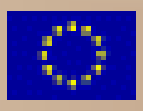
Information and analysis for sustainable forest management: linking national and international efforts in South and Southeast Asia
Workshop proceedings No. 2

FOREST POLICIES AND FOREST POLICY REVIEWS

April 2002



EC-FAO PARTNERSHIP PROGRAMME (2000-2002)

The EC-FAO Partnership Programme on *Information and Analysis for Sustainable Forest Management: Linking National and International Efforts in South Asia and Southeast Asia* is designed to enhance country capacities to collect and analyze relevant data, and to disseminate and up-to-date information on forestry, and to make this information more readily available for strategic decision making. Thirteen countries in South and Southeast Asia (Bangladesh, Bhutan, Cambodia, India, Indonesia, Laos, Malaysia, Nepal, Pakistan, Philippines, Sri Lanka, Thailand and Viet Nam) participate in the Programme. Operating under the guidance of the Asia-Pacific Forestry Commission (APFC) Working Group on Statistics and Information, the initiative is implemented by the Food and Agriculture Organization of the United Nations in close partnership with experts from participating countries. It draws on experience gained from similar EC-FAO efforts in Africa, and the Caribbean and Latin America and is funded by the European Commission.

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**Information and Analysis for Sustainable Forest Management:
Linking National and International Efforts in
South and Southeast Asia**

**EC-FAO PARTNERSHIP PROGRAMME (2000-2002)
Tropical Forestry Budget Line B7-6201/1B/98/0531
PROJECT GCP/RAS/173/EC**

PROCEEDINGS OF THE FOREST POLICY WORKSHOP

**KUALA LUMPUR, MALAYSIA
22-24 JANUARY, 2002**

**edited by
Thomas Enters and Robin N. Leslie**

Information and Analysis for Sustainable Forest Management: Linking National and International Efforts in South and Southeast Asia

EC-FAO PARTNERSHIP PROGRAMME (2000-2002)
Tropical Forestry Budget Line B7-6201/1B/98/0531
PROJECT GCP/RAS/173/EC

Proceedings of the Forest Policy Workshop
(22 - 24 January 2002)

Table of Contents

List of appendices

Introduction and background

The second workshop for the EC-FAO Partnership Programme: ***Information and Analysis for Sustainable Forest Management: Linking National and International Efforts in South and Southeast Asia*** was held in Kuala Lumpur, Malaysia from 22 to 24 January 2002. The workshop was entitled ***Forest Policy and Forest Policy Reviews***.

The event was organized by FAO with financial support from the EC through the EC-FAO Partnership Programme (Tropical Forestry Budget Line B7-6201/1B/98/0531: Project GCP/INT/173/EC). The Forest Research Institute Malaysia (FRIM) provided logistical support and organized a visit to its premises in Kepong for some participants.

This report provides the proceedings of the workshop, including an overview of the Partnership Programme, the workshop objectives and conditions, an overview of the progress achieved so far, planned activities for 2002 and conclusions.

Programme objectives

Overall objective of the programme: To promote the sustainable management of trees and forests in the tropics of South and Southeast Asia founded on policies that integrate and balance relevant economic, environmental and social aspects of forestry.

The following countries have been identified as participants in the EC-FAO Partnership Programme activities:

South Asia: Bangladesh, Pakistan, India, Sri Lanka, Nepal, and Bhutan (six countries); and

Southeast Asia: Lao PDR, Thailand, Viet Nam, Cambodia, Malaysia, Indonesia and Philippines (seven countries).

Immediate objectives: To strengthen national capacities to collect, compile and disseminate reliable and up-to-date information on forestry in South Asia and Southeast Asia, to analyse the forest sector and to make information available to policy decision makers.

Workshop components, objectives and expected outcomes

The workshop had the dual purpose of serving as the venue for the third steering group meeting and as a forum for discussing arrangements for establishing a regional network of statistical correspondents and for conducting in-depth forest policy studies.

The objectives were as follows:

1. Review the progress of the EC-FAO Partnership Programme and discuss future activities to improve forestry statistics.
2. Discuss the status of forest policy reviews that have been conducted in the participating countries in the recent past (last five to seven years).
3. Agree on additional forest policy studies that could be supported by the EC-FAO Partnership Programme.

The workshop was designed to have the following outcomes:

1. Clear guidance for additional activities and agreed upon timeframes for the work to be initiated.
2. Reaching a consensus on the feasibility and need for a network of statistical correspondents.
3. Obtaining updated information on the status of forest policy in the 13 participating countries.
4. Agreement on the additional forest policy reviews under the EC-FAO Partnership Programme.

In preparation for the workshop, participants were asked to prepare a brief presentation on recent forest policy reviews in their respective countries, according to the following outline:

1. A preliminary overview of recent national forest policy reviews including a brief introduction and description of forest policy studies in the context of subjects/areas, main results/findings, and main implementing institutions/organizations over the past five to seven years.
2. Exploratory assessment of follow-up activities in response to recommendations made in the policy reviews, and impact of the most recent policy studies.
3. A brief assessment of the objectives, information sources, constraints to and opportunities for conducting policy reviews.
4. Introduction of the currently most important issues, constraints, challenges, and opportunities for sustainable forest management (SFM).
5. Identification of the key areas/topics that could benefit from policy studies the EC-FAO Partnership Programme could support.

Workshop participation

All participating countries were invited to send representatives to the workshop, with a recommended preference that the National Focal Point attend. Twelve countries accepted the invitation to attend, but Bangladesh was unable to provide a representative. Last minute difficulties prevented the focal point in Viet Nam from participating at the workshop. The paper on forest policies in Viet Nam is included in the proceedings. A number of Malaysian representatives joined the meeting. The European Commission was represented by M. Louis du Breil de Pontbriand and four FAO officials facilitated the discussions (see Appendix 1 for the full list of participants).

Workshop organization

Due to the workshop's dual purpose it was divided into two parts, although there was no strict separation between the parts. The first part was mainly reserved for presentations on the progress the EC-FAO Partnership Programme had achieved during 2000 and 2001, which was followed by discussions on planned activities for 2002. It included in-depth discussions on the status of forestry statistics in Asia and the rationale for establishing a network of statistical correspondents, as well as an introduction to the National Forest Programme Facility, which has started to assist countries in tackling the challenges and constraints in implementing national forest programs.

The second part of the workshop focused on forest policies and forest policy reviews. It included overviews on FAO's global forest policy work, eleven country presentations and a guest presentation on "The impact of present forest policies on sustainable forest management in Malaysia" by Ms. Chan Lai Har of the Ministry of Primary Industries, Malaysia. In addition, M. du Breil de Pointbriand provided insights into the support program of the European Commission for forestry.

The workshop itself was organized and facilitated by four FAO staff (Mr. Martin, Mr. Durst, Ms. Ma and Mr. Enters). The workshop was quite informal and provided plenty of opportunities for discussions and exchange of experiences during plenary sessions and various group sessions (see Appendix 2 for the workshop program).

Overview of EC-FAO Partnership Programme progress and planned activities[1]

Mr Patrick Durst, Senior Forestry Officer and Program Manager, gave a brief welcoming address, in which he outlined the objectives and the expected outcomes of the workshop. He reminded the participants of the history of the EC-FAO Partnership Programme and the efforts of the Asia-Pacific Forestry Commission (APFC) to improve forestry statistics throughout the region. He noted the parallel EC-FAO initiatives in Africa, Latin America and the Caribbean and thanked the focal points for their assistance in the implementation of the program, in general, and individual country activities, in particular. In concluding, he expressed his appreciation to Dr. Razak and Dr. Norini Haron of FRIM for providing logistical support for the smooth organization of the workshop.

Mr. Thomas Enters (Forestry Sector Analysis Specialist) provided an overview of the program activities and achievements during 2000 and 2002. He noted that after a relatively slow start during the second half of 2000, the EC-FAO Partnership Programme had picked up momentum. By the end of 2001, more than 50 activities, most of them pilot studies, had been initiated (see Appendix 4 for a list of activities). Most studies are still ongoing and are expected to be completed during the second quarter of 2002. Studies concerning non-wood forest products were completed in July 2001. A report, including an overview chapter, is currently available in draft format and participants were provided with copies of the country papers for verification.

As the workshop was organized in Kuala Lumpur, the organizers invited two pilot study implementers from FRIM to provide an overview of their activities. Mr. Samsudin Musa of FRIM provided the preliminary results of a pilot study on "Assessing the status of logged-over production forests—development of a rapid appraisal technique". Based on recent experiences the study is reviewing existing methodologies and developing a cost-effective approach applicable for prevailing conditions in Peninsular Malaysia. Currently, the selected approach is being tested in the field and refined for wider application. As the condition of forest areas is of great interest not only to Malaysia, workshop participants recommended that the study be followed by training that will be provided during the second half of 2002.

Dr. Daniel Baskaran of FRIM reported the progress of a pilot study on "Assessing the extent of private sector forest plantations in Peninsular Malaysia—development of an effective data collection methodology". The paper discussed a cost-effective approach to document private sector forest plantations in Peninsular Malaysia and the development of a database. Preliminary results of the study indicate that the area under private management is larger than originally assumed. Private sector involvement in small- and large-scale forest plantations is becoming more important, which makes the pilot study very timely. In fact, FRIM has been approached already by the Ministry of Primary Industries for information.

Both presentations were well received and the presenters provided additional information during discussions. In general, the participants were satisfied with the EC-FAO Partnership Programme's progress, although some focal points proposed additional studies. Mr. Enters recommended that only few additional studies should be initiated and that most activities in the Programme's third year should focus on much needed training and application of earlier work. The proposed training activities on GIS, assessment methods for trees outside forests, logged-over forests, and forest products and trade statistics (see Appendix 4) were well received.

Mr. Durst presented current and recent activities on forest policy in the Asia-Pacific region. The following are the most important:

- Forest Sector Outlook Study (1998)
- Impact and Effectiveness of Logging Bans in Natural Forests (2001)
- Logging and Mill Residue Study (2001)
- In Search of Excellence: Exemplary Forest Management in the Asia Pacific Region (2002)
- Impacts of Incentives in Plantation Resource Development in Asia and the Pacific (2002)

[1] Most papers presented are available in Appendix 3

Mr. Enters followed with a detailed description of the study on "Impacts of incentives on plantation resource development in Asia and the Pacific", which is funded partially through the EC-FAO Partnership Programme. The study is conducted under the APFC umbrella and other contributors include the USDA Forest Service, FAO Regular Programme, the Center for International Forestry Research (CIFOR), the Department of Agriculture, Fisheries and Forestry Australia and the Ministry of Agriculture and Forestry, New Zealand. The initiative provides an excellent example of EC-FAO Partnership Programme collaboration with other organizations and its ability to respond to requests for information at the regional level. The results of the study will be presented at the 19th Session of the APFC in Mongolia at the end of August 2002.

Ms. Ma gave a presentation on "The process and main findings of FAO policy studies in Africa and the Caribbean". In Africa, FAO is coordinating an analysis of the current situation with respect to financing government forestry institutions from revenues collected from the forestry sector and from general government revenues collected from individuals and other sectors of the economy. The results indicate that revenue systems are highly complex, that most of the funds are spent on staff and that in most countries revenues are insufficient to achieve SFM. The forestry policy study in the Caribbean countries indicates that most countries lack the necessary data and capacities to analyse policy-relevant issues as a foundation for formulating sound forest policies. In concluding, Ms. Ma outlined a number of opportunities for follow up and stressed that a program approach at the regional level is the best way to respond to the complex task of supporting forestry policy improvement and addressing the key issues in the Caribbean region.

Mr Durst and Mr. Enters presented a paper on the many reasons for the poor quality of information on forestry in Asia. The purpose of the presentation was to alert participants to a number of problems that cannot be addressed by the EC-FAO Partnership Programme and to stimulate a discussion on the underlying causes of poor forestry information. During breakout groups participants had the opportunity to comment on the hypotheses presented. They provided very useful inputs for the further refinement of the paper.

Ms. Ma outlined in her presentation on "Network of statistical correspondents" the key constraints in receiving the Joint Forest Sector Questionnaire and in national statistics to provide reliable, up-to-date and complete information. She noted that the planned network is an important output of the EC-FAO Partnership Programme and proposed the establishment of a regional network of national statistical correspondents to:

- facilitate communication between FAO and individual countries;
- discuss common issues in the region;
- share information and its management and techniques among countries; and
- strengthen national and regional statistics.

Participants reached a consensus on the need for a network of statistical correspondents. Focal points agreed to Ms. Ma's proposal to identify national correspondents who will attend a workshop on forestry statistics to be held from 20 to 24 May 2000 in Bangkok in collaboration with the International Tropical Timber Organization (ITTO). To ensure the sustainability of the network, it was agreed to provide training for Ms. Parijat Chuntaketta (Statistical Clerk, FAO/RAPO) in Geneva and Rome in the middle of April 2002.

Mr. Martin outlined the links between the Asia-Pacific Forestry Sector Outlook Study, the EC-FAO Partnership Programme and the National Forest Programme Facility, which will assist countries in tackling the challenges and constraints in implementing national forest programs. He reiterated the importance of data collection, data analysis and information dissemination as cornerstones of an appropriate forest policy formulation process.

Forest policies and forest policy reviews in Asia

During the course of the workshop, the 11 representatives of the participating countries presented overviews on forest policies and recent policy reviews in their respective countries. The quality of the presentations was mixed. Some participants stuck closely to the outline that Ms. Ma had prepared (see above), while others provided only a very broad and descriptive overview of forest policies in their countries. Nevertheless, the country presentations provided sufficient food for thought and served their purpose of stimulating discussions on the outline for a major forest policy study (see below).

Despite the considerable differences among countries in Asia with regard to the importance of forestry to the national economy and environmental and socio-economic indicators, some common trends in forest policies can be observed. Over the last two decades, forest policies have been shaped by the problems of deforestation, the widening gap between timber supply and demand, the recognition that forests are a source of diverse goods and services besides timber, and the trend towards decentralization, devolution and privatization of forest management.

Forest policy reviews are either conducted internally or with external assistance, as has been the case in Pakistan and the Philippines. During a time of crisis reviews are even dictated by outsiders as the Indonesian case revealed. In a number of countries, forest policies have been scrutinized at a particular time in response to perceived or real forest management problems. In other countries, reviewing policies and their impact appears to be an ongoing process according to needs. In the past, non-foresters were rarely part of a review process. This has changed over time and today in most countries various stakeholders, including community groups and the private sector, are involved in revising forest policies. In some countries, policy changes have been rather smooth and have avoided disruptions. In other countries, changes have been too frequent and led to considerable confusion. In fact, as Dr. Amatya of Nepal pointed out, policies have changed more often than approaches to forest management, as policies were not translated into operational tactics. This explains at least partially why policies directed at SFM have been quite ineffective and instead deforestation and forest degradation have been common in all countries participating in the EC-FAO Partnership Programme.

What are the recurring problems? Most forest policies set very ambitious, if not unattainable targets. Envisaged forest cover is frequently set 10 percentage points higher or more than the current extent of forests. Forest plantation programs foresee ever-increasing planting rates while the reality on the ground indicates a very different picture.

If policies are translated into action, usually change is very slow, although as the imposition of logging bans indicates, change can also happen overnight, which indicates that earlier attempts to translate forest policy into SFM have failed. There are many reasons for this. One is that other stakeholders were only informed about new policy directions but did not play any role in policy reviews. Policies were just not accepted. An appropriate example here is probably the case of the monopoly of the State Timber Corporation in Sri Lanka, which was to be abolished many years ago but still exists.

Forest policies sometimes clash with other sectoral policies, which are rarely considered during "comprehensive" forest policy reviews. Even within forestry, policy objectives can be contradictory. There is frequently a conflict between the desire to conserve biodiversity and other environmental services and the need to produce timber for the wood-processing industries.

In most countries, forest policy reviews suffer from weak capacities to analyse the impacts of previous policies. Such assessments require accurate and relevant data, which are in short supply. Monitoring is often neglected, which is compounded by poor accountability and transparency. Finally, while attempts are made in many countries to provide incentives for improved forest management, disincentives are often overlooked and an enabling environment is often assumed where it does not exist.

Forest policy reviews are a major component of the EC-FAO Partnership Programme. To initiate updated reviews Ms. Ma presented a draft outline, which was discussed subsequently by the participants in breakout groups. In general, the outline was appreciated and accepted with some minor modifications that were suggested by the participants during a plenary session before the closure of the workshop. Subsequently, the outline was finalized by FAO staff in Bangkok and Rome (see Appendix 5). It was also decided that the documents would form the basis for country reports that APFC member countries will prepare this year for the 19th session of the APFC.

Conclusions and action items

Workshop evaluation

Overall the workshop can be regarded as very successful as it reached the expected outcomes. Also, 11 out of the 13 member countries were able to send a representative. The participants expressed their continued support for the EC-FAO Partnership Programme, and significantly shaped the activities for 2002.

Items for action

The immediate need is to initiate the forest policy reviews. In this regard, the heads of forestry departments have been informed about the initiative and the link to the country papers for the APFC session.

Most pilot studies will be completed during the first and second quarters of 2002. It will be vital to prepare the documents for dissemination properly to support follow-up activities, especially training.

A number of training courses will be organized in 2002. It will be crucial to select appropriate participants (particularly important for the training on forestry statistics, which will be organized from 20 to 24 May 2002 in Bangkok). By then, Ms. Parijat Chuntaketta (Statistical Clerk, FAO/RAPO) will have been trained and in the position to facilitate the network of statistical correspondents. A training workshop on the assessment of trees outside forests will be organized by the Forest Survey of India in Dehra Dun from 22 to 26 April 2002 and the call for nominating participants has been circulated. The Forestry Department Peninsular Malaysia is currently preparing a program for a study tour of forestry officials from Lao PDR and Cambodia to gain insights into the department's information system. Finally, a training course on GIS applications is likely to take place in Chiang Mai (Thailand) from 29 April to 03 May 2002.

APPENDIX 1

EC-FAO Partnership Programme
Forest Policy Workshop

LOCATION: KUALA LUMPUR (MALAYSIA), THE LEGEND HOTEL
22 to 24 January 2002

List of participants and resource persons

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APPENDIX 2

EC-FAO Partnership Programme
Project ASI/B7-6201/IB/98/0531

Information and Analysis for Sustainable Forest Management: linking National and International Efforts in South Asia and Southeast Asia

Forest Policy Workshop

LOCATION: KUALA LUMPUR (MALAYSIA), THE LEGEND HOTEL
Timing: 22 to 24 January 2002

PROGRAM

Tuesday, 22 January 2002

08.30	Patrick Durst (Senior Forestry Officer, RAP, Bangkok)	Welcome and opening address, objectives of the workshop and expected outcomes
08.45	Thomas Enters (Forestry Sector Analysis Specialist, RAP, Bangkok)	Overview EC-FAO Partnership Programme activities since the inception workshop held in July 2000
09.30	Samsudin Musa Research Officer (FRIM)	Progress of pilot study on Assessing the status of logged-over production forests – Development of a rapid appraisal technique
10.00	Coffee Break	
10.30	Thomas Enters	Planned EC-FAO Partnership Programme activities for 2002 followed by discussion
11.50	D.B. Dhittal	Recent forest policy reviews in Bhutan
12.10	Eang Savet	Recent forest policy reviews in Cambodia
12.30	Lunch	
13.30	V.K. Bahuguna	Recent forest policy reviews in India
13.50	Achmad Pribadi	Recent forest policy reviews in Indonesia
14.10	Patrick Durst	The state of forestry statistics in Asia or "Ten reasons why we don't have reliable forestry statistics"
14.40	Working groups	Confirm or refute reasons presented by P. Durst
15.30	Coffee break	
16.00	Working groups	Presentation of group reports
16.30	Ma Qiang (Forestry Officer, FAO, Rome)	Rationale for a network of statistical correspondents followed by discussions
17.30	Close	
19.00	Welcoming dinner hosted by FAO	

Wednesday, 23 January 2002

08.30	Daniela Baskaran Director, Plantation Forestry Division (FRIM)	Progress of pilot study on Assessing the extent of private sector forest plantations in Peninsular Malaysia – Development of and effective data collection methodology
09.00	Patrick Durst	FAO current/recent activities on forestry policy in the region
09.30	Thomas Enters	Introduction to the recently initiated study on Impact of incentives on the development of forest plantation resources in the Asia-Pacific region
09.50	Somchay Sanonty	Recent forest policy reviews in Lao PDR
10.10	Na'aman Jaafar	Recent forest policy reviews in Malaysia
10.30	Coffee Break	
11.00	Ma Qiang	Process and main findings of FAO activities on policy studies outside Asia
11.30	Working groups	What are the main objectives of policy studies and what can they accomplish?
12.30	Lunch	
13.30	Working groups	Presentation of group reports and discussion
14.00	S.M. Amatya	Recent forest policy reviews in Nepal
14.20	Bashir Ahmed Wani	Recent forest policy reviews in Pakistan
14.40	Dolores Catindig	Recent forest policy reviews in the Philippines
15.00	Michael Martin (Chief, Forestry Planning and Statistics Branch, FAO, Rome)	Presentation on the connection between the activities conducted through the EC-FAO Partnership Programme with what happened in the Outlook Study for Asia and what we propose to do in the areas of support to policy analysis for the National Forest Programme Facility.
15.30	Coffee break	
16.00	Ma Qiang	Introduction of the draft outline for the planned forest policy studies
16.20	Working groups	What should we seek in the forestry policy review?
17.00	Working groups	Presentation of reports and discussion
17.30	Close	

Thursday, 24 January 2002

08.30	Chan Lai Har (Undersecretary, Forestry Division, Min. of Primary Industries, Malaysia)	Forest policy and implications for sustainable forest management in Malaysia
09.00	Louis du Breil de Pontbriand	The support programme of the EC in forestry
09.20	Sarath Fernando	Recent forest policy reviews in Sri Lanka
09.40	Jira Jintanugool	Recent forest policy reviews in Thailand
10.10	Thomas Enters and Ma Qiang	Common aspects of recent policy reviews conducted in Asia
10.30	Coffee Break	
11.00	Plenary	Finalizing the outline for the national forest policy reviews
12.30	Lunch	
13.30	Plenary session	Finalizing the outline for the national forest policy reviews
15.30	Coffee break	
16.00	Michael Martin and Ma Qiang (Facilitators)	Closing of the workshop
17.30	Close	

APPENDIX 3

Papers presented

TEN REASONS WHY WE KNOW LESS ABOUT FORESTRY IN ASIA THAN WE SHOULD

Patrick Durst and Thomas Enters

Introduction

Making appropriate and timely decisions is important in managing any resource. To make the right decision requires inputs and information—this is where the problem starts. Frequently, the information that we have is not the information we want. This is exacerbated by the fact that more often than not the information we want is not the information we really need. Finally, by the time we have figured out what we really need to know, the necessary information is not available. As a result, many decisions are based on inaccurate, incomplete or outdated information, and the decisions do not lead to the desired results.

Although the problem described above is common in many sectors, it is of particular concern for forestry because poor decision making can have long-term and wide-ranging effects. Consider reforestation with commercial species in remote (i.e. the wrong) locations, for which at the end of the rotation there is no market. Poor species selection may only become evident several years after planting, when growth rates—for some people although not for all—dramatically decline. As a consequence, investments in wood-processing facilities become subject to risk when the supplies of raw materials were overestimated. The list of examples could be extended easily.

The negative impacts of poor decisions in forestry are not only long-lasting but they also affect an increasing number of people, directly or indirectly. Concerns about climate change and biodiversity loss have made forestry a global issue, although actions are still taken at the local level. Demands for information about particular aspects of forestry can come from any corner of the world, and it is not sufficient anymore to apologize that requested information is not available!

We have known for many years that forestry statistics and information in Asia are inadequate and many efforts have been made at national and international levels to improve the situation. For example, the International Tropical Timber Organization has held more than 10 training workshops on tropical forestry and timber trade statistics since 1990. FAO has devoted time and resources to the issue, of which the EC-FAO Partnership Programme on Information Analysis for Sustainable Forest Management is only one example. The Forest Survey of India assesses the country's forest resources every two years and the Forestry Department of Peninsular Malaysia has used a Sawmill Information System (SIS) since 1999, which has increased considerably the speed with which data can be validated, analysed and presented according to specific questions.

Certainly, progress has been achieved in some countries. Information is more readily accessible and some forest departments even make it available on their websites, thus accelerating the speed of information flow tremendously. Yet, the suspicion remains that we could have achieved far more, if we had looked more closely at the direct and the underlying causes for poor information on Asian forestry and forests. Too often policy makers, planners and donors assume that the lack of funds, infrastructure and skills are the main barriers to improving forestry information. While it is safe to assume that investments, particularly in capacity building and equipment can make a difference, it is useful at this point to review comprehensively the reasons for the poor state of forestry statistics and information in Asia.

(1) Lack of funds

Data collection, analysis, storage and dissemination are costly. In forestry, data collection is particularly expensive. Forests stretch over large areas; many natural forests are still located in areas that can be classified as remote or inaccessible and the number of operators in the forests and the wood-processing industries in many countries is staggering. Hence, it is not surprising that many forest inventories are as old as 10 years (or more) such as in the Philippines where the last inventory was conducted in 1989. Although aerial photography and remote sensing make it possible to assess forest cover from above it can be quite costly as especially satellite-based inventories require ground-truthing. Also, bird's-eye-views provide little information on forest operations and wood processing.

Infrastructure for processing, storage and retrieval of data such as geographic information systems (GIS) or global position systems (GPS) have been hailed as breakthroughs for data collection and analysis, but they also come at a high price. Additionally, office computerization needs and costs climb out of reach for many countries.

(2) Inadequate skills and capacities

The advent of information technology in forestry requires new skills that are not always easy to acquire, assuming that the existing staff shows an interest in training and upgrading their skills (see below). In most countries, there are very few people who can manage GIS effectively, and training is no guarantee for strengthening capacities. More often than not, experienced and skilled people are promoted, relocated or leave their jobs altogether in search of higher incomes (e.g. in the private sector).

There is also a lack of suitable trainers conversant in local languages and many forest agencies are unable to provide financial resources for upgrading skills. At the field level, the problem is compounded by low literacy levels in some countries and a lack of understanding as to why data have to be collected and questionnaires have to be completed.

In addition, due to the changes that forestry has experienced and increasing complexity, sustainable forest management (SFM) requires expertise from many disciplines including ecology, silviculture, rural sociology, economics, soil science and engineering (Omoluabi 1998). However, multi-disciplinary expertise is not all that is required. Information needs have also escalated and it is obvious that many forest departments or related institutions have still not replied to the challenge that multi-stakeholder and multi-disciplinary forestry poses.

(3) Resistance to change

Historically, the main objective of forest management was timber production. Although forestry policies and forest management objectives diversified and expanded long before the United Nations Conference on Environment and Development (UNCED), since 1992 forestry has become even more multi-dimensional. Local stakeholders and the international community especially have voiced their concerns about the narrow definition of forestry. They view forests as a source for sustaining local livelihoods and providing local environmental services, as a reservoir of global biodiversity and as carbon sinks that need to be maintained to minimize the perceived negative effects of climate change.

Foresters have been slow to adapt to the expanding demands. Forestry statistics have been even slower in coping with the changes. The main focus has remained on timber, timber products, the wood-processing industries and forest resource assessments in terms of aerial cover. Scant attention is paid to collecting data on forest conditions, the extent of private plantations, non-wood forest products (NWFPs), trees outside forests, fuelwood use, biodiversity, the numbers of forest dwellers and forest-dependent people, degrees of dependencies, recreational visitors to forest areas and the like.

To some extent, this shortcoming can be explained by the lack of funds and capacities (see above). Forest departments have been slow to employ social scientists and ecologists whose skills are required to collect many new data. For example, botanists and ecologists are required to unlock the mysteries of biodiversity, especially related to changes over time. More important than the lack of resources is probably the human tendency to resist change, which Woon *et al*. (1999, p. 158) also experienced during the introduction of the Peninsular Malaysia Sawmill Information System:

> "The human resistance to change issue is often overlooked in many major computerization projects and accounts for the high failure rate of such projects. Thus, the management team overseeing such projects should ensure that adequate on-the-job training be provided."

This apprehension explains why, although the rhetoric on forestry has changed and demands for information have increased, data collection and forestry statistics have remained almost unchanged over the decades.

(4) Inconsistent definitions and methodologies

What is the difference between a reserved forest and a forest? The first is the legal description of the forest area, whether it is covered by trees or not, the second depicts the actual forest area. While this is obvious to some, others are not aware of the difference, which accounts for many misunderstandings.

Solberg *et al*. (1996, quoted in Brown 2000) noted that:

> "Estimating the area of forest plantations presents some challenges. The term 'plantation' has varied meanings, and even where a precise definition is available, it is not universally applicable."

Brown (2000, p. 5) concluded that "in many instances, because there is an extensive range of silvicultural practices applied in intensive forest management, the difference between a semi-natural forest and forest plantation is essentially arbitrary" and that many definitions include several ambiguities. As a result, countries such as Finland, Germany and Canada report no forest plantations, while neighbouring countries with seemingly similar forest practices and philosophies report significant plantation areas. What is a "rubber (*Hevea brasiliensis*) estate" in some countries, is a "forest plantation" in Malaysia. Why not? Malaysian forestry officials argue. There is not much of a difference between an *Acacia mangium* plantation and a rubber plantation and both produce timber for the furniture industry. What is a *Pinus radiata* plantation to most people is often referred to as "planted forest" in New Zealand. The list of examples could be extended to other forest-related issues including the use of different measurement units such as cubic meters, tons, or hoppus tons.

Plantation area estimates provide another interesting example. The estimates of plantation areas are conducted in quite different ways. Some countries use seedling production or distribution as a proxy indicator for the area established. Needless to say, some seedlings die before they reach the planting area. Others are planted but do not survive. Gap planting can fix the latter problem, but leads to an artificial inflation of the planting area because the number of seedlings is used as an area indicator. Other countries report the annual planting area without considering mortality or the fact that some former plantation areas are replanted after harvesting. In the latter case, this is no actual expansion of the plantation area. In the first case, it is difficult to assess the difference between reported area and actual or net area. To do this, Pandey (1995) introduced a correction factor, which describes the success rate. In extreme cases, the success rate was as low as 15 percent. This reduced the farm forestry area reported by a social forestry project in Bihar (India) from 104 000 ha to 15 600 ha. The large-scale application of correction factors has been criticized but alternative and better approaches have not been applied widely. As a result, we know very little about forest plantations in Asia, which makes it next to impossible to calculate future wood supplies.

(5) Preponderance of illegal activities

Forestry statistics suffer greatly from widespread illegal activities in the sector. Hence it is not surprising that drastically different forest product data sets exist for some countries. For example, while FAO (2000) indicated that 1997 industrial roundwood production in Cambodia was 1.04 million m^3, data from four different sources for the same year ranged from 212 000 to 4.32 million m^3 (Castrén, 1999a). For Myanmar, FAO (2000) reported production of 3.44 million m^3, while Castrén's (1999b) estimates were less than 2 million m^3. Gintings and Roliadi (in Enters 2001) estimated log production in Indonesia at about 28 million m^3. Other official figures ranged from 29.15 to slightly above 40 million m^3 (FLB 2000). Barr (2000) calculated production at 55 million m^3, and referred to a 1999 study by Scotland and others which estimated production at 82.3 million m^3, or nearly three times higher than the official figures. For China, Chen estimated log production in 1997 of around 64 million m^3 (in Enters 2001) while FAO (2000) reported a figure of 109 million m^3 for the same year. Finally, Thailand's industrial roundwood production was approximately 2.9 million m^3, as published by FAO (2000), compared with only 54 800 m^3 (including confiscated timber but apparently excluding wood sourced from plantations), as published by the Royal Forest Department (RFD 2000).

Similar discrepancies can be found in other areas, in particular in trade flow statistics. Frequently import data (from country A to B) do not match export data (from country B to A). While some of the differences are due to errors, others clearly relate to illegal trade. This is not only the case for logs and wood products but also for NWFPs, about which in general very little in known.

(6) Vested interests, impacts on performance appraisals and embarrassing truths

While most of us would like to obtain an accurate picture of forestry in a particular location, there are some people who have a vested interest in concealing the truth or they are—frequently for understandable reasons—too embarrassed to report the truth.

Concealing the truth is in part related to illegal activities such as smuggling, tax evasion and transfer pricing. However, the problem goes much further. Hard evidence is difficult to come by but anecdotes reveal that investors in forest plantations tend to inflate planting areas for which they receive subsidies. In many countries there are no compelling legal instruments that institutionalize proper monitoring. Where they are in place, it is still possible to bribe forestry officials who then accept reported plantation areas, which may be a far cry from the actually planted area. The problem is similar in timber production. Data are transmitted usually by companies to local forest officers who then forward the same to the respective district or provincial forestry officers. Data verification is non-existent or weak.

In the Philippines, as well as many other countries, the performance rating of field officers is based mainly on their reported physical accomplishments versus targets. Therefore it should not be surprising that field officers hesitate to report failures, problems, forest destruction (e.g. forest fires or encroachment) and low "survival" rates. In fact, they are almost "forced" to withhold such information as it would affect their performance appraisal (Austria *et al.* 1997).

In a similar vein, policy makers, planners and donors are sometimes too embarrassed to face the truth revealing policy, program, project or institutional failures. Deforestation rates are deflated and the success rates of new programs are inflated in the hope of attracting more funds for initiatives that should actually be critically reviewed, modified or stopped. A favourite means of indicating a country's success in biodiversity conservation is to raise the size of areas protected without any additional budget allocations. While the creation of "paper parks" prevents embarrassment in the short term, in international discussions, ultimately it leads to suspicion on any number.

(7) Complexity of agencies involved in forestry statistics

Usually it is assumed that forestry departments are the collectors of all forestry-related data and disseminators of information. In practically every country this is far from correct and Malaysia serves as an example. The main agencies collecting statistical information on forestry and timber trade are forest departments (forestry statistics) and the Malaysian Timber Industry Board (trade statistics). Others include the Forest Research Institute Malaysia, Ministry of Primary Industries, Ministry of Finance, Ministry of Trade and Industry, Ministry of Industrial Development Sarawak, Statistics Department, Land and Survey Department, Customs and Excise Department, Timber Trade Associations in Peninsular Malaysia, Sabah and Sarawak, Malaysia Centre of Remote Sensing (MACRES), Malaysian Industrial Development Authority (MIDA), Malaysian External Trade Centre (MATRADE), district offices, embassies etc.

This multitude of actors can create high transaction costs and lead to the duplication of efforts. There may be no established channel of communication between customs and forestry departments regarding import of timber and export/import of value-added products such as furniture, as is the case in Nepal. Some actors are reluctant to share information and raw data are protected as secrets. In the absence of mandatory data transfers, information kept at one level or one department cannot be accessed easily unless it is specifically and formally requested, a frequently frustrating process.

(8) Proprietary business information

What used to be the domain of government departments has been transferred to the private sector to various degrees across the region. New Zealand is probably the most extreme example concerning the privatization of forestry (Clarke 2000). The increasing significance of the private sector translates automatically into a less significant role for public sector institutions. Areas that the public sector used to control, such as plantation development and management, are today in many countries the domain of private investors. As investors they are careful about making data about their operations available and view many issues increasingly as corporate or business secrets, as they feel that they need to maintain their competitive advantage.

As a result the public sector finds it more and more difficult to provide a complete overview of national forestry aspects including even research. Many enterprises refuse outright to complete and return questionnaires and thus developments in particular sectors, such as plantations or the domestication of NWFPs, have become blurred. This is particularly the case where government officials view their role as enforcers of the law and controllers but not as facilitators in development.

(9) Weak understanding of the objectives of data collection

The primary objectives of data collection, analysis and dissemination are to facilitate planning, management and the formulation of policies. Adequate, accurate, timely and relevant information also serves to direct scarce resources to areas of need, thereby minimizing risk and waste of resources. Data collection, their analysis, storage and dissemination are costly. Hence only relevant data should be collected and processed, with the detail and precision appropriate for decision making. Unfortunately, only few people understand the need to prioritize.

Data are often collected for the sake of data collection, or because that is what the job description specifies. Little time is spent on selecting the appropriate level of precision, choice of data-collection method and updating intervals. Survey forms are designed poorly and when they are returned, no one is assigned to code the data for further processing. All efforts are diverted to particular sectors of forestry and as a result other sectors, deemed less important, such as domestic timber markets, NWFPs or trees outside forests, are neglected totally by the institutions responsible for providing accurate and relevant information.

The types of statistics used in many government departments are mainly descriptive, in table form, graphics or pictures. Essentially data remain data and are not translated into information. This is like asking for the balance of a checking account and receiving only a printout of transfers. Making tables available on web pages also does not improve the situation. There is a substantial disregard for the needs of decision makers, planners and the general public, and as long as the translation of data into information is neglected, decisions will remain poor and people will continue to be misinformed.

(10) Data loss

Finally, data is also lost due to computer crashes, office relocations, changes in institutional arrangements, fires and occasional instability arising from survival and competition problems (Omoluabi 1998). While this is probably an infrequent problem it should not be discounted.

Summary

The discussion of the problems faced by forestry statistics in Asia is not intended to leave the reader with the impression that no matter what is tried, the situation cannot be improved. Instead, it is intended to serve as food for thought for further discussions and deliberations on the most appropriate ways to improve the current situation. Recognizing and understanding the underlying problems is often the first step in the right direction. Woon *et al.* (1999) responded to the challenge posed by resistance to change and actively assisted during the familiarization process when the SIS was introduced. Without the assistance from the program developers, scarce resources would have been wasted.

The scarcity of resources should also remind us that we need to prioritize and to determine the kind and precision of information required to support decision making. We will never be able to collect all the data that we want. Instead, we need to focus on what is required.

Investments in infrastructure should be minimized where data quality is a problem. Maps generated by a GIS might be more impressive than hand-drawn maps. However, if they are based on outdated and inaccurate inputs the quality of the final product is deceiving.

Some of the problems discussed above cannot be tackled directly, such as the preponderance of illegal activities. Other challenges can be dealt with more easily. The use of indicators will remain important. Hence they should be selected carefully. Assuming that seedling production can be translated into plantation area is erroneous. Performance appraisal procedures should also be reviewed. Those who successfully solve a problem but do not reach a predetermined target should not be penalized while those who report unverifiably that the target has been reached are promoted.

Finally, huge gains could probably be made if the one-way flow of communication was changed to a two-way flow. Data collectors have to feel that they are part of the information generation process. They need to feel ownership in the final products by being acknowledged and provided with an understanding of the final uses and value of the final product. Only then will their interest in collecting data increase.

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THE PROCESS AND MAIN FINDINGS OF FAO POLICY STUDIES IN AFRICA AND THE CARIBBEAN

Ma Qiang

The reform of fiscal policies in the context of national forest programs in Africa

Process of the study

Background

Currently, FAO is implementing a project on sustainable forest management (SFM) in African ACP (Afrique-Caraîbes-Pacifique—signatories of the Lomé Convention) countries under its Partnership Programme with the European Commission. The project has the overall objective of assisting national forestry administrations to direct their policies and institutions towards SFM effectively.

Under the component "Review and Reform of Fiscal Policies Affecting Forest Management", selected African countries have prepared country reports.

Country reports

The main objective of the country reports is to investigate the current situation with respect to financing government forestry institutions from revenues collected from the forestry sector and from general government revenues collected from individuals and other sectors of the economy.

Consultants were hired to produce the reports with the supervision of FAO technical staff. A suggested outline was given to guide the preparation of the reports. The consultants were asked to provide information in five main areas:

1. *Revenue sources and amounts*—describe and quantify the different charges collected from the forestry sector by all levels of government.
2. *Administration of charges*—describe the way in which charges are determined and revised, methods of collection, monitoring and checking.
3. *Total revenue collection*—report on the total amount of revenues collected from the forestry sector and their disbursement between different agencies.
4. *Total government expenditure*—report on total government expenditure in the forestry sector, including: administration; reforestation funds; direct support to forestry; state forest enterprises; and support to other institutions. Quantify the various sources of finance used.
5. *Analysis of the revenue system*—comment on the strengths and weaknesses of the current forest revenue system in terms of the contribution of forestry charges to expenditure in the sector and the impact that it has on SFM. Recommend how the system might be improved to increase revenues and support SFM.

Thirty-seven countries have agreed to prepare reports and 31 reports have been received.

Synthesis of country reports

This paper summarizes the information presented in the country reports. It compares and contrasts the many different ways in which forest revenue systems are designed and implemented and presents some estimates of the total financial flows between governments and the forestry sector.

Regional workshop

The regional workshop was held from 13 to 16 November 2001 in Abuja, Nigeria. The workshop reviewed the country papers, and discussed the challenges and strategies for fiscal reform. A synthesis paper was presented at the workshop as well. Ten topics were prepared for group discussions:

- *Charging for non-wood forest products (NWFPs) and services*: What types of charges can be used and what products/services can they cover? What are the country experiences? When and where is charging desirable?
- *Other forms of innovative financing*: What other sources of finance are available to support SFM? How can they be used? What experiences have countries had with such sources?
- *Collecting charges from large-scale commercial producers*: What are the problems with collecting charges from large-scale producers? Where and how have they been overcome and what remains to be improved?
- *Collecting charges from many small producers:* What are the problems with collecting charges from many small producers? Where and how have they been overcome and what remains to be improved?
- *Fiscal policies in other sectors:* What positive/negative influences do fiscal policies in other sectors have on forestry? How have these influences affected forests? How can forestry administrations improve the situation?
- *Forest funds*: What are forest funds and how do they operate? When and where are they appropriate? What experiences have countries had with forest funds?
- *Revenue sharing and charge collection with communities*: When and where has revenue sharing worked well and why? What are the country experiences? How can this be implemented successfully?
- *Improving service delivery*: How can forestry administrations improve forest monitoring and charge collection with their limited resources? What have been the experiences with greater administrative autonomy?
- *Governance and administration*: What are the main types of unacceptable behaviour and poor administration in the forestry sector? What can be done to overcome these problems?
- *Revenue collection under decentralization*: What issues does decentralization raise? How can they be addressed? What are the country experiences?

Main findings

Forest revenue systems: Trends and status

Structure of forest charges

The structure of charges can be as important as the level of charges. It can affect:

- the efficiency of charge collection;
- the way that forests are managed; and
- the benefits of forests to different stakeholders.

Forest revenue systems in many countries try to take this into account by using charges that vary by type of forest, activity, product and type of producer. There are many variations in the way that charges are assessed (e.g. on the basis of area, volume or value).

Types of forest

- State forests or forest reserves

  The state claims ownership of most or all natural forests in many countries.
- Private forests and community forests

Private forests are not common in Africa and governments do not generally collect revenues from production in privately-owned forest plantations. Community control, ownership or management of forests is becoming more common.

- Natural forests and forest plantations

  Most countries use different ways to assess and collect charges from natural forests and forest plantations.

Generally, it is more difficult to collect charges in the natural forest and the charges used there are more complicated.

Activity

- Production

  All countries use production charges. They are based usually on volume or the number of trees cut. Some countries also use area-based charges.

- Conveyance

  A few countries have conveyance charges by volume or transport type—mostly for fuelwood.

- Processing

  Processing charges are also usually a fixed amount per month or year, sometimes based on capacity.

- Trade or sale

  Charges on international trade are usually based on volume or value. Charges on domestic trade are usually for fixed time periods (e.g. monthly licence fees).

In addition, many countries collect charges at several different stages and producers in some countries have to pay 10 or more charges. Generally, charge structure is very complicated. This may lead to many opportunities for evasion and high administrative costs.

Types of product

Forest charges may be collected from the production of many different types of forest goods and services.

- Fuelwood and charcoal
- Roundwood

  All countries collect charges on industrial roundwood and most also collect charges on fuelwood production. Usually charges are levied by volume or area.

- Processed products

  Charges on processed products are mainly charges related to international trade.

- NWFPs and services

  Charges on NWFPs are also common, but are limited usually to one or two of the most common or commercial NWFPs. They are charged normally by volume or as fixed-fees (e.g. monthly permit fees). Charges for other goods and services are mostly for hunting and tourism. A few countries are trying innovative charges.

  Most countries collect charges from a full range of goods and services. However, there may be scope for new types of charges or sources of funding for new and innovative types of goods and services, for example:

  - payments for carbon storage;
  - payments for catchment protection;
  - joint ventures for conservation projects; and
  - compensation for other uses of forestland.

Types of producer

Many countries try to distinguish between different types of forest user, presumably for socio-economic reasons. Many countries allow subsistence production for free. Some countries recognize different scales of operation and charge less for small producers.

- Large-scale commercial producers
- Small-scale commercial producers
- Artisans
- Subsistence production

The different systems are complicated and sometimes confusing. A few countries noted that free user rights sometimes lead to evasion of charges.

Trends in forest charge: Average time between revisions and the effects of inflation

- Very few countries revise their charges regularly.
- Most countries revise charges every three to five years on average.
- A few countries revise their charges very infrequently.
- If charges are not revised frequently, inflation reduces their real value over time.

Implementation of revenue systems: Processes used to set charges

There are six main ways to set charges:

1. *Market-based charges*

   Market mechanisms include auctions, sales by tender and sales by negotiation. In many cases, these mechanisms are used for the sale of forest products from plantations.

2. *Charges based on residual value*

   Residual valuation or stumpage valuation is a method of estimating the value of standing trees, by subtracting the harvesting, extraction and processing costs from the value of forest products (i.e. roundwood or, in some cases, forest products such as sawnwood and wood-based panels).

3. *Charges based on replacement cost*

   Another approach to setting forest charges is to try to calculate the cost of replacing the forest resources removed or damaged by producers.

4. *Set by forestry administration: Consultation within the forestry administration.*
5. *Interdepartmental discussion: Consultation within government*
6. *Consultation: Broader consultation with many stakeholders.*

Most countries use more than one of these methods. Very few countries use market-based methods when setting their forest charges. Very few base their charges on values or costs.

According to a comparison of historical trends in real forest charges (1990-1999) and the methodology used to determine forest charges, using methods based on markets, values or costs may result in increases in charges.

There are four processes used to collect forest charges and monitor charge collection:

1. Roundwood from plantations

   In forest plantations, most countries use market-based or replacement cost methods when setting charges. Production volume is measured usually in some detail and charges are paid in advance. Monitoring is sometimes difficult, particularly when low-paid staff are monitoring large sales of valuable timber.

2. Area-based charges in concessions

   Charges based on the forest concession area account for a major share of revenue collection in countries with well-developed forest concession systems (e.g. in West Africa). These charges are paid normally in advance at the start of each year or the start of the licence period.

3. Volume-based charges for industrial roundwood production

   Charges based on the volume of production are the most common types of charge and are used in nearly all countries. Volume-based charges are difficult to implement, because they require detailed and expensive measurement, grading and monitoring of production. Charges may be paid in advance or in arrears and are centralized or decentralized, depending on the country. Legal production is marked often with an official stamp, but monitoring is still difficult. Again, fraud may be a problem.

4. Charges for fuelwood and NWFPs

   Usually, charges for fuelwood and NWFPs are either based on weight or volume of production or flat-rate charges (e.g. a fixed amount per year). Because of the large number of small producers, measurement and monitoring is often difficult, particularly with volume/weight-based charges. Because of the scale of production, more often than not, charges are paid in the field. The costs of collection are often high and the level of charges is low, so the efficiency of charge collection is also often very low.

Total forest revenue collection

In all but two countries, total revenue collection has increased over the last decade. However, after adjusting for inflation, revenue collection has fallen in eight countries. Total revenue collection can increase due to higher charges, improved levels of collection or increased production. It is difficult to tell which of these factors have contributed to increased revenue collection.

Revenue collection per cubic metre is an indication of how much the government receives for the use of the resource. This figure is also more comparable among countries that have different levels of production. Revenue collection per cubic meter is variable but generally very low. It is generally highest in countries with a high proportion of industrial roundwood production and exporter countries (e.g. in West Africa). The average is only US$0.19 per m^3.

Government expenditure on forestry: Trends and current status

Many countries could not provide information about trends in expenditure. Expenditure has increased in all countries except two, but by less than inflation. After inflation, expenditure has increased in only five countries. Trends in total expenditure are affected strongly by trends in external support.

On average, external support accounts for 35 to 40 percent of total expenditure, but it is very variable. Government expenditure per hectare is variable, but generally very low. To some extent, expenditure in different countries reflects donor priorities and does not necessarily reflect the importance of forests. The average is only US$0.82 cents per hectare.

Total collection and expenditure: All sources of funding by country

Forest revenue, net government support and external support are the three main sources of funding. Forest revenue is most important in two countries and net government support is most important in seven countries. In all the other countries, external support accounts for the highest share of expenditure: 26 percent from forest revenue; 33 percent from net domestic government funding and 41 percent from external support.

Revenue is greater than expenditure only in Côte d'Ivoire and the Central African Republic. In all other countries, forest revenue does not cover total expenditure. It does not even cover domestic expenditures.

Conclusion

In many countries, forest revenue systems are complex and not easily understood. This complexity often tries to reflect market value, there is an easier way—use markets. Charges are too low and are not revised frequently enough, which makes SFM difficult. More efficient charges, such as area charges and flat-rate charges should be used.

In many countries, most national funding is spent on staff. This has little effect on SFM. Expenditure is generally very low, and scarce resources are not spent effectively. Donors focus on investment in SFM but this reflects their priorities and is not sustainable. Countries seem to spend more on forestry where forest revenues are higher.

In many countries, it is unlikely that revenue will ever be enough to support SFM. In such cases, there are three options: privatize; protect; or continue to subsidize. However, there is still much room to improve revenue collection through greater efficiency. Low revenue collection is often a political or institutional problem, not a technical problem.

Part II. Forestry Policy Study in the Caribbean Countries

Process of the activity

Background

In 1997, the Division of Policy and Planning of the Forestry Department of FAO, in cooperation with the European Commission, initiated the project "Forestry Policy Study in the Caribbean Countries". The objectives of the study were to contribute to understanding the ways and mechanisms through which forestry policies are formulated and implemented, to describe their general effectiveness and to identify the needs and opportunities for strengthening the Caribbean countries' capacity in forestry formation and analysis. The study covers 28 countries and territories of the Caribbean region.

Phase I: The preparation of a forest policy report for each of the countries/territories

This phase included a meeting with the consultants who had been recruited for the preparation of the country reports to ensure uniformity in the preparation of the reports and in the approach for the gathering of information, and to discuss the conceptual framework of research as an additional means of capacity building in the field of forestry policy. The outline for the preparation of the reports was proposed at the meeting.

Phase II: Analysis and synthesis of country reports

Reports on forestry policies of 28 countries and territories were prepared between June 1997 and May 1998. An analysis and synthesis of the reports were produced based on the country reports.

Phase III: Expert consultation on forestry policy in the Caribbean

The expert consultation was held in Trinidad, between 25 and 28 May 1998. The 28 country/territory reports, together with the synthesis, were the basic working documents of the consultation.

The objectives were to:

- present the synthesis, analysis and conclusions of the FAO/EC study on forest policies;

- discuss experiences and share information related to forest policy formation and implementation;
- analyse the key policy issues confronting the forestry sector;
- discuss the ways individual countries responded to key policy issues; and
- identify options for forest policies and directions for national and international actions in support of the development of appropriate policies for sustainable development.

The results and outputs were expected to include:

- an assessment of the findings and recommendations of the FAO/EC study on forest policies; and
- the identification of specific actions at national and international levels to be supported by regional governments and the international community from 1999 to 2005.

The findings, conclusions and recommendations of the study were validated at the expert consultation. Some 50 participants attended the event, representing forestry and governmental planning agencies, international and regional organizations, NGOs, regional development banks and academic centres.

Main findings

Key forest policy issues in the region

In all countries, there is a feeling that a general land-use policy and plan is a necessary normative framework for the sustainable use of forests. Policies that secure the participation of people are also considered necessary for improving the rationality and equity in granting concessions and in allocating land for forestry purposes.

Sustainable forest management is an important issue in all larger countries. The discussion centres on what are appropriate forest management systems, and the mechanisms for enforcing them. The restrictions on SFM include the lack of information on forests, undesirable selective extraction practices and the use of inappropriate technologies. The low percentage of forest under sustainable management is seen as a major weakness and an undesirable situation.

The pricing of the resource, and in more general terms, forest valuation, securing the compliance of contractors with the terms of contracts and the government's capacity for securing SFM, are among the specific problems raised in the treatment of the significance of concession contracts.

Important issues prevailing in those countries with relatively rich forest resources are the linkage of national macropolicies with the forestry sector and public investment in the sector. It is felt, for example, that national accounts do not reflect the contribution of the forestry sector to economic development fairly. Moreover, the inadequacy of investment funds for the sector is a major hindrance not only to forestry development, but also to the progress of the nation as a whole.

The need to ensure that governments, while promoting forestry development and conservation, duly protect the rights of indigenous people and communities is an important issue in many countries which cries out for resolution.

The loss of forest cover is seen as one of the most negative results of the lack of institutional capacities and appropriate policies, as is the confrontation between conservationists and those espousing economic development.

Some issues specifically affect small island states. These include the availability and quality of water, the incidence of forest grazing and quarrying and mining. In all these matters, economic, social and environmental dimensions do not appear to have been assessed clearly.

It is evident that most countries of the region possess neither the necessary data nor the capacity to analyse the issues, and to formulate sound policies.

The process of forest policy formation

There appear to be three main approaches to forest policy formulation.

The first approach can be found in those countries, in which the methodology is explicit, and in which there are clear and legitimate procedures that define the different stages with regard to inputs and responsibilities in the preparation, analysis and decision-making process of policy formation.

Another approach is characterized by the existence of a set of stages, which begins with the identification of issues and ends with options for solutions. However, the process appears to be less structured than in the first approach in that procedures are less formal and are not always followed in a systematic way. Moreover, the stages are fewer.

The third approach is pursued by those countries that do not seem to possess a formal set of stages for policy analysis at the technical level. When confronted with the need to act on issues, *ad hoc* procedures are used.

The analysis of the country reports revealed that important progress in implementation and the achievement of goals has been obtained both in countries with a highly structured process and in some without. This, at first glance, might suggest that having a clearly defined process is not a determining factor. The degree of political will appears to be more important in determining successful outcomes. This political will is stimulated to a great extent by the process of policy formulation that is linked to public investment and implementation.

A clear and objective process for policy formation is necessary to maintain the political will. Of even greater importance, the process might be the essential ingredient for creating political will, where it does not exist, by providing sound evidence of the political and socio-economic implications of forestry-related issues. Not least, the process often forces governments to be more transparent and to present the rationality of decisions regarding their positions on forestry matters.

Countries with a less-structured process have a low correlation between the existence of a policy and its implementation, and between the existence of a policy and public investment. Hence these countries seem to be associated with poor quality of issue identification and description. The analysis and selection of options in these countries are mostly presented in a descriptive way, providing very little quantitative evidence of the political, social and economic implications of the various options that have been considered.

Institutions and forest policy research

Most organizations that deal with forestry are underfunded and experience a chronic lack of personnel and equipment. It is evident that most often the best-qualified officers are concentrated at headquarters. With an almost universal lack of transport, their capacity is not utilized fully. The professional background of forestry agency staff is predominantly in the natural sciences.

The high number of agencies with responsibilities in the forestry sector is a major constraint to the achievement of goals in the sector. As there is little or no coordination of the activities of these agencies, there is much overlapping and a waste of resources. The problem is compounded by the inadequacy of the legislation establishing these agencies.

Effective decentralization of forestry administration, accompanied by the assignment of clear and specific geographical responsibilities and delegation of authority, seems to result in an improvement of performance and management. There also appears to be a positive correlation between the decentralization of forestry administrations and the commitment and response from local communities.

The function of policy analysis is almost totally absent in the structure of the forestry services. Policy analysis, especially when important resources are involved, remains with higher levels of the ministries that host the forestry organizations or with central planning agencies. The creation of specific policy analysis agencies or the creation of units within forestry institutions is an

emerging trend. Another emerging approach is the establishment of organizations responsible for the environment, and assigning to them the responsibility for policy analysis and formation.

Policy research being carried out in the region is almost exclusively limited to studies for decision making related to technical issues and problems. The study of the policy-formulation process has been neglected almost completely.

Opportunities for action or follow up

A program approach at the regional level is considered to be the most appropriate way to support forest policy improvement and to address the key forest policy issues in the region. The general development objective of the program is "to enhance national and regional capacity to analyse, formulate and implement forestry policies that help improve people's well-being and the sustainable management of forests and natural vegetation in individual countries".

The program will have the following main components:

- Policy studies

  The immediate objective of such studies will be to assist countries in addressing the most urgent issues requiring policy analysis. Under this component, issues, such as land-use planning, feral grazing, tourism and forestry will be analysed and policy options identified. This component will require the collaboration of international agencies with governmental and national experts.

- Capacity building

  The immediate objective will be to create, in the Caribbean region, a critical mass of policy analysis and the institutional framework necessary for policy implementation, i.e. a regional think-tank on forestry policy. Such improvement in human resources and institutions is expected to develop the capacity for addressing the region's most urgent needs in forest policy analysis, formulation and implementation. One of the main activities under this component will be the training of government officers and personnel of private and non-profit organizations.

- Information strengthening

  Modern communication technology will be adapted for the collection, storage and sharing of strategic information and technical documents by governments and experts in the region. Institutional resources available in the region will also be used to conduct research on demands on forestry and to monitor, on a continuous basis, the achievements and performance of the forestry sector in the region.

NETWORK OF STATISTICAL CORRESPONDENTS

Ma Qiang

Introduction

This paper aims to reach a consensus on the need for a network of statistical correspondents among participants; to deliver key messages on the tasks, activities and launching of the network; and to require the participants to identify a statistical correspondent in each of their respective countries.

Why do we need a network of statistical correspondents?

The establishment of a network of statistical correspondents in the 13 member countries of the EC-FAO Partnership Programme is a required output. The following information on efforts to generate forestry statistics through cooperation and communication between national and international organizations provides the basic background for establishing the network.

Joint forest sector questionnaire (JQ)

In order to disseminate forestry information to countries and other users, FAO produces the Yearbook of Forest Products and updates its database on an annual basis. The statistical information is based primarily on data provided by countries through completed questionnaires.

Since UNCED and the work of the Intergovernmental Forum on Forests (IFF) in particular, the demand for more and reliable information on forest use and conservation has increased rapidly at global, regional, national and local levels. The collection, processing and analysis of data are costly and there is a need to rationalize the process. With this objective in mind, representatives of FAO, the UN Economic Commission for Europe (ECE), Eurostat and the International Tropical Timber Organization (ITTO) met in September 1998 and January 1999 to design a Joint Forest Sector Questionnaire (JQ) in response to requests from member countries to rationalize data collection, processing and dissemination.

The advantages of the JQ are manifold: data are requested only once from each country. The completed JQ is distributed to all four organizations avoiding duplication of efforts; each organization continues to use the information received according to its own mandate. There is only one national statistical correspondent in each country who fills in one questionnaire that is sent to one focal organization; the completed questionnaire is distributed to other partner organizations. Each partner organization limits its data validation effort to a limited number of countries.

Status of received JQs

By the end of 2001, eight countries had submitted completed JQs. Seven countries provided good to excellent quality data (see Table 1 below). Five countries have not provided data for more than five years. There is no focal point or statistical correspondent in these five countries, while there is a focal point or statistical correspondent in most of the other countries. National statistical correspondents appear to be crucial to obtain good data.

Key constraints to receiving JQs and on national statistics

1. In some countries, there is no focal point for completing the JQ. This is the main reason for no response for many years.
2. Focal points provided by some countries are not the persons who directly complete the questionnaire or only names of institutions are provided. This makes it difficult to contact persons for clarification purposes.
3. JQs were not provided annually by some countries. This may be because data collection is often infrequent or irregular and suffers from a lack of resources. In most countries this is due to a lack of capacity, but in some cases it is due to a lack of modern technology for data collection and processing.
4. Some data are not reported entirely in the JQ. This is partly because data collection often involves different agencies. For example, forestry departments collect data on forestry production, ministries of industry or economic planning collect data on forest products and ministries of trade or customs services collect trade information. There is often little coordination and collaboration among the various agencies involved in this process and forestry departments often do not obtain data and thus have only an incomplete picture of the forestry sector.
5. Another reason for receiving partial data is that data collection is only done in the part of the forestry sector managed, owned and supervised by the public sector and little is known of private sector activities.
6. To convert different measurement units into the standard measurement unit is another bottleneck when validating the data. The units are not consistent among countries or different agencies within the same country.
7. Most countries have no data, or poor data that were not collected systematically on fuelwood and wood energy. Data on the collection and use of fuelwood are lacking in particular.
8. Some countries have difficulties in completing the JQs if data are available. Lack of knowledge on international statistics and JQs is another reason for receiving poor data through JQs.

Table 1. Status of data received from member countries

JQ	Responsible organization	Focal points	Last received	2001 received	2000 received	Quality of data
Bangladesh	FAO	N	1997			
Bhutan	FAO	Y	2000		X	Good
Cambodia	ITTO	Y	2001	X	X	Good
India	ITTO	N	1993			
Indonesia	ITTO	Y	2000		X	Excellent
Laos	FAO	N	2000		X	Poor
Malaysia	ITTO	Y	2001	X	X	Good
Nepal	FAO	N	1992			
Pakistan	FAO	Y	2000		X	Good
Philippines	ITTO	Y	2001	X	X	Excellent
Sri Lanka	FAO	N	1997			
Thailand	ITTO	Y	2001	X	X	Excellent
Viet Nam	FAO	N	1994			

What are the network tasks and activities?

The main tasks of the network of national statistical correspondents are to strengthen collaboration between FAO and member countries; to enhance information flow and enable countries to fulfil their commitments under the various international agreements and processes (e.g. complete JQs with good data for their respective countries); to discuss common issues and to share information management and techniques; to build national capacity (e.g. through training); and to strengthen national and regional statistics.

Network activities, with the support of the EC-FAO Partnership Programme, are planned as follows:

- a regional workshop on forest products statistics;
- a study tour on forestry statistical and information systems. The EC-FAO Partnership Programme is organizing a study tour for statisticians from Lao PDR and Cambodia to the Forest Department Headquarters of Peninsular Malaysia to obtain insights into a functioning information system for forest products.
- another main activity of the network should be cooperation with FAO and sharing information among countries, i.e. completing the JQs of FAO, UNECE, Eurostat and ITTO.
- statistical correspondents are supposed to communicate with each other or FAO directly through the Internet as needed.

It is expected that the network will be sustainable beyond the period of the EC-FAO Partnership Programme.

How do we launch the network?

The EC-FAO Partnership Programme will organize a workshop on forestry statistics from 20 to 24 May 2002 in Bangkok. The main objectives of the workshop are to:

1. Launch the network/working group of statistical correspondents in the 13 member countries.
2. Provide training on standardized international definitions and tabular formats for filling in the JQs.
3. Review current forest products statistics at national and regional levels.
4. Identify the main weaknesses and constraints concerning forest statistics and to further develop a set of alternative frameworks for improving national statistical processes.

The study of national statistics on forest products and trade was initiated in 12 out of 13 member countries with the support of the EC-FAO Partnership Programme. Some objectives of the workshop were addressed by the study as well. The results and the main findings of the study will be presented and discussed during the workshop.

Considering the objectives of the workshop, the national focal points of the EC-FAO Partnership Programme are requested to identify a statistical correspondent. The statistical correspondent should be the person responsible for completing the JQ immediately or for preparing the study referred to above.

The proposed workshop is designed to reach the following outcomes:

1. Establishment of a network of national statistical correspondents.
2. Knowledge obtained by statistical correspondents on international statistics and JQs.
3. Information on the status and constraints of current national and regional forestry statistics.
4. Agreement on further cooperation among the participating countries, and between international organizations (FAO, ITTO) and their member countries through the network.

Conclusions

To strengthen forestry statistics in the region and facilitate communication between FAO and individual countries requires a network of forestry statistical correspondents. The national correspondents should be persons who completed the JQs immediately or prepared the study on forest products statistics on production and trade. The network will be launched by the regional workshop on forestry statistics in May 2002 in Bangkok.

THE IMPACT OF PRESENT FOREST POLICIES ON SUSTAINABLE FOREST MANAGEMENT IN MALAYSIA

Chan Lai Har

Introduction

Malaysia's rich and diverse tropical rainforests are recognized internationally as one of the megadiversities for both flora and fauna. The forests are inhabited by well over 8 000 species of flowering plants, 1 000 species of vertebrates, over 6 000 species of butterflies and moths, an estimated 20 000 to 80 000 invertebrates and an unaccounted number of insect species and other lifeforms. The forests are managed carefully in accordance with the principle of sustainable forest management (SFM) to achieve a balance between development and conservation, so that forest products and services can be obtained in perpetuity.

Current position

The total forested area in Malaysia in 2000 amounted to 20.20 million ha or about 61 percent of the land area. The bulk of these forest areas comprises the dipterocarp forest (89 percent) followed by peat swamp forest (7 percent), mangrove forest (3 percent) and planted forest (1 percent). However, if one considers about 4.8 million ha planted under fast-growing agricultural tree crops, notably rubber, oil palm and cocoa, the total area under permanent tree cover in Malaysia is estimated to have been 26.93 million ha in 2000. This amounts to about 82 percent of the total land area.

Of the total forested area in 2000, 14.44 million ha or about 44 percent of the total land area has been designed as Permanent Forest Estate (PFE) to be managed sustainably for the benefit of present and future generations.

Of the total PFE, approximately 3.84 million ha are classified as Protection Forest with the remaining 10.6 million ha being classified as Production Forest. The function of the Protection Forest is to ensure climatic stability, the safeguarding of water resources, soil fertility, environmental quality, preservation of biological diversity and the minimization of damage by floods and erosion to rivers and agricultural lands. The role of the Production Forests, on the other hand, is to provide a sustainable supply of forest and timber products for agricultural and industrial purposes and for export.

Besides the Protection Forest within the PFE, other protected areas have been gazetted and proposed as national parks, and wildlife and bird sanctuaries (amounting to 2.19 million ha). Of this total, 0.32 million ha are located within the Protection Forest in the PFE; the total area designated for the protection of the environment and the conservation of biological diversity amounts to 5.31 million ha or 26.3 percent of the total forested land.

In addition, Malaysia has set aside pockets of virgin jungle reserves (VJR) throughout the country to conserve the various forest and ecological types in their original conditions. To date, a total of 120 VJRs covering an area of 111 800 ha have been established.

To supplement the future wood supply of the country and to relieve the pressure on the natural forests, forest plantations have been and will continue to be established. At the end of 2000, a

total of about 240 000 ha of forest plantations were established in Malaysia. Of this total, about 72 000 ha were established in Peninsular Malaysia with the balance of about 140 000 ha and 30 000 ha being established in Sabah and Sarawak respectively.

The forestry sector continues to contribute significantly to socio-economic development in Malaysia. It accounts for about 7 percent of total export earnings and provides employment opportunities to about 250 000 workers. Forests will continue to play an important role in the maintenance of climatic and environmental stability, the conservation of invaluable biodiversity and the supply of clean water (besides timber for downstream industries).

Federal and state powers

Under Article 74(2) of the Malaysian Constitution, forestry comes under the jurisdiction of the respective state governments. As such, each state is empowered to enact laws on forestry, formulate forest policy and undertake corresponding forest management responsibilities independently. The executive authority of the federal government only extends to the provision of advice and technical assistance to the states, the maintenance of experimental and demonstration stations, training and the conduct of research. Such a distinct division of powers has a significant impact on SFM. It poses a challenge to ensure that national policies formulated at the federal level relating to SFM will be implemented in a coordinated manner at the state level.

To facilitate coordination between the federal and state governments, a National Forestry Council was established on 20 December 1971 by the National Land Council. Under the Malaysian Constitution, the National Land Council is empowered to formulate national policies relating to land utilization in agriculture, forestry and mining. The establishment of the National Forestry Council under the National Land Council provides a forum for SFM policies to be discussed and agreed upon for implementation between the federal and state governments. Members of the National Forestry Council include Chief Ministers from all the states, ministers responsible for forestry, agriculture, environment and trade. The council is chaired by the Deputy Prime Minister.

National forestry policy

Malaysia formulated a National Forestry Policy (NFP) in 1978, which was revised in 1992. The revised NFP addresses and incorporates concerns relating to the conservation of biological diversity, sustainable utilization of forest resources, ecological and environmental stability as well as the role of local communities in forest development, compared to the traditional approach of forest management, which focused mainly on timber production.

Thus the revised NFP provides for a balance between the development and conservation needs required to achieve SFM. As such the revised NFP includes provisions for the following objectives:

(a) To dedicate as PFE sufficient areas strategically located throughout the country in accordance with the concept of SFM to be managed as Protection Forest, Production Forest, Amenity Forest and Research and Education Forest.
(b) To manage the PFE in order to maximize social, economic and environmental benefits for the nation and its people in accordance with the principles of sustainable management.
(c) To increase the production of non-wood forest products (NWFPs) such as herbs and medicinal plants, bamboo and rattan through scientific and sustainable management practices to supplement local demands and the requirements of related industries.

(d) To implement programs for forest development through regeneration and rehabilitation operations.
(e) To provide for the preservation of biological diversity and the conservation of unique flora and fauna.
(f) To ensure sufficient areas for the generation of clean water, prevention of soil erosion and environmental stability.
(g) To promote education in forestry and undertake publicity and extension services to generate greater awareness on the multiple functions that forests provide.
(h) To provide for specific areas for scientific and research requirements.

National Forestry Act

In October 1984, the National Forestry Act was promulgated to strengthen the country's capacity to implement SFM. The act was amended to further strengthen its effectiveness in dealing with forest encroachment and illegal logging, which hinder the attainment of SFM. Penalties for forest offences were increased from a maximum of RM10 000[2] or imprisonment for a term not exceeding three years to a maximum of RM500 000 and mandatory imprisonment of at least one year. Provision was also incorporated for the police and armed forces to undertake surveillance of forestry activities. This together with the stiff penalties helped to reduce illegal logging and forest encroachment.

The revised National Forestry Policy and revised National Forestry Act have had a significant impact on efforts undertaken towards achieving SFM. They both embody a vital change in the philosophy of forest management, away from simply ensuring sustainable timber yields to ensuring the sustainability of the multiple functions of the forests. Henceforth, the effectiveness of forest management will be based not just on the forests' capacity to produce wood in perpetuity, but more on how forests are managed to balance ecological, social and environmental functions with their economic importance.

ITTO guidelines and criteria

Malaysia is a member of the International Tropical Timber Organization (ITTO). Thus Malaysia is committed fully to achieving SFM, which has an important bearing on forest management. In this regard, Malaysia has adopted ITTO's Guidelines for the Sustainable Forest Management of Natural Tropical Forests and its Criteria for the Measurement of Sustainable Tropical Forest Management.

Towards this end a National Committee on SFM was established in 1994 in the Ministry of Primary Industries to operationalize the ITTO Criteria and Indicators for SFM. The National Committee has formulated the Malaysia Criteria and Indicators (MC&I) for Sustainable Forest Management based on the ITTO Criteria and Indicators. The MC&I are formulated for two levels of operations, one at the national level and the other at the forest management level. At the national level the MC&I comprise seven criteria, 64 indicators, 201 activities and 170 standards of performance. At the forest management level, the MC&I consist of seven criteria, 56 indicators, 172 activities and 150 standards of performance. Since their first formulation in 1994, the MC&I have undergone numerous refinements both through internal and external consultative processes, to take into account the latest developments in forestry.

[2] US$1 = RM3.77

SFM licence agreements in Sabah

In Sabah, the State Government has developed the Sustainable Forest Management Model at the Deramakot Forest Reserve to implement SFM. Based on the success of the Deramakot Model, in 1997 the state government adopted a policy to extend the model to the other forest management units (FMUs). Towards this end, 10 organizations from the private sector signed Sustainable Forest Management Licence Agreements (SFMLAs) in 1997 to manage the forest in accordance with SFM principles for 100 years. The number of SFMLA holders increased to 15 in 2000. The new policy stance by the state government is significant as henceforth forest management is aimed at encouraging the sustainability of the resource base. Under this concept, the SFMLA holders need to manage the forest areas sustainably, prepare long-term forest management plans, employ ecofriendly harvesting plans and undertake enrichment planting, forest rehabilitation and silviculture. These activities require considerable financial and human resources, both of which will need to be invested in effectively to achieve SFM.

Timber certification

To strengthen measures towards SFM, the federal government established the Malaysian Timber Certification Council (MTCC) in October 1998. The MTCC is a non-profit company set up to implement the timber certification scheme in Malaysia to promote SFM. The MC&I are used as the basis for third party independent assessment of progress towards SFM. Three states, i.e. Selangor, Pahang and Terengganu in Peninsular Malaysia were assessed in 1996 and reassessed in 1998. In Sabah, the Deramakot Forest Reserve was also certified as a well-managed forest. Steps are now being undertaken to certify the remaining states in Peninsular Malaysia while field testing of the MC&I is expected to be implemented in a forest concession in Sarawak.

Levy-financed SFM projects

In Peninsular Malaysia, part of the levy imposed on the export of timber products has been allocated to finance SFM projects. Under the scheme, the federal government has decided to allocate RM1 from the Malaysian Timber Industrial Development Fund (MTIDF) for every RM5 spent by state governments in Peninsular Malaysia on SFM. The projects eligible for financing include forest inventory, preparation of forest management plans, environmental impact assessments (EIAs), computerization of forestry departments, training and forest certification. The objective of such financing is to influence and encourage state governments to undertake activities in support of SFM. Since the levy is imposed only on exports of timber products in Peninsular Malaysia, the financing is available to states in Peninsular Malaysia only.

Related environmental management policy and prescriptions

The detrimental effects of forest harvesting on the environment are well known. To minimize such effects, policy prescriptions have been formulated for harvesting and all related infrastructure development in the PFE. Such activities will now need to be carried out in accordance with the principle of SFM and prescribed forest management and harvesting plans. In this regard various regulations and guidelines for forest harvesting and forest road construction with special emphasis on environmental conservation have been adopted to supplement the forest management and harvesting plans. These include the 'Forest Harvesting Guidelines', 'Forest Engineering Plan' and the 'Forest Road Specifications'. The establishment of GIS units coupled with the commissioning of the Forest Management Information System Sarawak (FOMISS) has also enhanced the technological capability of the forest departments in managing forest resources more effectively.

Malaysia has pioneered a number of practices aimed at reducing logging damage on the forest stand. They include tree marking for felling, timber tagging for identification and log removal and directional felling to reduce the negative impact of logging on the residual stand. In recent years, research into reduced impact logging (RIL) and low impact logging (LIL) technologies to minimize the negative impacts of forest harvesting on the environment have been intensified.

Furthermore, the Environmental Quality Act 1974 was amended to include EIAs in 1985 for forestry activities. The order came into force in 1987 and requires EIAs for activities that involve certain forestland uses. These include land development schemes and conversion of an area of 500 ha or more of forestland, logging, drainage of wetlands and other activities that may affect forests.

Recreation forest policy

The National Forestry Policy also provides for the development of recreational forests for ecotourism. Such forests can play an important role in increasing public awareness and appreciation of the multiple roles that forests afford to society. In this regard policy changes have been formulated to ensure that the management of recreation forests is in line with SFM principles. Thus a proper balance between the commercial development of such forests for ecotourism and the need to preserve the pristine nature of these forests for biodiversity and ecological considerations has become central to the policy stance for the development of ecotourism.

In Peninsular Malaysia, over 80 recreational forests have been developed. In Sarawak, a total of 15 national parks, five nature reserves and five wildlife sanctuaries, such as Gunung Mulu National Park, Sama Jaya Nature Reserve and Samunsam Wildlife Sanctuary, have been set aside. In Sabah, Amenity Forest Reserves meant for recreation have also been developed including the Danum Valley, the Lower Kinabatangan River or Home of the Bangkatan (the Proboscis monkey), the Orang Utan Rehabilitation Centre at Sepilok and the Tabin Wildlife Reserve in Lahad Datu, which will become fully operational in 2002.

Social forestry

Many communities reside near or inside the forest reserves. In line with SFM principles, policies have been formulated to protect the forest reserves from further deterioration attributable to the activities of these communities while sustaining their livelihoods. This is achieved through policy measures to improve their livelihoods, such as providing infrastructures and other basic facilities, diversifying economic activities to increase incomes, introducing improved farming systems and promoting the participation of local communities in forestry.

Improved technologies

Based on the projections on forest production, log production from the natural forests in Malaysia was expected to continue to decline at a rate of 28.30 million m^3 per annum from 1996 to 2000 and then to stabilize at a sustainable level of 17.0 million m^3 per annum from 2001 to 2010. This is in line with the objective of implementing SFM. Arising from this reduction in domestic log supply, policies are being promulgated to encourage the forest industry to optimize the utilization of scarce forest resources. This can be achieved via advanced technologies, reducing production costs and wastage, reorientation of product mix and adopting new marketing strategies.

Forest plantation policy

With the expected decline in timber supply from natural forests, the development of forest plantations will be given greater emphasis in current and future government policies. The private sector will be encouraged to establish both fast-growing and high value timber plantations to provide additional and alternative sources of timber.

Forest plantation establishment will be accelerated, particularly in Sarawak and Sabah while those already established by the Forest Department in Peninsular Malaysia will be privatized. The State Government of Sarawak has planned for 1 million ha of forestland, degraded by shifting cultivation, to be planted with fast-growing species during the next 15 to 20 years. The government has to that effect enacted the "The Forests (Planted Forests) Rules 1997", which set out the procedures and conditions for the orderly establishment of forest plantations in Sarawak. Incentives in the form of low land premiums and long leases have been provided to encourage investments. In Sabah, a total of 745 080 ha have been identified as suitable for forest plantations. The development of forest plantations will help to contribute to SFM as they will help to supplement wood supplies to downstream industries thereby reducing pressure on natural forests.

Policy on NWFPs

Besides the production of timber products, policies are now geared towards the development of NWFPs and forest services as well as agroforestry. This is to maximize returns to investors and to diversify the forestry sector, an important aspect of SFM. Non-wood forest products, including rattan, bamboo and herbal and medicinal plants, will be developed in a more integrated manner. Agroforestry will be promoted to address the increasingly scarce availability of land and raw material. This will allow for a wider range of agricultural crops to be planted with forest tree species, optimizing land use and returns to the sector.

The development of biotechnology products, the extraction of natural chemicals from forest biological resources, the utilization of forest biomass for clean fuel production and the development of genetically engineered products from flora will be promoted. The diversification of forestry products will make SFM a more viable option since the forests will yield greater revenues that can be reinvested into the sector to ensure its sustainablility.

Forest R&D policy

In the field of forest research and development (R&D), policy emphasis will be accorded to R&D in SFM. In particular, research to support the multiple functions of forests, such as biodiversity conservation, protection of water resources and the maintenance of climatic and soil stability will be emphasized. Greater attention will also be given to the commercialization of R&D results from the forestry R&D institutions. This is to accelerate the transfer of technology to the private sector in production and utilization of timber and forestry technologies to support SFM.

OVERVIEW OF FOREST POLICY REVIEWS IN BHUTAN

D.B. Dhital

Introduction

In Bhutan, forest degradation, caused by anthropogenic and natural factors, is a major problem. Over the last 41 years, the broadleaved forest area has decreased between 4 and 6 percent (Table 1). Coniferous forests have also been reduced by 6 percent compared to the base year, while scrub forests have been increasing steadily, replacing natural broadleaved and coniferous forests. Shifting cultivation has decreased significantly compared to 1978. The area of agricultural land has not increased since 1989. The main causes of forest degradation are overharvesting of timber and firewood, poor logging practices, forest fires, overgrazing, habitat destruction and pollution.

Table 1. Change in forest types according to various studies

Land-use category	1958	1978	1989 (MPFD)	1989 (LUPP)	1999 (JAFTA)
Agriculture	**299**	**241**	**431**	**220**	**175**
Forest					
Broadleaved forest (dense)		1 131	791	1 465	
Broadleaved forest (less dense)		311	468	47	
Subtotal for broadleaved forest	**1 485**	**1 442**	**1 259**	**1 512**	**1 419**
Coniferous forest (dense)		740	611	930	
Coniferous forest (less dense)		281	267	131	
Subtotal for coniferous forest	1 011	1 021	878	1 061	951
Coniferous forest with broadleaved forest					314
Total for natural forest	**2 496**	**2 463**	**2 137**	**2 573**	**2 684**
Shifting cultivation		115	156	88	
Natural pasture		75	105	155	
Scrub		222	314	326	522
Degraded		142	237		354
Total for other forested area		**554**	**812**	**569**	**876**
Total forest		**3 017**	**2 949**	**3 142**	**3 560**
Total for other land uses	**1 245***	**767**	**693**	**649**	**297**
Total	**4 040**	**4 035**	**4 073**	**4 011**	**4 032**

* Includes degraded forest as well.

The National Forest Policy of Bhutan emphasizes forest conservation and the need to meet the increasing demand for forest products. The first National Forest Policy was ratified in 1974. It covered aspects of forest management, development and utilization. The most important objectives of the policy have been preserving and promoting the sector to obtain maximum revenue for the national economy. The policy stipulates that at least 60 percent of the country should remain under permanent forest cover. Although the policy was very comprehensive, some inadequacies were perceived due to rapid socio-economic development; which necessitated a revision. Consequently, the National Forest Policy of 1974 was replaced by the National Forest Policy of 1991.

The National Forest Policy of 1991 is still in a draft stage and has not yet been passed by the National Assembly. It has four guiding statements and its purpose is to ensure that forest resources are used according to sustainable principles, and contribute to social justice and equity. The policy primarily aims to ensure the conservation of the environment, and only thereafter aims at deriving economic benefits from forests. The policy statements are listed below, in order of priority.

1. Protection of the land, its forest, soil, water resources and biodiversity against degradation, such as loss of soil fertility, soil erosion, landslides, floods and other ecological devastation and the improvement of all the degraded forestlands, through proper management systems and practices.
2. Contribution to the production of food, water, energy and other commodities by effectively coordinating forestry and agriculture.
3. Meeting the long-term needs of Bhutanese people for wood and other forest products by managing the production forests sustainably.
4. Contribution to the growth of national and local economies, including exploitation of export opportunities, through fully developed forest-based industries, and to contribute to balanced human resource development, through training and creation of employment opportunities.

The main thrust of the National Forest Policy is to bring the reserved forest under effective and scientifically prepared forest management plans. Accordingly, approved forest management plans for the commercial harvesting of forest produce have become conditional. Thus, the primary objectives of forest management are to:

1. Conserve the fragile environment.
2. Ensure a sustainable supply of timber, fuelwood, fodder and non-wood forest products (NWFPs) for local consumption.
3. Allocate forest products, in excess of local needs, to promote value-added forest-based industries.

Important criteria have been identified to guide the development of forest management plans to achieve these objectives. They include:

- Managed forests will attempt to satisfy local requirements for timber, fuelwood, fodder, compost litter and other traditional products as a first priority.
- Forests will be managed on a long-term sustainable yield basis, with allowable annual cuts based on detailed forest inventories and scientific growth and yield studies.
- Forest harvesting systems will ensure environmental protection by minimizing soil erosion and land degradation, protecting natural drainage systems and avoiding permanent changes in the composition of vegetation.
- Forest management will be holistic and consider not only the production of forest products but also watershed protection, wildlife conservation, maintenance of biodiversity and social uses.
- Silvicultural systems will ensure regeneration of the principal species by natural means and artificial regeneration techniques will be adopted only if natural regeneration fails.

A review of the National Forest Policy was carried out for the first time in October 1999, with technical assistance from The World Bank (IDA) and the Swiss Development Co-operation (SDC). The forest policy stresses the need to manage forest resources on a systematic and scientific basis. Effective management will require the allocation of land for conservation, watershed protection areas, production forests and community forest. The policy recognizes the importance of effective people's participation to ensure multi-purpose forest management. The policy also proposes a more rational economic valuation of forest resources as a means to promoting efficient domestic use and the development of viable forest-based industries.

The forest policy review assessed mainly the implementation of:

- Timber marketing and pricing, introduced in January 1999.
- Supply of subsidized timber for rural house construction, introduced in July 1999.
- Community and private forestry, introduced in 1995.

Timber marketing and pricing

The Royal Government of Bhutan (RGOB) began implementing this policy in the urban, commercial and industrial sectors in January 1999 along with the following modalities:

- Export of logs, sawntimber and firewood is banned.
- The sale of roundwood is conducted in open auctions, to which only Bhutanese citizens are invited to participate, except when there is an oversupply on the domestic market (special auctions are held where both domestic and international buyers participate).
- Buyers are free to decide on the end use of the timber within the country.
- Roundwood and sawntimber prices are determined by domestic market forces (the only relationship to the international market is through the export of processed products or through the "special" auctions).

Until 1998, there were four different price categories for roundwood (i.e. rural, urban, industrial and export). Rural and urban timbers were both subsidized. Industrial timber had a fixed price that was based on the most recent export prices. In turn, these prices were based on recent auctions.

Under the new policy, only two prices remain; (1) a rural price for supplying rural people for *bona fide* uses; (2) the urban category, which includes all timber for commercial, construction and industrial purposes. Wood prices under this category are determined by the market.

The RGOB expected that the new timber marketing and pricing policy would lead to:

- a gradual increase in the value of forest resources with positive impacts on environmental conservation without adverse impacts on the Bhutanese population;
- affordable access to forest resources for all Bhutanese citizens;
- efficient wood flow from the production sites to end users without unnecessary delays;
- adequate availability of raw materials for domestic use, providing in particular a basis for the development of viable national wood-based industries; and
- employment and income generation through the use of forest resources.

Proposals for changes in this area date back to the early 1990s. The RGOB decided to formulate the new policy due to the following deficiencies in the previous policy:

- the threat to environmental and conservation goals from the export of timber in its primary form;
- the high level of subsidies provided on timber prices undervalued the forest resources;
- the complex system of regulations, controls and permits caused unnecessary work and delays in wood flow;
- the national wood-based industries lacked access to a constant and affordable supply of raw materials due to log export to India; and
- the diversion of highly subsidized rural timber for urban consumption.

Although Bhutan is rich in forest resources, the development of wood-based industries has not progressed significantly. The revision was aimed at improving transparency, encouraging local timber-based industries and providing equal opportunities to all citizens for accessing forest resources.

Important provisions of the Timber Marketing and Pricing Policy

According to the provisions of the Forest and Nature Conservation Act (1995), commercial timber production is to be undertaken by the agencies of the Ministry of Agriculture based on approved Forest Management Plans. The sale and use of timber was based on the following provisions:

(i) The Ministry of Agriculture, through its agencies, will continue to harvest and market timber.

(ii) The sale of timber is to be conducted through open auctions by the timber producers.
(iii) Only Bhutanese nationals can participate in the auctions.
(iv) Timber will be auctioned in small volumes, if practical, to enable small-scale consumers to take part in the auctions.
(v) Buyers will be allowed to decide on the use of timber purchased at the auction within the country.
(vi) Export of timber as roundwood, sawntimber or firewood is banned. Only finished products can be exported.
(vii) Timber prices are determined by market forces based on demand and supply.
(viii) The Ministry of Agriculture will intervene, depending on the circumstances and situations, to stabilize prices.
(ix) Prices of finished products will be decided by the manufacturers.

Important recommendations

The conclusions of the review are tentative because:

(a) The market is highly fragmented, i.e. both supply and demand parameters vary considerably among geographic areas due to the difficult terrain and lack of market access; there are insufficient data to reflect the diversity and to form a precise judgement of what changes are occurring at local levels.
(b) Policy measures are very recent; medium term. The results of policy changes may well differ markedly after the market has absorbed first round impacts.

Roundwood supply and demand

Supply

At the national level, the increase in the commercial wood supply is due to the rapidly growing demand from both private and institutional users. In the medium term, supply should be more than adequate because the RGOB has developed enough forest management units (FMUs), from where the timber is supplied. However, in the long term the following issues need more attention:

(i) More FMUs need to be identified, based on demand, and management plans developed for the FMUs.
(ii) Timber demand for each 'dzongkhags'[3] needs to be estimated in advance so that the gap between local needs and the capacity of the Forestry Development Corporation Limited (FDCL), in charge of commercial harvesting operations, can be bridged.
(iii) The FDCL's revenue is not determined by the market because it also has social responsibility, in particular, supply of subsidized timber to rural populations. Although it still keeps the monopoly of harvesting operations, the FDCL contracts some of the logging and transport activities to the private sector to disengage from the execution of activities that can be performed effectively by private operators.
(iv) The Department of Forestry Services and the FDCL should collaborate in determining how best to allocate the resources and coordinate their activities so that the demand at the local level is met effectively.
(v) The FDCL's social mandate needs to be reviewed.

[3] Dzongkhag is the district level administration in Bhutan.

Demand

The domestic wood demand is fueled by expanding wood-based and construction industries. The rapid increase is due to the lack of wood substitutes, particularly as a source of energy (the impact of alternative sources of energy is small). The demand is price inelastic because of the pre-eminence of institutional users (e.g. schools, hospitals and the military). Another characteristic is the extreme fragmentation of the demand due to transport difficulties and a corresponding lack of market integration. Demand has considerable local variation depending on the presence of sawmills and other wood-processing facilities. The demand is generally greater close to the Indian border (traditional importers of wood products) and close to the large urban centres.

Auctions and roundwood prices

Wood marketing and pricing are based on a systematic auction process. This has led to:

(a) Higher prices for roundwood than the formerly administered prices.
(b) Some difficulties in meeting the demand of small consumers.

The increased prices for roundwood are due to high demand. This demand emerged under the previous system due to the difficulties that users were experiencing because of the existing procedures for accessing wood resources. As this demand becomes satisfied through the auctions, the pressure will abate and prices should decrease. The auction system has worked well so far and should be allowed to continue. Prices should eventually stabilize at a lower level.

To enable all Bhutanese citizens to participate in auctions, the auctions should be organized in such a way that:

(a) They meet the characteristics of the domestic demand, in particular the demand of smaller consumers.
(b) Timber lots are made more homogeneous. This will enable meeting domestic demands more adequately and generating revenues for the country as well.
(c) Concerning timber stock, accumulations are likely to occur in the near future if an efficient mechanism for liquidating wood stocks is not in place.
(d) There is a need to better delineate auction lots so as to better serve domestic users' needs and avoid an accumulation of stocks.

Development of wood-based industries and private sector promotion

Wood-based industrial development should be private-sector led. The RGOB's intervention should be limited to creating the enabling environment and leaving productive investment to the private sector. Currently, the establishment of economically viable wood-based industries still faces obstacles. Potential investors perceive the forest policy as volatile, they are not sure of the availability of raw material, they do not have proper knowledge of national and export markets for value-added products and lack access to sufficient skilled workers. It should address, in particular, the availability of skilled workers by embarking on a major training program on wood processing for Bhutanese workers and technicians.

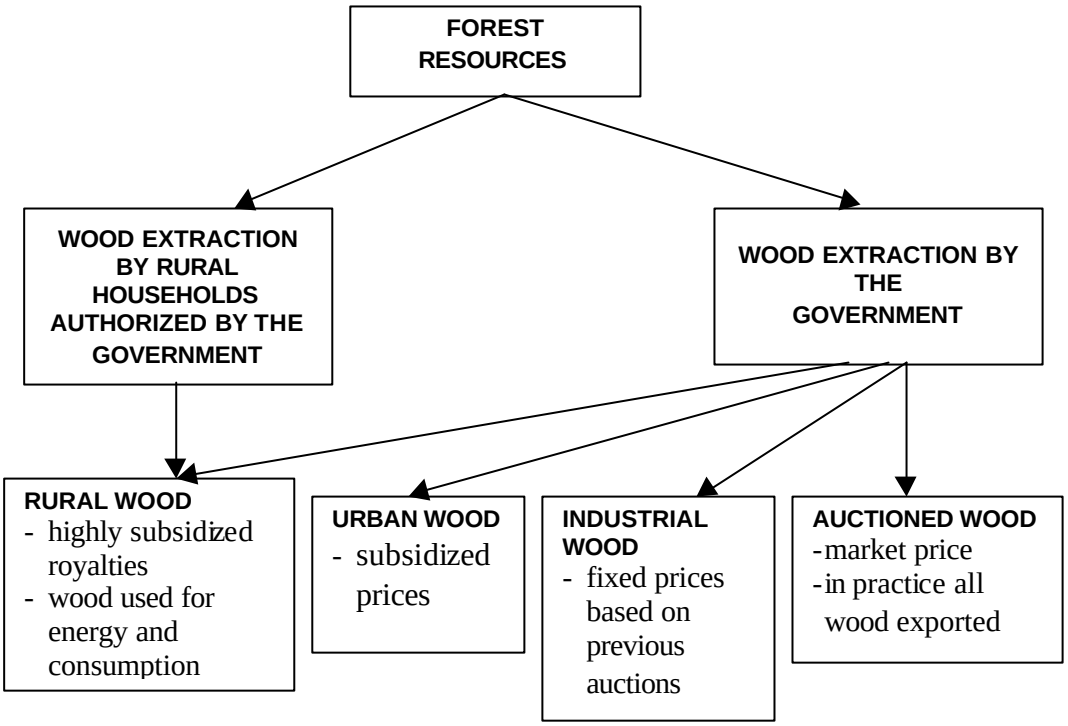
Sawntimber prices

Overall, recent sawntimber prices have reached a much higher level than under the former policy but there have been marked differences at the district level due to competition amongst sawmillers. In certain dzongkhags, the only existing sawmiller has had a *de facto* monopoly over the supply of timber, and hence, has taken advantage of this position to push prices higher. It is suggested that:

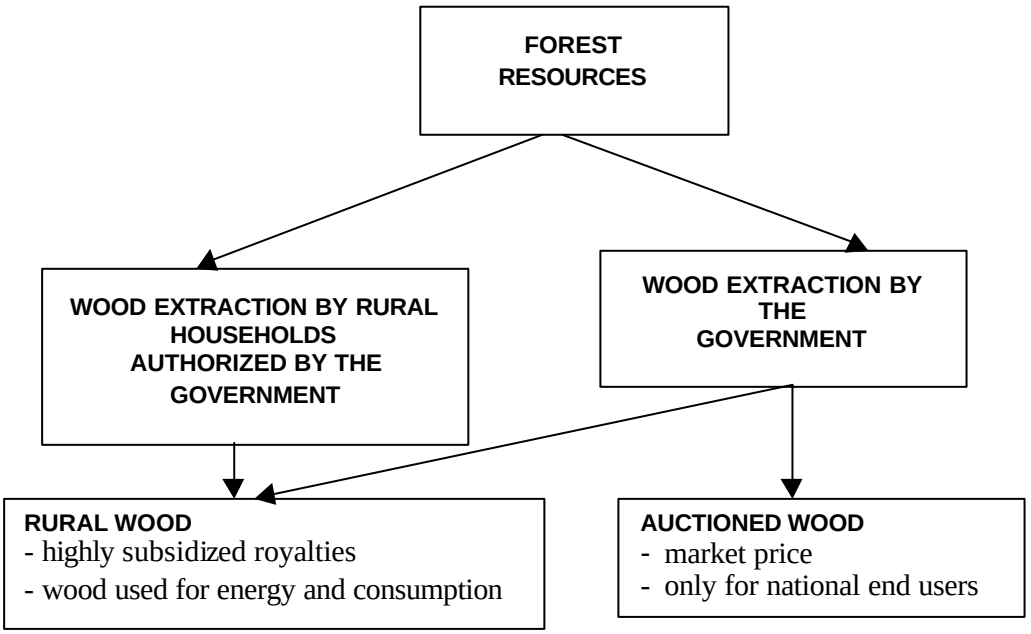
(a) The current high prices will motivate sawmillers to establish themselves in certain districts where high prices prevail. This will increase competition and lower prices.

(b) The FDCL's involvement in sawmilling needs to be reviewed further. What is needed is an enabling environment for private-sector development in wood-based industries that will facilitate the involvement of investors in the districts where their presence is most required.

Wood flow before the forest policy change (until 1998)



Wood flow after the forest policy change (since 1999)



Impact of policy changes

The following tentative conclusions can be drawn:

(i) The market is highly fragmented and both supply and demand vary considerably among locations.
(ii) The market is in a state of flux due to the policy changes.

Supply of subsidized timber for rural house construction

The Review Mission recommended continuing the provision of subsidized timber for rural households. However, it also suggested narrowing of the price difference between commercial timber and subsidized rural timber, and decreasing the number of households that are eligible to receive subsidized timber. The proposed rural timber allotment policy introduces the following measures:

(i) Redefine urban areas according to the distance to the major cities, transport facilities, level of industrialization and overall infrastructure. Many areas previously defined as rural have thus become urban areas.
(ii) Making only rural dwellers who have land tenure certificates ('thram' or 'gung') eligible for subsidized timber.
(iii) Increasing the period of entitling households to receive subsidized house construction timber from the present 25 to 30 years.
(iv) Fixing the ceiling of the quantity of allowed subsidized timber.
(v) Increasing the level of royalty (decreasing the subsidy).
(vi) People can use either standing trees, or sawntimber, or logs or any combination thereof.
(vii) Decentralizing the approval procedure at the dzongkhag level.
(viii) Monitoring the implementation of the policy by the Department of Forestry Services.

Policy implications related to supply and demand

The rural timber allotment policy has implications on commercial timber markets, especially in the following areas:

(i) Despite large regional differences in internal markets, domestic consumption is unlikely to absorb all the available roundwood in the short term. Further, some specific species/types of timber are unlikely to find places even in the domestic market. If the FDCL achieves the timber production target then there will almost certainly be a glut in the timber market especially in some dzongkhags.
(ii) Auctions have generally speeded up the timber flow from the production areas (FMUs) to the factories. However, there are some regional differences. In the eastern part of the country, there is a tendency towards wood accumulation and in other parts of the country, there is the problem of wood availability. The transport of excess timber from the eastern part of the country to other parts is not profitable commercially.
(iii) The log grading system is not practised fully by the FDCL. The FDCL has the prerogative to auction less merchantable species and low quality logs by mixing and making lots. This may be a disincentive for the development of smaller scale wood-based industries.

Community and private forestry policy

A preliminary review of the Community and Private Forestry Policy was carried out by the Ministry of Agriculture in 2001. According to Section 10 of the Bhutan Forest Act (1969), "the Government reserves the rights to the absolute ownership of trees, timber and other forest produce on private land". Before the enactment of the Forest and Nature Conservation Act (1995), the government had absolute ownership of trees, timber and other forest produce grown on private

land. This provision was repealed and invalidated by the Land Act (1979) and the Forest and Nature Conservation Act (1995).

Implementing institutions

The Ministry of Agriculture (MOA) is responsible for implementing the forest policy. The MOA and its department and divisions have the normative role in all questions related to forestry administration and management. The Department of Forestry Services (DoFS) with its functional division (Forest Resources Development Division) prepares the forest management plans for specifically defined and approved FMUs. The DoFS also constitutes the authorizing and controlling body for all roundwood extraction and sale in Bhutan.

To access rural wood supplies the applicant must submit a request to the Dzongkhag Administration, which subsequently forwards the request to the concerned and responsible divisional forest officer. The Dzongkhag Administration is also responsible for forestry extension and matters related to social forestry. The Ministry of Trade and Industries approves operating licenses for the wood-based industries.

The authorized wood harvesting and marketing agency is the FDCL (Forestry Development Corporation Limited), which has commercial (harvesting and marketing) and social responsibilities (e.g. road construction, afforestation and provision of rural timber from the FDCL's depots). The FDCL harvests and extracts timber through contractors using cable cranes and other equipment. The Ministry of Agriculture controls the FDCL directly through its board of directors. The commercial activities and the social responsibility of the FDCL need to be delineated clearly in future for the FDCL to function properly.

The private sector operators comprise contractors and industrial entrepreneurs. The contractors build the forest roads, carry out logging operations and transport the harvested wood. All wood-based industries are owned and managed by the private sector.

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FOREST POLICY IN CAMBODIA

Eang Savet

Introduction

Cambodia is a tropical country in Southeast Asia and situated north of the equator within latitudes 10^{o} and 15^{o} north and longitudes 102^{o} and 108^{o} east. It comprises 181 035 km^2 in the lower Mekong River Basin, sharing borders with Thailand, Lao PDR and Viet Nam. In 1998, the population of Cambodia was 11.43 million with an average annual population growth rate of 2.4 percent.

The forests of Cambodia cover more than half of the country's total land. The forest resources have a key role in protecting the environment and are of critical importance to the socio-economic development of the country. The management of forest resources in a sustainable manner to provide current and future requirements of the Cambodian people is an important objective of the Royal Government of Cambodia (RGC). To achieve this goal, increased attention must be focused on improving forest management and the elimination of illegal logging activities.

Current forestry situation

In 1969, forests covered 13.2 million ha, or 73 percent of the country's total land area. Until the early 1970s, forest management practices resulted in low impacts on forest ecosystems. Forest areas were classified into forest reserves that were managed according to their function, with emphasis on sustainable production, protection, the establishment of wildlife sanctuaries, research and the preservation of the natural area surrounding Angkor Wat.

Between 1970 and 1979, Cambodia was immersed in a destructive civil war that culminated in the eventual fall from power of the Khmer Rouge. Social and economic conditions in the country during that period precluded the possibility of significant industrial development, restricted the growth of small-scale local industries and limited access to forest areas. As a result, forest use was somewhat limited, primarily providing a source of fuel and timber for local communities.

The 1979 to 1992 period witnessed dramatic changes in the forestry administration. The Department of Forestry and Wildlife (DFW) lost effective control over the management of forest resources as a result of the replacement of the regional forestry administrative structure by provincial authorities that controlled forest resource utilization. As a consequence of the closed economic policy of the RGC and the relative inaccessibility of forest areas most forests remained intact, with the annual harvest being well below the annual allowable cut (AAC), which was estimated to be between 0.5 and 1 million m^3.

More recently, forestry in Cambodia has been characterized by a forest concession system and a significant increase in the production of industrial timber. According to satellite imagery estimates provided by the German Technical Cooperation (GTZ)/Mekong River Commission Forest Cover Monitoring Project, forest cover had declined to 10.6 million ha (or 58.60 percent) of Cambodia's total land area by 1997. Even this figure is somewhat deceptive, for large portions of the forest had been degraded and were no longer amenable for sustainable forest management (SFM). The reduction in forest cover between 1969 and 1997 amounted to about 2 million ha (Figure 1), which in percentage terms is about 0.56 percent per annum compared to about a 1 percent average for neighbouring countries.

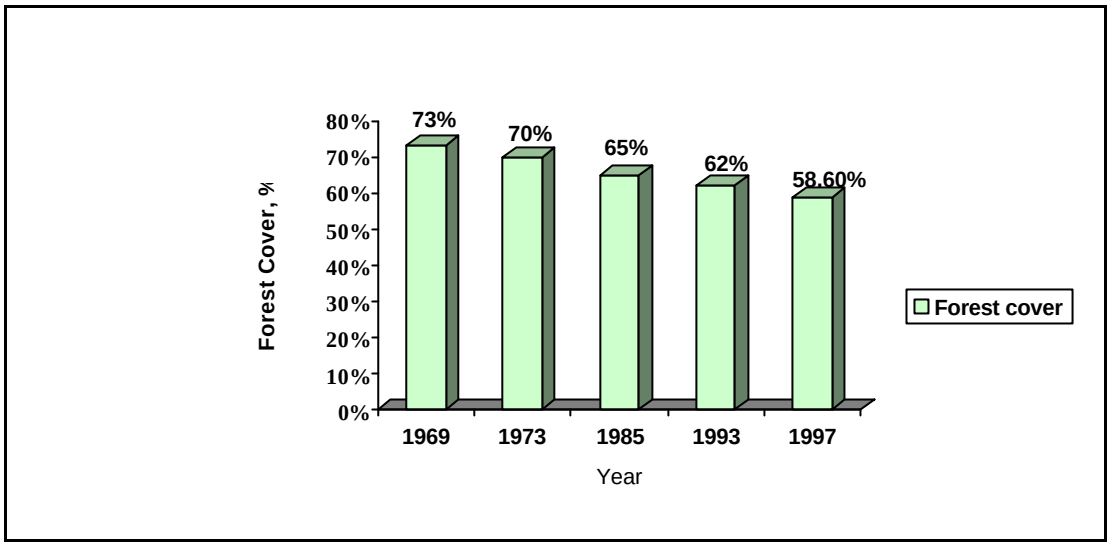

Figure 1. Change in forest cover from 1969 to 1997

Current and emerging issues, trends and critical problems

Forests in Cambodia have been increasingly at risk, particularly during the past decade, because of the expanding demand for agricultural land, timber and fuelwood. This trend has been intensified by the impacts of rural development and population growth. The primary causes of deforestation and forest degradation have been agricultural expansion, land encroachment, fuelwood gathering and commercial logging. Their impacts have been exacerbated by market imperfections, planning procedures, population pressure and poverty.

The RGC has been formulating policies and implementing programs to address the causes of forest destruction and forest degradation, which focus on:

the development of forest management plans, consistent with international standards;

local community participation in forest management;

the eradication of illegal logging activities; and

the development of land-use and management procedures for utilizing cancelled forest concession lands.

Forest policy

The forestry sector was accorded high priority in the RGC's National Program for Rehabilitation and Development to facilitate the rational and sustainable development of forest resources. The RGC is endeavouring to manage its forest resources on a sustainable basis for socio-economic development and environmental protection.

In November 1993, His Majesty King Norodom Sihanouk issued a Royal Decree designating 23 protected areas covering 3.3 million ha, representing 18.23 percent of the country's total land area. Within this protected areas system, there are seven national parks, 10 wildlife sanctuaries, three protected landscapes and three multiple-use areas.

In 1996, the RGC established a National Steering Committee to manage and execute national forest policy. Subsequently, it initiated four studies with assistance from the World Bank, focusing on forest concession management, forest policy, log monitoring and control, and a legal review of forest concession contracts. The RGC concurred with the major findings and recommendations of the studies, and high-level planners and policy makers have pledged to implement the recommendations.

The RGC's second Five-Year Plan (2001-2005) emphasizes law and administrative reforms to control forest crime, improve the implementation of forest concession contracts and initiate a forest rehabilitation campaign. Supporting activities concentrate on reforestation, forest resources' management, forest industry and forest product market surveys, suppression of illegal forest activities, research and wildlife conservation. The plan reserves 20 percent of the AAC from concession forests for domestic consumption.

The industrial timber policy of the RGC is reflected in an integrated ban on log exports and the promotion of the production and export of higher value-added processed wood products. The primary objectives of this policy orientation are to decrease the rate of timber harvesting, and to provide employment and income-generating opportunities for local communities.

The critical importance of forest resources in protecting the environment and in meeting the socio-economic needs of the country's predominantly rural population has dictated the need to develop and adopt a new forestry law. With technical assistance at different times from the World Bank and the Asian Development Bank (ADB), the Ministry of Agriculture, Forestry and Fisheries (MAFF), in collaboration with other government ministries, the donor community, and NGOs has completed the draft of a comprehensive Forestry Law. The draft law provides a legal foundation for establishing the roles and powers of government agencies in forest administration and enforcement, classifying forestland, establishing a permanent forest estate, defining the rights and obligations of stakeholders concerned with forest harvesting, collecting forest revenues, private and community forestry, conservation and protection of forests and wildlife, and assigning penalties for forestry crimes. The draft has been reviewed and approved by the Council of Ministers and has been submitted to both houses of parliament for adoption.

In early 1999, the DFW, with technical assistance from FAO, initiated a process to prepare a preliminary National Forest Policy to direct the development of the forestry sector in an orderly manner. This policy is being reviewed by an internal working group within the DFW.

There have been several policy initiatives affecting commercial forestry activities in the country. A forest concession management sub-decree on Forest Management Control was adopted for implementation on 7 February 2000. It maintains the rights of local communities to participate in decisions concerning the granting of forest concessions, the preparation of forest management plans and the development of systems for monitoring and controlling harvesting operations in forest concessions. The sub-decree requires the establishment of a permanent consultative communal committee to facilitate discussions on issues of importance to local communities living in or near forest concession areas. The sub-decree has been distributed to concessionaires and provincial offices to facilitate its implementation.

A Model Forest Concession Agreement, prepared in collaboration with and technical assistance from the World Bank and ADB, has provided a framework for dialogue between the DFW, the Cambodian Timber Industry Association and other stakeholders. Currently, it is being used as the basis for contract renegotiations that are being conducted between the RGC and forest concessionaires.

The Cambodian Code of Practice for Forest Harvesting, a legal instrument for achieving SFM on forest concession lands, became effective on 26 July 1999. Its implementation is intended to protect the environment and promote economic development consistent with the principles of SFM. The code will protect sites of cultural significance, maintain forest regenerative capacity, improve the economic and social contributions of forestry and ensure the health and safety of forest workers.

In October 2000, the RGC signed a Development Credit Agreement with the International Development Association of the World Bank to support a US$4.8 million Forest Concession Management and Control Pilot Project. This three-year project assists the DFW in its efforts to strengthen its institutional capacity to monitor and regulate forest concession operations. As part of the plan to implement forest concession reforms, concessionaires are required to prepare forest management plans that are consistent with international standards, and to renegotiate forest

management investment contracts. A Forest Concession Management Planning Manual, prepared with assistance from the ADB, has been provided to concessionaires to facilitate the development of forest concession management plans.

A sub-decree on Community Forestry has been drafted recently to increase the number of community forests and to encourage local communities to participate in SFM and the conservation of forest resources. A series of workshops is underway to incorporate the comments of various stakeholders.

In order to strengthen the capacity and develop the infrastructure for the monitoring and reporting of forest violations in concession and non-concession forestlands through the DFW, and in national parks and protected areas through the Ministry of Environment, a three-year Forest Crime Monitoring and Reporting project was initiated by the MAFF in 2000.

In an effort to reduce the demand of local communities for fuelwood, the RGC has provided import tax exemption on gas.

Process and mechanisms of policy formulation

The RGC is committed to the declarations of the United Nations Conference on Environment and Development (UNCED) that was held in Rio de Janeiro in 1992. It considers the achievement of SFM within the broader framework of the sustainable economic development of the country to be an important national goal. The DFW is responsible for coordinating actions associated with forestry. The Ministry of Environment has comparable responsibilities associated with the country's 23 protected areas.

Presently, the forestry sector in Cambodia is being reformed comprehensively. In order to coordinate this reform within a revised forest policy framework, the RGC, through a sub-decree dated 3 July 1996, has established a high-level inter-ministerial National Committee for the Development and Implementation of Forest Policy. The committee is chaired by the Prime Minister. The Director General of the DFW acts as the committee's executive secretary. The committee's primary responsibilities are to:

- coordinate consultations between the RGC and international donor agencies providing assistance on forest policy;
- select and manage the technical assistance provided by donors;
- coordinate consultations among various stakeholders;
- review investment programs in the forestry sector; and
- develop proposals and plans associated with forest policies.

Subsequent to the approval of the new Forestry Law, the committee will be replaced by an inter-ministerial National Forest Policy Steering Committee that will be chaired by the minister of the MAFF.

The proposals of the Rio Conference are still not very well known in Cambodia and their implementation remains incomplete. The MAFF and the DFW have recognized that the current rather fragmented efforts to achieve SFM have to be transformed into a comprehensive program that incorporates a variety of approaches. The MAFF and the DFW are considering the use of a National Forest Programme to develop a comprehensive forest policy framework for the achievement of SFM.

There is also an absence of a comprehensive national forest policy that builds upon available forest legislation and is harmonized among major stakeholders. While essential fragments of policies relating to forestry are available, the development of a comprehensive national forest policy based on a consultative formulation process including all stakeholders has yet to be completed.

The RGC is now developing, with assistance from the Cambodia-German Forestry Project, a Statement on National Forest Policy. This will provide a preliminary framework for the legislation and regulations currently in place or in the process of being developed. A consultative process on national forest policy formulation will then be initiated that includes all stakeholders.

A planned reform of forestry administration is provided in the new Forestry Law and will be implemented subsequent to the law's adoption. The new four-tiered administrative structure, including inspectorate, cantonment, division and *triage*, will establish a technical line of control from the centre to the local level. This reform is consistent with the recommendations of both the Consultative Group meeting in Tokyo in 2001, and the ADB Forest Concession Review that was conducted in 2000. It will provide a clarification of authority over forests and result in a more coherent governmental administration of the forest estate. The existing administrative structure, with provincial and district forest offices under the direct authority of provincial and district officials, will be abandoned and provincial and district forest offices will be integrated into the new structure. With the new administrative structure, the RGC plans to decentralize ministerial functions to lower-level authorities.

The administrative reform will present new professional challenges for the entire institution and its personnel at all levels. It will require a comprehensive review of the roles and functional responsibilities of forestry administration. Formal lines of communication and supervision will have to be reviewed, and interactions with other ministries and government departments will have to be redefined.

Institutional arrangements

While most forested land falls under the jurisdiction of the MAFF and the DFW, protected areas are administered by the Ministry of Environment and flooded forests are administered by the Department of Fisheries. Within the forestry sector, several professional networks focus on issues related to community forestry, concession management, conservation and rehabilitation. Each of these comprises stakeholders that might include representatives from state forest authorities, local communities, private companies, NGOs and donor-assisted projects. These networks have the potential to contribute significantly to policy, legal and technical forestry issues. Such contributions are reflected within the community forestry network that is assisting the RGC in its efforts to elaborate the Community Forestry Sub-Decree, the preparation of which has been mobilized under the direction of an inter-institutional task force.

The DFW is responsible for the formulation and implementation of forest policy. It has a central office in Phnom Penh organized into seven offices, a research institute and two companies. Staffing of the DFW, including provincial and district offices, totals 1 834. The central office employs 765 persons, of whom 530 are professionals. The provincial forestry offices are located in provincial agriculture, forestry and fisheries departments.

Forest policy implementation and impacts

Primary challenges to achieving SFM include the formulation of a comprehensive national forest policy, administrative reform, institutional strengthening and human resources development.

The forested area of the country currently excluded from concession management is estimated to be about 3 million ha, but additional areas are expected to become 'vacant' after the cancellation of contracts with concessionaires who fail to submit, and to have approved, SFM plans consistent with international standards. In December 2001, the MAFF issued Prakas (Declaration) No. 5721 that suspended logging activities by all concessionaires until such time that they have approved forest management plans, and have renegotiated forest management investment contracts. The forest resources in the 'vacant' areas, many of which could be depleted, will not be able to produce commercial benefits from timber harvesting for several years. At present, there is no comprehensive land-use plan indicating the manner in which these areas should be managed.

Conclusions

While significant challenges remain, the RGC is continuing its efforts to achieve SFM and to reduce illegal forest activities by developing a legal framework for policy reform, restructuring the forest concession system, establishing credible law enforcement capabilities and promoting community forestry. In order to achieve its goal of SFM, the RGC will continue to require the cooperation and support of its neighbouring countries and other countries in the region, as well as technical and financial assistance from the international community.

FOREST POLICY INITIATIVES IN INDIA OVER THE LAST FEW YEARS

V.K. Bahuguna

Introduction

Modern scientific forest management began in 1864 under the British administration with the establishment of the Indian Forest Department. Since then, forest policies have been issued in 1894, 1952 and 1988. Due to the large number of forest-dependent people, Indian forest policies should be based on the concept of sustainability. The latest forest policy was issued in 1988. Primarily it emphasizes stabilizing and restoring the ecological balance and meeting the livelihood needs of around 350 million people who live in and around forest areas. The policy is based on the following principles:

- The maintenance of environmental stability through preservation and, where necessary, restoration of the ecological balance that has been affected adversely by serious forest depletion.
- Conserving the natural heritage of the country by preserving the remaining natural forests with their vast variety of flora and fauna, which represent the remarkable biological diversity and genetic resources of India.
- Reducing soil erosion and denudation in the catchment areas of rivers, lakes and reservoirs for mitigating floods and droughts and for increasing the lifetimes of reservoirs.
- Arresting the extension of sanddunes in the desert areas of Rajasthan and along the coastal tracts.
- Increasing substantially forest/tree cover through massive afforestation and social forestry programs, especially on all denuded, degraded and unproductive lands.
- Meeting rural and tribal population requirements for fuelwood, fodder, non-wood forest products (NWFPs) and small timber.
- Increasing the productivity of forests to meet essential national needs.
- Encouraging efficient utilization of forest produce and maximizing the substitution of wood. Creating a massive people's movement with the involvement of women, to achieve these objectives and to minimize pressure on existing forests.

Constitutional status

India is one of the few countries in the world where the protection and improvement of the environment, and the safeguarding of forests and wildlife is enshrined under the directive principles of state policy—Article 48 A and 51 A (g), Part IV of the Constitution. The Constitution enjoins citizens to protect nature and stresses forest and wildlife conservation as fundamental duties. The Constitution also provides for forests and wildlife as concurrent subjects under Schedule 8, List III, Entry 17-A and 17-B.

Forestry sector resource scenario

Floral and faunal biodiversity

India's unique phytogeographical and climatic diversity endows it with a rich repository of biological resources. With only 2.4 percent of the total land area of the world, the biological diversity in terms of species richness of plants, animals and micro-organisms, contributes 8 percent of the known global biological diversity. It is one of the 12 mega-biodiversity countries.

From about 70 percent of the total geographical area surveyed so far, 49 000 plant and 81 000 animal species representing about 7 percent of the world flora and 6.5 percent of the world fauna have been described by the Botanical Survey of India and Zoological Survey of India, respectively. The rich biological diversity has produced diverse societies ranging from fisherfolk to forest dwellers and hill people. Of the total geographical area of the country, 23 percent is recorded as forests. However, the actual forest cover is only 19.39 percent, which houses 80 percent of the country's recorded biodiversity.

Forests have been classified into 16 forest types ranging from tropical, sub-tropical, temperate, sub-alpine and alpine regions. More than 50 percent of the forests are located in the states of Madhya Pradesh, Arunachal Pradesh, Andhra Pradesh, Orissa and Maharashtra. Thirty percent of the growing stock is however, in the seven Northeastern States. Traditionally, the forest areas are confined to difficult mountainous terrain and inaccessible areas of the mainland. Their inaccessibility, while posing a challenge to their scientific management, has also helped in maintaining some of the areas in their pristine forms. About 5 percent of the country's forest area (about 15 million ha) is under protective area status through around 600 wildlife national parks and sanctuaries. Some important considerations for forest management are discussed in more detail below.

Livelihood needs of rural poor and tribal populations

Forests contribute to around 1.7 percent of the gross domestic product of the country. However, these figures do not include the non-marketed and unrecorded removal of fuelwood, fodder, NWFPs and timber being collected by the people for their livelihood needs. Around 350 million people (including 75 million tribals living within a radius of 5 km to forests in around 170 000 villages, covering a forest area of 32 million ha) are responsible for this removal. They have been removing around Rs.400 billion worth of forest produce annually[4]. This unaccounted removal has remained outside the national accounting system and is a main cause of concern for forest planners. It is pertinent to focus development priorities on villages to reduce their forest dependence.

Increasing the productivity of the forests

The recorded productivity of the forests (0.5 m^3/ha) is far below the world average and needs to be increased (to around 5 m^3/ha on average) through the application of superior technology and management options.

Expansion of forest/tree cover

India needs to bring around 109 million ha under forest/tree cover to meet the target set by the National Forest Policy (1988) of one-third of the total land area being under forest or tree cover. Due to forest development and protection of forests, forest cover has remained at around 19 percent during the last 15 years (see Table 1). As of today, around 79 million ha of forests are under the control of forest departments (63 million ha) and the private sector (16 million ha). This means that another 30 million ha of private lands have to be covered by forests and trees. As stated, around 16 million ha of tree growth exists outside the forests on private/common lands. This brings the net forest/tree cover to around 25 percent of the total land area.

[4] US$1 = Rs. 48.7

Table 1. Comparative forest cover of India (1987 to 1997)

Assessment year	Period	Forest cover (in sq.km)	Percentage of total area
1987	1981-83	642 041	19.52
1989	1985-87	640 134	19.47
1991	1987-89	639 182	19.44
1993	1989-91	640 107	19.47
1995	1991-93	639 600	19.46
1997	1993-95	633 397	19.27
1999	1995-97	637 297	19.39

India's afforestation efforts

India has raised around 30 million ha of plantations on public and private lands since 1950. Considering a survival factor of 60 percent, around 18 million ha of plantations should remain in the field.

Recent forest policy initiatives

The following forest policy initiatives have been adopted during the last five years. Ownership rights of NWFPs have been transferred to local bodies. Forest policy has emphasized the protection of the customary rights of the forest-dependent people and concessions to tribal communities and other rural people living in and around forest areas. The 73rd Constitutional Amendment has transferred the ownership right of NWFPs to village-level institutions i.e. "panchayats". This right should go a long way towards the decentralized functioning of village-level institutions.

In recent years, the Government of India (GOI) has set up the following committees for taking policy initiatives:

1) Afforestation policy and rehabilitation of degraded forest and review of Joint Forest Management (JFM).
2) Review of forest policy options.
3) Review of forest working plan preparations.
4) Review of NWFP management.

Impact of policy reviews:

Afforestation and JFM policy: After the review, the following initiatives were adopted by the GOI:

a) A JFM Cell was established in the Forest Protection Division of the Ministry of Environment and Forests for monitoring the community-based forest management system. Previously, there was no such focal point and the stakeholders found it difficult to interact with the government and to provide feedback.

b) Forest Development Agencies (FDAs) have been created at the district level as a federation of the village-level JFM committees with representation from government departments who can contribute to the land development activities, local leadership etc. The FDAs ensure the regeneration of forests, employment generation and empowerment of JFM committees. The GOI will transfer funds to the FDAs directly under its National Afforestation Programme. The FDAs will be constituted at the level of territorial/wildlife divisions and 20 states have set up more than 80 FDAs on a pilot basis from 2000-2002. The program will be implemented on a major scale during the 10th Five-Year Plan.

c) Landmark policy guidelines were issued in February 2000 on JFM. The salient features of these guidelines are:
   a) Provision of legal identity to JFM committees.
   b) Increased participation of women.
   c) Extension of JFM to good quality forests (crown density above 40 percent).
   d) Conflict resolution mechanisms.
   e) Recognition of self-initiated groups and a better evaluation and monitoring mechanism.

d) A National JFM Network has been established consisting of individuals and organizations representing different stakeholder groups such as the central and state governments, national and grassroot-level NGOs, donor agencies, and research and training organizations. The main objective of the network is to provide a regular mechanism for consultation among various agencies and to obtain constant feedback from different stakeholders on the JFM program for policy formulation. To support the network, a stakeholder forum has also been created as an extended arm of the network for regular interaction among the stakeholders and to provide responsive services including research, meetings and dissemination of decisions made at network meetings.

e) The microplans of JFM areas are the core activities for village-level institutions. Sometimes these run counter to working plan prescriptions. A mechanism has been created for implementing the microplans in harmony with the working plan prescriptions.

f) Explicit provisions have been made for JFM in the draft forest act that will replace the existing Indian Forest Act 1927.

g) For afforestation, specific targets have been assigned for the public and private sectors to achieve the national goal of bringing one-third of the total land area under forest and tree cover. Financial implications have been determined and incorporated in the National Forestry Action Programme (NFAP). Regular meetings are being held with the Planning Commission and various donor agencies for acquiring funds. So far only 25 to 30 percent of the annual financial requirement has been arranged leaving large gaps to be filled.

h) Special efforts are being made to promote high quality private nurseries to meet the demand for improved planting material for afforestation.

The forest policy review stressed that there is no need for a new forest policy as the existing policy provisions need to be implemented fully before any review is considered necessary.

A conscious decision has been made not to lease any forestland to industry. To meet the raw material needs of industry, collaboration with farmers has been suggested.

The Forest Survey of India has been assigned the task of assessing of trees outside forests to ascertain the area covered by trees in the country.

Attempts are being made to harmonize the forest policy with other sectoral policies, especially with regard to mining and industrial policies.

Encroachment on forestland is to be discouraged firmly. With the introduction of JFM, around 38 158 ha of encroached land have been vacated under the JFM program.

Special efforts are being made to evolve rules and regulations for felling trees on private lands. This has been done in view of the Supreme Court's ruling for managing all types of forests under a working scheme. Already, the Madhya Pradesh Government has taken an initiative in this regard and a few Northeastern States have also taken action.

The working plan code has been modified to meet the emerging forest management options. Funds are being ensured to carry out the working plan prescriptions in the natural forests.

A task force has been set up by the GOI to develop criteria and indicators (C&I) for the sustainable management of forests. The C&I are being fieldtested through a project funded by the International Tropical Timber Organization (ITTO) and implemented through the Indian Institute of Forest Management. The C&I will be communicated to all the states for implementation.

Forest fires cause huge losses to forests, especially to their biodiversity. It has been estimated that around 3 million ha of forests are affected annually by forest fires causing a loss of around Rs.4.4 billion annually. National guidelines were prepared for forest fire prevention and control, and funding has been increased under the Central Government plan scheme. A master plan has also been prepared for a period of 10 years for tackling forest fires. One key component of the new forest fire policy is to involve villagers in forest fire prevention and to provide them with a "fire prevention bonus" every year for preventing and controlling forest fires through the signing of a memorandum of understanding with the JFM committees.

A new "integrated forest protection" scheme has been approved for implementation during the 10th Five-Year Plan to deal holistically with forest protection. This scheme will provide funds for infrastructure development and capacity building of the institutions responsible for forest protection.

Several steps have been taken by the various state governments to enact rules for the sharing of NWFP benefits and institutional arrangements are being developed for their collection, marketing and value addition.

India has a great potential for developing herbal medicines. A medicinal plant board has been established by the GOI to oversee the development of the medicinal plant sector in the country. Similarly, medicinal plant boards are being set up in the states.

A large number of people are heavily dependent on bamboo particularly in the Northeastern States. Bamboo development has been declared a thrust area for development. The International Network on Bamboo and Rattan (INBAR) has been encouraged to propose a development strategy for the bamboo sector. INBAR has been sanctioned funds for developing proposals for Tripura and Mizoram.

In order to evolve better relations between the people living in areas adjoining national parks and sanctuaries, the concept of ecodevelopment has been initiated successfully. Forest protection infrastructure is also being strengthened to prevent poaching. Ecotourism has great potential because of India's rich flora and fauna and cultural diversity. Ecotourism has been declared a thrust area by the Ministry of Environment and Forests.

Future action points

The Ministry of Environment and Forests will target its future activities on:

1. Implementation of the national forestry action program.
2. Strengthening of the JFM program and other community-based systems.
3. Development of strategies for meeting the conflicting demands of society on forests at the local, regional, national and international levels.
4. Operationalization of C&I for sustainable forest management and development of an effective institutional mechanism for monitoring.
5. Creation of sound forest management information systems for decision making.

INDONESIA'S FOREST POLICY AND REVIEWS

Achmad Pribadi

Introduction

Over the past five years, some of Indonesia's forest policies have been reviewed, in particular policies related to forest plantations and natural production forest management. Many international and local organizations have been involved in the reviews, including CIFOR, WWF, donor agencies (DFID, GTZ etc.), the World Bank, and FAO. Among local organizations that have conducted forest policy reviews are NGOs (LATIN, WALHI) and forest research institutions.

This paper presents an overview of forest policy reviews conducted over the past five years, a brief assessment of the reviews and a discussion of recent important issues concerning the achievement of sustainable forest management (SFM) in Indonesia. The last part proposes forest policy topics that could be supported by the EC-FAO Partnership Programme.

The studies that have been completed are shown in Table 1. Some findings are discussed separately under two groups, forest plantations and natural forest management policies.

Table 1. Forest policy reviews since 1995

Title	Organization	Authors	Year of publication or completion
The Economics of Long-term Management of Indonesia's Natural Forest	World Bank		1995
Masalah Kebijakan Pengelolaan Hutan Alam Produksi (Problems of Natural Production Forest Management Policy)	LATIN	Haryadi Kartodihardjo	1999b
Belenggu IMF & World Bank: Hambatan Struktural Pembaharuan Kebijakan Pembangunan Kehutanan di Indonesia (Shackles of IMF & World Bank: Structural Constraints in Reforming Forest Development Policy in Indonesia)	LATIN	Haryadi Kartodihardjo	1999
Will HPH Reform Lead to Sustainable Forest Management? Questioning the Assumptions of the Sustainable Logging Paradigm in Indonesia	CIFOR-WWF	Christopher Barr	1999
The Impact of Sectoral Development on Natural Forest Conversion and Degradation: The Case of Timber and Tree Crop Plantations in Indonesia	CIFOR	Haryadi Kartodihardjo & Agus Supriono	2000
Addicted to Rent: Corporate and Spatial Distribution of Forest Resources in Indonesia; Implications for Forest Sustainability and Government Policy.	DFID	David Brown	1999
Achieving Sustainable Forest Management in Indonesia: Report of the ITTO Technical Mission to Indonesia.	ITTO	Freezailah *et al.*	2001

Forest plantation policy

Kartodihardjo (1999) concluded that the conversion of Indonesia's natural forest to timber and tree crop plantations stimulated natural forest degradation; subsidies could not accelerate the development of forest plantations; forest plantation policies did not resolve problems related to forest land use.

Based on the key findings, Kartodihardjo proposed that the remaining natural forests on conversion forestlands should be reclassified as permanent forests. Plantations should be allocated only unproductive production forestlands and the efforts on forestland redistribution programs by the Indonesian government should benefit people at the local level.

Natural forest management

In response to the poor performance of natural forest management under the HPH (forest concessionaires) system the World Bank (1995), DFID (Brown 1999) and CIFOR (Barr 1999) proposed to reform it. They identified constraints and challenges in reforming natural forest utilization. Previous policies had led to underpricing of raw material in the domestic market, distortion in forest product markets and lack of effective measures to encourage community participation in forest management. These issues were not new, as many experts described them during the new order regime.

The World Bank (1995) provided recommendations that were later adopted by the International Monetary Fund (IMF), they included: lengthening the concession periods to 35 years; introducing performance bonds and an independent monitoring system; competitive auctioning of concession rights (HPHs); removing market distortion by lifting restrictions on logs, sawnwood and wood panels; and increasing the state's rent capture by raising timber royalties and introducing area-based fees for logging concessions (World Bank 1995). The first three recommendations constitute the so-called HPH reform.

Response to the recommendations

Since democratization commenced in 1997 many policy changes or adjustments have been proposed and implemented. Most changes relate to the package of recommendations.

In terms of forest plantation policy, Kartodihardjo's recommendations have been followed up by issuing the Ministerial Trial Decree of a moratorium on natural forest conversion in 1999. The regulation implies that the natural forestland can no longer be converted. According to the new policy, forest plantation development has to take place on unproductive areas. Due to the high costs, investments in plantations have declined since the monetary and financial crisis commenced in 1997.

Concerning forest management policy, changes include lengthening HPH contracts, restructuring HPHs, auctioning of HPHs and introducing performance bonds.

Lengthening HPH contracts to 35 years

The Ministry of Forestry (MoF) issued the Ministerial Trial Decree to lengthen the renewable HPH contracts to 35 years. Until 2000, 51 HPH contracts had been renewed based on the regulation.

Limitation of HPH size

The policy applies to very large forestland concessions or a small number of group owners (Government Regulation No. 6/1999) whose licenses are in the process of being extended. It aims to increase the effectiveness of forestland utilization, to share forest benefits equitably among multiple stakeholders and to develop a sound forest management system to achieve SFM. The new law limits the size of new or extended timber concessions to 50 000 ha and the overall concession holding of any timber group to 100 000 ha within a province, and 400 000 ha in the entire country. The only exception to the law is West Papua where individual concessions are limited to 100 000 ha and group holdings to 200 000 ha.

The new licensees must involve local cooperatives with a minimum of a 20 percent share in managing the forest. Until 2000, 73 HPH units had been redesigned to 96 units. Forty-three units owned by 21 groups of companies were redesigned to 60 units, and 30 units of individual HPHs, were redesigned to 36 concessionaires.

Unfortunately, the concession size limit can be circumvented. Any timber group can employ a number of strategies to avoid the 400 000 ha limit. One strategy is to spin earlier acquired timber concessions off to one or more family members, who then operate the concessions under a different company name. This strategy has been practised for some years in some conglomerates (Brown 1999).

Auctioning HPHs

The MoF issued the Ministerial Trial Decree No. 731/1998 and 732/1998 as basic regulations to the auctioning of new or expired concessions. The policy aims to provide licenses transparently and fairly. In 1999 and 2000, only one license, located in Central Kalimantan Province, was auctioned. Until today, harvesting has not commenced due to land-use conflicts. The complexity and lack of experience in conducting auctions are the main reasons for its slow progress.

In mid-2000, the HPH reform, based on the World Bank's recommendations, was postponed, because of the release of Law No. 41/1999 on Forestry (issued in September 1999) and decentralization/autonomy in 2001 under Law No. 22/1999. The regulations contradict PP 6/1999, which is the basic regulation of the HPH system. To date, the revision of government regulations that refer to Law No. 41/1999 and Law No. 22/1999 is under draft finalization.

Implementation of performance bonds and independent monitoring

The policy on performance bonds and an independent monitoring system is now being prepared for the final draft. The process involves many stakeholders who attend long discussions and debates; this is time consuming.

Removing market distortion by lifting restrictions on logs

To remove market distortions in forest product trading, the MoF has issued a policy to decrease the export tax gradually and to end the cartelism of forest products. For example, export taxes on logs have been decreased gradually from 30 percent in April 1998 to 20 percent in 1999. By the end of 2001, the export tax decreased to 10 percent. The policy was issued because of the underpricing of logs in the domestic market, which caused inefficient raw material utilization.

However, the policy has triggered the smuggling of forest products by manipulating legal export documents. Since the imposition of the policy, the loss in national income has amounted to US$1.4 million (from US$3.9 in 1997 to US$2.5 million at the end of 2000).

Due to the high level of forest product smuggling, NGOs, the international community and other parties have demanded a revision of the export tax policy. Therefore, in October 2001, the MoF and the Ministry of Industry and Trading issued a Joint Ministerial Decree on log export bans. The ban will be reviewed in the next six months.

Increasing PSDH and DR

Forest/timber rents are important for Indonesia's forestry sector. They constitute the dominant component of the forest revenue system. The forest revenue system consists of a number of charges that have evolved over the past 30 years and assumed varying levels of importance. For practical reasons, it is impossible to capture rents as one stumpage charge because of the complex nature of the concession management. Timber rents are often grouped into components of initial

charge (for the concession rights), annual charges, production charges (linked to production volumes) and trading charges (related to export). At present, the system includes among others the following charges: Forest Concession License Fee, Forest Product Royalty (PSDH), Reforestation Fee (DR), Export Tax and Land and Building Tax.

The charges can be grouped broadly into area-based and production-based (or volume) charges. Area-based charges consist of the forest concession license fee (IHPH) and the land and building tax (PBB). In various years, the IHPH contributed only about 0.5 percent of the total forest revenue collected. The PBB contributes about 2.5 to 3 percent of the total forest revenue. Production-based charges comprise the forest product royalty (IHH), scaling and grading fees, the reforestation fee or fund (DR) and the timber export tax. The IHH and DR account for about 96 percent of the total forest revenue.

Wibowo (2001) suggested that in 1997 and 1998 rent capture in logging concessions within 18 provinces was between 24 and 36 percent, leaving a windfall of 64 and 76 percent to the concessionaires. The volume of uncaptured rent in terms of timber value was estimated at between Rp. 5.2 and 8.9 trillion[5]. It was worth 30 to 53 percent of Indonesia's foreign debt repayment in 2001, of Rp. 16.93 trillion.

Considering the volume of illegal logging, the overall volume of unrealized forest revenue is enormous. Combating this situation will provide environmental and financial benefits. In response to the World Bank's recommendations, the Indonesian government increased the tariff of IHH/PSDH from 6 to 10 percent of the forest product pricing list. New regulations relating to DR are being drafted.

Assessment of policy reviews

Objectives

Policy reviews examine and evaluate the effectiveness of a particular policy, explore main findings and propose recommendations, indicate constraints and challenges in implementing a policy, and assess roles of particular institutions in supporting Indonesia's programs to achieve SFM.

Information sources

There are many information sources to support reviews including government institutions; the MoF, BPS, BAPPENAS, CIFOR, the World Bank, NGOs (e.g. LATIN, WALHI) and donor agencies (e.g. DFID, GTZ, EU). The MoF generally provides forestry sector data and forestry regulations. BAPPENAS and the World Bank are sources of information on macroeconomic policy, while BPS can provide statistical information on forest products.

Potential constraints

It is very difficult to find the latest information in government institutions because of the lack of well-organized libraries. In addition, forest policies change many times over short time periods.

Opportunities

Democratization and transparency, which are being encouraged, make it easier to obtain information from multiple stakeholders in forestry.

[5] US$1 = Rp. 10 000

Current issues

Important issues are reflected in the eight commitments of Indonesia to the CGI (the 9th CGI meeting was held in Jakarta, February 2000). These commitments are: to impose strong measures against illegal loggers, especially in national parks; to speed up the forest resource assessment as a basis for the National Forest Program (NFP) formulation; to evaluate the policy related to conversion forests and put a moratorium on all natural forest conversion until the NFP agrees; to downsize and restructure the wood-based industry to balance raw material supply and demand; to close heavily indebted wood industries under the control of IBRA; to connect reforestation with the existing forest industries and those under construction; to recalculate real timber values; and to use decentralization processes as a tool to enhance forest management.

It will be difficult to achieve the eight commitments simultaneously. Therefore, from 2001 to 2004, the MoF will focus on the five priority programs (Annex 1).

General constraints to achieving SFM are:

- Weak law enforcement, which requires improvements in laws.
- Widespread social problems. Both local and "adat" people are demanding rights to forest resources. The disputes have not been solved yet. The government has lost its energy in resolving these conflicts.
- Poor monitoring and evaluation and also unfair forest resource allocation have made it difficult to implement SFM.
- Many unresolved land-use conflicts will discourage the government from undertaking the targeted plan.

Proposed study that the EC-FAO Partnership Programme could support

Topics that could be supported by the EC-FAO Partnership Programme are restructuring forest-based industries to balance log supply and demand. The study should examine whether the supply approach is more effective in balancing the supply-demand of logs rather than just controlling the demand of logs. This hypothesis is supported by an estimation of a log boom in 2005. Therefore, the contribution of international organizations such as FAO is required to support the government in achieving SFM.

Abbreviations and acronyms

BAPPENAS	Badan perencanaan nasional, National Development Planning Board
CGI	G7- Consultative Group for Indonesia (the country's major donor group)
CIFOR	Center for International Forestry Research
DFID	Department for International Development (UK)
DR	Dana Reboisasi, reforestation fund
EU	European Union
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit (German Agency for Technical Cooperation)
HPH	Hak Pengusahaan Hutan (Forest Concessionaires)
IHPH	Iuran Hak Pengusahaan Hutan, License Fee
IBRA	Indonesia Bank Restructuring Agency
JICA	Japan International Cooperation Agency
LATIN	Lembaga Alam Tropika Indonesia (The Indonesian Tropical Institute—local NGO)
MoF	Ministry of Forestry
NRM	Natural Resource Management (Donor Agency—USAID)
PSDH	Provisi Sumber daya Hutan, Forest Product Royalty
WWF	World Wildlife Fund

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Appendix 1: The MoF's progress in achieving five priority programs

Issues	Efforts	Constraints	Opportunities
Curbing illegal logging	The impacts of illegal logging are publicized widely. Forestry sector personnel, government officials and communities receive education and training. The government has issued a presidential instruction on curbing illegal logging and illegal timber trading in the Leuser ecosystem area and Tanjung Puting National Park Imposition of a log export ban starting in October 2001. An operational intelligence team has been dispatched to several parts of the country that serve as centres of illegal timber distribution	A strong network directs timber theft for commercial purposes and operates frequently with the backing of enforcement officers. The number of forest rangers is still too small compared to the forest areas that have to be secured.	Active participation in issuing an international political statement on illegal logging due to poor forest law enforcement at the Governance East Asia Ministerial Conference/FLEG). This is known as the Ministerial Bali Declaration. The political commitment of the Indonesian president to illegal logging was declared in April 2001.
Forest fire control	The government is continuing to try to control forest and land fires in a number of ways, including institutional strengthening, human resource development, provision of facilities, development of an early warning and detection system (in cooperation with GTZ, JICA and EU). In anticipation of further fires, fire location (hot spot) information is distributed widely and prevention campaigns (printed and electronic) have been held, as have official dialogues. HPHs have been asked to declare that they no longer burn to clear land.	Coordination of responsible institutions is poor. Strong coordination will be needed particularly when fires break out again in drought years.	The domestic and international communities are paying great attention to the problems of forest fires in Indonesia.
Restructuring forest-based industries	The government has established a task force to examine the restructuring of heavily indebted HPHs and HTIs under IBRA control (Ministerial Decree No. 943/Kpts-VI/2001 involving related private organizations and companies). Identify and inventory out-of-date technology and machinery within the timber industries. Assess the potential of natural forests and other sources of raw materials against the demand to try to achieve a balance of supply and demand.	Restructuring forest-based industries usually has high social impacts.	Because of the high biodiversity of its tropical forests, Indonesia should be able to obtain support from international organizations for achieving SFM.
Establishment of forest plantations and reforestation	Resolve land-use conflicts between communities and companies on a case-by-case basis. Create a conducive investment environment by simplifying regulations and de-bureaucratization procedures.	Allocation from the reforestation fund to industrial forest plantation companies has been discontinued and this has caused a liquidity crisis.	Regional autonomy with its fairer and more transparent distribution of authority and closer participation in forest management, should increase public concern and participation in forest and land rehabilitation programs.
Decentralizing the forestry sector	General rules developed to provide guidelines and standards for issuing forestry licenses such as: Forest product utilization and harvesting in production forest; Criteria and standards of license for environmental service utilization.	Human resources in local governments are not fully ready (in terms of capability and quantity) to manage the forest sustainably.	The central government can focus on developing macroeconomic policies for the forestry sector.

FOREST POLICY REVIEWS IN LAO PDR

Somchay Sanonty

Current status of forest/forestry in Lao PDR

The forest resources of Lao PDR are still rich in comparison with other Asian countries and they play very important roles in the economy, society and environment of Lao PDR and the Mekong River Basin.

Wood products account for more than 30 percent of the total export revenue. Demand for timber including plantation timber is expected to grow rapidly both in Lao PDR and neighbouring countries.

About 80 percent of the domestic energy consumption is wood based, mostly in the form of fuelwood. A stable supply of wood energy can sustain people's livelihoods and save scarce foreign currency.

Most of the Laotian population, especially those who live in remote areas are heavily dependent on forests for their subsistence and for generating income. Production of non-wood forest products (NWFPs), based on technically sound forest management by villagers, can increase incomes.

Forests provide important environmental services including water and soil conservation, which are vital not only to domestic power generation and irrigation but also to the development of the Mekong River Basin. Conservation and rehabilitation of forests in the watershed areas can contribute to the economic development of Lao PDR and the Mekong region.

Biodiversity in Lao PDR is still rich in comparison with neighbouring countries. Its conservation is of regional and international importance.

A National Reconnaissance Survey was undertaken by the National Office of Forest Inventory and Planning (NOFIP) with technical and financial assistance from the Swedish International Development Authority (SIDA) from 1987 to 1989. According to the final report, forest covered 47.2 percent of the total land area; the forest cover had decreased from 11.6 million ha (49.1 percent) in 1982 to 11.2 million ha (47.2 percent) in 1989 As the result of various measures adopted by the government since then, shifting cultivation has been decreasing and forest cover is expected to have increased.

Current and emerging issues, trends and critical problems

Shifting cultivation and poverty

Although the area under shifting cultivation has been decreasing due to the government's policy initiatives, notably land and forest allocation, and economic development, more than 100 000 ha are still burnt every year. Moreover, villagers, especially subsistence farmers, still collect NWFPs indiscriminately. Unless they are given alternative crops to grow and alternative income generation opportunities, in addition to skills and means to use the forest on a sustainable basis, forest resources around villages will continue to disappear and deteriorate.

Effects of the war

Heavy fighting and bombing before 1975 destroyed a vast area of rich forests and killed countless wildlife in addition to human casualties. Unexploded ordnance restricts access, and prohibits rural development and the sound management of forests including afforestation in many provinces.

Forest fires

Fires spreading from burning swidden fields to nearby land and forests cause more forest destruction than shifting cultivation itself. Extensive grasslands and degraded lands in the northern provinces are thought to have resulted from these fires.

Unsound management of production forests, NBCAs and wildlife

Due to an inadequate legal framework and limited financial and human resources the Master Plan for Management and Utilization of Forests defined in the Forestry Law is not effective and most of the production forests and National Biodiversity Conservation Areas (NBCAs) are not covered by long-term management plans. Some stakeholders do not abide by the law.

Scarce financial and human resources limit raising awareness of the public and also prohibit the strict enforcement of existing regulations concerning harvesting and the conservation of biodiversity.

Underdeveloped wood processing and marketing

Most wood-processing facilities in Lao PDR are small scale, obsolete and inefficient in raw material use leading to excessive amounts of mill residues. Wood products cannot compete in foreign countries where the final products are processed from logs and semi-finished products are imported from Lao PDR.

Insufficient afforestation

Timber plantation areas are increasing only slowly and their quality is often poor. Tree breeding and high quality planting stock are inadequate.

There needs to be a clear and integrated plan to promote tree plantations by various partners for efficient use of financial resources including the Compensatory Plantation Fund.

Inadequate legal framework and human resource development

Although the forestry law provides a legal basis for sustainable forest management (SFM), related regulations and technical guidelines for the implementation of SFM are not in place.

Government officers, especially local ones who are required to enforce laws and regulations on the ground, do not clearly understand and uniformly apply regulations. They are short of means to enforce them.

Current national forest policy and legal framework development

National statement or objective related to forests

The First National Forestry Conference held in May 1989 in Lao PDR attracted considerable interest as manifested by approximately 500 participants, both from the central government and the provinces. Major multilateral and bilateral donors were also present. The three policy directions identified at the conference were to:

1) Preserve, improve and increase the biological capacity of the present forest, especially by improving existing management systems and protection.
2) Use forest benefits rationally, especially by using and improving the economic benefits of forest resources.
3) Link the rehabilitation, preservation and expansion of forests with the meeting of food requirements, commodity production, reorganization of production systems and construction of permanent settlements for the upland population.

Legal development framework

(1) Issuance of the Prime Minister's Decree No. 74/PM dated 17/7/79 related to forest protection.

(2) The First National Forestry Conference in May 1989 charted the direction of forest policy.

(3) The Tropical Forest Action Plan (TFAP) adopted in 1991 outlined options for forest development in six programs as follows: institutional strengthening, human resource development, sustainable alternatives to shifting cultivation, watershed protection, sustainable use of natural forest and plantation forestry.

(4) Based on the above basic policy directions and programs, with assistance from donors, the government initiated various activities as follows:

- The establishment of 20 national forest reserves (NBCAs) by the Prime Minister's Decree No. l64 in 1993. The total area of the NBCAs is more than 3 million ha occupying about 12 percent of the total land area.
- Initiation of land/forest allocation by the Prime Minister's Decree No. 186 in 1994 and subsequent decrees and regulations. The allocation of land and forests has been completed in about 6 330 villages, which is more than a half of the total number of villages in the country.
- Introduction of a loan scheme for commercial tree plantations in 1994. More than 10 000 ha of tree plantations have been established with the use of this loan.
- Signing of the Biodiversity Convention in 1996 and the World Heritage Convention. The government is also considering membership of the Convention on International Trade of Endangered Species (CITES).
- Promulgation of forestry laws in November 1996 outlining an integrated SFM approach.
- Issuance of the Prime Minister's Decree No. 189 in November 1999 declaring the implementation of the forestry law. A number of related regulations for implementing the law are still under preparation, including land/forest classification and land-use planning, NBCAs, harvesting in production forests, protection forests, plantation development, village forestry, wood industries and a Forest Development Fund.
- Creation of the Compensatory Plantation Fund and streamlining of log sale procedures by the Prime Minister's Decree No. ll in 1999. An incentive scheme for promoting tree planting by farmers is under preparation.

- Piloting of various upland farming systems and promoting people's participation in forest management (e.g. village forestry, joint forest management and profit-sharing systems).
- Setting the target of forest cover at 60 percent by 2020. It is expected that 500 000 ha of timber plantations will be established.
- Establishment of the National Agriculture and Forestry Research Institute (NAFRI) in 1999 to integrate and strengthen research activities.

Important issues, constraints, challenges, opportunities for SFM

The forest resources of Lao PDR are in a critical condition. Their sustainable management is vital to the development of the national economy, the improvement of livelihoods, and to the conservation of biodiversity and the environment. Consolidating the achievements of the government and donors over the past 10 years is essential to formulate more efficient and effective SFM approaches.

Limited financial and human resources necessitate prioritized approaches.

In a transition toward a market economy, promoting private initiatives is also essential for the sound development of the forestry sector in Lao PDR.

Recommendations for achieving SFM

(1) Stabilization of shifting cultivation and poverty alleviation:
- Acceleration of land and forest allocation tailored to specific target areas such as NBCAs, focal areas. Land-use planning at district levels.
- Strengthening of extension services at the local level.
- Establishment of incentive schemes for sustainable farming systems and tree plantation by shifting cultivators (e.g. agroforestry systems).
- Promotion of income generation activities including village forestry (e.g. production of NWFPs, ecotourism and village plantations).

(2) Biodiversity conservation:
- Formulation of NBCA management plans with the participation of local people.
- Establishment of the Forest Development Fund to support conservation activities (including farmers).

(3) Sustainable management of natural forests:
- Demarcation of production forests and formulation of long-term management plans for more sustainable resource management.
- Strengthening of local forestry institutions and staff for long-term planning and management.

(4) Development of tree plantations:
- Preparation of the National Afforestation Promotion Plan including target areas, species, seed/seedling production, tree breeding etc.
- Streamlining of administrative processes for investments in tree plantations.
- Piloting and introduction of an incentive scheme to promote tree planting by farmers.
- Development of products by using fast-growing species and subsequent marketing.

(5) Wood industry development:
- Review the existing wood-processing industries to improve efficiency, to balance industrial capacity with sustainable supplies of raw materials.
- Limit the export of logs and sawntimber and promote the export of value-added products.

(6) Research:
- Strengthening of adaptive research on upland farming systems and agroforestry.
- Genetic improvement of plantation species.

(7) Legal framework and human resource development:
- Preparation and dissemination of related laws, regulations and technical guidelines to government officers, industries and the public.
- Formulation of the Master Plan for Forest Management and Utilization consisting of the area and location of major forest categories and guidelines for forest management.
- Training of forestry staff in enforcing forestry laws, regulations and technical guidelines.
- Strengthening of the Department of Forestry's (DOF) policy formulation capacity through improved monitoring and evaluation.

Actions to be taken by the government

1) Enactment and implementation of forest-related regulations.
2) Formulation of the Master Plan for Forest Management and Utilization and approval by the National Assembly.
3) Acceleration of land and forest allocation.
4) Review and streamlining of policy and administrative procedures concerning investment in wood processing and tree plantations.
5) Introduction of incentive schemes for the promotion of alternative upland farming systems and tree plantations by farmers.

Actions to be taken by the government and donors

Technical development and dissemination

- Upland farming systems including agroforestry.
- NWFP production and processing.
- Formulation and implementation of the National Afforestation Promotion Plan.
- Improvement of plantation tree species.
- Formulation and implementation of long-term management plans for production forests and NBCAs.

Institutional strengthening and human resource development

- Establishment of the Forest Development Fund.
- Strengthening of local forestry organizations and staff, especially in the management of production forests and NBCAs.
- Strengthening of the DOF's policy formulation capacity.
- Strengthening forest research.
- Establishment of forest-related facilities including nurseries, tree-breeding centres, training and research venues.

Promotion of investment by all sectors

- Tree plantations
- Product development, processing and marketing of timber from plantations.

RECENT FOREST POLICY REVIEWS IN PENINSULAR MALAYSIA

Na'aman Jaafar

Introduction

Under Article 74(2) of the Malaysian Constitution, forestry comes under the jurisdiction of the respective state governments and as such each state is empowered to enact laws and formulate its forestry program and policy independently. However, the federal government may extend its executive authority in the form of advice and technical assistance to the states, as well as the provision of training and the conduct of research and maintenance of experimental and demonstration stations. In this respect, the National Forestry Council (NFC), established in 1971 under the National Land Code, is empowered to coordinate the planning, management and development of forest resources.

Circumstances in the last decade necessitated some important reviews regarding forest policy; these took place in the early 1990s and entailed a subsequent review of the Forestry Act. The process of revision is dynamic and continuous in order to tune in to current and foreseeable future requirements for enhancing the management, conservation and sustainable development of forests.

National Forestry Policy

In 1977, the National Forestry Policy was accepted by the National Land Council (NLC). It was endorsed by the NLC on 19 April 1978; currently it is being implemented by all the states in Peninsular Malaysia. The objectives of this policy are also being implemented in Sabah. In Sarawak, the Forest Policy was approved by the Governor-in-Council in 1954. It has very similar provisions to the National Forestry Policy, which has remained the basis for forestry practices.

The forestry sector has been subjected to several significant changes that are consistent with global needs for sustainable forest management (SFM) and development. The main purpose of forest management has shifted from solely timber production to multiple values in terms of goods and services and the protection of the environment.

Inherent in the formulation of comprehensive forest management, conservation and development approaches are implicit necessities to address the challenges faced by the forestry sector. Hence, the National Forestry Policy 1978 was revised in early 1992 and subsequently endorsed by the NLC on 19 November 1992.

The revision of the National Forestry Policy 1978 was necessary to strengthen the management, administration and development of the forestry sector further. In this context, the National Forestry Policy 1978 (revised 1992) includes provisions for:

(i) The judicious implementation of the National Forestry Act 1984.

(ii) The establishment of forest plantations, including high-quality timber plantations with the active participation of the private sector.

(iii) The involvement of local communities, especially those living near forest fringes, in agroforestry through the planting of forest fruit trees to conserve forest resources.

(iv) The production of non-wood forest products (NWFPs), in particular bamboo and rattan.

(v) The development of additional forest recreation facilities for ecotourism.

(vi) The conservation of biological diversity.

(vii) Special scientific values, which involves setting aside specific areas for the purpose of scientific studies.

(viii) International technical collaboration aimed at fostering closer international cooperation in the quest to achieve SFM.

The main objectives of the National Forestry Policy 1978 (revised 1992) are to:

(i) Conserve and manage the nation's forest based on the principles of sustainable management.

(ii) Protect the environment, to conserve biological diversity, genetic resources and to enhance research and education.

The salient features of the National Forestry policy 1978 (revised 1992) include the following:

(i) To dedicate as *Permanent Reserved Forest (PRF)* sufficient areas strategically located throughout the country, in accordance with the concept of rational land use. The PRF will be managed and classified under four major functions:

  (a) **Protection Forest** for ensuring favourable climatic and physical conditions in the country; the safeguarding of water resources, soil fertility, environmental quality, preservation of biological diversity and the minimization of damage by floods and erosion to rivers and agricultural lands.

  (b) **Production Forest** for supplying all forms of forest produce (in perpetuity and at reasonable rates) that can be produced economically within the country and are required for agricultural, domestic and industrial purposes, and export.

  (c) **Amenity Forest** for the conservation of adequate forest areas for recreation, ecotourism and public awareness.

  (d) **Research and Education Forest** for the conduct of research, education and the conservation of biological diversity.

(ii) To manage the PRF in order to maximize social, economic and environmental benefits to the nation and its people in accordance with the principle of sustainable management.

(iii) To implement a program of forest development through forest regeneration and rehabilitation operations in accordance with appropriate silvicultural practices.

(iv) To promote efficient harvesting and utilization within the production forest for maximum economic benefits from all forms of forest produce, to stimulate the development of appropriate forest industries commensurate with the resource flow and to create employment opportunities.

(v) To promote the planned development of forest industries towards the production of value-added finished and semi-finished products for local consumption and export.

(vi) To encourage aggressive "bumiputra" (indigenous people) participation in the field of wood-based industry in compliance with the government policy.

(vii) To establish forest plantations of indigenous and exotic species to supplement timber supply from the natural forest.

(viii) To promote active local community involvement through various contracts in forestry development projects and to maintain their involvement in agroforestry programs.

(ix) To increase the production of NWFPs through scientific and sustainable management practices to supplement local demands and the requirements of related industries.

(x) To undertake and support a comprehensive program of forestry training at all levels in the public and private sectors in order to ensure an adequate supply of trained human resources to meet the requirements of forestry and wood-based industries.

(xi) To encourage private investment in forest development through the establishment of forest plantations on private lands.

(xii) To undertake and support intensive research programs on forestry and forest products aimed at enhancing maximum benefits from the forest.

(xiii) To promote education in forestry and undertake publicity and extension services in order to generate better understanding by the community on the multiple values of forests.

(xiv) To provide for the preservation of biological diversity and the conservation of areas with unique species of flora and fauna.

(xv) To develop a comprehensive program in community forestry to cater to the needs of rural and urban communities.

(xvi) To set aside specific areas for the purpose of forestry education and other scientific studies.

(xvii) To foster closer international cooperation in forestry in order to benefit from the transfer of technology and exchange of scientific information.

National Forestry Act

To ensure effective forest management implementation, various forestry enactments and ordinances have been formulated and enforced by the respective state authorities since 1910. The legislation was further standardized and strengthened in areas of forest management planning and forest renewal operations with the endorsement of the National Forestry Act and the Wood-Based Industries Act by parliament in 1984. Currently, these two acts are being enforced by all the states, especially in Peninsular Malaysia.

In tandem with the revised National Forestry Policy and to safeguard forest resources further from illegal logging and timber theft, the National Forest Act 1984 was amended in 1993 to include more stringent penalties for such forest offences, which includes a mandatory jail sentence of at least one year. Among other provisions, the amended National Forestry Act 1984 has increased the penalty for commissioning the illegal felling of trees from a maximum fine of RM 10 000[6] or imprisonment for a term not exceeding three years to a maximum fine of RM 500 000 and imprisonment for a term, which shall not be less than one year but shall not exceed 20 years. The amended act has also enacted provisions for the police and armed forces to undertake enforcement and surveillance of forest activities, especially in curbing illegal logging, encroachment of forest areas and timber theft.

Strategies and programs

In line with the National Forestry Policy, the strategies applied in Malaysia, specifically in Peninsular Peninsular, include the following:

(i) Ensure the management of the PRF follows the Malaysian Criteria and Indicators (MC&I) for SFM.

(ii) Evaluate the status of wood and non-wood forest resources.

(iii) Ensure the implementation of silvicultural treatment and reforestation in the logged-over PRF.

(iv) Enhance the level of public awareness on the roles of forests.

(v) Encourage the establishment of forest plantations by individual or private companies.

(vi) Identify the biological diversity in the PRF.

[6] US$1 = RM 3.77

(vii) Prepare and implement a biological diversity management system.

(viii) Design agroforestry systems that are economical and can be practised by individuals and the private sector.

(ix) Develop ecotourism programs, forestry museums and infrastructure and educational facilities in the forest recreation areas.

(x) Develop Information Technology (IT) and Knowledge-Forestry (K-Forestry) in line with the Information Technology Strategic Plan of the Forestry Department.

(xi) Optimize the use of wood and non-wood forest resources.

(xii) Prepare the needed physical infrastructure.

(xiii) Enhance surveillance for the prevention of illegal logging and illegal settlement in forest areas, especially in the PRF.

(xiv) Study and strengthen the provisions contained in the National Forestry Act and the Wood-Based Industries Act.

(xv) Provide adequate training for the staff and private sector involved in the implementation of activities in SFM.

Hence, the forestry programs, projects and activities undertaken in Malaysia include:

(i) Formulation and implementation of forest management plans that take into account the negative impact of management activities on the environment and the forest ecosystem, and meet the changing societal needs. In this regard, a national forest inventory is carried out for all forested lands every 10 years to determine the status and composition of the forest resources to support more effective forest management planning.

(ii) Implementation of the MC&I for SFM.

(iii) Assessment of the implementation of the proposals for action of the Intergovernmental Panel on Forests and Intergovernmental Forum on Forests (IPF/IFF).

(iv) A continuous forest inventory carried out on permanent and temporary plots on a yearly basis to supplement and update the information collected in the national forest inventory that will also further enhance management planning.

(v) A pre-felling inventory carried out in all areas of the PRF earmarked for harvesting to determine the most effective forest management and silvicultural systems to be applied; prescribe priority pre-felling silvicultural operations for natural regeneration through the retention of adequate residual trees of advanced growth.

(vi) Growth and yield studies for the refinement of the growth and mortality rates of forests harvested under the various cutting regimes.

(vii) Forest mapping using GIS and remote sensing.

(viii) Change detection using remote sensing techniques to monitor changes that occur within the forests and their surrounding areas, and to classify forest and vegetational strata.

(ix) Resource capability classification to refine the existing forest classification for enhancing SFM practices; establishing forest plantations to alleviate the pressure to overharvest the natural forest.

Conclusions

The National Forestry Policy and other administrative policies of the Forestry Department, Peninsular Malaysia, are being revised from time to time to match prevailing conditions and requirements and to improve the management, conservation and sustainable development of forests.

A REVIEW OF FOREST POLICY IN NEPAL

Swoyambhu Man Amatya

Current situation of forest resources and the forestry sector

Nepal is situated between India and China, and extends over an area of 14.7 million ha. Administratively, Nepal is divided into five development regions and 75 districts. Physiographically, the country is divided into five regions, according to altitude (the Terai, the Siwalik, the Middle Mountains, the High Mountains and the High Himal). Of the total land area, forests cover 4.27 million ha (29.0 percent) and shrub covers 1.56 million ha (10.6 percent) (DFRS 1999). The annual rate of forest depletion in the Terai was 1.3 percent from 1978/79 to 1990/91. In the hilly area, forest areas have declined at an annual rate of 2.3 percent from 1978/79 to 1994. In the whole country, from 1978/79 to 1994, the forest area has decreased at an annual rate of 1.7 percent (DFRS 1999). This trend indicates the continuing pressure on forest resources, especially in the Terai. Forest depletion has caused serious problems including decline of agricultural productivity and environmental degradation. The Ministry of Forests and Soil Conservation has estimated the annual cost of deforestation to be about 11 billion Nepali rupees[7] (MFSC 2000).

For conservation and management purposes, forests are classified into five categories.

- government-managed forests;
- community forests;
- leasehold forests;
- religious forests; and
- private forests.

In the case of government-managed, community, leasehold and religious forests, the land is owned by the state but management and utilization are assigned to different entities. In private forests, land and tree ownership rests with private entities.

Current and emerging issues, trends and problems

Currently the emerging issues in Nepal's forestry sector are in community and leasehold forestry. Community forests are part of the national forests handed over to user groups to conserve, manage and utilize for the basic needs of the community. Community forestry in the hills, in most cases, is functioning well and communities are deriving various benefits. Conversely, it has not been functioning well in the Terai. Leasehold forests are leased to private individuals, cooperatives, institutions and commercial enterprises. An emerging issue in this type of forest is that local communities should permit leasing of forests to poor and disadvantaged groups.

In addition to these issues, the forests of Churia, Terai and Inner Terai are very fragile. They need to be conserved. In order to check the depletion of forest resources, to improve conservation and achieve sustainable forest management (SFM), especially in the Terai, Churia and Inner Terai, the government is trying to introduce a new forest management concept with the following major elements:

[7] US$1 = 80 NPR

- contiguous large blocks of forests will be demarcated, gazetted and managed as national forests;
- a collaborative forest management system will be applied to improve forests and biodiversity;
- barren and isolated forestlands will be made available to communities as community forests; and
- all forests will be managed with people's participation.

The government views people's participation as important for the management of the Terai, Churia and Inner Terai forests. Community forestry operational plans will have to be prepared and forest products will be utilized based on the annual increment and according to prescribed guidelines related to the marketing of forest products. The government is willing to provide 25 percent of the income derived from government-managed forests to local governments (Village Development Committee and District Development Committee). The remaining 75 percent will be collected as government revenue. It has been proposed that the government will collect 40 percent of the earnings from community forests for program implementation. Community forest user groups have raised this revenue sharing mechanism as a major issue in the management of forests of the Terai, Churia and Inner Terai.

In Nepal, forestry legislation used to be formulated to resolve past problems related to protection rather than to meet present and future needs for better management and increased production. As a result, legislation that included several major acts and associated rules was not in accordance with the spirit of the new forestry sector policy. This discrepancy was particularly noticeable in the case of community forestry. Policy is now very clearly oriented towards 'people's participation' in contrast to the previous legislation such as the Forest Act of 1961, which originally aimed to prevent villagers from entering forests.

The Nepal National Forestry Policy of 1976 was the first document indicating the government's intentions concerning the use and management of forest resources. The National Forestry Plan was developed by the Ministry of Forests and Soil Conservation. In the Seventh Five-Year Plan period (1985 to 1990), the National Planning Commission adopted the policies of the plan and developed them further. The objectives were to meet the people's need for forest products, including timber, fuelwood, and fodder; to maintain or restore the ecological balance through reforestation and watershed management; and to derive maximum economic gains from forest products by promoting the export of medicinal plants. The main policies of the Seventh Five-Year Plan were to supply the needs of daily life, including fuelwood, timber, fodder and grass, to carry out afforestation on a large scale, and to protect afforested areas, all by encouraging people's participation.

Master Plan for the Forestry Sector

The Master Plan for the Forestry Sector (MPFS 1989) prepared by the Ministry of Forests and Soil Conservation and approved by the government in 1989 provides a 25-year policy and planning framework. The long-term objectives of the forestry sector as set out in the plan include the following:

- to meet the people's basic needs for forest products on a sustained basis;
- to conserve ecosystems and genetic resources;
- to protect land against degradation and other effects of ecological imbalance; and
- to contribute to local and national economic growth.

The Master Plan for the Forestry Sector guides forestry development within the comprehensive framework of six primary and six supportive programs to achieve its objectives. The main features of the Master Plan lie in an integrated and program-oriented approach to forest and watershed management. This program approach was a turning point in the history of Nepal's forestry sector policy.

Both the Eighth (1992 to 1997) and the Ninth Five-Year Plan (1997 to 2002) prepared by the National Planning Commission, followed the Master Plan to continue its main thrust of people's participation in forest management. The main objective of the Ninth Five-Year Plan is poverty alleviation by providing economic opportunities for poor people and encouraging their participation in development activities.

The Forestry Sector Policy 2000

Recently, the Ministry of Forests and Soil Conservation has formulated a revised forestry sector policy (MFCS 2000). This is an updated version of the Master Plan and subsequent amendments. The revised policy outlines development strategies and programs and funds required to develop the forestry sector. The policy is also recognized by the Agricultural Prospective Plan, the Nepal Environmental Policy and Action Plan and the National Biodiversity Action Plan.

Tenth Five-Year Plan (2002-2006)

Currently, the National Planning Commission is formulating the Tenth Five-Year Plan (2002-2006). Intensive forest management and poverty reduction are the main thrusts in forestry (Tenth Five-Year Plan, 2001). Areas of legislative reforms have been identified with emphasis on removing the anomalies of the current legislation, especially by forming a committee that represents only poor people within the community forest user groups, handing over leasehold forests to the poorest of the poor and recognizing Churia areas as protected forests for management.

Process and mechanisms of policy formulation

Policies related to forests are formulated following a specific procedure. Concerned departments produce policy outlines and forward them to the ministry for debate. The ministry then seeks the views of its senior staff and a draft policy is prepared. The concerned ministry then sends the draft policy for an expert review to the Ministry of Law and Justice. After finalizing the draft policy, the concerned ministry sends it to parliament. A sub-committee of the parliament discusses the draft and sends it to parliament for debate. Once it is approved by parliament it appears in the Gazette as legislation.

In Nepal, a forum known as the Forestry Sector Coordination Committee allows foreign partners working in governmental and non-governmental organizations, concerned individuals from various organizations such as the Federation of Community Forestry Users Groups, to provide their expert opinions before forest policies are formulated and published in the Gazette.

Institutional arrangements

Nepal has diverse institutional arrangements from individual households through community, government, semi-government and non-government organizations to private enterprises for the use and management of forest resources. These institutions have their comparative advantages in different management/use roles under different ecological, physiographic and socio-economic conditions. If appropriate roles are allocated to these institutions on the basis of comparative advantage, the use and management of forest resources can be more effective, efficient and sustainable.

There is sufficient capacity within the country for policy formulation and implementation. The policy is implemented by formulating development programs. A concerned organizational set up that has functional responsibility, helps to implement programs efficiently. In the Ministry of Forests and Soil Conservation (MFSC), a legal section helps to formulate policy matters and provides expert opinions on draft legislation and legal interpretation. However, there is no separate wing in the ministry that exclusively looks after policy formulation and analysis.

Within the Ministry of Forests and Soil Conservation a number of steps have been taken concerning organizational reforms. The process of organizational reforms is still ongoing. The Ministry of General Administration is responsible for such a change. According to this ministry, one of the reasons for constant reforms is to maintain cost-effectiveness and efficiency.

The Ministry of Forests and Soil Conservation has sufficient skilled human resources for policy formulation and implementation. Most available human resources have managerial capacities as well. However, the capacity for monitoring and evaluating the effects and effectiveness of forest policies needs further strengthening. There is no separate institutional arrangement that deals with this aspect.

Implementation of forest policies and impacts

The Ministry of Forests and Soil Conservation is responsible for implementing policies and monitoring their impact. In its annual plan, the ministry reports to the National Planning Commission on policy application in the field and the mitigation of problems. Policy coordination among sectors is the responsibility of the government, especially of the National Planning Commission. The ministry initiates any necessary changes in legislation, and implements them in the field. Presently, the government is considering a review of the Master Plan for the Forestry Sector.

Conclusions and recommendations

Because of the complexity of the forestry sector, a holistic approach is needed to translate the forest policies into actions. As forest policies are multi-dimensional and interrelated, a mix of strategies is required. Land-use planning, increased production of fuelwood, timber, fodder and non-wood forest products, effective harvesting and distribution, reduction in consumption and promotion of private forestry are some of the key points that have a direct bearing on achieving SFM. According to the current government policy, Nepal will promote community forestry in the midhills where forests are crucial for stabilizing soils and protecting watersheds. Equally necessary is the issuance of legislation conducive to the implementation of each program. The allocation of sufficient financial resources guarantees effective program implementation.

In reviewing the forest policies of Nepal, Bajracharaya and Amatya (1993) concluded that the different policy guidelines provided by the major plans at the national level were adequate and correct. However, these national-level policies were not translated adequately into regional and program strategies. Most importantly, the broad policies were not translated into operational tactics. The time has come to act rather than formulate yet another set of policies.

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PAKISTAN—A NATIONAL FOREST POLICY REVIEW

Bashir Ahmed Wani

Introduction

Natural forests cover less than 5 percent of the total land area in Pakistan. Notwithstanding the low per capita forest area, the demand for services (e.g. watershed protection) and products (e.g. construction wood and fuelwood) is increasing. Fifty-one percent of the land area is arid (rainfall below 250 mm per year) and supports bushes and grasses used by livestock, particularly goats and sheep, which are the mainstay of people who live in this region. The semi-arid areas (250-750 mm rainfall per annum) cover 35 percent of the land area. This area is used mainly for rainfed agriculture. Only 12 percent of Pakistan (Himalayas, Karakuram and Hindukush mountain ranges) is sub-humid. It is in this area that natural coniferous forests are located, forming the watersheds of the Indus and Jhelum river system.

Overview of recent national forest policies

Forest policies that have guided forest management and influenced the development of forest resources are:

1884 The first forestry policy resolution under the colonial British Government when forests occupied more than 25 percent of the total land area and livestock populations were low. There was very little urbanization and wood consumption was also very low.

1955 After independence in 1947, the first forest policy of the Government of Pakistan was announced. This policy defined the objectives of forest management based on the concepts of sustained yield; it also contained provisions for the preparation of management plans; fencing of forests; the establishment of wood-based industries; creating employment opportunities; the setting aside of 10 percent of the area for irrigated plantations; establishing linear plantations and a trained forest service; powers to control land use for soil conservation; the protection of mountain habitats for wildlife; and the management of private forests through legislation.

1962 The merger of provinces into West Pakistan and other influences led to the Forest Policy statement of 1962. Major policy thrusts included: commercial forest management; the transfer of state lands to the forest departments; the rights of local people; the appointment of forest magistrates; entrusting timber harvesting to forest departments or autonomous bodies; growing of industrial wood; supplying saplings to the public at nominal rates; plans for coastal areas; planting of floodplains; transferring land strips along railways, highways and canals to the forest departments; research on afforestation in arid zones; selection of fast-growing species for saline and waterlogged areas; legislation for the minimum number of trees on farmlands; and the promotion of farm forestry via extension services.

1975 In 1975, attention focused on diminating rights of local people to forests; artificial regeneration using high quality growing stock; establishing forest industries near forests; using fast-growing species; providing adequate irrigation water; transferring linear plantations to forest departments; promoting farm forestry; and entrusting the management of private forests to forest owners' cooperatives.

1980 The Forest Policy guidelines issued in 1980 were part of the National Agriculture Policy. They included a greater thrust on planting fast-growing tree species, forest harvesting based on proper science, the scientific management of wilderness, production of medicinal herbs etc.

1991 By 1991, forest policy concerned: Integrated use of forest resources; long-term loans at concession rates and insurance for tree crops; leasing of selected public lands to interested groups; artificial regeneration; logging by the public sector; the establishment of extensive road networks to facilitate extraction, the mechanization of forest operations; the establishment of regional research institutions; encouraging private game reserves; collaborative wildlife management through the sharing of revenues from trophy hunting; the promotion of social forestry and afforestation on degraded and marginal lands; the involvement of NGOs and voluntary organizations; tree plantations to mitigate pollution; legislation to protect wildlife habitats and wetlands; a GIS-based inventory and monitoring system; watershed planning and coordination as a federal function.

Analysis of past forest policies

First policy review (1992)

The first review of the policy statements of 1955, 1962 and 1980 was carried out by Mr. Abeedullah Jan, Inspector General of Forests, and published in the book *Review and Analysis of Forest Policies of Pakistan 1992*. The main problems regarding the implementation of various forest policies were attributed to a lack of funds to implement forestry programs, jurisdiction problems over privately owned forests, low priority of the forestry sector compared to agriculture, competition between agriculture and forestry for land and water, resistance from people to controlled grazing, priority for non-tree land use, lack of public cooperation and lack of funds and facilities for the forest department staff (see Annex 1). The publication also describes the Forest Policy of 1991.

Second policy review (1998)

The most recent review of forest policies in Pakistan was carried out by The World Conservation Union (IUCN)—Pakistan and the International Institute for Environment and Development (IIED) in collaboration with the Government of Pakistan in 1998. This report "Changing perspectives on forest policy" was based on a consultative process involving a multi-disciplinary team of experts from local institutions. It provides insights into the impact of a rapidly increasing population on the country's ecosystems, climate change, desertification and biodiversity. The study recognizes that forestry in Pakistan can no longer be considered in isolation from other sectors and has to be managed for a broad spectrum of goods and services. The study concludes that because of the multiplicity of interests and demands on national forests, policies cannot be formulated without considering the perspectives of all stakeholders. The report highlights the strengths and weaknesses of past policies, investigates the lessons learnt from different projects and programs and provides a good foundation for future policies to be built on.

The study identified the following constraints to improving forest policy in Pakistan:

Entrenched forest department attitudes, which use a "command-and-control" approach; the department is wary of the development-agent/monitoring role, which will be required in the future. This is an exacerbated bureaucratic system, with a lack of incentives and training in the new areas.

Fiscal deficits, putting a strain on departmental budgets.

Weak reconciliation of social and environmental goals with the current formal departmental goal of revenue maximization.

Lack of accountability.

Inadequate information on forests and on stakeholders' needs and capacities.

Lack of established fora for review and debate of policies and experimental initiatives.

Lack of local-level governmental institutions that could reconcile top-down policy initiatives and implement bottom-up participatory projects.

Weak relations between the state and civil society (NGOs, communities and their representatives.

Weak integration of farm forestry and import policies into forestry policies, and consequently a continuing and overriding pressure to use the small remaining natural forests for timber production.

Current constraints for conducting policy reviews in Pakistan

- Of the two policy reviews, one was conducted solely by Mr. Abeedullah Jan and the other by an NGO—IUCN Pakistan.
- Policy review processes are not institutionalized and are not a government priority. Policy reviews have been conducted in an *ad hoc* fashion.
- Guidelines on periodic policy reviews are unavailable and policies are influenced by the frequent changes in governments.
- Mechanisms for following standard procedures and steps for conducting policy reviews do not exist.
- Since the implementation of forestry programs and forest management are a provincial matter, the federal government that is responsible for policy formulation comes into conflict with provincial interests concerning:

  Levying of taxes on inter-provincial movement of timber.

  Upstream–downstream compensation for watershed values.

  Demand for cash compensation in lieu of a ban on timber harvesting in protected areas.

  Conflict of interest between various federal agencies (e.g. game hunting).

  Conflicts between the energy sector and biodiversity conservation (support for the construction of dams for inexpensive electricity against opposition from environmentalists who want to conserve the mangrove ecosystem).
- The lack of capacity to incorporate the Convention on Biological Diversity (CBD) and the UN Framework Convention on Climate Change (UN FCCC) into forestry policy. Biodiversity conservation and the management of forests as carbon sinks are not fully reflected in past policies.
- Forest policies are prepared in isolation from other sectors (e.g. wildlife, fisheries, tourism, population planning, energy, etc.). The isolation occurs at both the policy formulation and implementation levels.
- Capacities to incorporate forest certification into forest policy are inadequate.
- Lack of capacity and understanding to include international trade in forest products in the forest policy.

Issues/constraints for sustainable forest management (SFM)

- There is no consensus on the definition of SFM.
- There are no criteria and indicators for SFM, specific to the situation in Pakistan.
- Lack of adequate financial resources for developing the forestry sector.
- The existing forest classification is based on a 1935 description and classification. There is a need to undertake ecosystem-based classification according to the accepted international system.
- Biodiversity concerns are not incorporated in forest management plans.
- Stakeholders such as local communities, other government departments, NGOs and biodiversity specialists are not involved in the preparation of management plans.
- There is no policy on invasive and exotic fast-growing species.
- There is a need for a balanced approach towards the centralized Forest Act (1927) and the most decentralized revised provincial acts.
- Extra-sectoral influences are not considered in formal forest policies.

Topics for the EC-FAO Partnership Programme

- Development of criteria and indicators for SFM.
- Support for reviews to assemble fragmented forest legislation into a uniform format in accordance with international conventions.
- Strengthening of the Inspector General of Forests' Office and provincial forest departments to conduct policy reviews, implementation and monitoring.
- Assistance to formulate guidelines and procedures for conducting forest policy reviews.
- Support to conduct impact assessments for all important forest projects and past policy statements.
- Exchange of information and printed material related to forest policy reviews in other countries of the Asia-Pacific region.

Improving policy at national, provincial and local levels

The 1998 policy review recognized the need to decentralize the formulation of the forest policy and to involve provincial and local officials in the process; until then this had been the main domain of the federal government. Federal policies should set the framework for securing forest goods and services at the national level, and the basic principles and criteria for SFM. The federal level also needs to deal directly with international protocols and the relationship between domestic forest production and trade, to achieve efficiency. The federal level needs to have authority over nationally important forest services such as biodiversity and major watersheds. This will require a broad monitoring system of forest stocks, flows and demands, which would draw upon provincial forest resource accounting systems. According to this review the driving force for the future federal policy formulation should be a healthy interaction between the Inspector General of Forests' Office and a new forum for multi-stakeholder national forest coordination.

The provinces should focus on aspects of forest investment and management, including the preparation of working plans, harvesting, sale, afforestation, credit, research and training. Provincial multi-stakeholder forest fora should be instituted as the primary means of reviewing policies. These should be linked to village- and district-level organizations involved in forest management. Provinces should institute forest resource accounting systems to provide

information on forest stocks. This study also demonstrates the advantages of involving local communities and their organizations in forest management.

In summary, Pakistan needs:

Multi-stakeholder forest fora at national, provincial and local levels.

Policies that reconcile revenue generation with the need for social and environmental benefits derived from forests (particularly for rural livelihoods).

A detailed analysis of the barriers to imports of wood and wood products.

Clarifying the goals of forest departments, as a prerequisite to decentralization, to.inform the national and provincial forest fora and to provide inputs for policy revisions.

A considerable expansion of joint forest management activities, with local communities and private sector groups having clear rights of use, and with extensive forest department involvement.

Greater support for farm forestry to supply timber and generate rural income.

Strengthening community and farmer organizations to ensure they can practise sustainable forestry.

Reorganizing and strengthening forest authorities to support the above.

Follow-up activities in response to policy review recommendations

The 1998 policy review provided a foundation to revise the National Forest Policy in Pakistan. As a follow up to this policy review, the Federal Forestry Board (FFB) has been revived with the mandate to review issues related to forest policy and management. The FFB comprises representatives from provincial forest departments, NGOs, civil society and other stakeholders who directly or indirectly influence forest management. The FFB held two meetings during 2001 and presently it is monitoring the implementation of federal cabinet policy guidelines related to forest harvesting on a sustainable basis through forest management plans. The new forest policy incorporates the suggestions made in the recent policy reviews through a consultative process. However, there is a need for forest policy reviews to be institutionalized and to develop a permanent mechanism for this purpose both at the federal and the provincial levels.

ANNEX 1

FOREST POLICY 1955

Objectives	Methods proposed	Results achieved	Problems
Preserve and utilize forests for the benefit of the nation.	High priority for forestry in national development plans.	High priority was not given.	Adequate funds were not provided.
Sound management in privately owned forests.	Government legislation, adequate staff and financial assistance	Partially achieved. Control of private ('Guzara') forest was transferred to the Forest Department in Hazara (NWFP) whereas in Rawalpindi District (Punjab) technical advice was provided to Guzara committees headed by Deputy Commissioners.	Jurisdiction.
Soil and water conservation at vulnerable sites.	Obtain powers to control land use.	Forest Act (1927) and Chose Act 1900 provided adequate powers but were not used to the desired extent.	Responsibility of the Soil Conservation Dept. Large numbers of small farmers involved and lack of funds
Public support for forest conservation.	Education, motivation and demonstration.	Tree plantation campaigns were arranged with available resources.	Financial and organizational constraints.
Classification of state forests.	Classify on the basis of utility and objectives.	Task accomplished	-
Emphasis on the commercial role of forests.	National integrated economic policy.	Not done (except through classification).	Productive forests are located in different provinces i.e. NWFP, AJK and NA, which derive maximum financial return from forests.
Increase forests on irrigated lands.	Reserve 10 percent of colony lands/watershed areas for trees.	Partially implemented. Only 3 percent of land provided for tree plantation.	Priority always given to agriculture. Spare water not available.
Increase linear plantations.	Raise trees on canal sides, along railways and on wastelands.	Partially done. Roadsides and canal sides are still under the control of C&W and irrigation departments in Sindh.	Departments compete for jurisdiction on land.
Increase community plantations.	Support cooperative village plantings.	Not achieved	Cooperative spirit in agriculture poor.
Work forests on a sustained yield basis.	Manage all forests under approved working plans.	Achieved to the following extent: NWFP - 66 percent Punjab - 88 percent Sindh - 44 percent Baluchistan - 14 percent	Low only in Baluchistan where plans are not needed because tree growth is sparse.
Long-term and scientific management of forests.	Properly constituted and trained forest service.	Service exists but it is relatively small.	Financial constraints.
Maintain wildlife in forests.	Provide protection, living space, etc. to wildlife.	Law enacted and some protected areas designated.	Financial constraints, low priority and low expertise.

AJK = All Jammu and Kashmir
NA = Northern areas
NWFP = North West Frontier Province

A REVIEW OF FORESTRY POLICIES IN THE PHILIPPINES

Dolores R. Catindig

Background on basic policies

The Philippine Constitution of 1987 particularly Article II, Sec. 16, Article XII, Sec.1-6 and Article Xlll identified the environment and natural resources as among the major concerns of the government. Forest management in the country is governed by Presidential Decree No. 705, as amended, otherwise known as the "Revised Forestry Code of the Philippines". This forestry code outlines the policies of the State in the management of the forest and its resources.

The Philippine Sustainable Forest Management Strategy (PSFMS) provides the framework for all forestry programs, projects and activities. This framework is consistent with the provisions of the Philippine Constitution and supports the Local Government Code of the Philippines (R.A. 7160), the National Integrated Protected Area System Act (NIPAS Act), and the Indigenous People Rights Act (IPRA Law). It is also supportive of the government's commitment to relevant international agreements and covenants. Executive Order No. 263 (E.O 263) or Community-Based Forest Management (CBFM) is the national strategy for ensuring the sustainable development of the country's forest resources.

Major forest policies studied/reviewed (1995-2001)

Subject/area	Main results/findings	Result of review	Impact
A. Review of the Philippine forest policies in the following areas: Forestry & forest resources Forest land uses Forest sustainability vis-à-vis CBFM Institutional issues and concerns Resource economics LGU issues	There is an opportunity and need to craft and package a "simplified and comprehensive Philippine Forestry Policy" in one document No legal impediments to using the WEM framework and the CBFM for forestry planning implementation and monitoring of forestry programs Consider the forestry system and other sectoral systems as integral components of the total sustainable development system Population growth will continue to increase the pressure to use forest areas for non-forestry uses Sustainable forestry, which is infinitely superior to a total logging ban, should be pursued Forest and other land use are in disarray due to the absence of comprehensive national land-use policy Inadequate human resource skills in government, LGUs, POs and NGOs Loose partnership and poor collaboration between the government and LGUs	Formulated a comprehensive policy which is labeled as the Philippine Forestry Policy 2001 (PFP 2001) fully embracing the WEM framework Crafted 14 Forest Operational Policies addressing the six major areas of concern (see Annex A)	Currently under deliberation by the FMB Executive Committee and the DENR Policy Technical Working Group

Subject/area	Main results/findings	Result of review	Impact
B. Forest Plantation Development Integrated Forest Management Agreement (IFMA)	The requirement to subject a project for the Environmental Impact Assessment (EIA) system should be simplified. Re-alignment of the policy to conform with the existing laws on NIPAS, IPRA, Local Government Code and CBFM	A simplified EIA system The new policy takes into consideration the existing laws on NIPAS, IPRA, Local Government Code and CBFM	Facilitates the approval of forest plantation applications Communities affected by IFMA project are consulted.
C. Government share for the use of forest resources	Improper pricing for the use of forest resources The "rental system" applied for use of forestland and its resources no longer conforms with the Constitution.	Economic instruments were developed and adopted.	Proper pricing for the use of forestland and its resources.
D. Forest charges	The price data being submitted by the regional offices as a basis for the computation for forest charges differ considerably.	Developed a system that integrated and improved price-monitoring activities.	Price monitoring reports have improved and facilitated the determination of rates of forest charges
E. CBFM	Programs and policies related to social forestry projects and other community or people-oriented programs are fragmented.	Executive Order 263 was promulgated integrating all people-oriented projects.	Easy supervision of the program.

DENR = Department of Environment and Natural Resources; FMB = Forest Management Bureau; LGU = local government unit; PO= People's organization; WEM = Watershed Eco-system Management

Philippine forestry: Policy reviews

The main purpose of policy reviews is to assess the effectiveness of a certain policy with regard to attaining its objectives and to determine whether a policy is to be maintained, revised or abolished. Forest policy reviews in the Philippines can be described as being reactive in the sense that often reviews are conducted only in response to issues that arise in the course of implementing a policy or project. Policy reviews are not systematized within the DENR and not conducted periodically. Some of the reasons can be attributed to weak monitoring and evaluation of policies, which leads to information gaps. Also feedback mechanisms are absent, which constrains better-quality policy reviews. Another reason is related to funding, as only limited funds are programmed for policy studies. Capabilities to conduct policy research and analysis are rather weak.

Information sources for policy reviews include the different programs and projects of the DENR, other government institutions, accomplishment reports, private research groups conducting policy work in collaboration with the DENR and to some extent, the Internet.

Opportunities for conducting policy reviews include the proposal for the development of an information system structure within the DENR, which foresees the provision of the required data for the department's planning and decision making. The proposal entitled "Forestry Statistical Information System" has been approved for funding by the International Tropical Timber Organization (ITTO). It is most likely to be implemented within this year. In the area of capacity building, the National Forest Programme Facility of the FAO could also provide important support.

Sustainable forest management (SFM) in the Philippines

Issues

The Forestry Code is still pending in Congress due to the unresolved issue of the total logging ban as against selective logging.

Inadequate funds to sustain forestry programs. Many aspects detailed in the Master Plan for Forestry Development have not been addressed due to funding constraints.

Failure to establish forestry as a viable land-use option compared to other land uses.

Pressure exerted by a fast-growing population resulting in the conversion of forest areas to non-forest uses.

Constraints

Lack of data/information that are vital to resource planning and decision making.

Inadequate funds to sustain forestry programs.

Weak human resource skills, especially in the field offices, to implement forestry programs and projects.

Weak enforcement of forestry laws and regulations.

Challenges for SFM

To empower marginal upland communities to increase their income from the forests and thus alleviate poverty.

Mainstreaming collaborative efforts between LGUs, the private sector and the government in SFM. This means equipping LGUs with the technical capabilities in forest conservation, development and management.

Increase the attractiveness of investing in forest plantations through incentives.

Capacity building to address emerging aspects such as urban forestry, carbon sequestration, ecotourism, collaborative forest management between the government and the LGUs, product certification and criteria and indicators (C&I).

Opportunities

The export ban for wood coming from the natural forests, development of appropriate C&I for forest management, plans to pursue certification and ecolabeling, and adopting the WEM framework in planning and policy formulation are some of the opportunities for SFM in the Philippines

Key areas/topics for policy studies for EC-FAO Partnership Program support

1. Incentives for private capital flows into forestry to include tenure issues, security of forest resources, taxation, product development, marketing, financing schemes etc.
2. Development of C&I.
3. Forest certification.
4. Review of export restrictions.

Annex A

Operational policies proposed under the Philippine Forest Policy 2001:

1. A basic forestry code that will repeal and replace the existing Revised Forestry Code of the Philippines (P.D. 705, as amended) entitled "Sustainable Forestry Development Act".
2. An administrative order adopting the WEM framework and the PFP 2001 as implementing guidelines.
3. An administrative order re: preparation of a comprehensive manual of procedures for forest management planning using the watershed and ecosystem management framework.
4. A joint memorandum circular with other concerned government departments and offices and the private sector re: development of 25-year physical framework plans for major river basins in the Philippines.
5. Amendment to the rules and regulations governing the implementation of the CBFM program.
6. Amendment to the existing policy in the issuance of Private Land Timber Permit and Special Private Land Timber Permits.
7. Revision of the existing policy on the regulation of forest tree seed production, collection and seed disposition.
8. Amending, redefining and expanding some delegated functions and authorities to regional and field officers to increase efficiency in the implementation of the CBFM program based on the WEM approach.
9. Amendment of the existing policy to reconstitute the decentralized function of the Ecosystem Research and Development Bureau (ERDB) of the DENR into a strengthened central forest research institution to provide scientific and technological support for national policy and program planning, implementation and monitoring.
10. Amendment of an existing policy re: strengthening the capacity and capability of the Human Resource and Development Service of DENR to develop and maintain personnel resources in sufficient numbers and qualification to operate DENR's forestry programs and projects effectively.
11. Amendment of existing policy re: unification of all IEC and extension functions and strengthen integrated IEC-Central Office programs and projects.
12. Amend, streamline and simplify the existing performance monitoring system for DENR programs and projects.
13. Use of resource economics issues, recommendations and discussions as bases of proposals for new policy, administrative orders, and circulars.
14. Institutionalization of the Environmental and Natural Resources Accounting (ENRA) at all levels particularly at the provincial LGU and Sustainable Development Unit levels.

FOREST POLICIES IN SRI LANKA

Sarath Fernando

Background

In 1929, an initial step towards an explicit forestry policy was taken by introducing statements concerning sectoral objectives:

- Providing for self-sufficiency in construction timber and firewood, and also for the export of timber and forest produce.
- Conservation of water supplies, prevention of soil erosion, and coordination of forestry operations, with a requirement for the preservation of indigenous flora and fauna.

Influenced by FAO's declaration on the principles of forestry policy in 1951, the Forest Department introduced comprehensive sectoral policy objectives in 1953. The objectives, which for the most part are still valid today, were to:

- Maintain, conserve and create forests for the preservation and amelioration of the environment, soil and water resources, and for the protection of the local fauna and flora where required for aesthetic, scientific, historical and socio-economic reasons.
- Ensure and increase, as far as possible, the supplies of small wood for agricultural requirements and fuelwood for domestic consumption.
- Maintain, as far as possible, a sustained yield of timber and other forest produce for general housing, industrial, communication and defense requirements of the country.
- Work the forest to the highest possible economic advantage consistent with the foregoing objectives.

Until the early 1980s, forestry was considered to be the responsibility of the state. In 1980, there was a clear policy change when the importance of involving people in forestry development was recognized by the addition of a new statement to the statements made in 1953. Rural communities were to be involved in the development of private woodlots and forestry farms through a program of social forestry.

A draft National Forest Policy was proposed in 1991. The draft policy was based on the principles of conservation as set out in the World Conservation Strategy of 1980 prepared by IUCN. The draft policy had eight statements in the following categories: role of forests in the environment, forestland tenure, forestry and land use, sustainable development, conservation and forest ecosystems, recognition of research and education as priority needs, inter-institutional links, and people and forests.

The draft policy of the Forest Department was put on hold because of the commencement of the preparation of the Forestry Sector Master Plan. During this process a comprehensive policy review was undertaken.

Findings of the forest policy review (1992 to 1993)

The past and prevailing policy objectives and statements have provided the framework for forestry sector development. Despite some deficiencies in the past statements, it should be recognized that many of the statements were relevant at the time they were made. Also, the policy objectives introduced in 1953 were still valid.

The main questions addressed in the review were: how well has the sector performed in relation to the set objectives? and, if the performance has not been satisfactory, why not? A review of past development trends in relation to policy objectives indicated that the sectoral performance had been unsatisfactory.

The national forest resources have diminished greatly in the last five decades. Deforestation and forest degradation have reduced biological diversity and agricultural productivity, and depleted the sources of wood and other products. The overall contribution of forestry to the national economy was much smaller than it could have been. The involvement of rural people and communities in forestry development activities was limited.

Other trends and realities which were identified:

- In 1990, the closed-canopy forest cover was about 70 percent. In 1950, it was 50 percent; in 1956, 44 percent; and in 1992 only 23.9 percent.
- There have been continuing conflicts between forestry and agricultural expansion: "chena" (shifting) cultivation has increased from about 1 million ha in 1956 to 1.2 million ha in the late 1980s. Officially more than 900 000 ha of natural forests have been converted to other land uses as a result of irrigation, settlement, agricultural development and other non-forest development projects.
- There is widespread poverty and landlessness, causing pressure on natural resources.
- The increased demand for wood by households and industries has outstripped the productive capacity of the natural resources.
- Management and the protection of the state-owned forest resources have been ineffective; natural forests, forest plantations and protected areas are being encroached upon.
- Much of the remaining biodiversity is still outside the established protected area network although the network is extensive.

In sum, it is evident that former forestry policy statements have not been translated into action to achieve what the policy makers envisaged.

Why did the past forestry policies not have the desired impacts?

The main reasons for unsatisfactory performance were:

- The lack of an explicit, widely accepted, comprehensive national forestry policy, supported by legislation and an administration that is needed for implementing it.
- The policy statements did not address the root causes of the problems adequately.
- The necessary will and/or resources to implement the various policies did not exist.
- Essential policy instruments such as incentive schemes, credit lines, or taxation schemes were not introduced.
- Conflicts with other sectoral policies and development activities (especially agricultural and settlement policies), and the lack of a general land-use policy and coordinated planning in the natural resource sector, had adverse effects on the forestry sector.
- The information base for policy formulation had become outdated.
- The mandates of the government agencies were not always clear, and accountability for policy implementation has been vague.
- The policies recognized only the state as a forest manager.

In addition, the past forestry policy statements did not cover all the important issues that were being faced by the sector. The main areas that were not addressed were:

- conservation of biodiversity;
- forest-based industrial development and marketing;
- private tree growing and NGO involvement;
- research and development;
- trees on non-forested land;
- development of institutions;
- inter-sectoral concerns;
- nature-based tourism; and
- property rights, land and tree tenure.

An interpretation of the forestry-related values

Several studies concerning the resource base, demand and supply trends, financial and economic issues, and the development and assessment of various scenarios have contributed to the formulation of a new policy. The studies were important, but what should drive policy is what people want from forestry; it must reflect the desires of the main interested parties. The following is an interpretation of the people's broad forestry-related values, which have now been taken into account in the policy:

- There is a strong emphasis on environmental protection at the national level as indicated in Sections 14 and 28 (Chapter VI) of the Constitution of the Democratic Socialist Republic of Sri Lanka, which specifies that "The state shall protect, preserve and improve the environment for the benefit of the community…it is the duty of every person in Sri Lanka to protect nature and conserve its riches".
- The environment, and forests in particular, are very much valued by the people. Deforestation is seen as one of the main environmental problems.
- Conservation of the remaining natural forests to protect biodiversity is valued, especially by educated people. Rural people value conservation but they also put emphasis on the production and utilization of forest products.
- People want to increase their incomes and improve their standard of living.
- Many people and communities have close cultural and even spiritual ties with the forests.
- Traditionally, Sri Lankan society has put a strong emphasis on the welfare of the rural population.
- There is a desire for decentralization and for increased participation in planning and decision making through a democratic process.
- There is a major emphasis on nation building, independence and self-reliance, which implies a desire to be self-sufficient with respect to forest products.
- There is a strong emphasis on meeting the basic needs of all people, and on increasing equity in the distribution of benefits gained from natural resources.

The most important elements of the economic policy of the government, which affected the formulation of the new forestry policy and also were adhered to in it, were:

- emphasis on sustainable economic development;
- the development of land, water, forest and fishery resources in a sustainable manner;
- carefully planned, transparent privatization and commercialization of selected operations to save public resources;
- encouragement of the private sector;

- trade liberalization, including progressive reduction of protective duties;
- promotion of competitive industries, with emphasis on small- and medium-scale ones;
- elimination of monopolies in agricultural markets;
- improving the welfare of the rural population;
- facilitation of land leasing;
- creation of employment opportunities; and
- equal distribution of development benefits.

Policy formulation process

A review of past and prevailing forest and related policies suggested a need for policy reform. The following is a simple presentation of the main stages in the formulation of the National Forestry Policy. In principle, the stages are in chronological order, but in some cases they overlap with activities as well as feedback loops—the process is interactive:

- *Assessment of the present forestry situation and past policy performance.* The past and prevailing policies, legislation and organizational frameworks were reviewed, and their relationship with the sectoral performance was analysed.
- *Assessment of people's needs concerning forestry* (in relation to the prevailing realities). The forestry policy should reflect what the people want from the forests.
- *Development and analysis of feasible means to meet people's needs*. Feasible options to fulfil the nation's forest-related needs were developed and analysed.
- *Development of a policy statement to express the aspirations of the people and realistic development objectives and options*.
- *Implementation of the policy*. The policy and development strategies have to be implemented to reach the desired objectives; otherwise they will be useless.

Summary of the National Forestry Policy

The National Forestry Policy is consistent with the National Economic Policy, National Policy for Wildlife Conservation and National Conservation Strategy. The scope of the policy is forestry in a broad sense, including its biophysical, environmental, social and economic components.

The objectives of the National Forest Policy are:

1. To conserve forests for posterity, with particular regard to biodiversity, soils, water and historical, cultural, religious and aesthetic values.
2. To increase the tree cover and productivity of the forests to meet the needs of present and future generations for forest products and services.
3. To enhance the contribution of forestry to the welfare of the rural population, and strengthen the national economy, with special attention paid to equity in economic development.

The policy acknowledges concern for safeguarding the remaining natural forests for posterity so as to conserve biodiversity, soil and water resources (sections 1.1, 2.1, 2.3, 6.5). It emphasizes the importance of retaining the present natural forest cover, and increasing the overall tree cover (sections 1.2, 2.1, 2.6, 2.7). A major part of the forests are to be protected completely for the conservation of biodiversity, soil and water resources. Multiple-use forestry is to be promoted. The remaining natural forests outside the protected area system are to be used sustainably to provide for the growing demand for bio-energy, wood and non-wood forest products (NWFPs), and various services, especially for the benefit of the rural population, without ignoring environmental objectives (sections 2.1, 2.3, 2.6). The policy recognizes that home gardens and

other agroforestry systems, and trees on other non-forested land, have a crucial role in supplying timber, bio-energy and NWFPs (section 3.1).

The National Forestry Policy recognizes that the state alone, or its main implementing agencies, cannot protect and manage the forests effectively. People's participation in forestry development and conservation is to be promoted. The policy emphasizes the need to develop partnerships with local people, communities, NGOs, and the local private sector (sections 2.4, 3.1, 3.2, 3.3, 4.1, 5.6). The people have co-existed with the forests for centuries, and have close cultural and sometimes even spiritual ties with them. These values must be recognized and respected (section 2.2).

The policy aims, therefore, at broadening the institutional framework for forest management, with clearly defined roles and responsibilities for the various partners. Farmers, the estate sector, community organizations, NGOs, and small- and medium-scale commercial enterprises will all have a role in activities such as protecting the forests and growing trees to meet household needs, supplying raw material for wood-based industries, and the harvesting, transporting, processing and distribution of various forest products (sections 2.4, 4.1, 5.3, 5.6).

Logging ban in natural forests

The Forestry Sector Master Plan of Sri Lanka in 1986 recommended harvesting in 119 000 ha of wetzone natural forests and in 954 000 ha of dryzone natural forests. This evoked considerable criticism from environmentalists, academics, NGOs, the general public and some officials of the Forest Department for not paying adequate attention to environmental and forest conservation considerations.

The government responded by commissioning an environmental study in 1989 to evaluate the proposals, resulting in the following strategies for the conservation of natural forests:

Introduce a moratorium on logging operations in natural forests in the wetzone.

Survey and evaluate the conservation value of natural forests in the wetzone (Accelerated Conservation Review).

Establish a special committee (Conservation Review Committee) appointed by the Minister of Lands, Irrigation and Mahaweli Development to advise the government on the conservation of natural forests.

Prepare management plans for all of Sri Lanka's natural forests.

Incorporate an environmental management component to the five-year investment program of the Forestry Master Plan to:

- establish an Environmental Management Division in the Forest Department (Forest Conservation Unit);
- implement a National Conservation Review to evaluate the conservation values (biological diversity and hydrological importance) of all the natural forests; and
- identify an optimal protected area network.

In response to the study's recommendations, the Forest Department designated 13 forests in the wetzone (24 000 ha) as conservation areas. The government also imposed a complete logging ban in all natural forests in 1990. The ban is still in place with strong public support to maintain the ban until the depleted forests have regenerated.

The goals of the logging ban are to:

prevent further degradation and loss of natural forest cover;

restore forests that have been degraded heavily;

protect and maintain biodiversity;

maintain the environmental and hydrological functions of forests; and

preserve recreational, aesthetic and cultural values.

No formal policy provisions by amendment to the Forest Ordinance regulation or special legal provision were enacted in imposing the logging ban. The ban was imposed without legal provisions in the Forest Ordinance, as the Forest Department is the main institution entrusted with the administration of major parts of the forest areas. On the whole, the logging ban has been implemented effectively except where forests had to be cleared for security reasons or changed to other land uses. However, illegal felling of trees and encroachment on state forests take place regularly and the Forest Department and Department of Wildlife Conservation are fully involved in curbing such illegal activities.

The logging ban has created an imbalance in the demand and supply situation of wood products and imports have increased to a certain extent. The total value of logs imported to Sri Lanka in 1993 is about Sri Lankan Rs. 73.8 million[8] and has increased only slightly since then.

In addition, the increasing scarcity of logs has resulted in substantial price increases in some luxury timbers such as teak (*Tectona grandis*), ebony (*Diospyros ebenum*), nadun (*Pericopsis mooniana*), and calamander (*Diospyros quaesita*). All species in this class, except teak, originate from the natural forests. The average price increase of luxury class logs from 1985 to 1997 was about 35 percent annually and 50 percent just before and after the imposition of the logging ban. The average annual price increase of other logs (special class, classes 1, 2 and 3) from 1985 to 1999 was about 20 percent with no significant increase being attributed to the logging ban.

According to Forest Department records, incidences of illegal cuttings increased after the logging ban and illegal harvesting was more prominent in forest plantations than in natural forests. However some analysts believe that this could be attributed to socio-economic issues such as poverty, unemployment and changes in the political environment, which are not related to the logging ban.

Assessment of follow-up activities and impacts of the most recent policy studies

As a follow-up activity, action was taken to amend the existing Forest Ordinance in order to incorporate new policy directives. In addition, a Five-Year Investment Programme was prepared to implement some activities identified under forest policy strategies. The new ADB-funded Forest Resources Management project is based on the above Five-Year Investment Programme.

One of the main policy recommendations was to involve the non-governmental sector (private sector, NGO/CBO and village communities) in forestry development activities including reforestation/tree planting and forest management, and a pilot program was initiated in this context. Additional measures were undertaken to involve the private sector in reforestation, especially in the establishment of commercial plantations.

Although there were recommendations to abolish the monopoly enjoyed by the State Timber Corporation (STC) in the harvesting and marketing of forest products from state forest areas, and to involve the private sector in the harvesting and marketing of forest products from state forest areas, the actual implementation of this recommendation has been undertaken rather slowly.

[8] US$1 = 79.5 rupees

Objectives, constraints and opportunities for policy review

Several constraints were encountered during the implementation of the policy recommendations:

i. Cumbersome procedures and procedural delays in getting the necessary amendments to the Forest Ordinance.

ii. Lack of incentives such as soft loans, tax conversions etc. to the private sector, which is to be involved in reforestation activities.

iii. Difficulty in changing the attitudes of various people including government officials and politicians to accommodate some policy recommendations.

iv. The objectives of the policy should be conducive to forestry development and to increase the contribution of the forestry sector to the national economy and poverty alleviation. The lack of proper strategies and the commitment to implement the policy are the main constraints.

Experience from the logging ban

A recent study on the impacts of the effectiveness of logging bans in the natural forests of Sri Lanka (Durst *et al*. 2001) has indicated clearly the main reasons for the success of the logging ban and constraints to its effectiveness. The main reasons for the success of the logging ban are:

the monopoly of the STC for extracting timber from state forests;

alternative wood resources derived from non-forested lands; and

the commitment of the government.

Based on experience, the following aspects have been identified as necessary conditions for the successful implementation of the logging ban:

development of appropriate policy, legislative and institutional frameworks;

development of alternative wood resources;

demarcation of forest boundaries;

relaxation of the private timber transport permit system;

adequate resources for forest protection and law enforcement;

political and public awareness and forestry extension;

community and participatory forest management;

improvement of the efficiency of forest industries;

increase the range of timber species utilization; and

development of a monitoring system for sustainable forest management (SFM).

The main information sources are the databases of the Forest Department, Ministry of Forestry and Environment, Department of Statistics and Central Bank of Sri Lanka. However, there may be several information gaps, and a strategy should be adopted to collect data to fill these identified gaps.

As a comprehensive policy study was undertaken from 1992 to 1993 before the formulation of national forestry policy of 1995, the procedures, the techniques established and the major part of the information gathered could be used for any future policy study. This could be considered as a great opportunity for conducting future policy reviews.

Most important issues, constraints, challenges opportunities for SFM

One of the main issues is the deforestation and degradation of forest areas, which has resulted in the erosion of biodiversity, increased occurrence of flashfloods, landslides and drying up of perennial waterways. The lack of an accepted land-use policy is another major constraint, which has resulted in indiscriminate conversion of forest areas to other land uses, mainly due to population pressure.

However, under the Forest Resources Management project, action has been initiated to survey and demarcate all the forest areas in the country with the main purpose of establishing a national forestry estate. This will help to prevent the destruction of forests, at least to a certain extent.

In addition, the natural forest areas and forest plantations will be brought under scientific management through the implementation of management plans that are being formulated at present. In this context, the recently conducted National Conservation Review has provided necessary information on biodiversity and water conservation. Data collected on these aspects was used to establish a database. Also, this study has identified the most important forest areas that should be conserved for biodiversity and water conservation purposes. These measures can be considered a way forward in achieving SFM.

Key areas/topics that could benefit from policy studies

The following are topics of interest to Sri Lanka:

- Private sector involvement in forestry development activities.
- Forest utilization and marketing and its impact on the national economy.
- Sectoral conflicts encountered during the implementation of forest policy and the impact of the forest policy on other sectors.

References

Durst, P., T.R. Waggener, T. Enters and L.C. Tan (eds.), 2001. Forest out of bounds: impacts and effectiveness of logging bans in natural forests in Asia-Pacific. RAP Publication: 2001/08. Food and Agriculture Organization of the United Nations, Bangkok.

FOREST POLICY REVIEWS IN THAILAND

Jira Jintanugool

Background

In Thailand, numerous policies aim at the conservation and sustainable utilization of forests as well as their genetic resources and maintenance of the ecological balance. The cabinet endorsed the National Forest Policy in 1985. One of the key articles is to reserve 40 percent of the country's land area for forests (15 percent for conservation and 25 percent for productive purposes).

After a devastating flood in Southern Thailand in 1988, the government with support from concerned conservationists banned the logging of terrestrial natural forests in 1989. The logging ban marked a considerable shift in policy from wood production to forest conservation.

The 7th National Economic and Social Development Plan (NESDP) (1992-1996) stated that 25 percent of Thailand was to be protected as conservation forest. This indicated an increase of 10 percent from the earlier 15 percent. The forest conservation policy was also reiterated and the target emphasized in the 8th NESDP (1997-2001).

Forest Land Zoning, endorsed by the cabinet in 1992, has to maintain forest cover of 40 percent. To fulfill the goal, the National Reserved Forests, with an area of 23.52 million ha or 45.9 percent of the country's land area, were classified into the following zones: Conservation Zone (C), Economic Zone (E) and Agriculture Zone (A). Zone C encompasses an area of 14.1 million ha or 27.5 percent of the total land area. It consists of national parks, wildlife sanctuaries and watershed areas, which cover most of the natural forests that are still in good condition. Zone E covers 8.3 million ha or 16.18 percent of the total land area. It covers the areas planned for commercial plantations and the reserved areas for landless farmers. Zone A makes up 1.15 million ha or 2.25 percent of the total land area. It covers the deforested areas suitable for agriculture, which will be allocated to landless farmers through the agricultural land reform process.

Overview of recent policies

Since the Earth Summit in Rio de Janeiro, Thailand has responded to most international conventions and has followed the recommendations of the 1992 United Nations Conference on Environment and Development (UNCED). The government and non-government sectors are aware of the significance of Chapter II of Agenda 21 and the Forest Principles. Sustainable forest management strategies have been developed for implementation. The main points of the international conventions have been incorporated in many national policies.

The NESDP, which is the backbone of Thailand's economic planning and development activities, particularly its 7th and 8th Plans, outlined a number of significant strategies and action plans for forest resource conservation and the participation of people in the management of natural resources. As a result, relevant agencies, local people and NGOs play a more important role in natural resource conservation and forest management.

The current Constitution, enacted in 1997, emphasizes the rights of rural people to actively participate in the management and utilization of natural resources. People's participation is viewed as a strategy to implement policies and ensure sustainability. This has been incorporated in the 9th NESDP, which covers 2002-2006.

Follow–up activities

With the imposition of the logging ban in 1989, the main objective of forest management has changed from production to conservation. The government is concentrating more on forest rehabilitation, especially reforestation and biodiversity conservation. The areas reserved for conservation and the Protected Area System have increased steadily (Table 1). Law enforcement has been strengthened, and some people residing in the conservation forests have been resettled in buffer zones or other designated areas, although this strategy has resulted in a number of conflicts.

Table 1. Natural conservation and recreation (1996-2000)

Category	1996		1997		1998		1999		2000	
	No.	Area (1 000 ha)	No.	Area (1 000 ha)	No.	Area (1 000 ha)	No.	Area (1 000 ha)	No.	Area (1 000 ha)
National parks	82	4 233.2	82	4 233.2	87	4 418.2	96	4 892.8	102	5 222.6
Forest parks	57	76.2	66	86.1	65	86.8	66	85.1	68	85.2
Wildlife sanctuaries	42	3 098.7	44	3 201.2	46	3 267.2	48	3 343.4	53	3 484.9
Non–hunting areas	44	321.7	43	297.2	44	310.2	49	330.5	49	330.5
Botanical gardens	15	5.7	15	5.7	15	5.7	15	5.7	15	5.7
Arboreta	47	2.8	49	3.1	53	3.4	53	3.6	54	3.6

Source: Royal Forest Department, Forestry Statistics of Thailand (2000)

To help augment wood supplies other than those from natural forests and to promote forest plantations on private land, the government passed the Forest Plantation Act in 1992. As an incentive, investors are exempted from paying royalties for plantation-grown wood. Various other schemes have been initiated to expand the plantation area. One of the most popular programs is the Economic Wood Plantation Promotion Project that encourages farmers to plant economic trees on their own land. Farmers receive a subsidy of 18 750 baht/ha[9] to plant and manage the trees as forest farms for at least five years. The program has been operating since 1994.

People's participation in forest management is gaining recognition by both the government and the public. In early 1990, NGOs and academics proposed the Community Forestry Bill, later called the people's version. The Royal Forest Department (RFD) responded by proposing its own version, identified as a government version. All efforts have been pooled to produce a 'conciliatory' version. In 1996, a 'compromised' version was drafted and put forward for ratification. However, it has not been passed yet due to the dissolution of the government and parliament in 2000.

In the meantime, other parties proposed their own versions of the bill. Seven draft bills were submitted to parliament for consideration in 2001. The lower house passed the draft bill to the senate house at the end of 2001. The bill is expected to be passed during 2002.

Discussion and conclusions

The imposition of the logging ban in 1989 marked a sharp turning point in Thailand's forest policy. The RFD changed its main function from timber exploitation to forest conservation. Numerous Royal Decrees were passed to declare permanent protected areas such as national parks, wildlife sanctuaries and other designated areas. These forest reserves have established a Protected Area System. As has been stated in the 7th, 8th and 9th NESDPs, protected areas are to

[9] US$1.00 = 44 Baht

cover 25 percent of the total land area. At present, the protected areas cover about 17.8 percent of the total land area. There are plans to declare additional forest reserves as protected areas.

The 1997 Constitution has provided a very strong basis for people's participation in the utilization and management of natural resources. Buffer zone management and community forestry concepts are to be applied in areas surrounding and close to protected areas. Buffer zones and community forests can be developed as an alternative source of timber and non-wood forest products.

In conclusion, three key areas could benefit from policy studies in Thailand. They concern the management of protected areas and buffer zones, community forests, and private productive forests.

RECENT FOREST POLICY REVIEWS IN VIET NAM

Phan Trung Dien

Forest and forestlands

About 19 million ha of the land area of Viet Nam, corresponding to about 58 percent of the total area, are classified as forestland. However, only about 9.3 million ha are covered by forests (1995), while the remainder is bare land. The total volume of standing stemwood in these forests is around 525 million m^3, indicating an average of 56 m^3/ha. This means that for each citizen there is a forest area of 1.500 m^2 with 10 m^3 of wood. In addition, forests also contain large amounts of bamboo and other non-wood products.

Forestland in Viet Nam is presently classified into three categories: special-use forests (protected area); protection forests; and production forests. In each category, forests actually cover only part of the area (Table 1). Plantations cover about 1.4 million ha, and the main species are pines, eucalyptus, acacias, casuarina and a large range of native species.

Table 1. Forest area classification in Viet Nam in 2000 (in million ha)

Forest classes	With forest cover	Without forest cover	Planned by 2010
Special-use forest	1.7	1.2	2.0
Protection forest	5.3	1.3	6.0
Production forest	4.1	2.8	8.0
Total	11.1	5.3	16.0

Forest sector development to 2010

The government's policy priorities and development objectives in the forestry sector have been translated into ambitious targets for the proper management of the approximately 18 million ha of forestland in Vietnam. The final goal is to increase the existing 9.3 million ha of forest cover to 18 million ha (48.3 percent of the total land area) by 2010. Forest sector targets include:

Establish 6 million ha of Protection Forests to conserve soil, water, flora and fauna.

Designate 2 million ha as Special-Use Forests to preserve biodiversity, enhance research and promote ecotourism.

Develop 8 million ha as Production Forests primarily for commercial exploitation.

Involve 1 million smallholder households (2 million labourers) in agroforestry practices with permanent integrated land use.

Accelerate scattered tree planting in homegardens and local areas by smallholders and local communities.

Programmed forestry action and post-UNCED forestry development in Viet Nam

With the assistance of UNDP/FAO and a number of bilateral donors, a Forestry Sector Review and the formulation of the Tropical Forestry Action Plan (TFAP) was carried out in Viet Nam. This exercise has enhanced the development of sustainable forest management (SFM) through the following measures:

Faster allocation of forestland to farmers (local people are seen as the driving force in forestry development).

Formulation of local programs and projects under the National Reforestation Programme 327 (an amount of US$40 million from the state budget is allocated annually for reforestation) and from 1998 to 2010 implementing a 5 million ha reforestation program.

Decentralization of state forest management to lower-level authorities, especially district and commune levels.

Strengthening organizations and upgrading the Forest Inspectorate to be strong enough to enforce the forest protection law and to control forest destruction.

Development of specialized forest fire control and prevention, and forest pest control systems.

Reorganization and modernization of forest enterprises to enable them to carry out management, protection and enrichment of forest resources.

Closing natural forests to exploitation

Timber harvesting in natural forests has been banned in Viet Nam. In combination with accelerated reforestation this is to ensure short- and long-term environmental and social security. It is a testimony to the commitment of the government and people of Viet Nam to respond to Agenda 21 adopted by UNCED at Rio de Janeiro in 1992. The immediate objectives of the policies are:

Consolidating the protection function of forests through stricter protection of the existing 9.3 million ha of forests and the establishment of 5 million ha of new forests by means of natural regeneration and plantations.

Generation of employment and income to improve the livelihoods of 24 million people living in and around forests. Farmers will be mobilized to protect and develop forests, providing an average forest-based earning of US$70 to 100 per uplander and US$350 to 500 per household. Through this initiative, forestry will contribute significantly to hunger eradication and poverty alleviation in the mountain areas.

Meeting the fuelwood demand of the population and replacing fuelwood with alternative sources of energy.

To achieve the objectives, the major activities are:

Ban on the collection of forest products in protected areas, restriction on the harvesting of timber and non-wood forest products in critical watersheds over a 30-year period.

Prohibition of commercial logging in all natural forests remaining in the highlands and midlands of the north of northern Viet Nam, the southeast of the South and the Mekong and Red River deltas.

Restricted logging is allowed in forests outside special-use forests, very critical and critical watersheds in the Central Highlands and the central coastal area.

Since 2000, log production has been reduced to 300 000 m^3/year. The logging sites, logging volumes and cutting rates are subject to approval by the Minister of Agriculture and Rural Development.

Strengthening the coordination of international assistance to Viet Nam's forestry sector

Of great significance for forestry development in Viet Nam is the assistance provided by UNDP, FAO, WFP, WB, ADB, WWF, EU and bilateral donors including Sweden, Germany, the Netherlands, Japan and Finland.

Within the scope of the Consultative Group, a number of technical working groups have also been set up, such as:

TWG1: Land Allocation, Land Use Planning, and Social Forestry

TWG2: Development of Extension System and Rural Financial System

TWG3: Flow of Funds in Loan Projects and Disbursement Issues: Organizational and Institutional Capacity Development

TWG4: Data Base on International Co-operation Projects in Agriculture and Integrated Rural Development.

These groups provide fora for sharing knowledge, exchange of information and cooperation among projects and institutions related to the broad sector of agriculture and forestry in particular.

Conclusion

In recent years, along with radical economic reforms, forestry in Viet Nam has made significant progress. The government has developed a number of distinct national programs dealing with forestry development, of which the most important is the 5 Million-Hectare Reforestation Program. Others include the Forest Closing Program and the Upland Development (for the Northern, Central and Southern Region) Program. In addition, other policies and national programs influence the forestry sector such as those on hunger eradication and poverty alleviation, the soft loan policy and sedentarization.

The strategic objectives that have been identified collectively aim at mitigating or overcoming constraints and promoting SFM in Viet Nam. Numerous policy measures and the adoption of strategies in the short, medium and long term that are implemented by the forestry institutions are designed to achieve objectives such as land allocation, protection, production and management of natural forests, regeneration and afforestation, forest industry development, marketing and trade, forest research and extension, budget and finance and institutional strengthening.

Appendix 4 List of current and ongoing activities

Activities	Title	Country	Launching date	Submission date	Output
Pilot or case studies	Second inventory of permanent sample plots	Cambodia	March 2001	April 2001	Brief report and raw data for further processing and analysis
	Data analysis of trees in homegardens	Sri Lanka	November 2001	January 2002	Report
	Assessing the extent of private sector forest plantations in Peninsular Malaysia – Development of and effective data collection methodology	Malaysia	August 2001	January 2002	Report
	Assessing the status of logged-over production forests – Development of a rapid appraisal technique	Malaysia	February 2001	March 2001	Report
	Economic contribution of selected NTFPs in India	India	September 2001	December 2002	Local workshop and report
	Evaluation of forest and natural resource data and information flow in the Philippines	Philippines	September 2001	March 2002	National workshop and report
	Environmental and socioeconomic impacts of biofuel use in Southeast Asia	Philippines	May 2001	April 2001	National workshop and report
Regional studies	Review of statistical information on forest products and trade	Thirteen countries	November 2001	February 2001	Thirteen country reports and one regional overview
	Impact of incentives on the development of forest plantation resources in the Asia-Pacific region. Study is jointly funded by EC-FAO Partnership Programme, FAO Regular Programme, the USDA Forest Service, and the Center for International Forestry Research (CIFOR). The EC-FAO Partnership Programme provides funds for the study coordinator, Dr. Devendra Pandey, and the country studies denoted with an asterisks	Australia China India* Indonesia Malaysia (Sabah)* New Zealand Philippines* Thailand* USA	November 2001	August 2002	Country reports, overview report, executive summary, presentations at the 19th Session of the Asia-Pacific Forestry Commission in august 2002 in Mongolia
	Statistical data collection and analysis on non-wood forest products	Twelve countries (no study in Malaysia)	April 2001	December 2002	Twelve country reports and one regional overview
	National statistics on forest products	Thirteen countries	November 2001	March 2002	Thirteen country reports and one regional overview
	National woodfuels & wood energy information analysis	Thirteen countries	December 2001	March 2002	Thirteen country reports and one

					regional overview
Training	Preparation of a training manual on assessment methods for trees outside forests (TOF)	India	November 2001	December 2001	Training manual to be used for training workshop in 2002
	Improving forestry statistical systems	*Thailand*	*May 2002*		*Improved communication flows*
	Geographical Information Systems applications	*Thailand*	*April 2002*		*Improved data handling and manipulation*
	Assessment of forest conditions – Application of rapid assessment tools	*Malaysia*	*July 2002*		*Improved data collection, analysis and dissemination*
	Assessment of trees outside forests – Application of practical and cost-effective methods	*India*	*May 2002*		*Improved data collection, analysis and dissemination*
	Forestry statistics for Ms. Parijat Chuntaketta	*Switzerland and Italy*	*April 2002*		*Effective coordination of forestry statistics network*
National workshop	Information and analysis for trees outside forests in India – National workshop to review and coordinate TOF assessment activities	India	January 2001	April 2001	National workshop and workshop report
Regional workshop	Forest policy analysis	Malaysia	22 to 24 January 2002		Workshop report and initiation of country reports on policy reviews
	Impact of incentives on the development of forest plantation resources in the Asia-Pacific region	*Philippines*	*19 to 21 March 2002*		*Review of draft documents prepared under regional project*
Study tour	*Forestry statistical and information system in Peninsular Malaysia*	*Malaysia*	*May 2002*		*Study tour organized for 4 Laotian and 4 Cambodian forestry officials*

Note: Activities in *italics* only started in 2002

APPENDIX 5

EC-FAO PARTNERSHIP PROGRAMME (2000-2002)
Project GCP/RAS/173/EC

TOR for National Forest Policy Reviews
Country

Background

National focal points for the Programme are invited to provide an assessment of the effectiveness and efficiency of the forest policies in their respective countries. The overall aim and objectives of the country forest policy studies is to investigate the current situation with respect of national forest policies in specific key areas. Specifically, the study is to:

identify the key national forest policy issues;
assess the process of forest policy formulation;
review the effectiveness of forest policy implementation in achieving its objectives;
identify the impediments to policy implementation;
describe efforts to overcome the impediments; and
provide suggestions on actions related to forest policy issues to achieve sustainable forest management.

These country studies will be presented to the Asia-Pacific Regional Forestry Commission (August 2002) and will form the basis for a regional overview paper on forest policies in South Asia and Southeast Asia.

Task

National focal points are invited to submit on behalf of their country a report of maximum length 20 pages + annexes on the points requested enumerated in the detailed outline which follows. It is also recommended to provide a copy of the most important source documents.

The reports are recommended to be submitted in English by 31 May 2002. The EC-FAO Programme will provide lump sum of US$ 2,500 for each country study.

National focal points are invited to send one printed copy plus appendices of their report through their FAO Representation to **Ms. Qiang Ma, FONS, FAO, Viale delle Terme di Caracalla – 00100 – ROME, ITALY.** Additionally, please provide an electronic version (text in Microsoft Word and tables in Microsoft Excel) on disk or by e-mail attachment to be sent to **Ms. Qiang Ma:** ma.qiang@fao.org and **Mr. Michael Martin:** michael.martin@fao.org

National Forest Policy Review

Recommended outline

Chapter 1: Current situation of forest resources and the forestry sector

Highlight in the text key indicators of change in forest resources, forest products and trade and the environmental, social and economic aspects of forestry such as (see table below):

Land, population, economy and forests	**Production, trade and consumption**
▪ land area ▪ population (total) ▪ population density ▪ population growth rate ▪ percentage of rural people ▪ GNP per capita ▪ annual growth rate of GDP ▪ forest area (total and in percent of total land area) ▪ area under forest management plans (the area of forest which is managed in accordance with a formal, national management plan over five years or more) ▪ forest area per capita ▪ plantation area ▪ rate of deforestation ▪ percent land area protected	▪ industrial roundwood (production, imports, exports consumption) ▪ sawnwood (production, imports, exports consumption) ▪ wood-based panels (production, imports, exports consumption) ▪ pulp for paper ▪ paper and paperboard

Chapter 2: Current and emerging issues, trends and critical problems

2.1 Identify and describe the most pressing current problems and emerging issues that are receiving the attention of the government, the specialised organisations, NGOs, the private sector and the rural communities.

Suggested sources of information: Among the sources of information for the identification of current issues are the activities and special programmes of the government agencies, the key policy research at the forestry research institutes and universities, and reports from consultants of national and international organisation. It is recommended also to search the newsgroup regarding the country in the Internet. The forestry national and operative programmes will provide evidences of the current and emerging issues. The evolution and impacts of other sectors depending on the goods and services of the forestry sector should also be reviewed.

2.2 Identify the main implications coming from international conventions and similar initiatives (e.g. IPF/IFF proposals for actions) for the national forest policies and the process of policy formulation.

Chapter 3: Current national forest policies

3.1 National statement or objective related to forests

Indicate if a national statement or objective related to forests exists in writing and in an easily identified document (constitution, special declaration, national development plans, main development programmes). Cite the document(s) and attach a photocopy of the substantive citation.

Please note where it has been published and if there have been initiatives to make it known to the population and other government institutions. Please indicate if there is clear evidence that the content and the objectives of the national forest policy is recognised by other institutions as evidenced by the citation or quotation of its content from government documents, publications and declarations.

3.2 Identify any specific forestry policies and thrust areas, e.g.:

- Forest resources and land-use change
- Forest management including timber harvesting
- Forest and biodiversity conservation
- Forest industries
- Non-wood forest products
- Trees outside forests
- Wood energy
- Investments in forestry and wood processing
- People's participation including decentralization and devolution of forest management responsibilities
- Role of forestry agencies in forest management
- Forestry research, education and extension
- Forest fires
- Forest plantation
- Climate change
- Watershed management
- etc.

3.3 Policy instruments of specific forest policies and implementation processes

- Regulatory and administrative instruments tools, e.g. administrative orders, regulation by laws etc.
- Voluntary tools, e.g. direct and indirect incentives and grants to production processes, taxes and tax concessions etc.
- Complementary tools and social services, e.g. information, extension etc.

Provide quotations of the specific policies, where possible, and identify relevant documentation.

3.4 Specific non-forestry policies affecting management of forests and trees such as:

- Agriculture and other land uses (e.g. mining)
- Environment
- Rural development
- Industrial development
- Infrastructure
- Employment
- Trade
- Tourism
- etc.

Chapter 4: Process, mechanisms of and institutional arrangements for forest policy formulation

4.1 Identify and describe the process of forest policy formation.

4.2 Identify and describe the responsible organisations, the ways in which the process is formalised and legitimised.

4.3 Describe how stakeholders are involved in forest policy formulation

4.4 Assess the country's capacities for policy formulation, implementation, monitoring and evaluation, reviewing the institutional arrangements related to forestry matters such as:

- Organisational framework for policy formulation and policy analysis
- Recent and current organisational and institutional reforms in the forestry sector
- Human resources
- Managerial capacities

  Etc.

Chapter 5: Forestry policy implementation and impacts

5.1 Identify the institutional arrangements and actions carried out in achieving stated policy objectives and the activities related to monitoring and evaluation. Answer the question, how is forest policy implemented? Address the following questions:

- How are broad policies translated into rules and regulations and enforced on the ground?
- What are the major constraints in policy implementation?

5.2 Analyse the impacts and effectiveness of the forest policies in implementation and in achieving its objectives. In particular, examine the role of policy as a tool to achieve the objectives of the country's national forest programme or broad objective for forests. Specifically, examine:

- What are the monitoring and evaluation mechanisms?
- How does information feed back into the policy formulation process, such as the emergence of the emerging issues described in Chapter 2?

Chapter 6: Conclusions and recommendations

Provide options for actions on forest policy issues for achieving sustainable forest management.

Considering:

- policy assessment;
- formulation;
- implementation

  Etc.

Chapter 7: Appendices

Supporting documentation such as lengthy tables and sections of other documents (e.g. laws and regulations) will be provided in the appendix of the report.

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