TRENDS IN COMMUNITY FORESTRY IN REVIEW

J.E. Michael Arnold

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1. INTRODUCTION

The term 'community forestry' is one that has never been closely defined. In one of the earliest uses (FAO 1978) it was said to refer to "any situation which intimately involves local people in forestry activity", with the definition going on to make it clear that this could encompass activities from farm forestry by individuals on farm land to collective group management of forests, and artisanal and other local small-scale commercial production and sale of forest products. However, it has often also been used more narrowly to mean just part of this spectrum - for example tree planting or other forestry activities carried out by a community or some other local group, or forestry programmes run by forest departments or other agencies of government that involve and serve rural people.

Partly because of this lack of precision, and partly because of concerns that the term community forestry could be interpreted to be confined just to activities carried out communally, or by a community as a whole, other terms have emerged to describe some or all of the activities outlined in the opening paragraph. Prominent among these have been social forestry, village forestry, rural development forestry - and more recently participatory forestry, collaborative forestry, and joint forest management (or co-management). However, few if any of these seems to have acquired a more precise universally accepted meaning. There have also been several attempts to produce a common terminology, but each tends to produce a different solution. This is hardly surprising, as a single term would imply a uniformity of form and needs that is clearly not reflected in what is encountered in practice.

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It is not a purpose of the present paper publication to make a further attempt to move towards an agreed set of definitions and terms. Though the plethora of terms can be confusing, often attaching different labels to essentially similar situations and approaches, it is necessary to recognise the range of different but overlapping forms that local involvement in forestry activities can take - as users as well as producers; on an individual, user group or community basis; through indigenous and spontaneous arrangements as well as through government programmes; etc. To this end, where there is a specific and recognizable descriptive term - such as farm forestry for tree management on farms, or management of forests as common property, or a title for a particular programme (such as 'joint forest management') - it is used. Where the broader concept, or more loosely defined forms of people's involvement in forestry activities, are being discussed, the term 'community forestry' will be used here as a synonym for the several alternative terms relating to people's participation in forest sector activities.

The principal purpose of the paper is to provide a review of how the overall concept has evolved, and to record lessons learned from experience in implementing its more important component parts. Though community forestry is relevant in the countries of the North as well as those in the South, its importance in the two is different. Whereas much of the concern in the former relates to community forestry as a force to conserve landscape and biodiversity values, in the latter the concern is primarily with community forestry as a means of meeting the needs and development aspirations of the huge numbers of people who directly draw and rely on forests and forest outputs in order to alleviate their poverty. The focus in the paper is on this second, developmental, role of community forestry.

The first section 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 section concludes with a summary account of the lessons learned in the early years of community forestry initiatives, and how this led to the main thrusts evident in the 1990s.

The second section outlines the information available on the nature of people's linkages with forests and forest products, highlighting the issue of choice versus dependency, and the nature and consequences of the changes in these relationships that are taking place, and that 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, in particular the shifts from forests to bush fallow, farm trees and other tree stocks that result from the ways in which people transform the natural resources available to them. A framework is developed to explore how the linkage differ across major categories of resource, land use, and livelihood system.

Against this background of information on needs and resources, the third section explores the main initiatives and developments of the 1990s. The focus is on how different forms of governance and support measures have been developed in different people-forest situations, in order to pursue 'participatory' and 'sustainable' forms of local forest and tree management and use. This section also examines the extent to which such approaches have been successful, and the problems and constraints that have become apparent by the end of the decade.

The final section summarises the debates that are now taking place as to how to address some of the principal current issues. These include the balance between conservation and development that could realistically be achieved in community forest management, the growing impact of market forces and the private sector, and how to move to approaches to collaborative management that accommodate multiple stakeholders and interests.

2. HISTORICAL OVERVIEW

Forests and forest products have nearly everywhere formed part of rural livelihood systems. Historically they have been important to local people in two main situations, which often overlap. One is where forests and woodland formed part of broader livelihood systems based on rotational agriculture, with periods of cultivation alternating with longer periods of forest fallow. The other is where 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 pressures on the resource, or the land, increased these were usually brought under some form of control on rights of use. Many such systems of control incorporated at least a measure of local management by the user community.
2.1 The decline in historical systems of local forest management

Over time, pressures from growing populations, together with the effects of economic and political changes, have frequently greatly reduced the availability of forest resources available for use by local people. Many of the systems for controlling access and use have at the same time been severely weakened or have disappeared altogether. Increasing pressures on the resources that remain have frequently led to their progressive degradation.

One of the main factors underlying these trends has been expropriation of forests by governments as forest reserves or some other form of state property. In India, for instance, governments started to lay legal claim over use of much of the forest estate, and to exercise these new powers, during the British colonial period. In the post-independence period, with the abolishment 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, and those 'rights' that were legally recognized at that time have tended to be progressively circumscribed, downgraded from 'rights' to 'privileges', or extinguished by subsequent legislation and practices. By 1980, nearly 23% 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 the state occurred elsewhere. The huge expansion in the areas designated as state forests in some of the main countries of the Southeast Asia region in recent times also reflect increasing pressures to exercise physical control over upland areas for strategic reasons, or because of their importance as a land bank for surplus lowland populations, or because of growing concerns to try and prevent downstream damage resulting from overuse of upland areas (Peluso et al. 1995, Lynch and Talbott 1995). In South America, traditional systems of forest management and use have been undermined since the colonial era by policies encouraging settlement by colonists, with property rights linked to land clearance, and ceding resources to logging, mining and other outside interests (Perl et al. 1991, Southgate and Runge 1990).

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

The impact of such pressures and changes can be illustrated from the results of a seminal study of village common pool resources in the dry areas of India, summarised in Box 1. In the 30 years to 1980 there were huge reductions in these resources. The much reduced remaining areas of village lands 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 for the state claiming forest lands has been to ensure their sustainable use for environmental and economic outputs. The potential value of forests as a source of rent to governments helps 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 within forest policy and practice became even stronger.

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

Particularly in Africa, traditional local systems of governance of forest and woodland resources have also been eroded because of lack of clarity about the rights involved under overlapping and poorly reconciled systems of national and community land law and custom. Local courts and administrative units that have taken charge of conflict resolution generally do not understand indigenous tenure systems and make decisions based on other criteria. 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).

### Box 1: Common property management and use in dry areas of India

In the dry rainfed plain areas of India, historically the main role of common property resources 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, mainly designed and enforced at the local level.

A major study by Jodha has shown that there have been huge changes in common property resource availability, management and use. In the 21 villages across seven states studied, it was found that the area of common land had been reduced by an average of 42% in the 30 years prior to 1980-82, while population in most villages had increased at least threefold per hectare. This reduction has been a result of land reforms (which led to abolition of a number of levies and taxes on common property resource users), the replacement of traditional village leadership with elected village councils (which resulted in decreased regulation of common land use), expanded private land ownership, expanded credit and subsidies for animals, and more marketing links for common property related products (mainly milk, meat, wool, fuel, 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 per cent had such controls in 1980, while use of fines, taxes and fees had ceased altogether.

The remaining area is typically heavily 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 his study villages Jodha found that from 84 to 100% of poor households depended on them for fuel, fodder and food items (compared with no more than 20% of richer households). Poor households also obtained from 14 to 23% of their income from products harvested from common property resources. With increasing differentiation between richer and poorer within villages has come increasing conflicts 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 which exhibited at least one instance of local concern to protect them, 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:** Based on Jodha 1990

### 2.2 Origins of the revival of community forestry

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 reported on in Box 1, 84% to 100% 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 responding to growing shortages of forest products and other forest outputs of value to the user community, or increased pressures from outside interests to use forest resources which are still important to the community, by 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 declines in access to supplies of forest products by increasing the stock of trees on their farm
In the past 30 years or more, there have thus often been self-initiated local actions to stabilise use of forest resources, or to increase supplies of forest products. This has been paralleled by changes in the 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 centralised 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 forest condition could only be halted if action was taken to accommodate local needs for fuelwood, grazing, etc., in some other manner. This analysis, and 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 huge initiative in the 1970s by the South Korea government to encourage villages to create collective woodlots on their lands, was stimulated by the perception that this was needed in order to stop destructive use of hill forests that were protecting downstream agricultural lands by those in need of fuelwood. Hill community forestry in Nepal similarly had its origins in 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, that recommended encouraging people to grow trees on their village and farm lands in order to reduce the pressures on production forests caused by mounting rural demands for fuel and other forest products, and forest uses such as grazing. Other comparable initiatives in the same period included the Village Forestry programme in Thailand, in forest areas heavily encroached by people seeking land to cultivate, the Hill Community Forestry programmes in Nepal, and the Village Afforestation initiative in Tanzania.

Such thinking within the forest sector was given added impetus by a number of major broader shifts in development thinking and strategy. The 1970s saw a shift in development theory and practice towards a greater emphasis on agriculture, mobilising the rural sector, and meeting the 'basic needs' of the rural poor. Recognition of the importance of wood fuels as the principal source of domestic energy, as a consequence of the increased attention given to the energy sector following the 1973 rise in fossil fuel prices, highlighted the role of forests in meeting such needs. This added a humanitarian and developmental dimension to the earlier conservation concerns that more attention need to be paid to meeting rural demands for wood, and doing so in a more sustainable fashion (Wiersum 1998, Arnold 1992).

### 2.2.1 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. A second was the perception that tree planting could help meet people's 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 stabilise and improve their farm system. Tree crops could help to increase output and generate income, and 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, indirectly or directly, a 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 became evident that 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. Any environmental benefits that may accrue from pursuit of these strategies are usually a by-product not a primary objective of tree planting by farmers in pursuit of their livelihood goals. It is rare for farmers to decide to plant trees for environmental reasons if they are not facing serious soil loss or site deterioration.

The relationship of the perceived fuelwood shortage to farmers' priorities also proved to be quite different to what had been assumed initially. Fuelwood "gap" analyses extrapolated present consumption and supply patterns without recognising 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 can limit a household's ability to collect fuelwood). Also, the growing of trees always involves some cost in terms of land, labour and capital: the produce of trees therefore has a real value to the farm household. Where farmers were planting trees it was species to produce fruit, fodder, protection, construction timbers or products for sale. Fuel, everywhere a low value commodity, was being supplied from lower costs sources, such as existing woody material, or agricultural waste products, or as a by-product or co-product of trees grown from other purposes. It became clear that there are few situations where farmers have been growing trees to use solely for fuel. The often very large programmes that were set in place to encourage and support tree growing by farmers, in order to increase local fuelwood supplies, consequently often had
disappointing results (Dewees 1997, 1989).

**Box 2: Social Forestry woodlot projects in India**

A major element of the 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 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 created primarily tree stocks and wood products of commercial value, with few intermediate products such as fuelwood and grass that previously were harvested from the areas and used by villagers. The woodlots therefore 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; woodlot management plans, village forest rules, etc., were often complex, unclear and required skills and experience that panchayats do not possess; continued involvement of the forest department discouraged local bodies from taking over and encouraged them to opt for extending forest department management; and 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. Woodlots are the property of the government or the panchayat. 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 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. Government involvement in resource management in practice 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 illustrated by the Social Forestry experience from India summarised in Box 2, this was partly because the growing of trees in this way was not effective in providing subsistence products, the change in land use deprived users of existing subsistence supplies of fodder, fuel, etc., and the resource created was often one from which the poor could obtain little if any benefit. Many woodlots either failed, were captured by interests other than those they were intended to benefit, or by default were managed by forest departments rather than by the user communities.

### 2.2.2 Shifting the focus to the natural forest

As the limitations and shortcomings of the early focus on afforestation became apparent, recognition grew that the needs approach that underlay it needed to be replaced by an approach centred on livelihood strategies. Interventions narrowly focused on just one tree-related issue, such as fuelwood supplies, are likely to encourage tree growing where trees are not an appropriate component of the farm household economy, or induce growing of inappropriate trees, or would require changes in the institutional or social framework that could not realistically be achieved in connection just with tree growing. More holistic approaches, that recognise farmers’ multiple objectives, and that balance tree-based solutions against alternative courses of action, needed to be adopted.
As understanding grew of the nature of the relationships between people and the ways in which they drew 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 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 magnitude 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 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 recognised 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 could be 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 (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 (NTFPs) 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 harvest of NTFPs should add to the perceived value of the tropical forest, at both the 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 that appeared to show that the potential income from sustainable harvesting of NTFPs 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 which could serve both conservation and development interests (e.g. Plotkin and Famolare 1992). It resulted in a raft of initiatives to expand and provide markets for more locally produced NTFPs, in order to tap more of this apparent cornucopia of sustainably harvestable wealth in tropical forests, by pursuing a 'Conservation by Commercialisation' 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 discussed later in this paper, it became increasingly clear that conservation and development objectives and practices did usually conflict, and that management for NTFPs required an understanding of the appropriate balance between the two. Nevertheless, these initiatives did serve 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 products, and building on the sustainable systems of use that local people often seemed to have created (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. 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.

The NAS Conference on Common Property Resource Management in 1985 a powerful impetus to moving 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 variety of different situations, of spontaneous indigenous efforts to strengthen remaining existing control systems, or to create new arrangements, to bring resources under more effective local control (Messerschmidt 1993). As was noted earlier, many of these were found to reflect responses to growing shortages of forest products and other forest outputs of value to the user community, or increased pressures from outside interests to use forest resources which are still important to the community.

Increased recognition of the continuing role of forests as common pool resources, and of such local initiatives at management, contributed to the revival in interest in local collective management that is reflected in recent government and donor initiatives of the kind discussed during the rest of this paper. It would appear that in some countries these shifts also reflect a declining importance of the forest sector as a source of revenue to
national governments, diminishing their interests in retaining such strong control over it. The current increase in interest in more local forest management is also related to its relevance to the devolution and decentralisation strategies that many governments are pursuing, as part of strategies to bring about structural adjustment and a reduction in the size and the role of government. It is argued that transferring management and protection responsibilities to the community level helps offset the reduction in budgetary resources available to forest departments, and shifts control to a level at which it could be carried out more efficiently. In practice, much of what is emerging takes the form of joint management between state and local user communities, rather than devolution of responsibility solely to the latter.

2.3 Community forestry by the mid-1990s

In the roughly twenty years since it first came to prominence, 'community forestry' had by the mid-1990s thus moved through a number of phases (Box 3). The initial exploratory phase, attempting to scale conventional forestry down to the community level, was followed by a period concentrated on mobilising users to create new forests in order to address perceived developmental and environmental needs. As assessment shifted from a needs to a livelihood basis, this gave way on one hand to an integration of trees and agriculture in 'agroforestry' systems, and on the other hand to approaches based on collective or collaborative management of existing forests.

The growing commitment to community forestry reflects 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 different of the interest groups supporting it, that collaborative 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
- 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 1998, Wiersum 1998, Wollenberg 1998). 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 reflects this. These key elements are examined in more depth in the next two sections.

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**Box 3: Phases in community forestry development**

<table>
<thead>
<tr>
<th>Period</th>
<th>Community forestry approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exploratory phase (1970s)</td>
<td>Emphasis on afforestation and village woodlots based on scaling down of conventional forestry practices as a means to address fuelwood and desertification problems</td>
</tr>
<tr>
<td>Consolidation phase (1980s)</td>
<td>Increased understanding about the role of trees in livelihood strategies of rural people Less emphasis on firewood, more on multi-product species and integration of tree growing with agriculture in agroforestry and farm forestry systems Growing emphasis on participation by target populations</td>
</tr>
<tr>
<td>Diversification phase (1990s)</td>
<td>More emphasis on existing forests, and their management for conservation and local development Increased focus on non-timber forest products as sources of household income and welfare Growing emphasis on devolution and increased participation, and on encouraging local management of forests as common property Stronger support for legislation to empower local users,</td>
</tr>
</tbody>
</table>
3. FORESTS AND RURAL LIVELIHOODS

People’s willingness and ability to involve themselves in management of a forest or other tree resource is evidently linked to the nature and strength 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 among several equivalent options they can chose from. 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 be able to examine 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.

Most past research on the forest products that local people harvest and use has been narrowly situation specific, and of limited relevance in illuminating the issues raised above. However, some recent exercises have focused on identifying patterns of people-forest interactions in different situations, and over time (e.g. Townson 1995a, FAO 1995, Falconer 1990, de Beer and McDermott 1989). The present section draws on findings from this work 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 nature of the resource that users have access to, and the changes that are taking place in patterns of raw material sourcing. The third attempts to outline the main types of people/resource/forest product linkages that are encountered, in order to provide a framework for examining what form of ‘community forestry’ system and interventions could be appropriate to each.

3.1 Forest products in changing rural livelihood systems

Box 4 provides a summary overview of the main features of forest output/livelihood relationships, and the ways in which they are changing. Forests nearly everywhere provide inputs into rural households’ subsistence use, and into their agricultural systems, and for many 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 living in a forest environment, and practising hunting, gathering and shifting cultivation, are likely to draw heavily on that forest and its outputs. The forest, as well as 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, constitutes an integral part of the social and cultural framework of those living within it. Elsewhere, the importance of forest products is more likely to be in the way they complement other sources of subsistence inputs and income, rather than in their absolute magnitude or share of overall household inputs. These inputs are often particularly important in bridging seasonal gaps, and in helping households tide themselves over longer periods of shortage.

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Box 4: Forest Outputs and Rural Livelihoods

<table>
<thead>
<tr>
<th>Livelihood inputs</th>
<th>Characteristics</th>
<th>Impacts of change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subsistence goods</td>
<td>Supplement/complement inputs of fuel, food, medicinal plant products, etc., from the farm system; often important in filling seasonal and other food gaps; forest foods enhance palatability of staple diets, and provided vitamins and proteins</td>
<td>Can become more important where farm output and/or non-farm income declines</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Likely to decline in importance as incomes rise and supplies come increasingly from purchased inputs; or as increasing labour shortages/costs militate against gathering activities, or divert subsistence supplies to income</td>
</tr>
</tbody>
</table>
Some subsistence use is declining, as households move to a different livelihood level in which forest inputs have a lesser role. Some subsistence use is falling because of pressures that make it less possible for the household to maintain the same level of use. In general, though, subsistence use continues to be very large, 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.

<table>
<thead>
<tr>
<th>Farm inputs</th>
<th>generating outlets</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-farm trees provide shade, windbreaks and contour vegetation; trees/forests also provide low cost soil nutrient recycling and mulch</td>
<td>Trees can become increasingly important as a low capital means of combating declining site productivity, and a low labour means of keeping land in productive use (e.g. home gardens)</td>
</tr>
<tr>
<td>Arboreal fodder and forage, fibre baskets for storing agricultural products, wooden ploughs and other farm implements, etc.</td>
<td>Increased capital availability, and access to purchased products, likely to lead to substitution by other materials (e.g. by pasture crops, fertilizer and plastic packaging)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Income</th>
<th>With increasing commercialization of rural use patterns some low-input low-return activities can grow; however, others are inferior goods and decline, some are displaced by factory made alternatives, and others become unprofitable and are abandoned as labour costs rise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Many products characterised by easy access to the resource, and low capital and skill entry thresholds; mainly low return activities, producing for local markets, engaged in part-time by rural households, often to fill particular income gaps or needs (though they can be major sources of employment and income for forest dwelling populations); overwhelmingly very small, usually household based, enterprises (with heavy involvement of 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 urban as well as rural markets</td>
<td>Higher return activities serving growing demand are more likely to prosper, particularly those serving urban as well as rural markets; as this happens an increasing proportion of the processing and trading activity is likely to become centred in small rural centres and urban locations</td>
</tr>
<tr>
<td>Some low input gathering activities involve raw materials for industrial processes and external markets</td>
<td>Gathered industrial raw materials tend to be displaced by domesticated supplies or synthetic substitutes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reduced vulnerability</th>
<th>With the “buffer” role of forests and trees can continue to be important well into the growth process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can be important in diversifying the farm household economy - e.g. providing counter-seasonal sources of food, fodder and income.</td>
<td>Likely to decline in importance as government relief programmes become more effective, or new agricultural crops, or access to remittance incomes, make it less necessary to fall back on forest resources</td>
</tr>
<tr>
<td>Also important in providing a reserve that can be used for subsistence and income generation in times of hardship (crop failure, drought, shortage of wage employment, etc); or to meet special needs (school fees, weddings, etc.)</td>
<td></td>
</tr>
</tbody>
</table>

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Some subsistence use is declining, as households move to a different livelihood level in which forest inputs have a lesser role. Some subsistence use is falling because of pressures that make it less possible for the household to maintain the same level of use. In general, though, subsistence use continues to be very large, 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, and proximity to widely dispersed rural markets, enable very large numbers of people to generate some income from forest products. Income from forest products seldom appears to account for a large share of a household’s total income, but is often important in filling seasonal or other cash flow gaps, and in helping to cope with particular expenses or to respond to unusual opportunities - as is illustrated in the examples in Box 5. Forest products can also provide a source of ‘windfall’ income; a good crop providing 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. Numerous case studies document how the numbers involved in the selling of forest products rise in hard times.

These activities can therefore be very important to the poor, including poor women, in situations in which 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 in a community, with more resources to devote to forest product gathering and production, who are the heaviest users (Madge, 1990; Cavendish, 1996; Ogle, 1996), 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. Few are able to expand beyond a single-person (or at best family-based) operation, operating from the homestead. Such activities typically generate low returns, providing little if any surplus to invest in livelihood improvement, and are often tedious and arduous. They are therefore likely to be abandoned once more rewarding and congenial alternatives become available, or rising incomes lead to displacement of the product in the market by purchased alternatives, or as increasing pressures on household labour resources make such low value labour intensive activities no longer competitive. Others are likely to be attractive only temporarily, such as wood fuel production and sales engaged in by immigrants or young men in the process of clearing land in order to create their own farms.

Expanding and growing forest product activities are more likely to be found where per capita incomes are rising, and 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 by very large numbers of people to more specialised year-round operations by a smaller share of the population. As the production and vending activities characteristic of such situations frequently do require skill and capital to enter, they are often not available to those previously engaged in the simpler forest product activities. They are more likely to be captured by the wealthier and better educated within rural communities, responding to market opportunities rather than pressures to find some source of income. As is shown from the experience summarised in Box 6, a single region can contain both stagnant and growing activities.

### Box 5: The role of forest product income in selected rural household systems

A study in Sierra Leone found that fuel wood selling provided the first cash income from land cleared for rice production. Subsequently fuelwood collection for the market was concentrated during the off-peak agriculture period, providing cash income in 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 has been shown to account for 39 per cent of cash income and 34 per cent 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-savanna zone of Guinea found that needs for fuelwood and poles were mainly met from bi-products of the agricultural cycle, and that farmers sequence their wild plant collection and trading incomes with seasonally-timed needs - e.g. to purchase seeds, hire labour for cultivation, and buy food at harvest to be processed and sold during the dry season. Many women traders generated their working capital from cropping, gathering and processing, within 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% in the harvest season to 9% in the hot and rainy seasons and 11% in the cold season. Cash income from these sources was sufficient to purchase between 9 and 28 per cent of the households annual caloric needs; the lower tercile income was more dependent on this source of income than the highest tercile, and...
It is therefore often necessary to be able to distinguish between those forest products activities that feature in the survival strategies of the very poor, and those product activities that can contribute to increasing 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.

3.2 Changes in patterns of sourcing forest products

Clearance for agriculture, destruction and degradation due to logging, and overuse of remaining forest and tree resources all reduce the options available to local users. As market opportunities increase the value of forest products, de facto privatisation by the wealthier and more powerful of the users, or appropriation by the state or industrial interests, can exclude many users from access to what is left. The increasing dependence of rural people on wage labour is also likely to mean 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 are often increasingly concentrating their harvest of forest products in areas of bush fallow and farm bush 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 the farm. Some of the forest products that contributed most to household incomes proved not to be drawn from forests at all - palm wine and distilled spirit coming from oil palm grown as an agricultural crop, and wood fuels from wood generated in clearing fields for cultivation (Townson 1995b).

Often the process of clearance for cultivation, and of the fallow cycle, involves a measure of manipulation of the tree cover to favour species and products of local value. Examples include the ‘forest orchards’ and ‘forest gardens’ in parts of Indonesia, in which the forest has been enriched with fruit trees, rubber, and other species
of local value (Michon and de Foresta 1995), and açai palm (*Euterpe oleracea* Mart.) and babaçu palm (*Orbygnia phalerata*) in parts of the Amazon basin (Anderson and Ioris 1992, May *et al.* 1985).

In addition, the planting of trees by farmers is observed to be increasing nearly everywhere. As is discussed in section 4.2.2, this is 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. Planting is usually initially mainly of trees that produce fruits, fodder and other outputs for domestic consumption, but as market demand emerges farmers will grow trees to exploit the opportunity to generate additional income (Arnold and Dewees 1997).

A notable feature of the changing circumstances within which people presently use and manage 'forest' products is thus this progressive shift from forest to non-forest tree resources as a source, and within 'forest' resources to stocks that the individuals can control in conjunction with their agricultural activities. Community forestry can therefore be 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 produce on-farm. For all of these, and other, reasons access to forests as common pool resources continues to be important for many rural households.

### 3.3 A typology of people/resource/forest product linkages

To summarize the main trends discussed above:

- **Very large numbers of rural households in developing countries are still subsistence users of forest or tree products.** Though the share of such products in their livelihood systems may often be declining, and supplies are increasingly coming from managed tree stocks rather than natural forests, forests often continue to serve as an important buffer source 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; but these activities have less potential to contribute to livelihood enhancement;**

- **Where per capita incomes are rising, such labour-intensive low return activities tend to give way to more productive and remunerative activities that meet growing and diversifying rural and urban demands; production and selling of forest products then increasingly shifts from a part-time activity by very large numbers of people to more specialized year-round operations by a smaller share of the population (Haggblade and Liedholm, 1991; Liedholm and Mead, 1993).**

These patterns can be modified in a number of ways - for example, where worsening urban poverty temporarily increases demand for low cost forest products which normally would have been displaced in urban markets. Over time, however, though we can expect some forest products to become increasingly important, others will fall out of use, and cause some forest product activities to become redundant and decline. In particular, those that generate only marginal returns to those engaged in their harvest and sale are unlikely to survive as costs rise and competition intensifies, or will persist only as long as the participants have no better option. Where forest products become less important to local livelihoods in this way, community level incentives to be involved in managing the forest resource could weaken.

The relative importance of these different patterns of needs and use differs considerably with variation in the importance of the need for forest products in livelihood systems, the potential of forest and tree resources relative to other household assets to support livelihood options, extent of integration into the market economy, and characteristics of people's social and institutional context. In order to provide a basis for examining how such variation can affect the scope for and nature of community forestry, the discussion that follows sets out a typology of the main kinds of people/resource/forest product linkage that occur (derived from work reported on in Byron and Arnold 1999). The three first categories identify different forms of linkage with the resource - distinguishing between the forest and agroforest as the main source of outputs, and within situations based on forests between those where the forest is the dominant resource, and those where it plays a supplementary role. The fourth category cuts across the others, being concerned with the processing and trading of forest products, rather than with the resource.
3.3.1 Forests are central to livelihood systems:

**Context**

Principally hunter-gatherer/shifting cultivation populations living in a forested environment. Likely to be homogeneous communities, with shared attitudes about resource use.

**Livelihood roles**

Forests are central to the livelihood system. Though in the past they have often provided the basis for stable livelihood systems, they usually difficult to sustain in the face of outside pressures (e.g. logging, wage employment, or when better access markets favours agricultural activities). Moreover, the forests provide only limited opportunities for livelihood improvement (e.g. development of agroforest crops, gathering for the market), some of which have poor sustainability records and can expose rural households to higher levels of risk (e.g. trades in extractive products, employment in boom-and-bust logging industries).

**Community forestry potentials**

Participants are often well placed to continue to manage their forest resource base as common property - provided there is effective government recognition of and support to local user group rights (e.g. against forest industry, and encroachment by other population groups); and other sector policies, such as settlement, do not undermine them.

3.3.2 Products from forests play an important supplementary or safety net role:

**Context**

Agricultural populations that still draw on forest/woodland for inputs that cannot be produced on-farm, or that can be more efficiently supplied from off-farm resources. Likely to be characterised by heterogeneous communities, and multiple user groups with overlapping claims on the forests - e.g. state, conservation, and industrial interests, as well as different categories of local user.

**Livelihood roles**

Forest products are of continuing importance in coping strategies of the poor in stagnant economic conditions, and as a reserve in difficult times. 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 higher return market opportunities, or to privatise forest land and put it to non-forest uses.

**Community forestry potentials**

Fractured, internally differentiated, communities are likely to lack capacity to manage competing uses unaided. Where this is the case, external assistance could be needed to strengthen and support resource sharing and management mechanisms. Policy-based impediments may include tenurial change that threatens existing rights, and restrictions on private harvesting and trading of forest products.

3.3.3 Forest products come primarily from agroforestry sources

**Context**

Where declining supplies from forest sources, and changing demand and on-farm factor availability and allocation, favour tree crops. Only available to those with access to land that they can use for trees (tree growing may not be possible for sharecroppers and other farmers with tenurial constraints).

**Livelihood roles**

Provides poor farmers with a low cost means of enhancing site productivity, diversifying to reduce exposure to risk, and 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 who have other sources of income.

**Community forestry potentials**
Potentials usually need to be pursued through individual rather than collective actions. Tenurial conditions that constrain (or appear to constrain) tree growing may need to be clarified or modified. Progress can often be constrained by impediments that restrict farmer access to appropriate technical options, or to markets.

3.3.4 Forest product activities are important as sources of employment and income

Context

Ease of access to the resource, low thresholds of entry, and rural demand for forest products can make these activities a major source of non-farm rural income. Available to the landless as well as those with access to the land, and to women as well as men.

Livelihood roles

Often an important component of coping strategies of those with few other income earning opportunities. However, often provides low returns and declining future market or competitive prospects. More remunerative activities with growth potentials often require skills and inputs available only to the wealthier and more skilled.

Community forestry potentials

Different categories of producer/trader face different potentials and constraints (credit, skills, etc.). It may be better to help people faced with declining prospects in their current activity to move into more rewarding alternatives. However, in the shorter term, there may be no option to these minimal-return forest product activities for many, so that interventions need to focus on how to support them.

There are not clear cut boundaries either between or within these categories. For instance, at the edges of forests shifting cultivation grades gradually into rotational agriculture. Similarly, the agriculture-plus-forest-input category ranges all the way from rotational bush fallow subsistence agriculture to predominantly commercial agriculture systems. Equally importantly, there is often a wide range of different levels and patterns of people-forest relationship even within a single situation. Nevertheless, such a framework does help in capturing some of the salient features of the variation in people-forest relationships relevant to the discussion in the next two sections.

4. CONTEMPORARY COMMUNITY FORESTRY SYSTEMS

The present section is concerned with the evolution of forms of governance and management that are prominent in community forestry. In practice, forest resources used by local people are often held in overlapping combinations of private, state, common property resource management and open access regimes. In Africa: "Rights to trees may be held by one or several individuals, though the land may be owned by another party. Access may rights may vary seasonally. Rights to a particular forest area or resource may be overlapping or nested according to village, lineage, household and individual property rights." (Neumann 1996). Similarly, in Asia there may be multiple use, for different products or by different groups, and at different times of the year, on an area (Campbell 1990).

Pursuing the typology set out in the previous section, we discuss issues of governance and management separately for those situations in which the resource is primarily forest and those in which it is primarily planted agroforest. Discussion of governance of forest resources distinguishes between those situations in which the resource can be managed essentially as common property by a single group of users, and those where control and management need to involve more than one set of stakeholders.

4.1 Managing forests as common property

As was noted earlier, collective management regimes for forest resources have evolved where the demand on a resource has become too great to tolerate unregulated ('open access') use any longer, so that property rights in the resource have to be created, and other factors make it impossible or undesirable to allocate the resource to individuals (McKean 1995). 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 such a regime can evolve into private property - a sequence that has been observed, for instance, among settlers without formal title in areas within the Amazon basin (Rudel 1995) - or can revert to open access use.
Forests clearly often possess features as a resource that can favour collective rather than individual control - they often need to be maintained on a large enough scale to function as a productive ecosystem, coordination among users may be necessary to deal with multiple uses and externalities, and group control can be the most efficient way of coping with the costs of monitoring porous boundaries and enforcement within those boundaries (McKean 1995). However, choice of management of forests as common property has been strongly affected by arguments that it is inefficient, and unsustainable, by comparison with private property or state ownership. This argument was dramatically expounded in Garrett Hardin's 1968 article entitled "Tragedy of the Commons", that was interpreted as postulating that overuse among those using a 'commons' was inevitable, because each would seek to extract more than his share knowing that the gain from doing so would more than offset his share of the cost of this overuse. Its wide acceptance contributed to the pursuit of land distribution policies that favour individual private land holdings, and to justifying state control of forest resources, ostensibly to ensure protection and productive use.

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 prove to be able to create and sustain collective arrangements which avoid over use. The growing body of knowledge has also resulted in fuller understanding of the attributes of resources and users that are conducive to the formation and functioning of such self-governing arrangements - attributes that are summarised in Box 7.

**Box 7: Attributes of common-pool resources and users conducive to self-government**

**Attributes of the Resource:**

- Feasibility of improvement: The resource is not at a point of deterioration such that it is useless to organise or so underutilised that little advantage results from organising.
- 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 sufficiently small, given the transportation and communication technology in use, that users can 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 other variables of importance to them.
- Common understanding: Users have a shared image of the resource and how their actions affect each other and the resource.
- Discount rate: Users have a sufficiently low discount rate in relation to future benefits to be achieved from the resource.
- Distribution of interests: Users with higher economic and political assets are similarly affected by a current pattern of use.
- Trust: Users trust each other to keep promises and relate to one another with reciprocity.
- Autonomy: Users are able to determine access and harvesting rules without external authorities countermanding them.
- Prior organisational experience: Users have learned at least minimal skills of organisation through participation in other local associations or learning about ways that neighbouring groups have organised.

**Source:** Ostrom 1999

Experience with long-enduring common property institutions also underlines the importance of use rights being recognised by government authorities, clearly defined membership of the user group, freedom to establish and modify appropriation and operational rules, and cost effective systems of monitoring and enforcement (Ostrom 1990).

**4.1.1 Experiences in situations favouring local management**

Instances where forests are being managed as common property have emerged in a wide range of situations.
Some of the most prominent contemporary instances are to be found, not surprisingly in heavily forested areas, where forest outputs play an important role in local livelihoods.

It is in such areas that self-initiated forest protection groups are presently most numerous and strongest. It has been reported that in the forest belt across India there are at least 10,000 such groups, managing areas in forests designated as Protected Forests in which state control is less intense, and in which there is generally more scope for the use by local people than is the case in Reserved Forests. Many of these informal systems date from the 1970s, and emerged as a response to growing scarcity of forest products, perceived growing outside threats, and growth in activities of local NGOs able to support such initiatives.

These forest protection groups are typically very small, often based in a single ethnically-homogeneous hamlet and frequently functioning within broader hamlet-level management activities. Initially, forest protection groups concentrated on control of harvesting and use of products in local demand but, in order to improve productivity, they have become increasingly involved in more active management of their forest areas. Some also have taken on management of areas of Reserved Forest.

The ability of local protection groups to emerge and flourish in the forest zone have been attributed to the presence of strong informal village organizations; the ambiguous status of Protected Forests (which allows some flexibility and innovation in forest department arrangements with local users); and the benefits to both villagers and the state of bringing degraded forest under management. Increasingly, groups have been seeking more formal authorization for their activities in order to strengthen their position in dealing with outsiders and the state. The forest department is empowered to authorize locally organized forest protection systems, and many have been authorized. However, in some areas some reluctance to do so has been evident, in part because of concern that the spread of local management could encroach on the position of the forest department. There has also been pressure for authorized groups to observe some of the requirements of the Joint Forest Management programmes discussed later (Kant et al. 1991, Poffenberger 1996).

Components of collaborative management are to be found in many other situations. Many of these are residuals of earlier more robust systems, which have been eroded over time by the combination of state appropriation and demographic change discussed in Section 2.1.

Where new contemporary systems are to be found it is generally in countries which, to a greater or lesser extent, have moved to remove or reverse measures that earlier discriminated against collective local management in favour of extending state control. As was noted in the earlier section, probably the principal factor in encouraging at least some countries to make such changes has been recognition that centralised management of forests in situations where local people also draw upon the forests has failed to conserve essential productive and protective aspects of the forest estate. It also accompanied growing acceptance of arguments that forestry needed to become more responsive to meeting local needs and concerns. In some initiatives, such as the Philippine ancestral domain certification programmes, providing meaningful local autonomy has become a primary objective.

Probably the best known such initiatives, and one of the most progressive, has been that in the middle hills of Nepal - the main features of which are summarised in Box 8. Starting in the 1970s the government initiated measures, and the necessary supporting legislation and regulations, to devolve responsibility for management of local forest areas to users, and to decentralise government authority and services to the local level. The process has moved progressively towards centering control in local forest user groups, which have a large degree of autonomy in making decisions about their resource, and in implementing these decisions. Networking among user groups has been further strengthening their position and effectiveness. By June 1997, there were 6,000 functioning forest user groups, managing 450,000 ha of forests, with a further 6,000 groups waiting for formal registration.

Issues still arise, both within user groups, between them, and with the forest department. Concerns have been expressed about domination by local elites, politicisation of the user group system, and pressures from the forest department for user groups to focus on tree planting rather than harvesting. Nevertheless, the Nepal experience has been encouraging; advancing democratic management of forests by local users further than is to be found in most situations, and giving it a strong institutional basis. And recent studies have shown that, where user group management is active the condition of the managed forests has often improved.

The considerable measure of success of this initiative to create a viable contemporary form of management of forests as common property evidently reflects both well focused and delivered government interventions, and also the fact that the hill areas of Nepal demonstrate many of the resource and user attributes favourable to this form of governance. Forests are very important to the functioning of hill systems, providing fodder and bedding for the livestock that are critical to hill agriculture, and fuel and construction materials. Both richer and poorer among users have a shared interest in these outputs from the forest, and many hill communities have a
long history of managing their local resources, as a consequence of their isolation. The importance of such factors is underlined by the contrast with the lowland terai area of Nepal, characterised by more diverse populations and market oriented livelihood systems, where it has not proved possible to develop comparable collective systems (Otsuka 1998).

However, the hills are becoming exposed to change in these attributes. With the opening up these areas, giving many communities access to markets and supplies of purchased goods, enabling people to migrate to take advantage of employment opportunities elsewhere, and giving more children access to schooling, some aspects of the conditions favouring collective management of local forest are changing. With less labour available on-farm, more marginal agricultural areas are being withdrawn, and often recolonised or planted to trees, thus creating sources of tree products nearer to the home. Livestock is becoming less important, and progressively shifted to stall-feeding, reducing the need for arboreal fodder. Pressures on the forests can therefore be declining. This could reduce the incentive for collective protection and management of local forests, or it could stimulate it by making it easier (Malla 1999, Gilmour 1997). It is too early to say how this will evolve. However, the fact that user group forestry is by now well established, and growing so vigorously, encourages the idea that it will be able to adapt to such changes.

**Box 8: Community Forestry in the Nepal Hills**

Historically, forests were controlled under a variety of forms of tenure - some feudal, some in the name of the state, and some under communal forms of control. The overthrow of the feudal system in the 1950s led to the forests of feudal owners being 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 they used under their own *de facto* control, in order to secure their access to them.

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. However, *panchayats* usually proved to be unsuitable bodies to undertake 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 Decentralisation Act in 1982, the government initiated a series of measures that moved the focus from the *panchayat* to the forest user group, incorporating features of indigenous control and management systems that many communities within the middle hill areas were already practising, and more authority and responsibility was progressively devolved to these groups. These new institutional formats were formalised in the 1989 Master Plan for the Forestry Sector, with the user group approach 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, set the prices at which the produce is sold and determine how surplus income is spent.

By June 1997, there were 6000 user groups, managing 450,000 ha, with a further 6000 waiting for formal registration. User groups are now coming together and forming larger network organizations. The largest network, the Federation of Community Forestry Users in Nepal (FECOFUN), with more than 1000 user group members, is taking on a negotiating and mediating role, and the provision to members of some services previously provided by the Forest Department.


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4.1.2 Impediments to collective local management
The record of initiatives to move to collective local management of forest resources that are less well endowed with the requisite attributes, or embedded in less supportive political, institutional and economic environments, have often been more problematic. Three characteristics in particular recur as major constraints to management by user communities: insufficient commonality of interest within the community; ineffective or unrepresentative local institutions; and heavy interference by the state.

**Conflicting interests within the user community**

In many situations migration, market integration, changing attitudes, and differential asset endowments and access to opportunities, have resulted in communities whose component parts have very different interests in forest resources. The needs 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 the better off and outsiders who wish to privatise forest output flows in order to benefit from the opportunities that increasing commercialisation of forest products present, or who seek to privatise the land and put it to non-forest uses. Securing the rights of access of the poor to forest product resources in such fractured and often conflict-ridden communities has proved problematic. All too often the user group is captured, or usurped, by an emergent elite within the broader community.

Market demand is likely to increase pressures from users both inside and outside the user group to use the resource, which can increase the likelihood of conflicts of interest and make the process of control more complex and difficult. This can cause breakdown of the mechanisms for exclusion and control, leading to over-harvesting and degradation of the resource. Where transactions have traditionally been based on reciprocity, exposure to market forces and market values can lead to even more fundamental breakdown within a community. In both of these scenarios more complex controls and institutional measures are likely to be needed in order to cope with the increased pressures. Indeed, it has been argued that collective management is best suited to meeting subsistence demand, rather than production for the market (Baland and Platteau 1996).

**Ineffective local institutions**

Often related to these changes, capabilities to control and manage at the community level have often become eroded or broken down, or represent only some of the stakeholders with claims on the resource. The high transaction costs associated with organising to take on such responsibilities within such fragmented communities can mean that there is no longer a functioning local body. There is then a danger that devolution of full responsibilities and powers will not result in a viable or equitable solution.

The extent to which the interests of those who run or control the organization coincide with the interests of the forest user group, or groups, is also often an issue. Elected local government bodies have often proved to be unsatisfactory in this respect, because of their predominantly political and bureaucratic agendas, and because they generally covered much larger areas and populations than that represented by a forest user group. Local government bodies may also lack the technical knowledge or the resources to control forestry activities - as proved to be the case, for instance, when the central government in Bolivia devolved responsibility for forestry to municipal governments (Kaimowitz et al. 1999)

Equally widespread is the problem of institutions that in practice prove not to represent the interests of their constituents. A study of devolution of forestry responsibilities to traditional authorities and Rural Councils in countries of the west African Sahel notes that neither chiefs nor elected rural representatives are necessarily accountable to their constituencies - "rural authorities are upwardly accountable to the central state, rather than downwardly accountable to the local population" (Ribot 1998). Devolving control or decision making powers to such bodies is more likely to give powers over the resource to particular individuals or groups of individuals within the community, effectively privatising use rights in their favour. It thus risks defeating the social objectives of community forestry.

This has proved to a very widespread problem. Even in the program of ancestral domain certification in the Philippines, which is expressly designed 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).

**Intrusive control by the state**

The comment immediately above about local bodies remaining primarily accountable to the central state reflects the third main problem: that of governments, through their forest departments being unwilling to ‘let go’ of control of forest resources even in programmes of devolution. All too often the latter occurs within the
framework of rules and regulations that limit their rights and benefits, and effectively circumscribe the authority and freedom of the recipients to act (Ribot 1998, Brown 1999, Hobley 1996).

The very process of imposing rules undermines the process of empowering a local institution to deal with its particular situation. Preset 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 constantly 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 there remains considerable dispute and friction between user groups and the forest department over the rules laid down and monitored by the latter (Srestha 1996). Limited rights, when set against the increased transaction costs associated with devolution of responsibilities, often discourage populations from taking on the management of local forests (Shepherd 1992).

In some countries collective local management has been thwarted by failure to put in place the policies required. Sometimes this has been because a government has not been persuaded of the need for a change from central control and management of forests. Sometimes it has been because change has brought about a shift other than towards devolved management. In Thailand, for instance, the growing strength of environmental interests, as the commercial and revenue values of upland forests declined following a logging ban, has led to stricter protective regimes that have hampered moves towards empowering communal management in upland areas where water supplies for Bangkok originate (Vandergeest 1996, Witayapak 1996).

Elsewhere, policy changes have not been followed through with the necessary changes in legislation and institutional structures. Some progress has often occurred in their absence, through informal arrangements between forest departments and communities (Fox 1996). However, 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 law and local groups can encounter difficulties in asserting their rights (Bruce 1996).

To sum up so far, the experience with interventions to encourage or support local management of forests as common property indicates that this has often been attempted in situations in which user groups cannot effectively control and manage forests unaided. Faced with multiple uses, and overlapping claims on the resource, local organizations frequently need assistance. A second feature that runs through much of what has happened has been the continuing presence of the state as a stakeholder in forestry, as well as a regulator. The widespread adoption of forms of joint management of forests between forest departments and local users has been a reflection of, and response to, this situation.

4.2 Joint management of forest resources

The case for joint or co-management between forest departments and local users is broadly as follows:

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

4.2.1 Joint Forest Management in India

The Joint Forest Management (JFM) programme in India provides one of the largest bodies of experience with such co-management approaches. It evolved from the Social Forestry programmes discussed earlier, 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 joint management in state forests occurred when the 1988 Forest Policy brought about a radical change in the priorities for the forest sector. The Policy subordinated direct economic benefit to environmental stability and meeting subsistence needs, and stated that forests were not to be commercially exploited for industrial uses. For the first time, environmental stability and meeting the subsistence requirements of local people were given greater prominence than
industrial use and generation of government revenue, with the policy document including specific reference to meeting the domestic requirements of ‘tribals and other poor living within and near forest’ (Saxena 1997).

In June 1990, the government of India followed this up with a circular to State governments recommending the adoption of ‘Joint Forest Management’ on areas of State forest land. The principal features of the Circular were as follows:

- JFM should be an arrangement between the village community, 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 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 a share of the income from the timber and other products sold by the forest department); grazing or agriculture is prohibited (though grass could be cut for feeding to livestock, and fruit trees may be planted);
- Only degraded forest areas are eligible.

By 1995, 15 States had adopted such collaborative programmes involving local communities in the management and protection of forest lands in return for rights to use specified forest products.

Not surprisingly, in such a large and diverse country, the results of applying the JFM approach have varied considerably. In the original area, in the southwest region in the State of West Bengal, where the underlying approach was first applied 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 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 (reduced erosion, improved water supplies, etc.) and that 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 because they are able to invest more labour in forest exploitation (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. Joint management has also been successful in the mangrove forest areas in the south of the State, because of the protection against flooding and erosion that improved management brought about. Much less progress was achieved in trying to extend the approach to the northern region of West Bengal, where the forests are less heavily degraded, and contain substantial timber components of continuing value to the forest department, but less of non-timber forest products of interest to villagers who have more attractive non-forest alternatives available to them. The incentives for participation in joint management of local forests were therefore less than in the southwest (World Bank 1998).

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 more as a set of principles and a process rather than a preset formula, to be modified and adapted to local circumstances, and 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 underlined, because JFM has provided a model for co-management arrangements not just in India, but in other countries as well - in particular in Africa. It is therefore important to recognize that such approaches need to be designed to fit the particular characteristics of each situation.

**Box 9: Some lessons from experience with Joint Forest Management (JFM) in India**
Resource factors

- Restriction of JFM just to degraded forests limits the potential benefits users can obtain, reducing their commitment to forest management.

- Pursuit of conservation usually means restricting or prohibiting existing gathering or harvesting activities 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 just 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 shift forest product benefits from meeting immediate subsistence needs to a share of future proceeds from product sales (and can 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 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 (VFCs) as the local implementing organization

- Some VFCs tend to be dominated by the local elite, 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 a recognised legal status, it may lack authority in dealing with the intra and inter group conflicts that JFM can generate.

- The need for SIFPGS to bring their procedures into line with JFM procedures, in order to benefit from the legitimisation 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, that can be challenged in law.

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 between 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 of the VFCs can mean that people join just to share in the income accruing to the VFCs.

- JFM areas are not exempted from existing regulations that require producers of NTFPs to sell to government forest corporations and other authorized organizations.
In considering what might be achieved through joint management, several of the lessons learned from the Indian experience could be relevant. Box 9 summarises major issues that have arisen in its application in different Indian States, and some of the main adaptations that have been attempted. Some of the more frequently encountered problems relate to difficulties in ensuring sufficient incentives to local participation in JFM. Pursuit of sustainable forest management usually means restricting or prohibiting existing gathering or harvesting activities of importance to sections of the poor, at least temporarily. Though forest management can be restructured to favour species and products of local value, the resultant changes in the composition of protected forests are likely to have differential impacts on different categories of user. Even in the generally successful experience of southwest West Bengal, fuelwood 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 can therefore be detrimental to the most vulnerable in the community.

In addition, excluding richer and more productive areas of forest limits the potential benefits users can obtain. In some areas the forest simply cannot 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 taken the form of wage employment in forest department activities, provision of services such as improved roads and water supplies, and 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, and whether they generate commitment to forest conservation and management.

Issues also arise over the distribution of costs and benefits between the forest department, the village forest protection committee and members of the committee. The need to bring production of the more valuable nationally regulated 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, and product flows previously used to meet subsistence needs may be diverted to sales, to the detriment of those who previously relied on them.

The more recalcitrant problems are often those associated with how to deal with 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; conflicts that arise with prior users of the forest who have been excluded from membership of the committee; avoiding 'free riders' 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 forest protection committees with other community institutions, in particular the panchayat system.

More fundamental issues about the role of the forest departments also arise. The JFM 'arrangement' is one that is ultimately controlled by the latter. The state retains legal title to the forest areas allocated to JFM, and specifies which areas may be included. Village forest protection committees are initiated by the forest department, which can dissolve them at will (without compensation), and which assigns a forest department staff member to the Committee, to supervise the application of their operational rules, which are laid down by the department. As several observers have noted, there is a danger that in practice JFM could result in an extension of forest department control and influence, rather than an increase in local participation in forest management (Sarin 1998, Saxena 1997).

However, some of the criticism of the extent and nature of forest department involvement seems to lose sight of the joint nature of JFM arrangements. In contrast to approaches designed to have local users take full responsibility, and manage the resource as common property, the areas assigned under JFM are not being transferred from the state to the community, they remain state forest land to be jointly managed by local users and the forest department. The responsibilities of the latter within the arrangement are such that a close association with the forest protection committee is usually necessary (e.g. to help communities defend their use rights, provide technical support, and to administer the flows of government funds that are channelled through JFM). Nevertheless, the extent of reaction against forest departments indicates that their involvement is widely felt to be excessive.

Given that the extent to which JFM provisions actually expand and entrench local peoples rights to access and use of forest resources is limited, and quite narrowly bounded, progress in practice depends quite heavily on how forest departments and their staff interpret and apply these provisions. A lot has been written about the difficulties foresters encounter in making the necessary attitudinal and skill changes, and in giving up the power, status and control over budgetary and extra-budgetary resources and income that stem from their control over large areas of forest. However, many do see the need for change, and find working with villagers more satisfying than the confrontational relationship that often prevails in territorial forestry. Good progress at the community level can often be attributed to the interest and initiative of an individual official (Jeffery et al. 1998).
Joint management has also benefitted from the growing presence of NGOs in its design and implementation. Their involvement has usually been encouraged, particularly where they can take on tasks that the forest department find difficult or contentious, or where there has been a history of poor relations between people and the department. However, there is a danger that forest departments are sometimes delegating tasks to NGOs in order to avoid making necessary internal changes. Also, it is becoming apparent that not all NGOs are well equipped to carry out such tasks, and that some are pursuing agendas for forest management (e.g. related to environmental issues) that are not necessarily congruent with the interests of the people in the communities they work with. In addition, the confrontational positions adopted by some advocacy NGOs (as distinct from grassroots NGOs) have sometimes hampered and curbed the development of joint management.

4.2.2 Summing up the lessons learned from joint management

Joint or co-management of state forests by the forest department and local users can offer significant strengths and advantages. However, it will succeed only if it can be tailored to the characteristics of each situation, rather than implemented as a single model of universal application. Also, in common with any other approach, it has its limitations. Working through community wide bodies that are intended to represent users other than the state, it is not well placed to deal with the increasingly common situation of multiple stakeholders, with different and competing claims on the forest. The dominance of forest departments also hinders progress. It is therefore becoming apparent that more flexible approaches need to be found, that can accommodate such pluralism of interests, and that are equipped to develop forms of management that can adapt to the varied needs of the different interested parties.

This is examined in the Discussion section of the paper. In the section below we first consider the forms of community forestry appropriate when users are drawing not on forests but on agro-forest resources that they have created and manage.

4.3 Agroforestry and 'farm forestry' systems

Planted tree systems represent a much more fundamental shaping of their local tree resources by users. Farmers cultivate and manage trees for a wider range of reasons than just to maintain supplies of forest products and services once access to forests declines or is no longer possible. Trees are also grown to meet increasing demands for tree products as populations grow, as new uses for tree outputs emerge, or as external markets develop. Trees are also retained or introduced into the farm landscape to help maintain agricultural productivity in the face of declining soil quality or increasing damage from exposure to sun, wind or water run off. Trees and tree products can also contribute to risk reduction and risk management in the face of needs to secure rights of land tenure and use, to even out peaks and troughs in seasonal flows of produce and income, and in seasonal demands on labour, or to provide a reserve of biomass products and capital available for use as a buffer in times of stress or emergency (Arnold and Dewees 1997, Chambers and Leach 1987).

Trees can equally be incorporated into farm systems in a variety of ways. Some have a forest starting point, evolving through enrichment of adjacent forest areas, and retention and protection of selected species of value during land clearing for cultivation, to planted and managed fallows, planting in various niches on the farm where trees will best complement or supplement crops, through to the growing of tree species as field crops as an alternative to agricultural crops. Different of these pathways present different issues, and different potentials for institutional change and support measures. In the rest of this section we look at a number of examples from across this spectrum, to explore some of the main elements involved.

4.3.1 From forests to agroforests

Agroforests based on enriched forest and fallow are common in the wet tropics, and many such systems are of long standing. As was noted earlier, they have often been increasing, as growing market demand for the products of the species involved increases their importance as a source of smallholder income, and as increasing labour shortages focus production in and around the farm area. Prominent examples include the açaí and babaçu palms in parts of the Amazon basin (Anderson and Ioris 1992, May et al. 1995), fruit species in the forest belt in West Africa (Falconer 1990), and a variety of species and products in the forest zone in Southeast Asia.

In the outer islands of Indonesia, which contain some of the main concentrations of such long standing agroforest systems, cinnamon, ilipe 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 by way of 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
These agroforest systems occur in areas in which the overall village and surrounding forest lands have traditionally been managed as common property, with smaller extended family groups controlling access to planted trees based on descent from the earlier planters, and 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 passing to individuals, if only temporarily, in order to facilitate timely decisions on harvesting and marketing. Therefore a combination of communal and private rights often prevail at present (Peluso and Padoch 1996).

The 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 from the production system so that over time they are declining, or being replaced by plantation sources. The opening up of forest areas, and the accompanying insertion of new activities such as logging, also offer rural people alternative ways of diversifying predominantly subsistence activities. With more people leaving villages for wage employment, there are fewer to maintain labour intensive agroforestry production systems (Peluso 1993, Peluso and Padoch 1996).

In some places such systems are also being eroded by competing claims on the forest and the land over which they have had historic de facto rights. Forest is being cleared to make room for growing populations and migrant settlers. Increasing 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 happening with Shoreas which produces 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.

4.3.2 Planted trees in farm landscapes

There is growing evidence that tree planting by farmers is increasing across a wide range of situations. Tree growing generally increases as one moves towards more intensive agriculture and land use, and as access to natural tree stocks declines. There is also a general progression over time within most systems 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. However, one widespread shift contributing 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 more children are not available for work on farm because they are at school. As tree growing is less labour intensive than most agricultural crops this, together with the related increase in the role of income from non-farm sources, has encouraged more use of trees (Box 10). In poor areas, unable to afford inorganic fertilizer or soil protection structures, there is often increased reliance on trees to help maintain site productivity.

Box 10: Trees and land and labour allocation

- As tree planting and husbandry requires less inputs 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 supervising and hiring-in labour can act as incentives for households to plant or to maintain trees instead of other more labour-intensive crops.
- Older households, having 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.
As a rule, most farm level tree management is primarily to meet household needs. Trading in tree products usually develops as local markets for fruits, fuel, 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 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, or to exploit the opportunity to generate additional income. Production for urban and industrial markets is more likely to be practiced by farmers in areas where the process of agrarian transition has evolved further towards greater involvement in commodity markets and an entrepreneurial approach to agriculture based on cash crops.

**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 has been to produce 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 that led them to focus on a few known industrial forestry species (in particular eucalypts), cash subsidies for planting in many of the States, and information about prices that appeared to make tree crops more attractive than agricultural crop alternatives on some sites.

However, after the first growing cycle, eucalypt growing was discontinued by many farmers due to higher than anticipated costs, 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. Farmer access to markets was adversely affected by government controls on private production and transport of wood products, by government sales of pulpwod at administered prices, and price controls on domestic fuels (kerosene and gas) 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 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, had 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 multi-species multiple product strategies found in many existing small farmer systems. One that has was a 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 wood fuel, poles, seedlings and fruit. Planting of trees was historically in under used parts of the farm such as around homesteads and along field pathways and borders. During 1985-89 a farmer-responsive extension service substantially increased the ‘menu’ of tree-related options available to households, and farmers responded by employing a large and growing 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 and land area in trees under conditions of increasing land scarcity appear to have been to obtain critical consumption goods which 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 bulk of farmers for whom farm trees serve a mainly self-sufficiency role, support should focus on helping farmers move forward incrementally, 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 of planting subsidies in some programmes leading to undesirable distortions in land use, such as displacement of sharecroppers and grazing, and reduction in small farmer subsistence production of food crops to the point where household food self-sufficiency levels could be adversely affected (SIDA 1991).

It is argued that more attention should be paid to matching production with demand (Current *et al.* 1995, Arnold and Dewees 1997). In particular, higher priority should be given to changing policies and practices that presently constrain farmers' access to markets, and that depress market prices for their tree products. Private producers are frequently subjected to controls on harvesting, transport and sale, designed to protect against illegal felling for sale from State forests. Resulting cumbersome and costly bureaucratic procedures lead to private producers having to depend on intermediaries to market their produce. In many countries farmers also have to compete with supplies from State forests and plantations, usually sold at administered prices.

It is frequently argued that investment in a relatively long gestation crop such as trees requires security of tenure, and will only occur if farmers have title to their land. However, this is not supported by the evidence. What proves to be important is the sense of security they have that they are assured of access to the fruits of their investment within whatever system of land tenure they are located (Fortmann 1987). Though there are some tenurial conditions, such as sharecropping, that will preclude tree growing, and some situations where uncertainty over state of landowner claims to tree-bearing land may have the same effect, and may need to be cleared up, tenurial reform is seldom necessary before farmers feel able to grow trees (Current *et al.* 1995, Shepherd 1992, Godoy 1992).

**4.3.3 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 cooperatives to create a collective marketing or even processing channel for their outputs. Others involve companies contracting to rent land from farmers on which to grow trees, or to contract with farmers to grow trees on company or public land. Yet others obtain supplies from nearby farmers who are linked to the company as 'out-growers'.

The potential advantages of such 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 out-grower 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 (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.

As is shown in Box 11, for such out-grower arrangements to function satisfactorily, there needs to be a balanced and equitable relationship between the producers and the company. The arrangement also needs to be consistent with the needs and possibilities of both sides. Out-grower 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 security of tenure, good neighbour relationships and labour management can be important.

Situations under which tree out-growing can be appropriate for smallholders can be where they have sufficient annual income from other sources to secure their ongoing needs, and land which they can use for trees that is not needed for food crop production, or for other basic needs. Tree growing is likely to be attractive where 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.

Where credit is needed for the tree, farmers may have to have title to be eligible for a loan. Out-grower production of tree crops is therefore unlikely to be feasible for very small or poor farmers. Those 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.

However, in the areas where tree growing is well established there are also often other programmes for some of the farmers who cannot, or do wish to, enter out-grower contractual arrangements. In South Africa, for instance, smallholders growing black wattle can market it, and get technical support, through a wattle growers co-operative (Clarke et al. 1997). In the Philippines, the company operating the out-grower programme also has a programme for those without title to land to grow trees under contract on company land (Roberts and Dubois 1996).

In recent years there has 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’ schemes, under which farmers were temporarily allocated plots on state forest land on which they were allowed to cultivate agricultural crops between 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 way 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 did not have any other option. Over time most have been abandoned, in recognition that they were fundamentally exploitative in nature. Those that survive, such as the ‘tumpang sari’ system in Java, continue to suffer from the same problems.

**Box 11: Key elements of company/grower agreements in tree out-grower schemes**

Study of existing out-grower arrangements shows the importance of a balanced and equitable relationship between growers and company. Even the best functioning of present schemes would benefit from the existence of grower associations empowered and trained both to act on their behalf in negotiations with the company, and to provide many of the services that growers now have no choice but to take from the company. Major issues that can arise between growers and companies include the following:

- **Freedom for growers to sell to other buyers.** Some companies require the growers under contract to them to sell only to them, others do not. As this aspect of contracts is usually difficult to enforce, it should be in the interests of companies to negotiate arrangements which growers are willing to adhere to without a restrictive contractual obligation. Too rigid a restriction on sale to others can put growers at risk if the company becomes unable to meet its commitments to buy from them, or unilaterally withdraws from these commitments. Over time, both company and growers are likely to be better served by a spread in tree growing as a farm crop, and emergence of a broader range of outlets, reducing the dependency of both sides just on the out-grower relationship.

- **Price.** The imbalance between the bargaining powers of company and smallholders is likely to result in at least a perception among the latter that the prices they are offered are low. Solutions can include setting up and training grower organizations to better represent them in negotiations, existence of an independent third party empowered to investigate and arbitrate price disputes, and extension of grower-company agreements to enable growers to benefit in a share of the off-farm as well as on-farm profits accruing from their tree growing operations. The emergence of competitive local markets for farmer grown wood is also likely to contribute to more satisfactory prices.

- **Credit.** This has been important in enabling many growers to participate, but is not always needed. Unless the grower needs to hire labour, tree growing generally requires very little capital, and availability of credit has sometimes resulted in growers using it unnecessarily - e.g. hiring contractors to carry out activities which the farm household could have undertaken, so raising their costs and reducing their profits. A more selective and judicious approach to use of credit seems necessary in
If the new schemes are to succeed they will need to be able to avoid the weaknesses of taungya. Most have focused on encouraging participants to use the land just for trees, rather than 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 for crop production, 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 be able to grant leases for 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 blocks of wasteland, which are then allocated to individual households. The farmers get long leases, and are able to benefit from group economies of scale in planting, extension, protection and marketing.

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 became more readily available the trend towards more trees would slow down or be reversed. If better functioning factor markets enabled farmers to, for example, purchase fertilizer and hire labour, they would be likely in many situations to move back to more intensive land uses.

5. DISCUSSION: ADDRESSING CURRENT ISSUES

It is now more than twenty years since ‘community forestry’ emerged, in one form or another, as a separate concept and vehicle for addressing the linkages between forestry and rural people. Not surprisingly, the considerable experience that has accumulated, 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 earlier understanding and approaches. In a number of important respects community forestry is presently having to engage in a process of rethinking and consolidation.

At one level this reflects growing recognition that the potentials for intervention are much more complex than was earlier assumed, and that many past attempts at intervention have not been sufficiently realistic. As one experienced observer has pointed out, proposals to achieve a greater degree of control by local communities too often call for conditions that would require “the complete restructuring of society, ... or a wholesale change in the patterns of political life. Too often, they also invoke a romantic past and seek to reverse the economy to re-find self-contained subsistence systems” (Campbell, 1990).

The tendency to simplify has also been evident in attempts to address the range of different types of people-forest relationship that occur as though they possess a degree of commonality that does not exist. This has led to attempts to implement community forestry through initiatives that pursue a single model for its development in situations exhibiting markedly different resource, demographic, social and economic characteristics.
More fundamentally, experience is showing that the different objectives that underlie the support for community forestry are not necessarily as congruent one with another as had been earlier tacitly assumed. Thus different interest groups pursuing community forestry, do so because they see it as being important for one or other of the following reasons:

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

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 assessing progress in terms of institutional change, or in terms of 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 rethought, and ways of harmonising policy and project approaches to accommodate a balance between them recast.

In this section we look at some of the more important present issues, and at current thinking about the directions community forestry could take in the near future. This discussion is organised around three topics: the balance between conservation and development, the growing role of market forces and the market sector, and approaches and methods that could make collaborative management more effective and relevant.

5.1 The balance between conservation and development

Over the period covered in this review, the development of community forestry has been increasingly shaped by concerns that it contribute not only to livelihood enhancement but also to the conservation of biodiversity. The theme of 'forestry and sustainable livelihoods' has come to be as much concerned with maintaining ecological quality as with sustaining income and material flows. At the same time, there has been growing pressure for biodiversity conservation projects to involve and benefit the people in and adjacent to them. However, it has become increasingly clear that it is difficult to successfully achieve both these objectives. An assessment of the performance of 23 of the Integrated Conservation-Development Projects (ICDPs) concluded that "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). At the project level, improvements in local benefits seldom resulted in less extractive use of the resource, nor did they diminish the need to protect the latter. This was sometimes partly due to poor project design. However, even well designed projects were likely to fall victim to outside events that increased pressures on the resource, such as increased migration back into rural areas by people who can no longer get employment as a result of structural adjustment programmes (Box 12).

Part of the answer clearly lies in better design of policy and project interventions; drawing upon more pluralistic approaches and adaptive management methods that achieve a more effective integration of interests of different stakeholder. It also suggests the need to revise some of the assumptions about the compatibility and mutual reinforcement of livelihood development and biodiversity conservation within the concept of 'forestry and sustainable livelihoods'.

The thesis that the forest can be used as a source of products without materially altering its ecological balance has been challenged on a number of grounds. Ecologists have pointed out that all harvesting of plant and animal components of the forest has some impact on its ecological composition and functioning, and these are often much greater than is commonly recognised (e.g. Peters 1994, Redford 1992). Economists have stressed the point that market demand is selective, and therefore is bound over time to alter the composition of the forest. Moreover, as market prices seldom reflect the values of environmental and other 'external' costs and benefits, market demand may lead to short-term over-exploitation of some plants and animals that provide highly desired products. Harvesting therefore can be expected to result in ecologically simpler forests, with less biodiversity (e.g. Homma 1992; Godoy and Bawa 1993).

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Box 12: Lessons from protected area projects linking conservation and local development
This is increasingly recognised. A recent study of the issue within WWF concluded that encouraging economic use runs risk of 'ecosystem simplification and biodiversity loss', but that "the price is considerably less than losing the ecosystem to an alternative use" (Freese 1996). However, it is also becoming clearer that it can be difficult to manage and use forests in a manner consistent with conservation and generate levels of benefits that will provide incentives to do so. A recent study of experience in Latin America concluded that the potential that the main conservation-compatible types of forest production provide only limited scope for enhancement of the incomes of those engaged in them, which also limits the extent to which they can encourage conservation. Thus, with the exception of some situations well endowed with commercially exploitable products, and well placed with respect to access to markets, harvesting and sale of non-timber forest products is found not to be financially rewarding (with much lower revenues than had been deduced from some early valuation studies (Peters et al. 1989, Balick and Mendelsohn 1992). Similarly, low prices accompanying abundant timber resources make it difficult to justify the additional costs of logging practices designed to reduce damage to the remaining forest. Equally, net values of pharmaceutical discoveries seldom translate into viable potential conservation values or local income streams. Nor, except in the most favoured situations, do the net revenues generated by nature-based tourism (Southgate 1998).

It has been argued that pursuit of the goal of using forests in ways that both support local livelihoods and conserve the resource should better reflect 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). The activities of the Chipko movement in protecting from loggers forests that were important to them, and the success of JFM in parts of West Bengal where people valued the protection of their agricultural lands that forests provided, are two examples where local values broadly coincide with 'forestry' values. Recent work, in particular in Africa, has shown the extent to which contemporary vegetation resources based on the transformation of the original forests into bush fallow also reflect what is locally valued. As was noted in section 3.2, these resources are much more important sources of forest produce to local users than the forests themselves. As Leach and Fairhead (1994) write in their study on this subject, "landscape changes can be perceived and valued in different ways by different groups; what is 'degraded and degrading' for some may for others be merely transformed or even improved".

Source: Derived from Wells 1994, Wells and Brandon 1992
In short, more weight probably needs to given in defining 'forestry and sustainable livelihoods' to conservation values other than biodiversity in many situations. Though some areas and biological systems will have biodiversity values that are so important that their conservation needs to take priority, the balance in community forestry would be more logically focused on sustainable systems of producing livelihood benefits, on doing so in a manner that encourages to the full the biodiversity that such systems encourage - for example by means of landscapes that maintain a patchwork or mosaic of agricultural and agroforest systems that preserve more biodiversity than alternative land uses would (Noordwijk et al. 1997).

### 5.2 The growing impact of market forces and the private sector

As has been evident throughout the previous sections, increasing integration into the market economy has nearly everywhere had a growing impact on ‘community forestry’. Some of these impacts, such as increased opportunity to generate income, can increase the importance of forests and trees in livelihoods. Other impacts, such as access to purchased supplies that will reduce dependence on locally gathered forest products, decrease their importance. In this section we explore the implications of some of these impacts further.

#### 5.2.1 Pressures on forests managed as common property

In principle, market opportunities, by giving added value to forest products, could increase the economic incentive to control the use and management of forest resources. In practice they result in some of the more intensive pressures on use and local management. As was noted earlier, commercial demand is likely to increase pressures from users both inside and outside the user group to use the resource, which can increase the likelihood of conflicts of interest. Labour and capital are diverted from management to more remunerative activities, and the potential to sell forest products or use them in commercial activities, increases the pressures to over-harvest the forest resource. More complex controls are likely to be needed, and the diversion of output from local to commercial uses is likely to shift benefits away from those who had depended on the forest for essential supplies of fuel, fodder, etc., exacerbating the potential for dispute and conflict. This can cause breakdown of the mechanisms for exclusion and control, leading to over-harvesting and degradation of the resource.

Other common consequences include increased social stratification within the group, with elites capturing the benefits (e.g. diverting supplies from subsistence use and users), which increases the likelihood of social conflict. Where transactions have traditionally been based on reciprocity, exposure to market forces can lead to even more fundamental breakdown within a community. The increased value commercialisation gives to the resource is also likely to attract the interest of privatizers and encroachers. In addition, increased value may encourage the state to capture a share by charging royalties, establishing marketing boards or imposing restrictions that limit the ability of communities to compete with it as a producer.

The consequence of such pressures is likely to be increased transaction costs associated with maintaining a collective management system, often to the point where the latter is abandoned. A study of the factors explaining ability or failure to adapt collective management systems from their subsistence origins to producing for the market reported that: "Communities who seem best able to adapt to commercialisation 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).

In some situations more complex mechanisms, able to cope with these 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 Shivalk hills in northern India, fodder grass for local self-use is protected collectively and distributed to all member households, while the rights to the commercially valuable bhabbar grass are auctioned to private contractors (Saxena 1997). In the CAMPFIRE programme in Zimbabwe communities have formed joint ventures with the private sector, to get access to the specialised safari and hunting skills and experience, needed to generate commercial revenues from the wildlife resources that they manage (Murphree 1996). In others, marketing has been handled by cooperatives. In the Plan Piloto Forestal in the Qintana Roo, a more ambitious approach is under way. There, ejido (community) groups that manage the forests function as industrial corporate entities, logging and processing timber, with a cooperative acting for all the groups in the market, and in negotiations with the state. Arrangements for distribution of benefits within communities have reflected traditional conventions such as annual rotation of posts, uniform salaries and consensual decision-making. However, while this has encouraged social cohesion, it has weakened business efficiency (Richards et al. 1995).

A more usual progression has been the increasing individualisation of rights to sell forest products, even within systems of collective control of the resource, such as was noted earlier in discussing agroforest systems in Indonesia. To date, outright privatisation of public forests has occurred on a large scale primarily in countries in transition from socialist systems. However, arguments have also been advanced in favour of privatisation of
forests in some developing countries. In a forest policy study dealing with Latin America it was argued that there were high opportunity costs associated with 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; thus excluding other potentially more valuable uses of the resource and the land (Laarman 1997). In 1997 the Government of Zimbabwe made a policy decision to privatise 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).

It seems likely that economic pressures to privatise public forests will increase. However, the debate so far seems not to have addressed the counter arguments in favour of collective control: e.g. 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 over use 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, 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 privatisation (McKean 1995, Bromley and Cernea 1989).

5.2.2 Strengthening small producers and traders

Revising regulations that limit competition and access to markets

As has been noted earlier, 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 regulations designed to limit rather than 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 (Dewees and Scherr 1996).

Forest departments may 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 - controls 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; e.g. by excluding exotic species grown by farmers but not occurring 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 deliberately subsidised 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 to confront the private producer with competition from subsidised sources.

One of the more 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 through one part of its forestry programme, they compete with them through the industrial forestry component. A logical long-term solution could be to phase out State production in those markets where smallholder production has a comparative advantage. 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 State, through its forest department, possesses as a producer of many forest products. There is a danger that, by hindering farmer access to tree product markets, governments may inadvertently be interfering with the shift from a subsistence to a market economy.

Smallholder and artisanal production and trade of forest products takes place overwhelmingly in the informal sector. The potential for such activities rests in part on there being an overall regulatory environment that does not discriminate against the informal sector. This could happen if regulations designed for formal sector operation would be disproportionately costly for informal sector operators to apply. In this connection, recent moves to require small producers to adhere to product certification requirements must be of concern. It has already been noted in a review of timber certification for ITTO that this bears unevenly on large and small producers (Simula and Ghazali 1996). Imposing certification requirements on some NTFP trades could prove even more onerous for small producers and traders.

Better support to participants in small-scale commercial activities

In nearly every country where such information exists, small-scale forest product activities are found to be
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). The very 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, the high rate of attrition, particularly amongst new enterprises, indicates the need that can exist for intervention to encourage entrants to concentrate on the more viable and sustainable kinds and levels of activity.

The concentration of the poorer of those engaged in generating income from materials from forests in low-return product activities that can offer no more than marginal, unsustainable livelihoods, 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. That being the case, it may be more fruitful to help people move into other more rewarding fields of endeavour rather than seeking to raise their productivity in their current line or work. The alternatives may be other forest product activities, but 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 in 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 proved to be susceptible to change in market requirements, to domination by intermediaries, and to shifts to domesticated or synthetic sources of supply, and have consequently not been sustainable. They can therefore expose rural households to high levels of risk, particularly where the trade has encouraged people to move away from more diversified and less risky agriculture-based livelihoods; as has happened with some of the extractive product trades from the Amazon region (Browder 1992). Similarly, interventions have sometimes led to product expansion on a scale that has resulted in depletion of the raw material resource - as happened, for example, with a programme that successfully expanded export demand for decorative baskets made by households in Botswana (Terry 1984).

Box 13: The rationale behind community involvement in forest management:

- **Proximity**: The local populations are the immediate custodians of the forest. They are the stakeholders in closest touch with the forest, and dependent on it in a wide variety 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 (NTFPs) - 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, where 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 the 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 which governments are able to establish independently.
In short, 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 failure of the farm forestry programme to anticipate the magnitude of the market, or to provide farmers with the information that would have enabled them to make informed decisions about the profitability of growing trees.

5.3 Making local forest management more effective and relevant

The rationale for devolving more responsibility for, and participation in, forest management from the state to local users of outputs of that forest remains strong (Box 14). It 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 that a central authority should only undertake tasks which cannot be undertaken at a more local level - the principle of 'subsidiarity'.

However, experience suggests that decentralization in itself does not provide sustainable forest development, nor does it ensure more equitable access to forest wealth. Instead it all too often seems to result in increased dissensus and conflict, new inequities, and less conservation.

It is increasingly recognised that this reflects a greater degree of complexity than had earlier been assumed. Neither the state nor local user groups are likely to be homogeneous entities with uniform objectives with respect to the management and use of the forest resource. Different government departments can have competing interests. With increasing exposure to market forces and demographic change, user communities become increasingly internally differentiated, with different components of a community developing different needs, opportunities and objectives. In addition there are often other stakeholders - including industry and environmental interests - with their own interests in how forests that communities draw upon should be managed. Increasingly, existing institutional arrangements are not able to deal with such complexity and

- **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 little alternative but to involve 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 otherwise unregulated public services. Several writers have emphasised the important roles which civil society organisations can play in augmenting public ‘voice’ and acting as ‘voice surrogates’; the forest sector, because of the way it impinges on many aspects of local life, may be an important arena for the exercise of such public voice.

- **Development philosophy**: CFM 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, decentralisation 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 CFM.

**Source**: Brown 1999
change.

The debate about community forestry is consequently shifting its focus towards a search for approaches and mechanisms to collaborative local forest management that are more likely to be able to cope with these complexities. In the process, some of the underlying concepts are having to be re-examined and rethought.

5.3.1 Towards a more realistic approach to 'participation' in forest management

The concept of participation, in the sense of 'having a share or taking part' (Oxford Dictionary), has been central to the main thrust of community forestry. It embodies the underlying aim of ensuring that those '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 it 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 1998).

The result has often been 'participation' that is more apparent than real. Responsibility for effecting the transfers of power and responsibilities has usually been vested in forest departments - the agencies of government with most to lose by it. As a result 'participatory' mechanisms emerge which 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). Alternatively, potentially reversible transfers of responsibilities take place that reflect a forest department's response to budgetary constraints rather than an initiative to strengthen the participation of the recipients. People may acquiesce in such changes, because they have no choice to do otherwise, but they are not empowered by them (Ribot 1998).

Another important factor has been the persistence of the assumption of homogeneous communities, comprised of people with common needs, use patterns, and objectives for the use and management of local forest resources. Implicit in much of the pursuit of participation in community forestry has been the assumption that the conditions that in the past favoured common property resource management still exist, or can be recreated (Campbell 1990).

The reality of fractured communities, internally differentiated by wealth, power, class, gender and ethnic identity makes it unlikely that there is often such a commonality of interest, or that it can easily be arrived at. Exercises in participatory appraisal, relying upon methods such as PRA that are likely to disproportionately reflect the views of the vocal and the powerful, consequently run the risk of creating 'participation' that does not equitably represent the interests of those who do not have an effective voice (Brown 1998). Moreover, participatory models based upon assumptions of social and cultural homogeneity can be at variance with the actuality of, for example, 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 - for instance with respect to gender or class (Hobley 1996).

Thus, as has been noted earlier, the reality of heterogeneous communities suggests that it is unlikely that the single community-wide institutions, favoured in so many community forestry programmes, will be able by themselves to manage and arbitrate between the different interests and concerns of their component stakeholders. Searches are therefore under way to identify approaches and methods appropriate to the reality of multiple stakeholders, with multiple interests in how the forests are managed and used.

5.3.2 Developing approaches that accommodate multiple interests

In developing approaches that enable several or many stakeholders to be involved in local forest management, ideas have been drawn upon from 'pluralism' - a term that denotes 'a condition or system in which two or more groups, principles, sources of authority, etc., coexist' (ODE 1998) - and from other disciplinary areas. Key elements of pluralism in the context of sustainable forest management are summarised in Box 14.

Box 14. Some key elements of pluralism in sustainable forestry and rural development

- 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 a danger that the unfamiliar terminology from these non-forestry sources could be interpreted as meaning that what is being proposed entails approaches that depart radically from the directions that have been pursued to date. However, it is more usefully seen as an improvement on, and refinement of, what has been evolving in forestry through collective and joint management of forests. In essence the new focus is pursuing three areas of improvement, designed to lead to the emergence of systems that are self-correcting in their functioning: a more acceptable balance between forest departments and other stakeholders; frameworks for negotiation, planning and management that provide more equal participation by all; and methods of management and monitoring that can accommodate different objectives and measures of performance and adapt to them.

Forest departments and 'civil society'

A feature of many present situations within which community forestry is being pursued is that the forest department is no longer the sole, or overriding, source of knowledge on forestry. With the acceptance that forest management needs to be based on more than just the precepts and practices of ‘scientific forestry’, forest departments are no longer the only source of objectives, management and planning in forestry, able to impose their technocratic view.

This has been accompanied by the emergence of alternative sources of knowledge, and authority, from among the growing body of ‘civil society’ institutions - the array of voluntary and not-for-profit organizations through which citizens come together for community-based action. As issues such as the environment and poverty alleviation have come to capture public attention, so NGOs have become increasingly influential within forestry. As was mentioned earlier, NGOs have come to occupy an important position in many collective forest management programmes, serving as intermediaries between state and users, facilitating change at the village level, and providing training, extension, advisory and even marketing services. Others have taken on an advocacy role, influencing policy at both local and national, and even international, levels.

Source: Anderson et al. 1998
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 1997a).

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. It can also be difficult for forest departments in practice to give up the power, status and control over budgetary and extra-budgetary resources and income that stem from their control over large areas of forest. The benefits of involvement in participatory forestry seldom appear to be as substantial or satisfactory, and there is not much evidence that the issue of providing those involved with career change options that compensate for this has received much attention.

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 to protect the position of the forest department as a producer also underlie many of the restrictions placed on others producing and trading particular forest products.

Some of these areas are clearly ones in which governments, and their forest departments, could properly and usefully reduce or remove their involvement - notably those where they compete with or otherwise unnecessarily restrict the activities of local producers. However, this should not be construed as an argument for withdrawal by forest departments. The arguments in favour of more pluralistic approaches recognise that management by local groups alone, without any support from other organizations, does not in itself assure sustainable management. The issue is one of balance, and of the different parties being able to interact in an equitable fashion acceptable to all.

Relaxing the need for consensus

The existence of several stakeholders, each with different objectives, and different ways of measuring progress towards achievement those objectives, makes it more difficult to establish absolute standards for forest management, or single clear cut solutions to problems that arise. Without a common standard differing views cannot be reduced to a common perspective. It therefore becomes more difficult to arrive at a consensus as to what to do, increasing the likelihood of conflict.

As was noted earlier, collaborative management of forests is by its nature prone to conflict, and much attention has been directed recently to conflict resolution and how to avoid or minimise conflicts (Pendzich et al. 1994 and 1996). It is now increasingly argued that a different approach is needed. One that views conflicting interests as constructive components of a situation, providing opportunities not threats, and does not attempt to suppress them within the confines of an artificially arrived at process of consensus. Concerns have arisen that the latter can in practice, like the process of 'participation', reflect the domination of particular more powerful interests, with others being coerced into agreement. In other words, a mechanism such as village forest committee set up by a forest department runs the risk of suppressing differences and potential conflicts, rather than airing them and allowing a solution agreeable to all to emerge.

It is consequently argued that it can be better to learn to function with difference and 'dissensus', rather than consensus, and find ways to move forward while accepting that different stakeholders hold different views. However, this raises a number of related issues. One is that of accountability where there are no clear cut standards against which to measure performance.

Platforms for negotiation and coordination

Central to a system reflecting the concepts outlined above is the need for negotiation, and continuing communication and collaboration among the several stakeholders involved. To be effective, negotiation has to be seen to be giving all participants an equal voice. It also needs to be able to function as a means of monitoring and dealing with change in ways that minimise the high transaction costs of dispute management.

The forum, or platform, for communication therefore needs to be seen to be neutral. Village or other local bodies created and managed by forest departments are likely to find it difficult to meet this requirement. Nevertheless, some have managed to develop satisfactory working systems. There are numerous reports of individual forest user groups in Nepal, for instance, that manage to both accommodate differing interests
among their user members, and maintain satisfactory working relationships with forest department officials and other interested parties.

A solution that has been adopted to part of this issue of needing to establish continuing dialogue with interested parties other than those in the immediate user group, is that of 'nesting' local user group organizations within a hierarchy of organizations, which between them are likely to be able to negotiate at different levels, and with different of the interested parties (Ostrom 1998). Forming associations of user group organizations, to represent the latter at higher levels, as FECOFUN has done in Nepal, can be another way to ensure a stronger and more wide ranging negotiating position.

More broadly, it has been suggested that relationships among different of the parties with an interest in a forest be based on existing local 'social capital' - a term that 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). This concept has attracted strong interest in recent years because of the contribution that such 'social capital' can apparently make both to effective government and economic development (Harriss and DeRenzon 1997).

Most rural communities function through a variety of overlapping local institutional forms: e.g. tenurial niches that provide rights of access to the resource, kin based claims on labour to work the resource, trading networks for marketing. It is has been argued that it can be more logical and effective to negotiate and monitor forest management and use through such existing arrangements, than to try and 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 arise in creating village forestry committees; it can undermine or subvert existing vested interests and so not be effective as a mechanism through which all parties are prepared to work.

While such approaches can address many of the issues that arise among different groups with interests in the forest at the local level, they are less clearly effective in dealing with negotiation and communication between local and outside interests, such as government agencies and logging industries. Forest departments, as often the main government agency with a presence in forested rural areas, often may be better placed than some of the alternatives to facilitate the process. Particularly where local institutions have broken down, and cannot be re-created easily, forest departments can act as arbiters against internal or external expropriation of a resource as more control is transferred to local bodies.

The question then arises as to how forest departments can perform such functions on a more equal footing with other stakeholders, avoiding regression into a situation of direct or indirect dominance of its local partners. Some of the ways in which this might be achieved have already been referred to: e.g. separating regulatory functions from involvement in forest management and delivery of support services, eliminating areas of undesirable competition with local producers for revenue and markets, reducing pressures on forest departments of overambitious targets that can force them to rely on centralised and bureaucratic operational procedures. Forest departments could also pursue procedures for working with local partners that encourage more flexibility, and willingness to adapt to the particular attitudes, needs and constraints encountered in each location. The experience with JFM projects has shown how much progress and performance relates to the ability of individual officials to establish a rapport with the people they work with, and to adapt standard procedures to what is needed locally. One way to make progress could be to recognise the range of different interests that those within bureaucracies as well as local user groups might have, and to create institutional arrangements that allow for situation specific solutions to be arrived at within much more flexible boundaries (Vira 1997).

Issues arise as to how 'civil society' groups with interests in local forest management participate in multi-interest processes. Confusion has sometimes arisen because the NGO community encompasses organizations with very different interests and agendas. Some are involved in an advocacy role, and others in an operational role. Some advocacy groups operate at the national level and intervene only indirectly through their involvement in the political process. 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. As was shown in the example from Thailand, where two such groupings of NGOs have lined up on opposite sites of the debate as to whether communities in important upland watersheds should be empowered to manage their local forests (Wittayapak 1996, Vandergeest 1996), it is important to understand what position each such organisation represents. This can also be the case at the operational level, in distinguishing between those whose interest is in helping mobilise particular rural groups, those that specialise in delivering special skills and those acting as intermediaries between the forest department and communities. In short, there is need for clear understanding of the role of each, and what interest it represents (Thin et al. 1998).
Adaptive collaborative management

Another strand in the search for more effective collaborative systems is for design, implementation and monitoring and response systems that can adapt to multiple objectives, and to changes in those objectives. Much of this search has focused on what has been developed and learned from 'adaptive management' approaches and methods in protected area projects. Adaptive management is based on acceptance of site specific differences, and on continuous testing, feedback to the collaborating partners, appraisal and revision.

Progress has been limited to date, in part because of the problems encountered in protected area management that were alluded to earlier (Fisher 1998). Another factor has been the dependence of the method on having a great deal of detailed information; it is not possible without adequate information. Methods for generating the different types of information needed have been drawn from a variety of sources (see Vira et al. 1998 for an overview of methods). But, as one practitioner has commented, application has been constrained by the fact that adaptive management's "requirement's for patient record-keeping and clear-headed assessment turn out to be hard to muster where there is conflict - that is, in all the important cases." (Lee 1998). The high cost of information probably limits the range of activities and situations in which adaptive collaborative management can be practised. As has been noticed in researching local forest management experiences, indigenous collective management practices are generally very conservative, because of the lack of the types of yield and other data that would be needed in order to be able to design and monitor more intensive levels of use (Arnold 1998).

5.3.3 Issues that could arise in application

The state of knowledge about collaborative local management of forests is thus in a period of transition. The lessons of the experiences of the last twenty and more years have made clear the need for operational systems that better reflect and accommodate multiple interests and stakeholders in an equitable fashion, and that allow for situation specific solutions and the flexibility to be able to adapt to change. Though potential ways of moving in these directions have been identified, not enough successful experience of applying most of them has accumulated to allow conclusions to be drawn as to what will succeed. At present, consequently, the more innovative and forward looking collaborative programmes contain an element of experimentation.

Some concerns have been raised about possible problems with flexible pluralistic approaches along the lines outlined above. One is that moves to relax the dominant role of the state and its forest department, and allow a more prominent role for local and other stakeholders, could lead to existing organizational mechanisms being dismantled or ceasing to function without new systems of coordination and collaboration taking place (FAO 1998). Because the transaction costs that those to whom responsibility is devolved incur can be high, it is likely to succeed only where devolution results in commensurate increases in returns to local stakeholders.

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 (Sarin 1999). Given the political weakness of many local user populations, there is a danger that they will be unable to participate in an equitable manner. 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). Questions have also been raised as to whether there are not some rights that are paramount and should not be subject to negotiation (Sarin 1999), and the danger that immersion in a system subject to the agreement of other interested parties could conflict with local people's right of self-determination.

It is therefore important to recognise that there are limits to collective action. Not all situations 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. 1998).

6. CONCLUSIONS

The importance of the role forests and forestry play in rural livelihoods is by now probably universally recognised. The need to address this through a reorientation of forestry as a whole, rather than as a separate 'social forestry' add-on, is also widely accepted within forestry. 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 a growing involvement by civil society and private sector interests.
The experience of some of the longer running and more flexible 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 widely become more important components of rural household livelihood systems.

Not surprisingly, though, profound and rapid change has often created pressures, and exposed difficulties. Acceptance of the importance of devolution to local levels has not always been accompanied by the political, legislative and regulatory measures 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 a commensurate increase in security of their rights, and thereby are 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. But this is possibly often more because of the speed and extent of the changes that are happening, and the exposure this brings to unfamiliar problems, than because of lack of intent. Changes have sometimes been promoted ahead of the capacity to implement them. Heavy promotion of communal management, often at the urging of donors, has frequently imposed pressures on forestry bureaucracies that they have found difficult to absorb.

It could be desirable if there is now a period of consolidation, moving from promotion to critical analysis, with more consideration of how best to address weaknesses and problems that have arisen. One is to better understand the circumstances under which local control is, and is not, likely to succeed, thereby avoiding initiatives in situations which are not conducive to collective management. A second is the need to encourage a more flexible and responsive approach; one 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 corrected. 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 recognise the limits to how much change can be achieved within the framework of forest-oriented programmes, and to keep 'community forestry' in perspective. It cannot be a solution to all local problems.

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