### Moving forward: developing pathways for sustainable livelihoods through forestry

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### Introduction

Participatory forestry<sup>1</sup> is now a significant and increasing feature of forest policy and practice throughout the world (Brown, 1999). While specifics are undergoing negotiation, the involvement by communities, local government and other stakeholders (including the private sector, nongovernmental organizations [NGOs] and international agencies) in forest management is accepted as an ongoing trend in forest management. This trend reflects the shift in the "ways in which forest management as a whole is being pursued" (FAO, 2002).

The shift is away from the control of forests by the state and their management by professional foresters to a situation characterized by multiple users and multiple objectives and possibilities (FAO, 2002). There is a demand for forestry agencies to provide more goods and services than in the past. The "measure of success"2 for forestry departments in response to this demand is changing; multiple objectives, which are often perceived as conflicting, have made the task of forest management increasingly complex. Forest managers are now expected to manage forests for conservation, production and services (including recreation) sustainably and to provide economic benefits to rural communities, especially in developing countries. While there may be disagreement over how much forest is to be managed for which objective, there is general agreement that forests should provide a range of products and services (including biological

diversity). Adding to the complexity is the growing sentiment that tropical forests are a global resource and that their conservation is of international concern. National and local forest managers find that they need to respond to the concerns of distant interests. Multiple objectives require pluralistic management arrangements that can accommodate the multiple interests.

### The role of participatory forestry in sustainable livelihoods

The focus of this paper will be the role that forestry, specifically participatory forestry, can play in sustainable livelihoods. Poverty alleviation has been receiving increasing attention as an important objective in forest management. The adoption of the International Development Target of halving global poverty by the year 2015 has refocused or changed the mandates of multilateral and bilateral agencies and international centres. Poverty alleviation, as the primary objective of development, has gently pushed people-centred concerns into the mainstream, even in natural resource management. National forestry agencies are being asked to identify and expand their contribution to national poverty alleviation efforts.<sup>3</sup> This requires a new perspective on forests and their use, in which success is measured not only by the amount of forest products harvested, export figures or revenue generated, but also by the contribution of forests in alleviating poverty. It requires more attention

<sup>1.</sup> For the purposes of the paper, participatory forestry is defined as participation in forestry decisions from policy to field and back with a full role in decision-making. Based on this definition, implementation of participatory forest management would result in policy and activities that are designed, implemented, monitored, evaluated and revised through collaboration of the stakeholders (see ODA, 1996).

<sup>2.</sup> However, deforestation has been and continues to be commonly perceived as a major criterion for the success or failure of forestry agencies. Forest area is monitored and reported by nations and international organizations and agencies, and the rate of deforestation is a common criterion for determining the effectiveness of forest management. Maintaining an area under forest has, for many agencies, become synonymous with successful forest management. Declining forest area is perceived as a sign of poor management, of negative factors that have not been effectively controlled. The decline of forest area has led to a questioning of the effectiveness of centrally managed forest regimes, especially in the tropics (Banerjee, 2000).

<sup>3.</sup> The preparation of the Poverty Reduction Strategy Papers (PRSPs) required national forestry agencies to identify the current and potential contributions of forest resources to poverty alleviation.

to identifying the overall contribution of forests to the livelihoods of the poor, and of the goods and services they provide, and to developing strategies for maintaining or enhancing this contribution.

Forests and trees can make a significant contribution. Indeed, in order to reach the International Development Target, it is necessary that the contribution of forests and trees not only be identified, but also increased. It has been estimated that about 1.6 billion people in the world are heavily dependent on forest resources for their livelihoods. Communities draw on off-farm forest or woodland for inputs that cannot be produced onfarm or that can be more efficiently supplied from offfarm resources. Foods from the forest provide for those who do not produce sufficient food from fields and gardens and cannot afford to buy food from the market. When crop yields have been poor and other sources of income are not available, reliance on forest products to fill gaps and complement other sources of subsistence inputs and income increases.

Within a community, it is common to find that it is the poorest households, with less agricultural land, livestock, labour, etc., that are the predominant collectors of forest products (see FAO, 1990; Hegde and Daniel, 1992; Lecup, 1994; Malhotra *et al.*, 1992; Warner, 1995). For these poorest of the poor households, although the actual amount of income earned from forest products may be small, it may provide a large portion of household income.

Despite the importance of forest resources to the poor, until recently efforts in development, as well as in forestry, have not paid sufficient attention to how natural capital, such as forests, are used (or could be used) in combination with other assets<sup>4</sup> to sustain livelihoods. This has resulted in gaps in our understanding of forests' contribution to sustainable livelihoods (DFID, 1999).

## Sustainable livelihoods and forest resources

Poverty is more than lack of income or food. In order to gain a better understanding of the causes of poverty, it is also important to be aware that the poor are also more vulnerable, more exposed to risk and more powerless. A current approach that attempts to go beyond the previous criteria of income or food security and to include multidimensional characteristics and causes is that of sustainable livelihoods. The sustainable livelihoods approach places people at the centre of development initiatives. A livelihood comprises the capabilities, assets and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks, and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base (Carney, 1998).

The assets that are the building blocks of livelihoods are not only natural, physical and financial capital, but also social and human capital (kinship and networks,<sup>5</sup> and nutrition and health). A range of assets is needed to achieve positive livelihood outcomes; no single category of assets sufficiently provides all the many and varied livelihood outcomes that people seek. The poor's access to any of the categories of assets tends to be limited. Those with more assets have a greater range of options and an ability to shift emphasis in their livelihood strategies. The ability to move out of poverty is critically dependent on access to assets.

In the livelihood context, forest resources include "all resources that can produce forest products. These can comprise woodland, scrubland, bush fallow and farm bush, and trees on farm, as well as forests" (Arnold, 1998). This definition focuses not on tenure or tree cover as the basis for defining a forest, but on the potential for producing products. The contribution of forests is measured not only by the products that they provide, but also by the non-tangible services that they offer.

Forests are important natural capital that in the past was often overlooked. In addition to income and what money can buy, forests provide non-material goods that contribute to livelihoods by enhancing social and human capital. Forestry initiatives that support access to resources, participatory decision-making and equity assist in increasing well-being, especially that of the poor.

There is some concern in forestry that initiatives that focus on poverty alleviation or sustainable livelihoods will encourage deforestation and forest degradation. However, sustainability of the natural resource base is

<sup>4.</sup> The five forms of capital that are needed for sustainable livelihoods are:natural capital:

<sup>-</sup> natural resources, such as land, forests, water and pastures;

physical capital: (a) privately owned assets that can be used to increase labour and land productivity, such as farm animals, tools, machinery; (b) publicly owned economic infrastructure (e.g. roads, electricity supply) and social infrastructure (e.g. schools, hospitals);
financial capital: cash (income and savings) and readily convertible liquid capital;

<sup>-</sup> human capital: health, nutritional levels, educational standards and skills.

<sup>5.</sup> These include kinship, friendship, patron-client relations, reciprocal arrangements, membership of formal groups, and membership of organizations that provide loans, grants and other forms of insurance (Carney, 1998).

a critical concern of (and basis for) sustainable livelihoods. More sustainable use of natural resources has a direct impact on the improvement of natural capital. All people affect the environment, but the rich have a disproportionately higher impact and the poor tend to be the most vulnerable to the effects of environmental degradation (UNEP, NASA and World Bank, 1998). The holistic approach of current sustainable livelihood initiatives recognizes the vulnerability of the poor to resource degradation and promotes sustainable resource management as a critical element for sustainable improvement in the livelihoods of the poor.

### Participatory forestry: its role in sustainable livelihood, poverty and forestry

How can forestry meet these expectations? First steps have been taken to reflect the expansion of management objectives by changes in forest policies and programmes; national policies and programmes are attempting to include conservation and production, as well as poverty alleviation and rural development, objectives and to be in agreement with international conventions.

However, can forestry agencies meet the challenge of moving into this new direction, into this new pathway? Why do we not see more change, the revitalization of forestry agencies and forest policies and programmes that these multiple objectives require? Are poverty alleviation and livelihoods considered in policies? How much meaningful participation is occurring in forest management?

### **Enabling environment: policies**

In many situations the greatest need may be for a policy and legal framework that:

- legitimizes participation in co-management of the resource;
- incorporates multiple objectives, including poverty; and
- provides operational mechanisms.

The need to address poverty issues is likely to be a key objective of national forestry programmes. However, a key challenge lies in the current lack of information on how to develop and implement forest policies that promote poverty reduction objectives.

If we assume that, given the right policies, regulations and local incentives, forests can benefit the poor and support them in reducing vulnerability, buffering risk and balancing out income flows, do forest policies provide adequate guidance on the forestry that will assist the poor? If they do, do regulations and/or local political competition over forest resources prevent these policies from being translated into forestry practices that contribute to poverty reduction?

Policies that support secure access to forest resources are indeed central to sustainable livelihoods. The dominating factors affecting access by the poor to forest resources stem, in many countries, from the ownership of forests (or areas classified as forest land) by governments and by the legislation and regulations controlling use in these forests exercised by government forest departments. Historically the result has usually been that access to forests by the poor is subordinated to industrial and conservation interests. The poor's access to forest product resources outside forests can also be affected by private or communal forms of tenure, by the relative priorities attaching to forestry and other land uses and by the manner in which governments and government departments implement relevant legislation and regulations.

The absence of a secure tenure for forests and other natural resources creates a "discouraging" environment for community involvement in their management (FAO, 2000). What do these tenurial rights entail? They entail secure long-term access with policies that recognize these local rights and provide the holders with legal and regulatory support in protecting them (e.g. against forest industry, agencies of the state, encroachment by other population groups) (Byron and Arnold, 1999).

Clear tenure rights enable local communities to protect forests from outside encroachment, to increase their benefits and to enter into business contracts (FAO, 2001). Where access to forests has been relatively unrestricted, forest foods and income from forest products are often particularly important for poorer groups within the community. Although the wealthier groups in a community, who have more resources to devote to forest product gathering and production, are often the heaviest users, the poor usually derive a greater share of their overall needs from forest products and activities. Where forest products play an important role in livelihoods, the



forest-dependent need security of access to the resources (Byron and Arnold, 1999). Where communal practices and systems of forest management and control continue to function viably, there is a need for policies that recognize these local rights, and legal and regulatory support is needed to protect them (Byron and Arnold, 1999).

### But policy is not enough

While national forest programmes are being revised and policies are changing, there have not been the anticipated on-the-ground changes. Indeed, it often appears as if there has been a proliferation of new directives, while the capacity of "over-structured and under-resourced forestry departments to implement them has decreased" (FAO, 2001). Although they are an important component in creating an enabling environment, it is clear that changes in policy alone are not enough. One of the causes of this lack of implementation is the "failure to entrench the transfer in legislation" (FAO, 2002). Changes in policy often occur through decree, administrative order or permit, providing rights and authority that can be withdrawn or simply not implemented. What is often cited as needed is legislation that, in turn, is supported by rules and regulations.

However, even if policy, legislation, rules and regulations are in place, is there implementation? The focus of the efforts to create an enabling environment for participatory multi-objective management has primarily been the policy and legislation components. Yet the results are mixed.

In a recent Forum<sup>6</sup> on the Role of Forestry in Poverty Alleviation it was noted, even in countries in which there was supportive policy for greater access to forest resources by community members and local organizations, that implementation had not occurred or had not occurred at the speed and level that had been anticipated. Why?

One of the primary factors is the regulatory burden. Regulations that govern local use of forests are often excessive and penalize the poor, for example, by requiring a number of permits to fell a tree. The more powerful can often defy or ignore the regulations, and this undermines the legitimacy of the laws. The demand for overly detailed forest management plans creates barriers for communities trying to acquire rights to forest areas. These management plans usually require far more detail than those for areas under state management. Resources are needed, not only by the communities and local organizations for the development of the management plans, but also by the state forest agencies for approval and monitoring. Positive examples do exist of effective attempts to minimize the regulatory burden. In the Gambia, for example, effective planning, utilization and monitoring are based on clear guidelines and do not require elaborate management plans (FAO, 2001).

Policy that grants only limited rights is another factor. Use of forests to which rights have been given to local users may be restricted in a number of ways. A frequent condition is to require local users to invest in planting or other regeneration and forest management measures, adding to the costs that the poor are expected to bear. User or community groups may also be required to share their revenue with the forest department.

Where access to forest products has been granted, it is common that the rights over timber and other products of commercial value have been excluded (FAO, 2002, citing Agrawal and Ribot, 1999). Areas placed under community-based management are those that are usually perceived or classified as "degraded" and not of commercial interest. The strategy for the most part continues to be "little trees for little people", with the state retaining the management and benefits of the productive forests (see Banerjee, 1996). While communities are given degraded areas to manage (under rules and regulations and benefit-sharing arrangements that have been developed elsewhere) there has not been a shift in who should make the important decisions (the state), especially for resources that can provide major benefits. Benefit-sharing (real) income and arrangements are usually externally determined, often without asking local institutions or community members if they in fact want to harvest their timber, and how they would like the proceeds to be distributed (see, for example, Sundar and Jeffery, 1999).

Communities are thus investing in improving the state's rather than their own resources. There are no longer any frontiers of unclaimed forests; all forest resources are "owned" and the state is the principal owner or steward. Faced with inadequate financial and human resources, governments are turning to local communities to assist them in protecting the "state-owned" forests in the hope that the

<sup>6.</sup> The Forestry Department of FAO, with support from the United Kingdom Department for International Development (DFID), held an interagency Forum in September 2001. The 60 participants included analysts from developing countries, representatives of multi- and bilateral agencies, international research organizations and NGOs who came together to share their experiences and help further the understanding of ways in which trees, forests and forestry can contribute towards poverty alleviation.

communities will respond. For forestry agencies, protecting and managing large areas of forest lands with the pool of "cheap" labour available at local community levels is a potential solution to this increasing resource problem (FAO, 2000).

### **Institutional constraints**

National forestry agencies, which are responsible for implementing the forest programmes, are commonly undergoing decentralization, restructuring and downsizing. The result is that forestry agencies are expected to address effectively the multiple objectives of current forest programmes with inadequate resources, that is, to do "more with less".

Even as community participation is becoming a central feature of forest management in many countries, defining the role of communities has proved to be especially problematic. Participation should be substantial, because community involvement in forest management should be supported by decentralization. Decentralization, in which administrative functions are relocated away from the central location, is a major trend that is currently occurring in governments throughout the world (see Fisher, 2000). In forestry, while the state continues to remain the ultimate caretaker of forest resources, the responsibility for the actual management is shifting from the central to local governments. This change is the result of major trends in public administration that go far beyond the forest sector7.

Yet the shift of responsibility to local government does not mean a concurrent shift in resources for implementation, nor does it mean that local government has the capacity (or interest) to assume the tasks and responsibilities. Neither does it mean "that local people will have more of a say in local resource management, unless those bodies are designed to be democratic, representative and accountable" (Lindsay, 2000, p. 35, citing Ribot, 1997).

Nor does decentralization mean that there has been a shift in power, for power is having the capacity to affect the outcome of decision-making processes and having a genuine role in decision-making (Fisher, 2000). Even the process of (and decisions concerning) decentralization itself has often been top-down in design and implementation, rather than the result of a participatory process that includes local government agencies, local government units and communities. Difficulties are being encountered by local institutions in taking on the responsibilities for management tasks previously performed by the central government (FAO, 2002). Central government has passed down the responsibility, but often the local government units (the recipients) have not received the training or resources to assume the responsibilities effectively, and final authority (responsibility for giving approval and obtaining signatures) rests not at the local level, but at the level of the central/national office.

Lack of local capacity and resources is a continuing concern. Local forestry agencies find themselves caught between the demands of central government, conflicting local claims on the resources and competing demands from external stakeholders (FAO, 2002). Instead of resulting in more equitable effective local management of resources, decentralization can result in control being captured by more powerful users (FAO, 2002, citing Sarin, 1999). The livelihoods of the poor can be harmed even with the best of intentions.

Community organizations or user groups are often politically weak and may not be able to participate effectively, especially if they are in competition with powerful interest groups. It is recognized that, while decentralization requires training and capacity building for local forestry agencies, local community organizations also need support. Participatory forestry initiatives need to provide support in capacity building and to strengthen group organizations and institutions (FAO, 2001). What should be (and pragmatically can be) the level of support provided to these local forest management organizations? To some degree, this will depend on the complexity of the management plans/guidelines/agreements and the capacity of the local institutions. Often, for example, there is no awareness of rights or knowledge of how to have access to support for recourse if there are conflicts or inequities.

NGOs are assuming an increasingly important role as intermediaries between government and community. As government agencies decline in size and presence, NGOs are filling the gap, providing training, extension and advisory services (FAO, 2002). Although NGOs perform a crucial function, there is still uncertainty as to their appropriate role. Tension occurs, for example, when NGOs have taken on an advocacy role and worked to influence policy at the

<sup>7.</sup> While they vary from country to country, the administrative changes include: structural adjustment programmes that require cuts to central government spending; efforts to make government more responsive to specific local or regional conditions; a stronger role for civil society and various public organizations in influencing the public policy agenda; and more vocal policy commentary by a public with increasing access to information (Tyler, 1995; Tyler, 1999).

local, national and international levels. In addition, the interests of the NGO may not be shared by the community. The agendas of environmental NGOS have "proved on occasion to be not necessarily congruent with the interests" of the communities with whom they work. It is important that there is a clear understanding and transparency of the interest that a NGO represents (FAO, 2002).

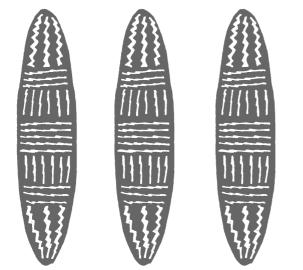
# What is needed for sustainable livelihoods and sustainable forest management?

If the multiple objectives of sustainable livelihoods and sustainable forest management are to be met, what is needed?

### A people-centred approach

Where forests continue to be central to livelihood systems, local people are, or should be, the principal stakeholders. Meeting their needs should be the principal objective of forest management, and this should be reflected in control and tenure arrangements (Peluso and Padoch, 1996). Povertyoriented forestry is concerned with reducing the vulnerability of the poor by enabling people to continue to have access to the resources and product flows that are needed for subsistence and coping purposes.

A detailed assessment needs to be prepared by, or at least with, the people concerned, in order to identify the complete range of relationships between the people and the forests that they use and/or manage, the current limitations to their livelihoods and the



potentials and desire for change (Byron and Arnold, 1999). Experiences in community-based forestry demonstrate that this approach is viable and effective.

### Access to resources and security of tenure

As already noted, access to resources and security of tenure is central not only to improving forest management, but also to providing economic opportunities to the forest-dependent.

### Political commitment and will for implementation

There is a need to go beyond the "letter of the law" in policies, legislation and regulations to enter into the spirit of partnership with communities and local institutions. An important step would be to simplify policies (and harmonize old policies and new directives) and to share widely information about not only policies and regulatory frameworks, but also the potential impact of those policies on the various stakeholders.

### **Benefits**

As already noted, we need to reconsider the approach to community involvement in forest management and to give more attention to identifying forests' contribution before developing strategies for maintaining or enhancing this contribution. Economic incentives have to be perceived by the communities if their long-term commitment is to be secured. As a result, it will be necessary to identify, develop and promote the economic values of forests. Every effort should therefore be made to ensure a positive impact on the livelihoods of the community members.

The incentives would be far greater if communities received more productive, mature, "good" forest, rather than degraded forests, to manage. Why are communities given only the degraded areas, in which there is relatively little to be gained (although, admittedly, for the communities it might be far more than they could have gained before)? The management of "good" forests is being retained by the state for conservation and/or production purposes. Neither of these functions is commonly perceived by forest agencies as being appropriate for community-based management. This will be one of the challenges in forest management in the future, as communities become more involved and poverty alleviation continues to be a primary concern.

The benefits are not just economic, because forest resources are more than natural capital. Rights and

responsibilities for forest management support the strengthening of social capital as well, because "... it is the prospect of having relatively unhindered access to the forest and its benefits, the belated realization of the environmental benefits of forests and the mere satisfaction derived from the feeling of 'ownership' that have been, in many cases, the driving forces behind their involvement" (FAO, 2000).

### **Removal of barriers to market entry**

Because of a lack of capacity to monitor effectively what happens in forest areas, many governments have set in place forest and environmental policies and regulations that are designed to limit rather than encourage the production and sale of forest products. These can include restrictions on private harvesting and trading of wood products and requirements to sell other forest products to state marketing boards (as occurs in parts of India). Unless such constraints to their access to the benefits are removed, there is little incentive for people to involve themselves in forest management (Arnold, 1998, citing Dewees and Scherr, 1996).

An important step is to remove the constraint to access to the more profitable and dynamic opportunities in forestry. Small-scale producers of timber and other forest products, for example, "are frequently subjected to costly controls when harvesting, transporting and selling wood and other forest products, while state and large corporate producers are sometimes subsidized" (FAO, 2001, p. 18). Small-scale producers also need support to have access to and analyse information on product markets and prices and to learn how to manage market risks better (FAO, 2001).

Government agencies and NGOs can play an important role in facilitating partnerships with the industrial sector that extend the range of mechanisms whereby the forest-dependent poor can participate in, and benefit from, forest product market opportunities.

### Conclusion

In summary, participatory, people-centred forestry can provide the pathway both for sustainable livelihoods and for sustainable forest management. However, it is necessary for us to be open to new forest managers, new partnerships and new ideas about how to balance the multiple demands on our forests. It is an exciting and challenging future for forestry: the challenge will be to build on our experiences of the past while embracing the new forestry of the future.

### References

**Arnold, J.E.M.** 1998. Forestry and sustainable rural livelihoods. *In* D. Carney, ed. *Sustainable rural livelihoods: what contribution can we make?* London, DFID.

Arnold, J.E.M., Liedholm, C., Mead, D. & Townson, I.M. 1994. Structure and growth of small enterprises using forest products in southern and eastern Africa. Oxford Forestry Institute (OFI) Occasional Papers No.47, and Growth and Equity through Microenterprise Investments and Institutions (GEMINI) Working Paper No. 48. Oxford, UK, OFI and Bethesda, Maryland, USA, GEMINI Project.

Ashby, C. & Carney, D. 1999. Sustainable livelihoods: lessons from early experience. London, DFID.

**Banerjee, A.K.** 1996. Some observations on community forestry. *In* M. Victor, ed. *Income generation through community forestry.* Proceedings of an International Seminar, 18–20 October 1995. Bangkok, Thailand, Regional Community Forestry Training Center (RECOFTC).

**Banerjee, A.K.** 2000. Devolving forest management in Asia-Pacific countries. *In* T. Enters, P. Durst and M. Victor, eds. *Decentralization and devolution of forest management in Asia and the Pacific.* Bangkok, Thailand, RECOFTC and FAO.

**Brown, D.** 1999. *Principles and practice of forest comanagement: evidence from West-Central Africa.* European Union Tropical Forestry Paper No. 2. London, Overseas Development Institute (ODI), and Brussels, Belgium, European Commission.

**Byron, N. & Arnold, J.E.M.** 1999. What futures for the people of the tropical forests? *World Development,* 27(5): 789–805.

**Carney, D.** 1998. Implementing the sustainable livelihoods approach. *In* D. Carney, ed. *Sustainable rural livelihoods: what contribution can we make?* London, DFID.

**DFID.** 1999. Sustainable guidance sheets: framework. London.

**DFID.** 2000. Strategies for achieving the international development targets: environmental sustainability and eliminating poverty. Consultation document. London.

**FAO.** 1987. Basic features of rural small-scale forestbased processing enterprises in developing countries, by Y. Fisseha. In *Small-scale forest-based processing enterprises*. Forestry Paper No. 79. Rome. **FAO.** 1990. The major significance of "minor" forest products: the local use and value of forests in the west African humid forest zone, by J. Falconer. Community Forestry Note No. 6. Rome.

**FAO.** 2000. Introduction, by F. Bojang, *In* F. Bojang and D. Reeb. *Proceedings of the international workshop on community forestry in Africa, Banjul, the Gambia*, 26–30 April 1999. Rome.

**FAO.** 2001. *How forests can reduce poverty.* Rome, FAO and DFID.

**FAO.** 2002. Forests and people: twenty five years of community forestry, by J.E.M. Arnold. Rome.

**Fisher, R.J.** 2000. Decentralization and devolution in forest management: a conceptual overview. *In* T. Enters, P. Durst and M. Victor, eds. *Decentralization and devolution of forest management in Asia and the Pacific.* Bangkok, Thailand, RECOFTC and FAO.

**Hegde, N.G. & Daniel, J.N.** 1992. *Promotion of nonwood forest products through social forestry.* Proceedings of a national workshop held in Pune, India, 8–11 March 1992. BAIF Development Research Foundation.

Leach, M. & Fairhead, J. 1994. The forest islands of Kissidougou: social dynamics of environmental change in West Africa's forest-savannah mosaic. Report to ESCOR, UK. London, Overseas Development Administration (ODA).

**Lecup, I.** 1994. The role of marketing of non-timber forest products in community development projects: Ayurvedic medicinal plants in Nepal. *In* J.B. Raintree and H.A. Francisco, eds. *Marketing of multipurpose tree products in Asia.* Proceedings of an international workshop held in Baguio City, Philippines, 6–9 December 1993. Bangkok, Winrock International.

Lindsay, J.M. 2000.Creating legal space for community-based management: principles and dilemmas. *In* T. Enters, P. Durst and M. Victor, eds. *Decentralization and devolution of forest management in Asia and the Pacific.* Bangkok, Thailand, RECOFTC and FAO.

Malhotra, K.C., Deb, D., Dutta, M., Vasula, T.S., Yardav, G. & Adhikari, M. 1992. *The role of nontimber forest products in village economy.* Calcutta, India, Indian Institute of Bio-Social Research and Development.

ODA. 1996. Sharing forest management. London.

Peluso, N.L. & Padoch, C., eds. 1996. Changing resource rights in managed forests of West

Kalimantan. Borneo in transition: people, forests, conservation and development. Singapore, Oxford University Press.

**Ribot, J.C.** 1997. Decentralization without representation: rural authority and popular participation in Sahelian forestry. Technical Consultation on Decentralization, 16–18 December. FAO, Rome.

**Shepherd, G., Arnold, J.E.M. & Bass, S.** 1999. *Forests and sustainable livelihoods. A contribution to the World Bank forestry review process.* Issues paper. (World Bank Web site, no longer posted).

**Sundar, N. & Jeffery, R.,** eds. 1999. *Introduction. A new moral economy for India's forests?* New Delhi, Sage Publications, and London, Thousand Oaks.

**Terry, M.E.** 1984. Botswanacraft and Hambukushu basketry: the effects of a major marketing operation on a group of African people, their traditional craft, and the natural resources. Report to the Botswanacraft Marketing Company, Estha, Botswana.

**Townson, I.M.** 1995. Patterns of non-timber forest products enterprise activity in the forest zone of Southern Ghana. Draft report to the ODA Forestry Research Programme, London.

**Tyler, S.R.** 1995. The state, local government and resource management in Southeast Asia: recent trends in the Philippines, Vietnam and Thailand. *Journal of Business Administration,* 22/23: 51068. (special edition)

**Tyler, S.R.** 1999. Policy implications of natural resource conflict management. In *Alternative approaches to conflict management*. International Development Research Centre (IRDC) (www.irdc.ca).

**UNEP, NASA & World Bank.** 1998. *Protecting our planet, securing our future.* United Nations Environment Programme (UNEP), United States National Aeronautics and Space Administration (NASA) and World Bank.

**Warner, K.** 1995. Marketing, valuation and pricing of NWFPs. *In* P.B. Durst & A. Bishop, eds. *Beyond timber: social, economic and cultural dimensions of non-wood forest products in Asia and the Pacific.* Proceedings of a regional expert consultation, 28 November–2 December 1994. Bangkok, Thailand, FAO.

**World Bank.** 2000. World Bank review global forest strategy. News Release No. 2000/193/S) (www.worldbank.org).