous user communities. Not all forms of difference among users are inimical to effective joint use (Ostrom, 1999; Baland and Platteau, 1996). Thus, successful FUGs in hill areas of Nepal have been found to be able to craft innovative institutional arrangements that enable those with different interests to participate in different ways (Varughese, 2000).

The increasingly fractured social context within which community forestry functions has led to a situation in which increased attention is being paid to mechanisms for conflict management. Competition for forest resources within and among communities has always generated conflict, spawning mechanisms such as local tenure systems and dispute resolution fora to address such matters. Increasingly, conflicts have also arisen between communities and government agencies, businesses, conservation organizations, development agencies and other entities over access to, and use of, forest resources. Recent policy trends, such as decentral-

ization and economic restructuring, have brought forth new conflicts, as communities and their members pursue new opportunities. Early interest in addressing conflict issues focused on negotiation and mediation as useful tools, as these were seen to be especially compatible with community forestry because of its concern with participatory processes, equity issues and strengthening of local capacity. However, experience has underscored the role of other approaches, including coalition building and litigation, in dealing with conflicts (Buckles, 1999).⁹

In recognition of the growing complexities involved, it has also been suggested that relationships among the different parties with an interest in a forest be based not on new community-wide bodies, but on existing local 'social capital'. This term has come to be used to describe the networks, norms and trust built up within a society that facilitate cooperation for mutual benefit (Putnam, 1993). The concept has attracted strong interest in recent years because of the contribution that such social capital can apparently make both to effective government and to economic development (Harriss and de Renzio, 1997). Most rural communities function through a range of overlapping local institutional forms, such as tenurial niches that provide rights of access to the resource, kin-based claims on labour to work the resource, and trading networks for marketing. It has been argued that it can be more logical and effective

⁹ For applications to community forestry, see Bruce, 1999; and Pendzich *et al.*, 1994.

to negotiate and monitor forest management and use through such existing arrangements than to try to create new, single community-wide institutions (Leach *et al.*, 1997).

However, such social capital is less likely to exist in the recently settled communities often found in, or adjacent to, forest areas (Hirsch, 1997). Attempts to create social capital in such situations can encounter the same difficulties as those that arise in creating VFCs; it can undermine or subvert existing vested interests and consequently may not be effective as a mechanism through which all parties are prepared to work.

Underlying such moves to refine approaches to local collective management and control has been growing recognition of the need to rethink the rationale behind the current focus on 'community' as a vehicle for development and change. Agrawal (1999) has pointed out that, as recently as the 1950s and 1960s, when the pathways to social change and modernization appeared to be more clear cut, communities were seen as "repositories of tradition and an obstacle to 'progress'". The subsequent shift away from this perception of community accompanied growing recognition that the earlier development theories with which it was associated were proving to be flawed. Therefore, we need to be sensitive to the danger that the current perception of community as possessing many attributes favourable to development may also prove to be in need of revision (Agrawal, 1999).

It is also important to recognize the extent to which a community is as much a product of external influences as it is of common internal interests. The communities that collective forest management programmes are constructed around can easily be shaped as much by the procedures of the programme as by the attributes of the people and their location. As a programme takes root, and people develop interests in what it can deliver, the definition of 'community' that it introduces can take on a life of its own, influencing future developments (Sundar and Jeffery, 1999).

Such discussion about the community context of community forestry has made it increasingly evident that it can be counterproductive to consider community management as necessarily an either/or alternative to private and State management options. Given the reality of multiple stakeholders with an interest in forests, it is often more likely that appropriate solutions could incorporate components of more than one form of tenure and management.

As it has become increasingly clear that community forestry can encompass a complex of different interests both within the local user community and among multiple stakeholders with some claim on the resource, so attention has shifted towards more pluralistic approaches and mechanisms that are designed for conditions in which two or more groups, principles, sources of authority, etc., coexist. Key elements of pluralism in the context of

sustainable forest management are summarized in Box 11.¹⁰ In essence, the new focus is pursuing three areas of improvement: a more acceptable balance between forest departments and other stakeholders; frameworks for negotiation, planning and management that provide equal participation by all; and methods of management, conflict resolution and monitoring that can accommodate different objectives and measures of performance and adapt to them (Anderson *et al.*, 1998).

A number of techniques are evolving to address the analytical and operational challenges that accommodating multiple interests raise in forestry (Vira *et al.*, 1998). These include: 'stakeholder analysis', which identifies the key stakeholders in the system and the nature of their respective interests (Grimble and Chan, 1995); the '4Rs' approach, which defines stakeholder roles in terms of their respective rights, responsibilities, revenues/returns from the resource and relationships (Dubois, 1999); the 'environmental entitlements' approach, which tracks people's access to, use of and transformation of environmental goods and services (Leach *et al.*, 1997); and 'adaptive management', which accepts site-specific differences and the need for continuous testing, feedback, appraisal and revision (Lee, 1999). Though such innovative approaches offer promise, not enough experience in applying them

¹⁰ The subject is extensively reviewed in *Unasylva*, 49(194). A more complete set of papers on the subject, from a 1997 International Workshop on Pluralism and Sustainable Forestry and Rural Development, is in FAO, 1999.



Different groups have, and always will have, different positions, opinions and objectives on sustainable forest management and rural development.

has accumulated yet to allow conclusions to be drawn as to what will succeed. Consequently, at present, the more innovative and forward-looking collaborative programmes contain a substantial element of experimentation, as is further discussed in Chapter 4.

To recapitulate, progress with collective management and co-management of forests has often been substantial. However, it is sometimes constrained by insufficient information about the conditions

Some key elements of pluralism in sustainable forestry and rural development

BOX 11

- Different groups have, and always will have, different positions, opinions and objectives on sustainable forest management and rural development.
- Groups are autonomous and independent.
- There is no single, absolute, universal and permanent solution to any substantive natural resource management problem; for any given land unit there is no single, absolute, sustainable management land use scenario (there are numerous 'sustainable scenarios').
- No group/organization can claim a superior or absolute scenario; sustainable forestry and rural development decision-making is no longer the sole mandate of expert authorities.
- A system of organizational checks and balances is central for avoiding errors of a narrow, single-entity management system; this is the positive aspect of 'bounded conflict'.
- Conflicts are inevitable and cannot be resolved, but they can be managed.
- Equity in decision-making is a distant, but worthy, ideal.
- Platforms, mediators and facilitators are often needed to provide the conditions for negotiation and cooperation needed for sustainable forest management.
- Communication is essential and helps participants to better understand their differences.
- Consensus is unlikely, but progress can be achieved without it.
- Approaches to sustainable forest management that aim at consensus are often misguided and unsustainable.
- Proactive approaches and new processes of sustainable forest management decision-making in pluralistic environments are emerging; more experience is needed.

Source: Anderson *et al.*, 1998

under which it could be appropriate, or about how to implement it in the often complex conditions of multiple stakeholders. In this connection, it is important to recognize that there can be limits to collective action. Not all situations where there is the need to strengthen the position of local users of common pool forest resources are amenable to improvement in this manner. Where this is not an

appropriate way of strengthening the position of local users, alternative approaches, such as targeting weaker interest groups, may be more effective and appropriate (Leach *et al.*, 1997). It may also be, as pressures on collective systems mount, that more users will need to shift towards community forestry forms involving individual control and private rights, which are discussed in Chapter 4.



CHAPTER 4

Smallholder management

People's involvement in forest management as individual smallholders or households, rather than through collective bodies, is concentrated in the management of trees as part of, or in conjunction with, farming, and in small-scale commercial processing and trade of forest products. This chapter examines these two forms of smallholder management, but first considers the limited experience of management of forests at the household level.

Smallholder management of forests

As noted at the beginning of the preceding chapter, many situations exhibit features that favour management of forests on a scale too large to be easily handled by individual households, and are therefore more logically managed by a group of users, or by the State, or by a combination of the two. For example, the forest may need to be managed as an ecosystem rather than as a small plot; there may be pronounced economies of scale in some aspects of forest management and use, or more than one category of user with claims upon it; or there may be ecological and other 'externality' values involved. Such factors are likely to create constraints to efficient management of forests at the smallholder level. Management at this level is consequently found in only a few situations.

To date, privatization of public forests to individual households has occurred on a large scale primarily in countries in transition from socialist systems. By far the largest initiative to encourage smallholder households to take on responsibility for management of existing forests in developing countries has been that in China. In the early 1980s, the agricultural 'responsibility system', under which cropland under collective control was distributed among the member households, was extended to forest lands under collective control, on the grounds that household management of forest resources would be more efficient. Sometimes this involved transfer of ownership; more frequently it took the form of transfer

of usufruct rights to income flows and trees, with the land remaining under collective control. Generally, it was confined to plantation forests that had been established to provide non-timber products, to fuelwood forests, and to small patches of timber forests not suitable for collective management (Dachang, 2001).

After the transfer of forest resources, there was at first a marked decline in growing stock, even in area under forest. As this trend was later reversed, it appears that it was mainly the result of farmers' initial uncertainties about the security of their tenure. It is argued that, because of repeated earlier policy changes, farmers felt that their new rights could be reversed, and they seized the chance to exploit the resource while they could (Dachang, 2001).

The early destocking led in 1987 to a ban on further transfers to household control, and some local governments decided to restore collective management. Nevertheless, most of the area originally transferred has remained under household management. However, evidence has been accumulating that the fragmentation of forest resources to numerous smallholdings has increased the cost and difficulty of silviculture, protection and logging, adversely affecting the cost-efficiency of forest management. In response, there have been moves by both government and farmers to restore some of the economies of larger scales of working through various types of shareholder schemes. These take several forms, but in essence, all involve reverting to some form of collective management, with the contributing households benefiting in proportion to the share of pooled

land, use rights or other inputs that they contribute. In practice, therefore, some of the forest that had passed into household control is now again managed collectively, but in ways that should make those who now have property or use rights in the resource more directly involved in decisions about management and benefit distribution. It is reported that group management schemes initiated by farmers are generally proving more successful than those initiated by the government (Dachang, 2001).

Arguments that individual, private management of forests is more efficient have led to some devolution to this level in other countries as well. In 1997 the Government of Zimbabwe, for instance, made a policy decision to privatize woodland as well as arable land in resettlement areas, in response to arguments that this would result in a less destructive use of the resource (Goebel, 1999). However, the debate on smallholder management so far seems not to have sufficiently addressed counterarguments in favour of collective control, some of which have been reinforced by the experience in China. These include: the diseconomies of small scale associated with management of many forest types and outputs; the danger that smallholder owners will lack the resources to be able to conserve and manage a forest resource; the pressures to overuse forest resources when their full value is not reflected in market prices; the poor record of private owners in managing in an environmentally sound manner; and the likelihood that there will not be enough land for all those who presently draw upon the forests as a common pool resource, so that many will be left worse off by privatization (McKean, 2000; Bromley and Cernea, 1989).

Smallholder management in forest fringe areas

Farmers living in, or on the edges of, forest areas often develop tree management systems based on components of the forest. This can take the form of retention of parts of the forest cover, within or adjacent to areas put under crops, to be managed for particular products, or enrichment of the forest to increase the density of tree species of value. Prominent examples of enrichment systems include the açai and babaçu palms in parts of the Amazon basin (Anderson and Ioris, 1992; May *et al.*, 1985), indigenous fruit species in the forest belt in West Africa (Falconer, 1990), and



An experiment to reproduce wild fruit-trees in Brazil. Farmers in forest areas often develop tree management systems based on components of the forest.

various species and products in the forest zone in Southeast Asia (Michon and de Foresta, 1999).

In the Amazon, and elsewhere in Latin America, there has been a rise in recent years in smallholder management of timber as part of such systems (Wentzel, 1999). In addition to the common practice whereby smallholders occasionally harvest timber trees from the forest cover on their land, there is growing evidence that households practise longer-term management of forest plots for valued timber species, and that smallholders plant selected timber species within managed patterns of forest fragments, fallow and agriculture (Pinedo-Vasquez *et al.*, 1998). Although some studies emphasize the



Smallholder timber forest management for commercial purposes has proved to be viable on scales from as little as 20 ha in Ecuador.

low productivity of such systems, it is reported that smallholder timber forest management for commercial purposes has proved to be viable on scales from about 40 ha in operations in Brazil, from 20 to 30 ha in Costa Rica, and from as little as 20 ha in Ecuador (Wentzel, 1999).

In the outer islands of Indonesia, which contain some of the world's main concentrations of long-standing agroforest systems derived from a forest base, cinnamon, illipe nut, rattan, rubber, damar (resin), fruits such as durian, and even some timber species, are among the more important products cultivated in this manner. Such agroforest products can provide much of the income of the producing households. Some may be managed as semi-permanent tree crops, or as enrichment planting in semi-managed forest gardens around settlements, but most form part of long fallow rotations, alternating and intercropped with agricultural crops and often incorporating an understorey of other plants of value that increase the overall productivity of the system (Michon and de Foresta, 1999).

These agroforest systems often occur in areas in which village lands and surrounding forest lands have traditionally been managed as common property, with smaller extended family groups controlling access to planted trees that is based on descent from the earlier planters, and with individuals having private property rights to trees they have planted. As the commercial importance of products increases, rights to use particular trees controlled by descent groups is often vested in individuals, if only temporarily, in order to facilitate timely decisions on

harvesting and marketing. Therefore, a combination of communal and private rights can prevail at present (Peluso and Padoch, 1996).

Such systems continue to evolve and change in response to changing demands, shifts in access to markets, the availability of alternative sources of income and employment, and growing restrictions on resource availability. Increased prices for some smallholder products, as rural forest areas have been opened up, have led to their being exploited at rates in excess of what can be sustained by the production system, so that over time they are declining or are being replaced by plantation sources. The opening up of forest areas, and the emergence of new activities such as logging, also offer rural people alternative ways of diversifying out of predominantly subsistence activities. With more people leaving villages for wage employment, there are fewer to maintain labour-intensive agroforestry production systems (Peluso and Padoch, 1996).

In some places, such systems are also being eroded by competing claims on the forest and the land over which local people have had historic *de facto* rights. Forest is being cleared to make room for growing populations and migrant settlers. Increasingly, areas of remaining forest are being allocated by the government to logging concessions, which can overlap with the areas used by local people for forest gardens. Where the species managed for smallholder products also have timber value, they are likely to be harvested as timber, as has been the case with Shoreas which produce illipe nuts (Peluso, 1993).

Thus, though increased market demand can mean that the agroforestry systems become more important parts of smallholder livelihood systems, some of the changes taking place are also putting them under threat. The systems are little understood, and suffer from lack of formal recognition of customary rights. Compared with agroforestry tree planting within farm landscapes, such agroforest systems within forest areas have received little attention, and there is a risk that this important form of community forestry will decline as a result.

Planted trees in farm landscapes

Tree planting by farmers appears to be increasing in a wide range of situations. Tree growing generally increases as people move towards more intensive agriculture and land use, and as access to natural tree stocks declines. Within most systems there also appears to be a general progression over time towards more 'planted' trees, as agriculture intensifies and existing tree stocks diminish (Arnold and Dewees, 1997; Warner, 1993; Shepherd, 1992).

The reasons for this vary. One widespread shift that has contributed to it appears to be the emergence of labour as a limiting factor in agriculture in many rural situations, as more people seek work off farm and fewer children are available for farm work because they are at school. As tree growing is less labour intensive than most agricultural crops, this



Fewer children are available for farm work because they are at school. This can contribute to an increase in tree growing, which is less labour intensive than most agricultural crops.

fact, together with the related increase in the role of income from non-farm sources, has encouraged increased use of trees (see Box 12). Where constraints on the availability of capital prevent or limit the purchase of inorganic fertilizer, or construction of soil protection structures, there is often increased reliance on trees to help maintain site productivity. Farm trees generally also have a role in diversifying the farm economy, helping to even out seasonal peaks and troughs in output and demands on labour, and providing protection against damage from wind, water and sun.

As a rule, most farm-level tree management is conducted primarily to meet household needs. Trading

in tree products usually develops as local markets for fruits, fuelwood and other tree products emerge; as shortages develop; as increasing demands on the time of household members leave less time for gathering what is needed to meet household needs; and as rising cash incomes allow some the option of purchasing rather than gathering or growing. Households that are managing tree stocks in order to provide themselves with such products will sell what is surplus to their needs, to exploit the opportunity to generate additional income. Production for urban and industrial markets is more likely to be practised by farmers in areas where the process of agrarian transition has evolved towards greater involvement in commodity markets and an entrepreneurial approach to agriculture based on cash crops (Arnold and Dewees, 1997).

CONTRASTING FARM FORESTRY PROGRAMMES

In practice, though, much of government and donor support for tree growing by farmers has encouraged growing for the market. In one of the largest farm forestry support initiatives, the Social Forestry programmes of the late 1970s and 1980s in India, although the intention of the farm forestry initiative was to focus on meeting household needs for fuelwood, in practice most planting that has taken place has produced wood products for sale. This reflected a strong extension presence by forest departments, pressures on them to achieve ambitious targets for numbers of seedlings raised and distributed (which led them to focus on a few known industrial forestry



Trees and land and labour allocation

BOX 12

Supply and demand for land and labour interact in a number of ways that can influence the decision of households to cultivate and manage trees on their holdings.

- As tree planting and husbandry requires less input of labour than most other crops, it may be seen to be a feasible land-use option when the opportunity costs of labour are high because there are good wage opportunities in other labour markets.
- Problems with hiring and supervising labour can act as incentives for households to plant or to maintain trees instead of other, more labour-intensive crops.
- Older households, with a smaller resident active labour force on which to draw, may adopt less labour-intensive forms of land use, such as tree growing.
- Trees may be planted by households with access to sufficient income from non-farm sources, which consequently have less need to cultivate their land intensively.
- The quality of land within a holding, as well as across holdings in a given agro-ecological zone, may vary greatly. Trees may be planted in those areas which would require most labour to cultivate in order to even out labour demands.
- Trees may be planted and maintained as an alternative to sale of land that is surplus to the household's immediate needs in order to retain resources that can be passed on to the next generation. Tree growing may also be preferable to renting out surplus land because the latter might jeopardize the tenure holder's long-term rights of ownership.

Source: Adapted from Dewees and Saxena, 1997

species, particularly eucalypts), cash subsidies for planting in many of the states, and information about prices that made tree crops seem more attractive than agricultural crop alternatives on some sites.

However, after the first growing cycle, eucalypt growing was discontinued by many farmers due to costs that were higher than anticipated, lower crop

yields in the vicinity of the planted trees, falling output prices as the additional supplies created an imbalance with demand, and uncertainties over yields and markets. Farmers' access to markets was adversely affected by government controls on private production and transport of wood products, government sales of pulpwood at administered prices, and price controls on domestic fuels (kerosene and gas)



Building a house with eucalypt poles.

that kept fuelwood prices artificially low. Small producers proved to be at a further disadvantage in selling to industrial and urban markets because the size of supplies from State forests and plantations often enabled them to capture advantages of scale in the negotiation of prices and in marketing agreements. Industries and traders preferred to buy from a few large suppliers rather than from a multitude of small, dispersed producers.

In some areas adjacent to urban and industrial markets, farm forestry has continued to be profitable, and in some situations trees have become a major crop. In general, though, eucalypt planting proved to be a viable option mainly for wealthier farmers who had more land and more assets, faced shortages of labour and problems of supervision, and had diversified sources of incomes (Saxena, 1992).

In contrast, fewer projects have focused on strengthening the multispecies, multiple-product strategies found in many existing small farmer systems. One that has done so was a Cooperative for Assistance and Relief Everywhere (CARE)-supported project in an area in western Kenya, where on-farm tree planting and management had become progressively more intensive with the transition to permanent cropping, the disappearance of communal tree resources and the rise of local cash markets for fuelwood, poles, seedlings and fruit. Planting of trees was historically in underused parts of the farm, such as areas around homesteads and along field pathways and borders. During the period from 1985 to 1989, a farmer-responsive extension service substantially increased the 'menu' of tree-related options available to households, and farmers responded by employing a larger number of

different tree species and management practices. Cropland became the dominant site for tree planting, and building poles replaced fuelwood as the principal use, with green manure, fruit, shade, medicinal products, timber and stakes as other uses.

The predominant reasons why farmers increased the numbers of trees and the land area in trees, under conditions of increasing land scarcity, appear to have been to obtain critical consumption goods that would otherwise have to be purchased, to diversify their sources of cash income, and to protect food security in the face of declining crop yields. While the initial focus was on self-sufficiency objectives, interest quickly turned to commercial opportunities, with consequent demand for greater assistance with marketing (Scherr, 1997).

REFOCUSING SUPPORT STRATEGIES

Recent work in Central America has similarly concluded that, for the majority of farmers for whom farm trees mainly serve a self-sufficiency role, support should focus on helping them move forward incrementally by providing information about unfamiliar species and planting configurations (Current *et al.*, 1995). It also supports the view that the earlier focus on intervening primarily to stimulate an increase in supply of tree products is insufficient, and may be wrongly focused. There is evidence that planting subsidies in some programmes lead to undesirable distortions in land use, such as displacement of sharecroppers and grazing, and reduction in

smallholder subsistence production of food crops to the point where household food self-sufficiency levels could be adversely affected (SIDA, 1990).

It has been argued that more attention should be paid to matching production with demand (Arnold and Dewees, 1997; Current *et al.*, 1995). In particular, higher priority should be given to changing policies and practices that presently constrain farmers' access to markets and depress market prices for their tree products. Private producers are frequently subjected to costly controls on harvesting, transport and sale, which are designed to protect against illegal felling for sale from State forests, or to control competition with timber production from the latter. In China, this kind of heavy regulation seems to have discouraged farmers from planting timber species, contributing to a shift towards non-timber forest product species on forest lands that have been transferred to household control (Dachang, 2001).

It is frequently argued that investment in a relatively long gestation crop, such as trees, requires the security of tenure provided by having title to the land on which they grow. However, it appears that, rather than the form of tenure, what usually seems to be important is people's sense of security that they have assured access to the fruits of their investment within whatever system of land tenure they are located (Fortmann, 1985). Though there are situations where title to the land is needed (for example, when it is necessary to take out a loan) and some tenurial conditions (such as sharecropping or uncertainty over the state of landowner claims to tree-bearing land) that will preclude tree growing, farm-



A farmer transporting tree seedlings for planting on his land.

ers' decisions about growing trees are usually found to be influenced more by economic than by tenure considerations (Current *et al.*, 1995; Shepherd, 1992; Godoy, 1992).

Trees as contract crops

Forest industries in many parts of the world draw a large part of their wood and fibre raw material from small growers, generally farmers, under some form of agreement. In some, companies acquire their supplies through trading intermediaries, and do not have a direct relationship with the growers. Others are initiatives of

the growers rather than the companies, such as the initiatives of cooperatives to create a collective marketing or processing channel for their outputs. Others involve companies contracting to rent land from farmers on which to grow trees, or contracting with farmers to grow trees on company or public land. Still others obtain supplies from nearby farmers who are linked to the company as 'outgrowers'.

The potential advantages of outgrower arrangements include the benefit to industry of limiting the need to invest in land, labour and the other costs of managing and harvesting a forest resource, and the benefit to growers of an assured market and access to technical services. For the farmers, it can provide assured and equitable access to markets, as well as access to technical support and credit.

However, the development of such arrangements in developing countries has been limited. Well-developed outgrower programmes, usually set up by pulp and paper companies for farmers to grow pulpwood for them on their farms, exist in South Africa and the Philippines, and on a smaller scale in Brazil and India and elsewhere (Desmond and Race, 2000; Clarke *et al.*, 1997; Roberts and Dubois, 1996). Some of these have achieved a considerable measure of success in delivering benefits both to the growers and the company.

For such outgrower arrangements to function satisfactorily, there needs to be a balanced and equitable relationship between the producers and the company (see Box 13). The arrangement also needs to be

consistent with the needs and possibilities of both sides. Outgrower schemes become attractive to a company when they can supply wood at lower cost than the alternatives, often in situations where costs can be influenced by indirect factors associated with the holding of land and employment of large labour forces. Thus, issues of land tenure, good neighbour relationships and labour management can be important.

Tree outgrowing can be appropriate for smallholders when they have sufficient annual income from other sources to secure their ongoing needs, and when the land that they can use for trees is not needed for food crop production or for other basic needs. Tree growing is likely to be attractive when the features of an assured market and access to technical advice and inputs make tree crops a more stable source of income than alternative uses of the land.

These features, and the probable need to have title to their land to be eligible for a loan, indicate that tree outgrowing is unlikely to be feasible for very small or poor farmers. As was found to be the case with contract farming of agricultural tree crops, it is more likely to attract the 'middle peasantry' among smallholders (Baumann, 2000). Outgrower schemes that have failed have sometimes done so because they have attempted to introduce tree crops to farmers for whom they were not suitable for these reasons.

In areas where tree outgrowing is well established, there are often other programmes for farmers who cannot, or do not wish to, enter outgrower contrac-

tual arrangements. In South Africa, for instance, smallholders growing black wattle can market it and get technical support through a wattle growers' cooperative (Clarke *et al.*, 1997). In the Philippines, the company operating the outgrower programme also has a programme for those without title to land to grow trees under contract on company land (Arnold, 1997).

In recent years, there has also been a revival of interest in developing schemes to enable farmers or the landless to grow trees on public land. In the past, a number of countries ran *taungya* programmes, under which farmers were temporarily allocated plots on public forest land on which they were allowed to cultivate agricultural crops between



Eucalypts grown for industrial users. Forest industries in many parts of the world draw a large part of their wood and fibre raw material from small growers, generally farmers.

Framework for assessing forestry outgrower schemes

BOX 13

PRINCIPLES

These include:

- mutual acceptance of each partner's aims under the arrangement;
- a fair negotiation process in which all partners can make informed and free decisions (including allowance for a third party to negotiate on their behalf);
- the realistic prospect that all partners can derive benefits proportional to their contributions and risks; and
- long-term viability and commitment of partners to optimize the returns from the arrangement, in terms of commercial, socio-cultural and environmental attributes.

CRITERIA

These include:

- a positive local socio-cultural, policy, economic and environmental context in which all the principles noted above can develop;
- partners who are willing and able to contribute to arrangements within the socio-economic and environmental parameters of their household/business

over the contractual period, with opportunities for renegotiation or inherent flexibility within contracts (i.e. partners need to avoid high-risk arrangements);

- arrangements that are formalized (i.e. have legal status), with clear details of when and how multiple benefits can be arranged (e.g. collection of non-timber forest products, grazing, intercropping), contracts can be nullified, and compensation would be forthcoming (it would also appear useful for a credible and independent third party to be nominated to arbitrate if disagreement arises); and
- partners who have access to accurate, in-depth and independent information on:
 - likely short- and long-term prospects (with contingency scenarios explored if arrangements are nullified);
 - current and likely long-term viability of prospective partners; and
 - likely long-term context for local forestry development (e.g. market trends, product volumes and competitiveness, necessary infrastructure, government policy, code of practices, local sustainable forest management practices, landholder/grower participation and wider community support).

Source: Desmond and Race, 2000

rows of young timber trees for two or three years in return for planting and protecting the tree seedlings. If land was available, they could then move on to another plot, leaving behind a maturing tree plantation. This provided forest departments with a low-cost means of establishing plantations, and provided farmers with some access to land on which to produce food crops in situations where there was shortage of arable land. However, the lack of security for those participating in such schemes meant that they were attractive only where farmers had no other option. Over time, most have been abandoned, in recognition that they were fundamentally exploitative in nature. Those which survive, such as the *tumpang sari* system in Java, continue to suffer from the same limitations.

If the new schemes are to succeed, they will have to avoid the weaknesses of *taungya*. Most have focused on encouraging participants to use the land just for trees, rather than for trees and crops (sometimes because of the perceived risk that crops would strengthen farmers' claims to longer-term tenure of the land). But the intermittent nature of income flows from tree growing makes it an unsuitable basis for livelihood security for the poor. Such schemes are therefore more suitable for those who have other land on which they can grow food crops, or other sources of income to meet ongoing needs.

Where the land to be allocated previously had other uses, as was the case with the 'tree patta' leases on village land in India, other issues can arise. If there is insufficient cultivable land available to make it



Villagers working in their tree nursery.

possible to grant leases to all the landless in the community, problems of choice of participants arise. And those who do not benefit from the scheme are left with reduced access to the common pool resources on which they have depended for grazing, fuel, etc. In one of the most successful schemes, in West Bengal, farmers have been grouped together to grow trees on small plots of wasteland, which are then allocated to individual households. The farmers get long-term leases and are able to benefit from group economies of scale in planting, extension, protection and marketing.

In China, large areas of wasteland and degraded land have been allocated to households for use in creating tree plantations. Some of this land was allo-

cated as 'family plots': in these, the household acquired use rights and ownership of any trees it planted, but did not acquire ownership of the land. This has not proved to be a popular form of distribution, and there has been greater response to a parallel programme of leasing or contracting land to households that imposes no limit on how much the lessee can acquire. Planting is supported by loans rather than subsidies, and low-cost loans backed by funding from the World Bank have made tree growing a profitable activity for many. However, lack of subsidies restricts access by the poor. There are also concerns that the attractiveness of tree planting could be diverting land from agriculture (Rozelle *et al.*, 2000).

Given the large amount of non-arable wasteland present in many countries, the relevance of tree cover in keeping marginal and fragile lands in use, and the potential for tree crops to contribute to rural incomes, it can be expected that the search for viable schemes of this nature will continue. However, there is one feature of smallholder tree growing, on farms as well as on public lands, that needs to be kept in mind. To the extent that tree growing is expanding because of its efficiency as a use of resources in labour- and capital-constrained situations, it is to be expected that if these were to become more readily available the trend towards more trees would slow down or be reversed. If better-functioning factor markets were to enable farmers to purchase fertilizer and hire labour, for example, they would be likely in many situations to move back to more intensive uses of land.

Small-scale processing and trading of forest products

Forest products generate part of the income of large numbers of people and, for substantial numbers of people, they are a major part. In nearly every country where such information exists, small-scale forest product activities are to be found among the three largest categories of non-farm rural commercial activity, in terms of numbers of people engaged in them (Liedholm and Mead, 1993; FAO, 1987). For many, involvement in sale of forest products forms just one component of the overall activity of the household, frequently in conjunction with agriculture.

The large numbers of people who succeed in setting up new activities of this nature suggest that in general there is little need for measures to attract new entrants. However, high rates of attrition, particularly among new enterprises, indicate the need for interventions to encourage entrants to concentrate on the more viable and sustainable kinds and levels of activity.

As was pointed out in Chapter 2, the poorer people engaged in generating income from materials from forests tend to be concentrated in low-return product activities, many of which can offer no more than marginal, unsustainable livelihoods. This presents particular issues. Support to such activities, once higher-return or less arduous alternatives emerge,

could impede the emergence of better livelihood systems for the participants. Encouraging participation in production of products already facing saturated markets is also likely to result, at best, in redistribution among the poor (Haggblade and Mead, 1998). That being the case, it may be more fruitful to help people move into other, more rewarding fields of endeavour rather than seek to raise their productivity in their current activity. The alternatives may be other forest product activities, but they could equally well be activities not associated with forests or trees. In either case, care needs to be taken to ensure that future growth prospects are indeed better for the alternative product lines to which people are being encouraged to move (Arnold *et al.*, 1994).

In recent years, a number of initiatives have been launched to encourage trade in particular forest products for industrial or niche export markets. However, such product trades have often been driven by "donors and NGOs who form enthusiasms [for] various 'silver bullets' ... that are hoped to be environment-friendly and income boosters" (Hazell and Reardon, 1998). Many have proved to be susceptible to change in market requirements, to domination by intermediaries and to shifts to domesticated or synthetic sources of supply, and they have consequently not been sustainable. Therefore, they can expose rural households to high levels of risk, particularly when the trade has encouraged people to move away from more diversified and less risky agriculture-based livelihoods, as with some of the extractive product trades from the Amazon region (Browder,



Woodworking to make mortars and pestles for the market.

1992). Similarly, such interventions have sometimes led to product expansion on a scale that has resulted in depletion of the raw material resource as, for example, with a programme that successfully expanded export demand for decorative baskets made by households in Botswana (Terry, 1984).

Interventions are likely to be more effective if they are directed towards types of forest product activity involving large numbers of people. The huge presence of small-scale activities producing and selling forest products in rural areas reflects the fact that demand for most of this output is also rural (FAO, 1987). Large increases in the prospects for smallholder and small enterprise commercial activities in the forest sector are, therefore, more likely to result from agricultural growth and the demands this generates. As discussed above, this kind of change also

opens up the more rewarding income-generating forest product-based opportunities.

In short, much of the effort to date has not been focused in ways that are most likely to materially enhance the potential for forest product activities to contribute to rural livelihoods. Interventions to encourage or support greater participation in income-generating activities need to be better informed about the realities of the commercial environment within which people are being encouraged to operate. This applies equally to programmes to stimulate tree growing for the market. The abandonment of eucalypt growing by so many farmers in India was largely due to the farm forestry programme's failure to anticipate the limited size of the

market and to provide farmers with the information that would have enabled them to make their own informed decisions about the profitability of growing trees (Saxena, 1992).

Smallholder and artisanal production and trade of forest products take place overwhelmingly in the unregulated, informal sector. The potential for such activities rests in part on the existence of an overall regulatory environment that does not discriminate against this category of production and trade. In particular, many types of small-scale operation could not remain viable if they were obliged to observe regulations designed for larger, formal-sector operations, as the cost of doing so would weigh disproportionately heavily on them. In this connection, recent moves to require small producers to adhere to product certification requirements must be of some concern. A review of timber certification for the International Tropical Timber Organization (ITTO) has shown that this places particular burdens on small producers (Simula and Ghazali, 1996). Imposing certification requirements on some non-timber forest product trades could prove even more onerous for small producers and traders (though it has been shown that it can assist some in getting access to particular markets for which their products are suited).

As noted above, in many countries governments intervene to control the trade in forest products in ways that, directly or indirectly, hamper smallholder producers. Because they give high priority to conservation objectives, many governments have set in place forest and environmental policies and



Wood products and handicrafts for sale in Bolivia. Interventions to support or encourage forest product enterprises need to be well informed about the realities of the commercial environment.

regulations designed to limit, rather than to encourage, private production and sale of forest products. Restriction of output by means of regulations is often favoured because it is seen as easier than controlling forest use on the ground (Deweese and Scherr, 1996).

Forest departments may also impose charges in order to capture a share of the value. Producers may be obliged to sell to government marketing bodies, or to traders to whom concessions have been granted. Farmers are often subjected to controls on harvesting, transport and sale of wood and other tree products from their land, which are often motivated by the need to curb illegal felling from State forests. If they cannot be abolished, controls of this kind can often be reduced and simplified, such as excluding exotic species that are grown by farmers but that do not occur in the natural forests.

In many countries, the government also intervenes in the market directly, as a producer from State forests. Some products are made available at subsidized prices because of their importance to the poor. Others are effectively sold at below-cost prices because the process of setting and collecting royalties fails to capture an appropriate share of the economic rent. The result is that the private producer is confronted with competition from subsidized sources. There is a danger that, by hindering farmers' access to tree product markets in these ways, governments may inadvertently be interfering with the shift from a subsistence to a market economy.

One of the fundamental policy issues that many governments need to address, therefore, is this conflict within their overall strategy to provide forest products. While providing support to production by smallholders and small enterprise activities through one part of their forestry programme, they constrain and compete with them through the industrial forestry component. In the short term, the scope for improving the position of the latter probably lies mainly in removing or relaxing regulatory constraints that reinforce the structural and scale advantages that the government, through its forest department, possesses as a producer of many forest products. A logical longer-term solution would be to phase out State production in those markets where smallholder production has a comparative advantage.

This would contribute to meeting a more fundamental concern that has been raised (Dove, 1993); namely that the potential for community forestry to contribute to improving the livelihoods of the rural poor will continue to be limited as long as the latter are unable to participate in the more profitable and dynamic product activities. If local people cannot participate proportionately in activities that realize the benefits to be obtained from timber and other high-value products of the forest, they will remain confined to the low-value activities, which provide them with only limited opportunity to escape from poverty. Real empowerment for local users should mean providing them with equitable access to all the opportunities that a forest resource could provide.



Part 3

COMMUNITY FORESTRY IN TRANSITION

ABOUT 25 YEARS AGO, the concept of community forestry, in one form or another, emerged as a focus for addressing the linkages between forestry and rural people. Some countries are still at an early stage in the process of applying this concept, but in others it has become central to the way forest resources are managed. Not surprisingly, the considerable but varied experience that has accrued, both of interventions to support applications of the concept in practice, and of research and evaluation studies to better understand the linkages between forests and people, has shown

that there is often need to rethink or modify some earlier hypotheses and approaches. In a number of important respects, community forestry is presently in a state of transition. At one level, this reflects growing recognition that the potentials for intervention are much more complex than was previously assumed, and that many past attempts at intervention have not been sufficiently realistic. In particular, it has proved much more difficult than expected to bring about effective and equitable transfer of authority and power. In addition, it has proved necessary to expand the concept of community forestry to recognize that it will often embrace individual and corporate, as well as collective, forms of management and activity.

Experience is also showing that the different objectives that underlie the support for community forestry are not necessarily as congruent with one another as had been previously tacitly assumed. Thus, different interest groups engaging in community forestry do so because they see it as being important for one or another of the following reasons:

- as a component of strategies to enhance rural livelihoods, in particular the livelihoods of the poor and, within the poor, of women and other disadvantaged groups;
- as a means to manage forest resources sustainably so as to conserve them and the biodiversity they contain; and
- as a component of government strategies to devolve and decentralize responsibilities, and to reduce the budgetary costs to the central government of managing the forest sector.

Different interest groups thus have different expectations in terms of outcomes, and it can be unrealistic to assume that win-win solutions are always possible when this is the case (Vira, 1999). Some community forestry approaches are now seen to have been overly biased towards one objective at the expense of others, for instance, pursuing progress in terms of institutional change, or more effective and lower-cost protection of forests, rather than in terms of impacts on people's



lives (Hobley, 1996). It has become evident that some of the relationships between the different underlying objectives need to be examined afresh, and ways of harmonizing policy and project approaches to accommodate a balance between them need to be recast.

Another important aspect is that of change in the parameters that underlie the emergence and evolution of community forestry. Chapter 5 first addresses the question of how shifts in approaches to environmental conservation and market liberalization could influence the future shape and extent of community forestry. It then examines the impact for community forestry, and for forestry as a whole, of the trend towards more pluralistic systems of forest management.



CHAPTER 5

Key issues influencing community forestry

Changing perceptions of the linkages between conservation and development

One of the most important factors shaping the development of community forestry has been the objective that it should contribute not only to livelihood enhancement for poor rural users but also to the conservation of biodiversity. The theme of 'forestry and sustainable livelihoods' has come to be concerned as much with maintaining ecological stability as with sustaining income and material flows.

However, as discussed in Chapter 3, it has become increasingly clear that it is difficult to successfully achieve both these objectives concurrently.

Measures deemed necessary in order to protect or promote ecological values of tropical forests nearly always constrain the ways in which local people can generate benefits for themselves from these forests. Conversely, local livelihood strategies often appear to threaten achievement of conservation goals, particularly when these are being pursued through a 'protected area' approach. As one study of experience with the latter has reported, "unambiguously successful and convincing examples where local people's development needs have been effectively reconciled with biodiversity conservation remain difficult to find" (Wells and Brandon, 1992).

As conserving global values of tropical rain forests, such as biodiversity and carbon sequestration, continue to feature strongly, it is possible that community forestry will be subjected to more rigorous efforts to make it compatible with such conservation objectives. If this were to be the case, it could be that conservation objectives become an even more dominant factor in shaping community forestry than has been the case in the past. As was noted earlier, progress towards legalizing the use rights of communities living in upland forest areas in Thailand has been held back by the growing strength of interests concerned about protecting the capacity of these forest areas to supply water to urban areas (Wittayapak, 1996; Vandergeest, 1996).

However, arguments are growing that the conventional approach to the issue of the balance between conservation and development at this level has been based on flawed assumptions about how rural peo-

ple and the environment interrelate. It is argued that there is need for greater appreciation that the poor may experience their own environmental problems, which need to be addressed separately from environmental policies seeking to satisfy concerns about global values. To address these local concerns there is a need to move away from macroscale approaches and policies towards a more situation-specific focus, reflecting the protective mechanisms that local users themselves adopt, and the attributes of a resource that they value and seek to conserve (Forsyth and Leach, 1998).

This has been accompanied by increasing debate about the relevance and accuracy of the conventional conservation thesis. There remain few, if any, pristine tropical forests. Virtually all have been affected by the activities of people, and the arguments that it is necessary to isolate them from further human impact are coming to be seen as

questionable. It has also been argued that tropical rain forests are more robust and able to absorb and recover from use than has usually been acknowledged, and that they do not need to be protected against other uses to the extent that has been attempted (Sayer, 2000). Moreover, as much more of the remaining tropical forest genetic resource exists in managed landscapes than in protected areas, it could be more logical to focus more of the conservation attention on sustainable management of what is in use. Many of these locally managed resources have a high measure of biodiversity (Halladay and Gilmour, 1995). Furthermore, recent research has also made clear that what might be considered by ecologists and foresters to be degradation or depletion of a forest resource can be considered to be transformation, and even improvement, of the resource by those depending on it for inputs into their livelihood systems (Leach and Mearns, 1996).

Thus, there is growing acceptance that the pursuit of conservation has been too much driven by northern concepts and donor preoccupations, at the expense of those who depend on forests locally. It is therefore quite likely that the conservation objective for community forestry will progressively shift from a predominantly protective orientation towards encouragement of sustainable systems of producing livelihood benefits in as environmentally friendly a way as possible (Freese, 1997). For example, this could be done by encouraging options that result in landscapes like those found in parts of Southeast Asia, which maintain a patchwork, or



Can community forestry be made compatible with conserving global values, such as biodiversity and carbon sequestration, of tropical rain forests?

mosaic, of agricultural and agroforest systems that, though less species rich than forests, preserve much more biodiversity than the alternatives of plantations or clearance to crop agriculture (Noordwijk *et al.*, 1997).

Another conservation-related shift in policy thinking that could influence aspects of community forestry is the revived interest in plantation forestry as a way of regenerating degraded areas and creating alternative sources of supply of forest products that could reduce the pressures on natural forests. It has been argued that pursuit of this objective through smallholder tree-planting schemes could have both livelihood and environmental benefits (World Bank, 2000). However, this could confront some of the

constraints to smallholder tree growing discussed above. In addition, availability of the concessional loan financing, which could be needed in order to make such planting viable on low-productivity sites, could also become increasingly difficult in the conditions of market liberalization and structural adjustment discussed in the following section.

Extending market liberalization and structural adjustment

The growing importance of policies of market liberalization and structural adjustment has clearly been one of the determining influences on the way community forestry has evolved in recent times. The accompanying goal of devolving away from government any activity that could be more effectively performed by others has been one of the driving forces behind the transfer of responsibility for forest management and control to the local level. At the same time, the downsizing of government budgets available for forestry can reduce the capacity of forest departments to provide necessary support to the new structures and to adequately continue to perform functions that need to stay in the public domain, such as preserving non-market values of forests.

This is being accompanied by growing privatization of what, earlier, were public functions in the forest sector. As the private sector takes over more of for-

est management and utilization, and sometimes ownership of the resource, governments are adopting market-based instruments (e.g. financial incentives, market promotion and certification) to encourage and regulate sustainable forest management. Often, forestry authorities also are downsizing and restructuring, and in the process they are contracting out, corporatizing and privatizing such functions as monitoring and provision of technical support services (Landell-Mills and Ford, 1999).

Most countries are still in the process of making such changes, which are predictably often creating some problems and exposing the need for further work on them. Instances of problems include the difficulties encountered by *ejido* forestry organizations in parts of Mexico in continuing to manage forests on a sustainable basis as government subsidies were withdrawn, and the difficulties faced by smaller and poorer *ejidos* once they had to buy in technical and other support services when these were privatized (Taylor and Zabin, 2000). Similarly, in China, concerns have arisen that, as access to low-cost loan funds is withdrawn, tree planting by poorer households will no longer be profitable and will decline (Rozelle *et al.*, 2000).

Another impact of such macroeconomic and policy change has been the acceleration of the process of exposing community-level producers of forest products to market forces. As discussed above, this can both create additional opportunities to generate income and also heighten pressures on local institutions attempting to manage a resource as common



As the use of forest resources becomes increasingly determined by market forces, more attention will need to be paid to ensuring that the poorer can continue to participate.

property. This can cause breakdown of collective mechanisms for exclusion and control, and the effective privatization of the more valuable product flows by those best able to take advantage of the market opportunities.

Therefore, there is the likelihood that, without countervailing measures, market liberalization will accelerate the process by which communal forest resources pass from collective to individual or corporate control. Indeed, privatization of common pool resources features increasingly as a policy measure in contemporary literature about management of natural resources. For instance, a recent Latin American forest policy study argued that reserving areas of forest, such as those encompassed by the Plan Piloto Forestal in Mexico, for the exclusive use of the limited numbers of people who are members of the user groups in question, excluded other potentially more valuable uses of the resource

and the land (Laarman, 1997). However, the changes brought about in the PPF area by market liberalization have shown how this can result in increased difficulty in controlling overuse of the resource, in exclusion of poorer people from access to benefit flows from the forest, and in the fragmentation and conversion of the forest resource (Taylor and Zabin, 2000).

The task of ensuring continued collective control of local forest resources, where this is needed for equity and environmental reasons, is consequently likely to become more challenging. Equally, as use of forest resources becomes increasingly determined by market forces, more attention will need to be paid to identifying the measures that will enable the poorer to continue to participate. This could mean revising regulations and support programmes to make them available to small as well as larger participants, developing and encouraging innovative

forms of collaboration between community and private interests (and formal- and informal-sector producers), and ensuring equitable participation of local stakeholders in forest management arrangements that need to accommodate multiple stakeholders, a subject discussed in the next section.

Community forestry and the broader context of forestry

The enabling environment for the large and growing numbers of people whose involvement in community forestry is through tree resources on their own land, or through processing and trading of forest products that they purchase, is likely to be determined mainly by factors other than those related to the forest, such as land use and tenure, and access to markets and services. However, for the huge numbers of people who still need to draw upon forests, the principal issue is usually that of security of access to the resource. Effective empowerment of those who need to be involved in control and management of the forest resource that they draw upon thus continues to be of paramount importance. To be effective, empowerment needs not only to establish or recognize their rights of ownership or use, but also to enable the recipients to exercise their authority and rights. Failure frequently results less from people's lack of institutionally grounded claims on a

resource than from their incapacity to pursue these claims effectively against more powerful actors (Forsyth and Leach, 1998).

ENSURING MORE EFFECTIVE EMPOWERMENT OF LOCAL USERS

To recapitulate points that emerged from the discussion in Chapter 3, a number of causes can be identified for the widespread failure of transfer of responsibility and rights to result in effective empowerment of local users. One is failure to entrench the transfer in legislation. Too much of decentralization is instead effected by decree, administrative order or permit, providing rights and authority that can be withdrawn or, if challenged, are unlikely to be upheld by law. Another cause is transfers of only limited rights, notably the widespread exclusion of rights over timber and other components of commercial value (Agrawal and Ribot, 1999). Processes of empowerment may also fail to provide recipients with enough security because they are incomplete, as in China, where the creation of rights for households to grow timber was partly offset by the tightening of controls over private harvesting, transport and sale of timber (Dachang, 2001).

Failure to implement devolution effectively frequently arises where the transfer of rights is made to local bodies that are, in practice, appointees or extensions of the central government, and are consequently more responsive to the latter than to the

people they represent. Another common weakness occurs when local institutions are not able to cope with the complexities arising from conflicting claims on the resource from within increasingly fractured user communities, and from competing demands on and interests in the resource from external stakeholders. Again, this is likely to result in control being captured by minority interests.

It is increasingly recognized that these problems exist, and the search for more pluralistic arrangements is driven by awareness of the need to identify collective systems that can accommodate greater complexity and multiplicity of interests in forest management. However, progress in identifying more flexible and less rule-bound systems that function satisfactorily is proving slow. Concerns have been raised that existing organizational mechanisms could be dismantled or could cease to function without new systems of coordination and collaboration taking their place (FAO, 1999). A related concern is that, with the decline in the role and authority of the State in forest management in favour of collaborative systems, the latter may become dominated or appropriated by the more powerful users (Sarin, 1999).

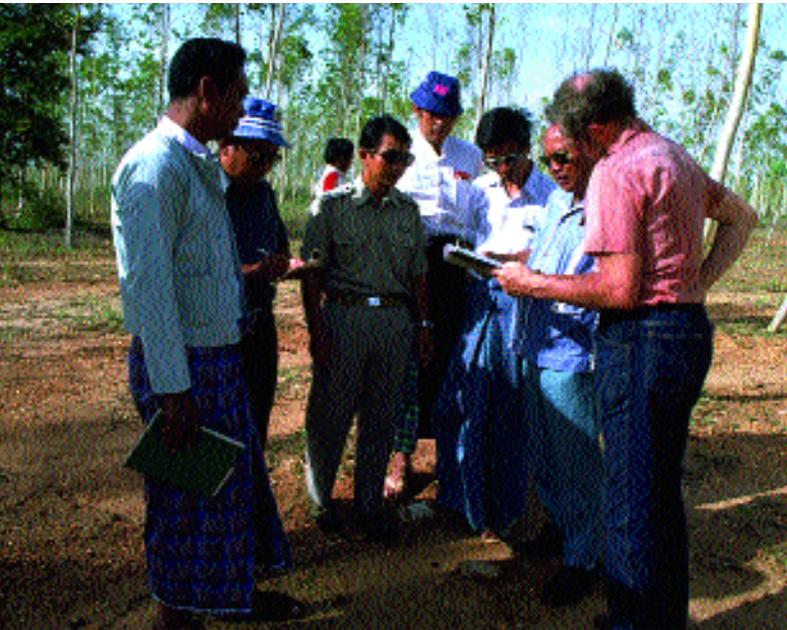
Given the political weakness of many local user populations, there is thus a danger that they will be unable to participate in an equitable manner. It has been argued that some rights of local users are paramount and should not be subject to negotiation, and that immersion in a system subject to the agreement of other interested parties could conflict with local



It has been argued that some rights of local users are paramount and should not be subject to negotiation.

people's right of self-determination (Sarin, 1999). This possibility has led some to express concern that the current enthusiasm for multiple stakeholder systems of local forest management could be more an expression of 'outsider' conceptions than a realistic way of achieving a more equitable and effective involvement for local users (Vira, 1999).

Another dimension of community forestry that continues to attract attention and debate is the issue of how best to provide the external support that most local forest management institutions will need in some measure. Fully self-managing groups may need little more than legal endorsement of their rights, government assistance in protecting and enforcing those rights when necessary, and access to government services. But many groups will need



A forester meeting with villagers. It is becoming increasingly clear that, in order to be effective, local forest management is going to need a high level of support.

more. Even relatively well-developed local institutions are likely to encounter difficulties in taking on responsibilities for environmental management tasks previously performed by the central government. When there are competing or conflicting claims on the resource that involve stakeholders from outside the community, issues may arise that need access to external sources of arbitration and management to resolve. Though one of the arguments for devolution of responsibilities to local institutions was that this would reduce the costs of forest management, it is becoming increasingly clear that, in order to be effective, local forest management is also going to need a high level of sup-

port. It is a mistake to think that community forestry is necessarily a low-cost route to sustainable forest management.

ENGAGING FOREST DEPARTMENTS AND CIVIL SOCIETY

In principle, as the main government agency with a presence in forested rural areas, forest departments should be well placed to provide such support. However, the potential to do so has often been limited by local distrust of the department due to past policies and practices that placed foresters and local people in confrontation with each other, and by lack of balance in its role in co-management arrangements of the kinds discussed in Chapter 3. This has contributed to the rapid expansion of the presence of NGOs in many collective forest management programmes, in which they act as intermediaries between State and users, facilitate change at the village level, and provide training, extension, advisory and even marketing services. Other NGOs have taken on an advocacy role, influencing policy at local and national, and even international, levels.

The involvement of NGOs in these ways has been enormously important and, overall, has greatly facilitated the emergence of functioning forms of community forestry. However, as experience with such arrangements has accumulated, it is becoming clear that they often need to be better focused in order to achieve the most effective and appropriate contribution of NGOs and other forms of civil society to local forest management. Confusion has sometimes

arisen because of failure to recognize the particular skills, interests and agendas of different NGOs. Some may be interested in community forestry because of the environmental implications; others may be involved as part of a mandate to support community development or the rural poor. Not all have proved to be equally helpful in the pursuit of community forestry. The confrontational positions adopted by some advocacy NGOs have sometimes hampered the development of promising joint management systems. The agendas pursued by some environmental and other special interest groups have proved on occasion to be not necessarily congruent with the interests of the populations with which they work. NGOs are often accountable only to their leaders and donors, rather than to the communities with which they work. Therefore, it is important that there be clear understanding of the role of each civil society organization, and of the interest it represents, when it becomes involved in community forestry (Thin *et al.*, 1998).

It can also be important to ensure that government agencies are not encouraging NGO involvement to avoid having to confront the need for internal change in order to undertake tasks that should be their responsibility (Dove, 1995). Forest departments are now generally responsive to the arguments that their traditional approach has failed to secure sustainable forest management, and is no longer appropriate to the demands currently being placed upon the forest sector. There is often considerable concern within departments that they become more successful, and be seen as being more

relevant to current government (and donor) concerns (Vira, 1997). However, it is not always clear how they should respond. In many countries, forest departments continue to be responsible for regulatory functions and direct management of large parts of the forest estate. Trying to combine this with transfer of control of parts of the forest estate to others creates understandable internal tensions and confusion. Some of the problems encountered in co-management programmes reflect the ambivalence, or lack of clarity about seemingly conflicting objectives, that this dual role can engender. It can lead, for instance, to reluctance to authorize indigenous local forest protection groups, because of a concern that this would enable them to encroach on the position of the forest department (Poffenberger, 1996). Concerns about protecting the position of the forest department as a producer also underlie many of the restrictions placed on others who are producing and trading particular forest products.

There are a number of ways in which such constraints on achievement of a more balanced role for forest departments in collaborative forestry systems might be reduced or removed. They include separating regulatory functions from involvement in forest management and delivery of support services, eliminating areas of avoidable competition with local producers for revenue and markets, and reducing pressures on forest departments of over-ambitious targets that can force them to rely on centralized and bureaucratic operational procedures. Forest departments could also pursue procedures for working with local partners that



Community forestry is changing to become more effective and responsive to local needs and aspirations.

encourage more flexibility and willingness to adapt to the particular attitudes, needs and constraints encountered in each location. For instance, the experience with JFM projects in India has shown to what extent progress and performance relate to the ability of individual officials to establish a rapport with the people with whom they work, and to adapt standard procedures to what is needed locally (Vira, 1997).

In sum, thinking about ways in which community forestry should change in order to become more effective and responsive to local needs and aspirations is currently undergoing change. Different approaches are being developed and tried out, but it is too soon to be able to determine with any confidence which approach will prove to have wide-

spread, sustainable potential. Much of what is happening at present involves an element of trial and error.

What does seem clear is that as community forestry becomes an increasingly important part of the overall forest and tree resource sector, it is being reflected in important shifts in the ways in which forest management as a whole is being pursued. Firstly, the norm of forests under State custody and managed by professional foresters following normative prescriptions has given way to forest situations characterized by multiple users and more empirical management, reflecting particular objectives and possibilities in each situation. Secondly, this broadening out introduces management practices other than those based on scientific forestry. The forester

is no longer the sole source of knowledge about how to manage forests, and the role of the forester will often be as a facilitator to others engaged in forest management. Thirdly, the conventional perspective of foresters as the guardians of forests, and government regulation as the sole arbiter of conflicts over forest management and use, is changing to an approach of social negotiation and consensus building (Wiersum, 1999).

Thus, recent changes in forestry increasingly reflect interpretations of the role that the forest sector needs to play in developments that were first articulated through community forestry. However, the

need to adapt to changing societal conditions and needs is a continuing imperative. In putting new arrangements in place to better reflect present needs, there is a need to try to anticipate whether they will also be relevant to further change in the future. For instance, in what way would a sharp decline in local demand for many forest products, as rural livelihood options expand, affect a structure for forest management and control constructed around local collective institutions? There can be no single answer to such a question, but it will surely call for flexible governance systems that can readily be adapted to cope with whatever change does emerge.



CHAPTER 6

Conclusions

The importance of the roles that forests and forestry play in rural livelihoods is by now probably universally recognized. The need to address this through a reorientation of forestry to involve rural users who draw upon forests for part of their needs is also widely accepted. These shifts in emphasis and approach are becoming all the more important as the State reduces its involvement in forestry and the sector has to adjust to growing participation by civil society and private-sector interests.

Many countries are still at an early stage in the process of developing and introducing forms of community forestry appropriate to their situations. In others community forestry is by now a well-established and integral part of the framework for management and use of forest resources. The

experience of some of the longer-established and more flexible of these community forestry initiatives has been encouraging. It has become clear that, in the right circumstances, local or joint control does result in increases in product and other benefit flows to local users, and can bring about an improvement in the condition of the resource. Agroforestry outputs have often also become more important components of rural household livelihood systems.

Not surprisingly, though, these experiences have often exposed problems and constraints. Acceptance of the importance of devolution to local levels has not always been accompanied by the political, legislative and regulatory measures needed to empower those to whom responsibility is being passed. People are sometimes being invited to take on more of the responsibilities and costs of managing forests without obtaining a commensurate increase in security of their rights, and they are thereby being put at risk. Individual initiatives to participate in markets for forest products are, similarly, being impeded or undermined by lack of progress in removing inappropriate restrictions and regulations.

Progress in evolving ways of implementing more genuinely participatory forms of local forest management, capable of accommodating the interests of several different categories of stakeholder, has also often lagged. In particular, the local institutions to which responsibility for forests to be managed collectively has been devolved have often proved to need support, or have been found to function in ways that lack suf-

ficient transparency and accountability to ensure equitable participation by all their members.

That difficulties have arisen has sometimes been because of the speed and extent of the changes that are taking place and the exposure that this brings to unfamiliar problems. Changes have sometimes been promoted before the capacity to implement them is in place. Strong promotion of community management, often at the urging of donors, has frequently imposed pressures on forestry bureaucracies that they have found difficult to absorb.

Where this is so, it could be desirable if there were now to be a period of consolidation, moving from promotion to critical analysis, with increased consideration of how best to address weaknesses and problems that have arisen. One need is to better understand the circumstances under which local control is, and is not, likely to succeed, thereby avoiding initiatives in situations that are not conducive to collective management. Another need is to encourage a more flexible and responsive approach

that is more situation specific and less formulaic. Another is to address the difficulties that forest departments are encountering.

At the same time, exaggerated expectations need to be avoided. Just as there is a danger in trying to

achieve too much too quickly, so there is also a risk of overloading community forestry. It is important to recognize the limits to how much change can be achieved within the framework of forest-oriented programmes, and to keep community forestry in perspective.

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