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Multiple-use forest management in the humid tropics

Opportunities and challenges for sustainable forest management

Cover photos:

Left: A woman and child collect fruits in the forest of the native community of Pueblo Nuevo del Caco, Ucayali, Peru (AIDER)
Top right: A team of chainsaw millers sit on a sawn log of ayous (*Triplochiton scleroxylon*) in a forest in Cameroon (G. Lescuyer)
Bottom right: Women make baskets using fibres harvested in a forest in the Lao People's Democratic Republic (J. Broadhead)

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Multiple-use forest management in the humid tropics

Opportunities and challenges for sustainable forest management

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Foreword

Societal demands on tropical forests at the local, national and global scales are profound and varied: the regulation of the hydrological cycle; the mitigation of global climate change; the provision of timber and non-timber products; food security; recreation; biodiversity conservation; cultural and spiritual values; livelihoods and employment; and many others. The Statement of Principles on Forests, made at the Earth Summit in 1992, affirmed that forests should be managed to meet the social, economic, ecological, cultural and spiritual needs of present and future generations. Yet we still seem far from implementing a truly holistic, multiple-use approach to forest management, or achieving the lasting conservation of tropical forests.

Managing forests for multiple uses is a potential way of increasing the monetary value that communities, managers and owners – who are sometimes the same people – obtain from the forest resource. But knowledge of the techniques for managing the various forest products and services, and the availability of market opportunities for them, can differ greatly, and the capacity to implement multiple-use forest management is often low. Local communities face challenges in adjusting their traditional practices to implement forestry regulations, which are often drafted with little consideration of the multiple goods and services of forests or of local social and ecological issues. In many tropical countries, management approaches that optimize trade-offs among the various forest goods and services have traditionally been neglected, or else are not well known by managers and practitioners. Laws are usually drafted with narrow objectives, and they tend to undermine societal inclusion because of limited cross-sectoral dialogue.

In 1985 FAO published the book *Intensive multiple-use forest management in the tropics: analysis of case studies from India, Africa, Latin America and the Caribbean*, which made the still-valid point that "the burgeoning demands and the often high density of population make it necessary to develop intensive multiple-use management systems. This, however, requires a good knowledge of existing practices and their deficiencies in fulfilling different objectives".

After more than two decades, this paper, based on case studies in the Amazon Basin, the Congo Basin and Southeast Asia, and a Web-based survey, takes a fresh look at the reality of multiple-use forest management. It finds that some patterns are global but that there are also regional peculiarities. This review gives us new insights into how to improve multiple-use forest management plans and practices on the ground, and how to use the concept to promote stakeholder dialogue on a range of policy, institutional, technical and social issues.

While progress has been made since 1985, multiple-use forest management has not expanded as might have been hoped. This paper identifies opportunities to increase the uptake of multiple-use forest management, and some of the steps that can be taken. Governments have a key role to play in creating enabling

environments and by supporting forest managers to realize the benefits of adopting multiple-use management.

This paper is the product of a collaborative effort led by FAO and the Center for International Forestry Research. We hope it will help managers, researchers and policy-makers to overcome the challenges, and realize the opportunities, for implementing multiple-use forest management in the humid tropics.

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Acronyms

CbFM	community-based forest management
CCF	Certified Community Forestry (Papua New Guinea)
COPAL	Coopérative des Planteurs de la Lékié (Cameroon)
FAO	Food and Agriculture Organization of the United Nations
FMC	Forest Management Concept (Indonesia)
FMP	forest management plan
FMU	forest management unit
FPCD	Foundation for People and Community Development (Papua New Guinea)
FSC	Forest Stewardship Council
GDP	gross domestic product
INCRA	National Institute of Colonization and Agrarian Reform (Brazil)
ITTO	International Tropical Timber Organization
KPKKT	Kumpulan Pengurusan Kayu Kayan Terengganu Sdn. Bhd. (Malaysia)
MFM	multiple-use forest management
NGO	non-governmental organization
NTFP	non-timber forest product
PAE	projeto de assentamento agro-extrativista (Brazil)
PES	payments for ecosystem services
PFE	permanent forest estate
RDS	reserva de desenvolvimento sustentável (Brazil)
REDD+	reducing emissions from deforestation and forest degradation, including the role of conservation, sustainable management of forests and enhancement of forest carbon stocks
RESEX	reserva extrativista (Brazil)
RIL	reduced impact logging
SFM	sustainable forest management
SIFORCO	Société Exploitation Forestière (Democratic Republic of the Congo)
SOC	state operating company (Viet Nam)
SODEFOR	Société de Développement Forestier (Democratic Republic of the Congo)
SUDECOR	Surigao Development Corporation (the Philippines)
SUFORD	Sustainable Forestry for Rural Development (Lao People's Democratic Republic)
TRC	Transformation Reef Cameroon

Executive summary

In this report, multiple-use forest management (MFM) is defined as the deliberate management of a particular forest area in a particular time period for various goods and services. Three regional assessments were carried out between 2009 and 2012 to identify and draw lessons from on-the-ground initiatives in MFM in the Amazon Basin, the Congo Basin and Southeast Asia. In all three regions, information was collected through interviews with country-based forestry experts, forest managers and technicians. A complementary, Web-based questionnaire was used to examine a range of variables in ongoing or completed MFM initiatives at the country level.

The regional assessments canvassed 46 MFM initiatives in 13 countries. This report provides an overview of forestry in those countries and the 46 initiatives, the constraints they face, and the opportunities for diversifying and integrating products and services in forest management units. The evidence, opinions and perceptions gathered through interviews and surveys indicate that the practical application of MFM is a complex and challenging task in the prevailing conditions.

There is wide variation in the forest area encompassed by the surveyed MFM initiatives, from 1 900 hectares to almost 1 million hectares in the Amazon Basin, from almost 11 000 hectares to more than 2.1 million hectares in Southeast Asia, and from 4 800 hectares to almost 200 000 hectares in the Congo Basin. The smaller areas are mostly forests managed by indigenous peoples or by associations of small-scale extractors.

Of the surveyed initiatives, timber production is the predominant primary objective, followed by the production of non-timber forest products. Other economic activities of importance in at least some of the surveyed MFM initiatives were fisheries, ecotourism, forest conservation, the production of fuelwood and charcoal, and ecosystem services.

In many of the countries analysed in this report and for certain categories of actor, MFM remains an interesting yet barely operational concept due to economic, technical and administrative constraints. Timber is still the only forest commodity with major lucrative markets, whose operation is based on a reliable body of technical knowledge, and which provides a significant contribution to national economies. The dominant model of timber harvesting is, however, being undermined in some regions by the arrival of investors interested in agro-industrial or mining projects, for which the financial benefits can be much higher than those associated with sustainable timber harvesting. In this new context, MFM could increase the economic benefits of SFM. Several initiatives, such as certification and legality schemes, could help support the implementation of MFM, although generally forest management certification has so far failed to yield significant increases in timber prices.

Forest managers should be supported in efforts to realize the potential of MFM. Greater effort is needed to eliminate unfair competition from operators whose sole

objective is to extract timber, with little or no concern for multiple uses. In most countries, the demarcation of a permanent forest estate and the development of national land-use plans would increase investment in long-term forest management and lend support to MFM. Improving the value of logged-over forest through silvicultural treatments would improve the chance of those forests being managed for multiple uses. Training and awareness-raising to change the entrenched mindsets of certain forestry stakeholders is also recommended.