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Forest policies, legislation and institutions in Asia and the Pacific Trends and emerging needs for 2020

Asia-Pacific Forestry Sector Outlook Study II

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Asia-Pacific Forestry Commission

FAO

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Forestry policies, legislation and institutions in Asia and the Pacific

Trends and emerging needs for 2020

Yurdi Yasmi, Jeremy Broadhead, Thomas Enters and Cole Genge

with

David Cassells, Gem B. Castillo, Patrick Durst, Francis Hurahura, Akiko Inoguchi, Yudi Iskandarsyah, Serey Rotha Ken, Top B. Khatri, Coi Lekhac, Preecha Ongprasert, Rao Matta, Sithong Thongmanivong, Tint L. Thaung, Pei Sin Tong, Gunawan Wicaksono and Chen Xiaoqian.

United States Agency for International Development (USAID)
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Cover design: Chanida Chavanich

For copies, write to:

Patrick B. Durst
Senior Forestry Officer
FAO Regional Office for Asia and the Pacific
39 Phra Atit Road
Bangkok 10200
Thailand
Tel: (66-2) 697 4000
Fax: (66-2) 697 4445

E-mail: patrick.durst@fao.org

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Foreword

Tremendous social and economic changes are taking place in the Asia-Pacific region and hopes are growing that a long awaited reconciliation of tensions between environment and development is a possibility. Rapid economic growth and heightening demands for materials, commodities and land have resulted in the depletion of forest resources in many countries around the region. Continuing deforestation and forest degradation together with environmental shocks and the threat of climate change have sensitized politicians and populations to the need to maintain the natural environment. In particular, natural disasters including floods, droughts and landslides have resulted in reversals in forest-related policy and forest cover in several Asia-Pacific countries. Realization of the huge availability of financial resources to cope with other threats to global society has also questioned the low prioritization of the natural environment. Increasing consensus over the threat posed by climate change and growing commitment to related international initiatives are hoped by many to bring new life to forestry and to help broaden implementation of the much discussed concept of ‘sustainable forest management’.

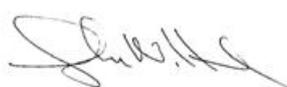
In many countries significant challenges remain however, and great efforts will be needed to confront the deeply entrenched social causes of deforestation and forest degradation. Policies supporting sustainable forest management have in some cases remained essentially dormant for years and sometimes decades with little progress evident at the field level. With forest cover increasing in some countries around the region and pressure growing to conserve remaining forest resources, wider transitions to sustainable forest management may, however, be seen in the coming years. Progress depends critically on the capabilities of forestry institutions in seizing current opportunities as a means of promoting long-term goals. Building responsiveness into institutional mechanisms and adapting to change constitutes one of the most important steps in creating a robust sector in a fast-evolving world.

Identification of key trends in forestry – political as well as physical – adds a valuable dimension to regional forestry discussions. This report, carried out under the umbrella of the second Asia-Pacific Forestry Sector Outlook Study, represents a collaborative effort between the Food and Agriculture Organization of the United Nations (FAO), The Nature Conservancy’s Responsible Asia Forestry and Trade Program and RECOFTC – The Center for People and Forests. The report focuses on 12 countries (Cambodia, China, India, Indonesia, Lao PDR, Malaysia, Myanmar, Nepal, the Philippines, Papua New Guinea, Thailand and Viet Nam) and draws upon papers prepared for, and discussions held during a workshop in Khao Yai National Park, Thailand, 6 to 7 October 2008. Participants at the meeting included: Jeremy Broadhead, David Cassells, Gem B. Castillo, Patrick Durst, Thomas Enters, Cole Genge, Francis Hurahura, Akiko Inoguchi, Yudi Iskandarsyah, Serey Rotha Ken, Top B. Khatri, Coi Lekhac, Preecha Ongprasert, Rao Matta, Tint L. Thaug, Sithong Thongmanivong, Pei Sin Tong, Gunawan Wicaksono, Chen Xiaoqian and Yurdi Yasmi.

The collegial nature of the process through which this study was developed lends credibility to the success of collaborative regional action and working towards a valuable common future. By openly contributing information, the individuals and organizations involved in the outlook study have demonstrated their commitment to the future of forests and forestry and their desire to improve upon the benefits that the current generation has received.



Hiroyuki Konuma
Assistant Director-General and
Regional Representative for
Asia and the Pacific
Food and Agriculture Organization
of the United Nations



Jack Hurd
Responsible Asia
Forestry and Trade
(RAFT) Program
The Nature Conservancy



Yam Malla
Executive Director
RECOFTC – The Center for
People and Forests

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Acronyms and abbreviations

APEC	Asia-Pacific Economic Cooperation
APFC	Asia-Pacific Forestry Commission
ASEAN	Association of Southeast Asian Nations
ASEP	ASEAN Environmental Programme
CBFM	Community-based forest management
CDM	Clean Development Mechanism
CIFOR	Center for International Forestry Research
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CoC	Chain-of-Custody
DFID	Department for International Development (UK)
EC	European Commission
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FCPF	Forest Carbon Partnership Facility
FECOFUN	Federation of Community Forestry Users Nepal
FLEG	Forest Law Enforcement and Governance
FLEGT	Forest Law Enforcement Governance and Trade
FSC	Forest Stewardship Council
FUG	Forest User Group
GHG	Greenhouse gases
GFTN	Global Forest Trade Network (WWF)
IPF	Intergovernmental Panel on Forests
ITTO	International Tropical Timber Organization
JFM	Joint Forest Management
LEI	<i>Lembaga Ecolabelling Indonesia</i> (Indonesian Eco-labelling Institute)
MoEF	Ministry of Environment and Forests (India)
MTCC	Malaysian Timber Certification Council
MTCS	Malaysian Timber Certification Scheme
NFP	National forest programme
NGO	Non-governmental organization
PEFC	Programme for the Endorsement of Forest Certification
PFE	Permanent forest estate
RAFT	Responsible Asia Forestry and Trade
REDD	Reduced Emissions from Deforestation and Forest Degradation
RFD	Royal Forest Department of Thailand
SFM	Sustainable forest management
SPREP	South Pacific Regional Environment Programme
TFF	Tropical Forest Foundation
TFT	The Forest Trust
TNC	The Nature Conservancy
UNCED	United Nations Conference on Environment and Development
USAID	United States Agency for International Development
VPA	Voluntary Partnership Agreement
WWF	World Wide Fund for Nature

Executive Summary

Continuing high rates of deforestation and forest degradation and the poor contribution of forests and forestry to poverty reduction are undermining efforts to promote sustainable forest management (SFM) in many countries in the Asia-Pacific region. It is often argued that by implementing appropriate policies, legislation and institutional arrangements SFM can be attained and that widespread economic, social and environmental benefits will result. Almost all countries in the region have moved towards SFM at the policy level and in many countries institutional structures are also gradually changing. This report reviews the status and trends in forestry policy and institutions and outlines the extent to which changes in policies, legislation and institutional arrangements aimed at supporting transitions towards SFM have been effective. Trends in governance and the extent to which efforts to tackle illegal logging have been effective are also assessed.

Status and key trends in forest policies

The region's forestry sector has undergone substantial change over the past two decades in response to broader developments including economic and population growth, infrastructure development and attention to environmental sustainability. Many countries are gradually moving away from state forest management towards multi-stakeholder engagement. This shift is supported by an improved understanding that achieving SFM is not possible if governments do not actively engage and work with a wider set of stakeholders. A number of external pressures also influence this shift, e.g. calls for social and economic justice, environmental degradation and international initiatives. At the same time, many countries have shifted their orientation from timber production to broader-based multiple-purpose forest management.

Almost all countries in the region have adopted policies that support SFM and balance the social, economic and environmental aspects of forestry. Changes towards forest conservation and devolution and away from forest resource exploitation took place in most countries more than a decade ago. The effectiveness with which policy has been implemented has, however, been mixed and although progress has been demonstrated in some areas and in some countries many challenges remain.

From a regional perspective, net forest area increased between 2000 and 2010 by around 14 million hectares, reversing the downward trend of the preceding decade. Almost all of the increase in forest cover is confined to China, India, the Philippines and Viet Nam, while nearly all remaining countries have experienced loss of forest area. Primary forest in particular is still being lost at a high rate – approximately 7 million hectares were lost between 2000 and 2010. With respect to social aspects of forestry, Nepal, India and the Philippines stand ahead in implementing participatory forestry through joint forest management (JFM) and community-based forest management (CBFM) initiatives. In China and Viet Nam, allocation of forest land and rights to households, individuals and private entities has been progressing rapidly. Despite this progress, resource degradation, land-use conflicts, large-scale conversion of forest land to industrial cropland and inequality remain widespread.

Current status and key trends in forest legislation

As a policy instrument, legislation provides legal support for policy implementation. Countries in the region have passed various laws to regulate forests and forestry, most of which support SFM. In a growing number of cases, legislation is taking the lead in directing forest management, especially where policy has been weakly implemented. In some countries, however, key forest legislation has not been revised for decades. For example, in India the primary forest legislation dates back to 1927 and in the Philippines to 1975. With rapid changes taking place and the changing demands on forests and forestry, the extent to which such dated legislation is capable of addressing current needs and priorities is questionable.

An important element in legislation is the distribution of forest ownership. Who formally owns the forests determines – from a legal perspective – who manages and controls the forest. In most Asian countries, governments own most – if not all – natural forests whereas in the Pacific, forest ownership is usually vested with customary owners. In some countries, collective and private or individual ownership of forest lands is increasingly being guaranteed by legislation.

Current status and key trends in institutional arrangements

The rapid changes currently taking place in forests and society pose critical challenges to forestry institutions. Increasing demands for forest products, needs for conservation, rehabilitation and climate change-related services, as well as calls for devolution make changes in the role of forestry institutions necessary. To achieve multiple objectives and meet society's expanding demands forestry can no longer be dominated by a single stakeholder group such as a government agency and multi-stakeholder management is becoming increasingly necessary.

Forestry institutions have taken steps to transform the state's role in various countries across the region. A notable change is the increased role of local (provincial and district) governments. The role of non-government institutions, including NGOs and private sector entities, is generally increasing although in many countries their role is still relatively minor. Other voluntary and market-driven institutions are playing an increased role in forestry, including timber and carbon certification organizations. New forestry-related climate change mitigation regimes such as Reduced Emissions from Deforestation and Forest Degradation (REDD) will require greater pluralism and inclusion if they are to deliver substantial reductions in forest loss and degradation as well as contribute to poverty reduction and income generation.

Current status and key trends in illegal logging and governance

Although consistent and verifiable data are difficult to access, the extent of the illegal timber trade in the Asia-Pacific region is estimated to be substantial. Spot checks at border crossings, variance between import and export data between countries and quantification of inputs required for recorded levels of final products production all provide insight into illegal timber production. Illegal logging is often associated with weak law enforcement, corruption and lack of transparency. Various efforts and approaches have been taken by the international community and countries in the region to address the problem, e.g., Forest Law Enforcement and Governance and Trade (FLEGT) programmes, bilateral partnerships and international declarations. Consumer countries are also taking steps to reduce imports of illegal timber and associated products and such incentives could provide significant stimulus for producer countries to strengthen implementation of SFM.

The outlook and conclusions

Many factors will influence Asia-Pacific forestry in the next decade including economic development, structural changes in economies, demographic trends, agricultural expansion, climate change and trade and infrastructure developments. Demands for forest goods and services will undoubtedly increase as will pressure on forestry institutions to perform efficiently. In almost all countries reviewed, forest policy and legislation supporting SFM has been in place for many years but progress has been faltering and achievements have been mixed. In the absence of robust implementation of policy aimed at improving forest management, deforestation – particularly through domestic and international investment in industrial crops and associated land grabbing – and continued forest degradation are likely to be seen. International REDD efforts together with FLEGT-related measures (US Lacey Act, EU Due Diligence legislation, FLEG/FLEGT) have the potential of providing substantial support to current efforts to increase and sustain forests and the forestry sector in the region. Attention to forest conservation, protection and reforestation is increasing greatly in the process as well.

To improve forest management there is a pervasive need to develop consensus over the role of forestry in national development – for economic development, environmental service provisions and social benefits. Without broad agreement over forestry objectives and implementation of supporting policy and legislation, the contribution of forestry to national development will remain suboptimal. To support forestry, policy measures should promote economic growth balanced with resource conservation involving clear allocation of rights and responsibilities; equitable benefit sharing arrangements; application of appropriate technology and environmental safeguards; removal of disincentives to invest in forestry; and greater stakeholder involvement. Most of all, forestry institutions need to become more flexible and responsive in capturing opportunities and striving to maximize the contribution of the forestry sector to emerging needs.

1. Background and rationale

Globally, the guiding theme for forest policy over the past two decades or more has been SFM, which aims to “ensure that the goods and services derived from the forest meet present-day needs while at the same time securing their continued availability and contribution to long-term development”.¹ In its broadest sense, forest management encompasses not only forest resources and the goods and services they provide but also the legal, policy and institutional framework within which forestry operates. The processes involved in implementing SFM aim to ensure that the economic, social and environmental benefits of forests are realized in accordance with present and future needs and that costs and benefits are distributed equitably among beneficiaries.

The concept of sustainable development gained momentum after publication of the 1987 Brundtland Report – *Our common future*. Following this publication, the sustainable development paradigm was adopted at the United Nations Conference on Environment and Development (UNCED) in 1992. Since then, SFM has become an increasingly important concept in forestry.² In 1995, the Intergovernmental Panel on Forests (IPF) was established by the UN Commission on Sustainable Development (CSD) to develop an international consensus on national mechanisms for SFM. At the country level, national forest programmes were conceived as central instruments to achieve SFM (Egestad 1999). To measure progress towards SFM, seven thematic elements derived from regional and international processes on criteria and indicators for SFM have been put forward (FAO 2005):³

- (1) *Extent of forest resources* – maintaining significant forest cover and stocking.
- (2) *Biological diversity* – its conservation and management.
- (3) *Forest health and vitality* – reducing fires, pollution, invasive species, pests and diseases.
- (4) *Productive functions* – maintaining production of wood and non-wood forest products.
- (5) *Protective functions* – in relation to soil, hydrological and aquatic systems.
- (6) *Socio-economic functions* – the support provided by forests to the economy and to society.
- (7) *Legal, policy and institutional framework* – to support the above themes.

Together these elements permit greater potential to quantify broad scale forest management sustainability. Assessments of related variables have allowed cross-country assessments of forest management (FAO 2005; FAO 2010e; FAO 2010b).

Several initiatives have supported SFM including the International Tropical Timber Organization’s (ITTO) “Year 2000 Objective” which was adopted in the early 1990s. The objective committed member countries to achieving SFM by the year 2000 and ensuring that traded tropical timber would be sourced from sustainably managed forests. Two decades later and notwithstanding some indications of progress it is clear the Year 2000 Objective was overly ambitious (Brüning 2006). In the Asia-Pacific region, only 11.6 percent of the total forested areas – some 19.5 million hectares – are considered to be managed sustainably. Certified forests only account for 3 percent of the total global forest area and over 90 percent is situated in developed countries (Cashore *et al.* 2006).

This failure led to some loss of aid agencies’ interest in forest management and concomitant reduction in funding to support SFM during the late 1990s and early 2000s (Anon 2003). To complicate matters further, achieving SFM remains financially unattractive to most forest industries (Rice *et al.* 2001; Siry *et al.* 2005). Gale (2006) has also drawn attention to “an Asian model of development dominated by narrow business-government coalitions that are actively hostile to [...] sustainable forest management”.

¹ See Promoting Sustainable Management of Forests and Woodlands: <http://www.fao.org/forestry/sfm/en/>

² Wiersum (1995) argues that sustainability has been an accepted principle in forestry since the eighteenth century, recognition of broader social, economic and environmental roles of forests in the Asia-Pacific region only received serious attention after UNCED, before which forests were mainly managed for timber production (Enters *et al.* 2003; Blaser *et al.* 2006).

³ <http://www.fao.org/forestry/24447/en/>

In recent years, calls to support SFM have been reinforced through the undermining of its fundamentals, including continuing high rates of deforestation, the inability of forests and forestry to contribute effectively to poverty reduction and new demands on forests for climate change mitigation and adaptation (APFC 2008; Enters *et al.* 2009a). In most countries in the region rates of deforestation remain high, although in the region as a whole forest cover has been increasing at 0.1 percent *per annum* over the past five years. Positive contributions were made almost exclusively by four countries – China, India, the Philippines and Viet Nam (FAO 2010e). In most other countries, forest cover (especially of natural forests) is level or falling as regional and global populations expand, become wealthier and make increasing demands on land and forest resources. The following countries have lost a significant area of forests, i.e., more than half of 1 percent annually, between 2005 and 2010: Australia, Cambodia, DPR Korea, Indonesia, Mongolia, Myanmar, Pakistan and Sri Lanka (FAO 2010b).

Many major drivers of change in forestry are external to the forestry sector. Demographic, economic, technological and environmental changes all shape forestry development. Increasing populations, changes in age structure, urbanization and international migration all impact forestry and, depending on mediating factors, may have a moderating or intensifying impact on deforestation and forest degradation (FAO 2010a). Income growth and distribution and the growth of a middle class produce varying effects on forestry as do changes in economic structure associated with transitions from subsistence to industrial- and service-based economies. It has often been the case that turnaround towards SFM follows a general pattern in which forest resources are depleted to a point of perceived scarcity – often punctuated by a catastrophic natural disaster – before rehabilitation policies are instituted and related measures are implemented (FAO 2010b). Other means by which forest transitions come about have been cited to include economic development, forest scarcity and agricultural intensification (Meyfroit and Lamblin 2008).

The recent economic downturn and developments over the next months and years will determine the direction that forestry will take to 2020 (Box 1.1). Prolonged recession would result in reduced demands for forest products while also reducing investment in environmental service production and increasing dependence on land and agricultural production (FAO 2010a). A return to high levels of economic growth may reduce pressure for forest conversion by providing urban jobs and reducing the attractiveness of agricultural employment, but increased demand for forest products and industrial crops (including agrofuels) may also result in rapid exploitation and conversion of remaining natural forests. Demands for infrastructure and residential and industrial development could also increase pressure on forests along with demand for land for forest plantation estates and mining expansion. High rates of economic growth may also increase funding availability for addressing the pressing local and global environmental concerns. In relation, environmental degradation and climate change – both in part consequences of rapid economic growth – have become increasingly important for forests and forestry although important questions surround the extent to which these issues will lead to concerted national and global actions (FAO 2010a).

Box 1.1. The likely path of Asia-Pacific development to 2020

- Most middle-income and emerging economies are likely to aim to pursue a high growth path. Political and institutional conditions will encourage adoption of this path, except in the context of catastrophic events (including a prolonged global recession or climate change-related events). There will, however, be some effort to develop 'green energy', especially in the context of increasing cost of fossil fuels and the growing concerns over energy security.
- Resource-rich low-income countries are likely to grow rapidly, taking advantage of the demand for raw materials from the emerging economies. Given the emphasis on rapid growth and exploitation of natural resources, sustainability is unlikely to receive much attention, especially in countries with weak policies and institutions.
- Low-income resource-poor countries (and regions within countries) are likely to face considerable challenges with high likelihood of a low-growth/stagnation scenario developing, especially if there are no efforts to improve human resources and infrastructure. Continued growth of the global economy will provide respite through migration and remittances and demand for labour-intensive production. This may reduce the pressure on land and other resources in some areas. A prolonged contraction of the global economy will have severe opposing impacts, aggravating unsustainable use of natural resources (including land, water and forests).
- Most developed economies are likely to remain in a low-growth, or even stagnation, scenario. However, in view of well-developed policy and institutional frameworks and ability to invest in science and technology, there will be greater efforts to shift towards a green economy.
- Small island countries will have fluctuating fortunes. While continued rapid growth of the global economy will maintain vibrancy in the tourism sector, challenges in the context of sea-level rise are likely to arise.

Source: adapted from FAO (2010a).

Despite external influence, the key mediating factors determining the path of change in forestry remain policy, legislation, institutions and governance. Various arguments and approaches have been proposed to achieve SFM. Enters *et al.* (2003) and FAO (2007b) reiterate the importance of forest policies – in particular their implementation – and institutions. Against this background, the main objective of this study is to review developments in policies, legislations and institutional arrangements in the Asia-Pacific region and to discuss developments likely to occur by 2020. Three broad questions are posed to guide the analysis:

1. What is the current status of, and what changes have occurred in policies, legislation, institutions and governance over recent decades?
2. To what extent have policies, legislation and institutional arrangements been effective in achieving SFM and to what extent has illegal logging been tackled?
3. What types of improvement are needed – if any – in policies, legislation and institutions to expedite achievement of SFM, combat illegal logging and respond to challenges likely to face forests and forestry up to 2020?

To address these questions 12 country reviews were conducted, covering Cambodia, China, India, Indonesia, Lao PDR, Malaysia, Myanmar, Nepal, Papua New Guinea, Philippines, Thailand and Viet Nam. These papers constituted the initial inputs to this document. Further inputs were garnered from discussions at a workshop convened for country authors to present and discuss their work, and from review of the literature.

The next sections review, in turn, the current status and key trends in policies, legislation, institutional arrangements and governance. Finally, an outlook for forests and forestry in the region is provided and some conclusions are drawn to support forestry agencies in developing policy processes appropriate in extending the breadth of implementation of SFM.

2. Status and trends in forest policies

The forestry sector in the region has undergone substantial changes in the past decades (FAO 2010a). Major shifts have occurred in response to broader developments such as economic and population growth, globalization and infrastructure development as well as policy alterations. In some cases, forest-related policy has been a major driver of change while in others, policy has been only weakly implemented and other factors have driven change. The role of forest policy and the need for an iterative policy process and supportive governance frameworks are often overlooked but are essential if forest policy is to be effective (Box 2.1).

Box 2.1. 'Policy' and 'governance'

Numerous definitions of what constitutes policy exist (FAO 1993; FAO 2005). According to Webster's dictionary:

Policy is a definite course or method of action selected from among alternatives and in light of given conditions to guide and determine present and future decisions.

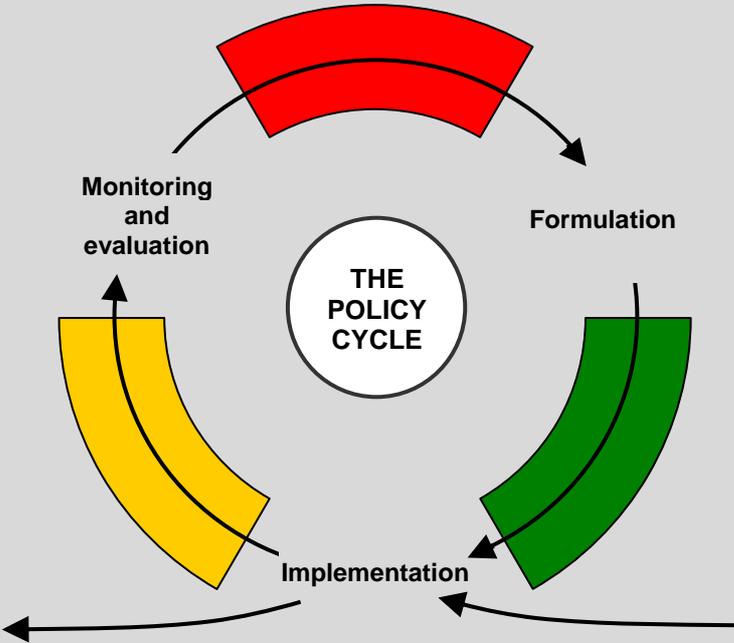
More generally, policies deal with articulation of courses of actions to achieve specific objectives. They are the guiding principles that determine what is to happen (Enters *et al.* 2003). Forest policies are concerned with the manner in which forests and tree resources should be managed to meet society's demand for goods and services that forests can – if managed properly – provide for current and future generations. Forest policy has content in the form of statements and instruments designed to achieve a desired objective such as biodiversity conservation, wood production or watershed protection.

Forest policy also follows a staged process: policy formulation, implementation and review. The process is circular in that review of policy effectiveness leads either to policy adjustments or renewal, or simply confirms the effectiveness of the existing policy.

Governance is a way of executing policies which is focused on cooperation between government, civil society organizations and markets (van Der Zouwen 2006). Governance differs from government

given its participatory nature. Often policies are formed reactively and without due analysis of the issues to be addressed, possible solutions and associated costs and benefits and potential policy overlaps and conflicts.

Communication and mobilization are often weak and consultation insufficient, such that the possibility of garnering stakeholder support and avoiding potential pitfalls and obstructions is denied. As described by Görg (2007) there is a changing role of governments in governance in that governments no longer dominate decision-making and wider participation is promoted. Decision-making, accountability and transparency are shared by all stakeholders and policies are thus garnering a broader base of support and have greater likelihood of success as a result.



For many years, forest policy has been directed towards SFM in most countries in the Asia-Pacific region. This has meant reorientation towards reduced exploitation of natural forests, increased

establishment of plantation resources and greater inclusion of local communities and indigenous peoples, and the private sector in forest management. Support for the forest-processing industry and promotion of domestic value addition has been another key theme although excessive wood-processing capacity has also led to policies promoting industrial rationalization. Several complete or partial logging bans for natural forests have also been imposed throughout the past two decades – in China, the Philippines, Thailand, Viet Nam and most recently, in 2001, Cambodia (Durst *et al.* 2001). Log export bans have also been implemented to reduce forest degradation and increase the availability of timber to domestic wood-processing industries. Forest rehabilitation has been more frequently included in policy statements, particularly in Indonesia, the Philippines and Viet Nam. Plantation development has also been an important policy focus in China, Indonesia, Malaysia, Thailand and Viet Nam, although results have been mixed (Enters and Durst 2004).

With the changes in forestry objectives away from timber production, many countries are gradually moving away from state forest management (Edmunds and Wollenberg 2004). Devolution, decentralization and multi-stakeholder forest management schemes have grown in the past decade, although challenges in maintaining the transition remain (Gilmour *et al.* 2007; Enters *et al.* 2000; Fisher *et al.* 2007; Colfer *et al.* 2008). Community involvement has been a frequent policy goal in the region and in Lao PDR and Viet Nam poverty reduction has become a central theme of forest strategies (MAF 2004; MARD 2007). In China, the Philippines and Viet Nam, granting of land rights to individuals, families and indigenous peoples has had considerable influence on the forestry sector. In Viet Nam, the forest land allocation policy has been combined with major programmes to increase forest cover, wood products production and rural incomes.

A number of reasons explain the involvement of non-state actors in forest management. Governments are increasingly realizing that they cannot manage forests alone. Rehabilitation of degraded forest lands requires resources from public and private investment and local people are important potential contributors. Governments also increasingly realize that forest management is difficult if not impossible without active engagement of a wide spectrum of stakeholders. A number of external pressures have also influenced movement towards participatory forestry, including international initiatives, social movements and donor requirements.

In other developments, regional and international collaboration to tackle illegal logging and trade has been strengthened in several countries and Indonesia in particular. Regional-level project-based efforts have begun to support forest law enforcement, governance and trade. In the more advanced economies, e.g., Malaysia and Thailand, separation between institutions responsible for conservation and production has been enacted and private sector involvement in plantation development has increased. More recently, protection/conservation of forest resources has received great attention in relation to climate change mitigation and adaptation. In the future, these issues are likely to receive greater consideration as concern grows over the impacts of climate change.

Although most countries in the region have adopted SFM as the guiding principle in forest policy, not all have revised forest policy and legislation in recent years. In the past decade, seven of the twelve countries reviewed here have revised their forest policies while only India has not completed a revision during the past 20 years. Only three countries have, however, revised forest legislation in the past decade while three more have not revised legislation for more than 20 years (Table 2.1).

Table 2.1 Revision dates of forest policy and legislation in Asia-Pacific countries*

Subregion	Country	Date of revision	
		Policy	Forest law
East Asia	China	2003 ¹	1998 ²
Southeast Asia	Cambodia	2002	2002
	Indonesia	2010 ³	1999
	Malaysia	1992	1993 ⁴
	Myanmar ⁵	1995	1992
	Lao PDR	2005 ⁶	2006
	Philippines	1995 ⁷	1975
	Viet Nam	2007 ⁸	2004 ⁹
	Thailand	2007	1982 ¹⁰
South Asia	India	1988	1927/1980 ¹¹
	Nepal	2000 ¹²	1993
South Pacific	PNG	1990 ¹³	1991
Key:	revised in last decade	revised in last two decades	revised > two decades ago

N.B. Italics indicate year of promulgation for key documents guiding forestry where a forest policy, as such, does not exist.

sustainable development of the nation's forests. The National Integrated Protected Areas Act of 1991 and the Indigenous Peoples' Rights Act of 1997 have also been of major importance in terms of the area of forest affected. Other countries, including those that have not recently revised forest policy and legislation, may have other instruments driving forest-related objectives. A clear and concise policy statement does, however, aid transparency and can serve to assist achieving objectives where the policy process has garnered wide support.

Table 2.2 summarizes forest policy objectives in the countries that form the focus of this paper. Almost all countries have adopted policies that support SFM in moving away from the sole objective of timber production and economic expansion.

In many cases, it is clear that external factors have triggered change in forest policies. In China, for example, one of the main policy objectives is environmental protection and restoration. Environmental concerns over forest degradation and severe flooding in the summer of 1998 triggered the imposition of a logging ban in state-owned forests of the upper reaches of the Yangtze River and the middle and upper reaches of the Yellow River (Waggner 2001). Similarly, in Thailand, after severe floods in November 1988 the government reoriented its policies towards forest protection. In Indonesia, the shift towards decentralization, environmental protection and restructuring of the forest industry was influenced by various factors such as political unrest in the late 1990s, environmental catastrophes, economic crisis and international pressure for democratic change and grassroots movements (Iskandarsyah and Wicaksono 2008).

Not all countries have specific forest policy documents, however, and forest sector activities may be guided by other policies and different decrees and orders. In China, for example, although there is not a specific "forest policy" document, many policy revisions have been made since 1998 that affect forests and forestry. The 2003 Decision on Accelerating the Development of Forestry (SFA 2009) was a key step in promulgating various reforms undertaken since 1998 (Chen 2008). In the Philippines, in lieu of a specific forest policy document, several codes, acts and executive orders have guided forestry development. An executive order issued in 1995 established Community-based Forest Management (CBFM) as the national strategy to ensure

* Source: FRA 2010 except: ¹ Decision on Accelerating the Development of Forestry (SFA 2009); ² Chen (2008); ³ MoF (2006b); ⁴ Tong (2008); ⁵ Thauang (2008); ⁶ Forestry Strategy 2020 (Hodgdon 2008); ⁷ Executive Order No. 263 (FMB 2009); ⁸ Forestry Development Strategy 2006-2020 (FSIV 2009); ⁹ Lekhac (2008); ¹⁰ Ongprasert (2008); ¹¹ India Forest Act 1927, Forest Conservation Act 1980 (Rao 2008); ¹² Khatri (2008); ¹³ Hurahura (2008).

Table 2.2. Examples of current forest policy objectives in the Asia-Pacific region

COUNTRY	CURRENT POLICY OBJECTIVES	REMARKS
China (Chen 2008)	<ol style="list-style-type: none"> 1. To improve biodiversity conservation and secure national ecological safety 2. To restore key ecosystems 3. To promote SFM 4. To clarify forest land tenure and secure farmers' rights on forest and forest land management 5. To promote forest industry 6. To strengthen international cooperation 	Forest policies in China show a clear shift from timber production to SFM in recent decades.
India (Matta 2008)	<ol style="list-style-type: none"> 1. Maintenance of environmental stability, restoration of ecological balance, and soil and water conservation 2. Meeting the needs of local communities through partnerships between forest departments and local communities 3. To achieve the target of 33 percent area under tree cover 4. To promote partnership between industries and farmers to produce raw material 	Forest policies have shifted from regulatory to participatory management embracing SFM objectives.
Myanmar (Thaung 2008)	<ol style="list-style-type: none"> 1. Protection of soil, water, wildlife, biodiversity and environment 2. Sustainability of forest resources 3. To support basic needs of the people 4. To harness economic benefits 5. Participation of the people 6. Public awareness of the vital role of the forests in the well-being and socio-economic development of the nation 	Forest policies embody the broader concept of SFM, biodiversity conservation and participation – both forest- and people-focused
Papua New Guinea (Hurahura 2008)	<ol style="list-style-type: none"> 1. Commercial logging based on SFM principles 2. Conserving natural forest for the benefit of people 	SFM objectives are guiding principles

Source: unpublished country reports.

Policy shifts have often been marked by major programmes aimed at reversing declining forest resource trends. In the spirit of ecosystem restoration, the President of Indonesia launched a national movement for forest and land rehabilitation in 2003 (locally known as *gerakan nasional rehabilitasi hutan dan lahan* – GERHAN). This scheme aimed at rehabilitating 5 million hectares of degraded forest throughout the country between 2003 and 2009. Likewise, Viet Nam has been pursuing a policy of forest land rehabilitation through the Five Million Hectare Reforestation Project (5MHRP) since 1998 (de Jong *et al.* 2006; Lekhac 2008).

Demands for social and economic justice, international pressure, environmental disasters, resource depletion and economic development have all in different ways held sway over forest policy and by looking at likely future developments it should be possible to determine broad possible directions for policy in the coming decade. For example, forest policies are likely to include increased attention to the importance of forests and forest land use as both a carbon sink and a potential source of greenhouse gases (GHG). Several governments in the region are participating in international schemes to mitigate and adapt to climate change and define new policies to ensure effective implementation of climate change schemes. Indonesia, Papua New Guinea and Viet Nam are pilot countries and Cambodia, Nepal, the Philippines, Solomon Islands and Sri Lanka are partner countries in the UN-REDD Programme. Indonesia, Lao PDR, Nepal, Papua New Guinea, Thailand and Viet Nam are participating in the Forest Carbon Partnership Facility (FCPF). Indonesia has been at the forefront with four nationally endorsed REDD+ demonstration sites, including the The Nature Conservancy (TNC)/USAID-led Berau Forest Carbon Program (BFCP), which emulates a national REDD+ mechanism. Other countries are also implementing REDD-related activities (Box 2.2).

Box 2.2. Malaysia brings REDD into its policy

Malaysian policy approaches for REDD are:

- Retention of remaining forests. This should be designed to be sufficient and cost effective and based on measures taken and opportunity costs.
- Additional funds will have to be set aside to assist in building technical and institutional capacity to implement effective measures to reduce emission of greenhouse gases from deforestation.
- Incentives mechanisms should be flexible and offer a range of options applicable to diverse forest environments, management regimes and socio-economic and development conditions.

Source: FRIM (2007) as cited by Tong (2008).

Future trends in forest policies will depend on many factors both within and outside the forest sector. Different countries are at different stages of forestry development and have different strengths and weaknesses, both within forestry and in other sectors. By 2020, it is likely that most countries in the Asia-Pacific region will have developed clearer courses in forestry according to their capacities, advantages and disadvantages, and that more countries will have begun to turn the corner towards sustainable forest management.

2.1. Synopsis by country

The following sections provide an overview of the policy settings in each of the selected countries and major trends that have occurred in the past decade. Reference is also made to forestry and other legislation that has been of importance in defining the direction of forestry.

2.1.1. Cambodia

For over a decade, sustainability has been at the centre of forestry policy in Cambodia. Policy adopted in 1998 emphasized balancing harvesting with tree planting and forest growth while controlling illegal logging (Savet and Sokhun 2003). Specific objectives included planting fast-growing trees for woodfuel production; controlling timber processing capacity; and encouraging modernization of wood-processing equipment and employment generation. Provisions were made for reviewing the legality of forest concessions with cancelled concessions to be classified as protected areas or classified forests (Savet and Sokhun 2003; Forestry Administration 2009).

In 2001, failures in the (production) forest management system resulted in the suspension of concession licences and forestry embarked upon a period of revision. A new law on forestry was implemented in 2002 and a National Forest Policy Statement was issued by the Prime Minister. The Department of Forest and Wildlife was reorganized into the Forestry Administration in 2003 to create a single line of authority for forestry at the national level (Rotha 2008; Forestry Administration 2009). The Cambodian Millennium Development Goals state that by 2015, 60 percent of Cambodia must be covered by forests. This goal will be difficult to attain, as economic land concessions are leading to widespread forest conversion and land grabbing while agricultural conversion, infrastructure development and a growing population are placing increasing demands on forest products and forest land.

The Forestry Law of 2002 provides rights to the Forestry Administration to establish community forestry. The government endorsement of the Sub-Decree on Community Forestry Management in 2003 was a milestone in forestry in Cambodia. The 2006 Guideline on Community Forestry and its relevant policies (*Prakas*) defines operational steps to secure a forest management agreement. Presently, there are more than 420 community forestry sites covering around 400 000 hectares, although only 94 sites covering 113 544 hectares are legal recognized (Database of the Forestry Administration, February 2010).

2.1.2. China

Since the environmental disasters that occurred in 1998, massive changes have taken place in China's forestry development through revision and formulation of laws and regulations while forest policies have also maintained their importance (SFA 2009). Policy changes are manifested in various measures: strategic changes and implementation of major forestry programmes; increases in government investments in forest establishment and rehabilitation; development of a forest management classification system; establishment of a Compensation Funds System for Forest Ecological Benefits; reform of collective forest ownership systems in several provinces and allocation of clear property rights (SFA 2009).

Since catastrophic flooding of the Yangtze River in 1998 and water shortages in the Yellow River catchment in 1997, awareness of the importance of forests has grown within the State Forest Administration, universities and other government institutions. Protecting and managing forest for hydrological functions has become an important part of watershed management (SFA 2009). Forest policy changes after 1998 were aimed at achieving the following objectives:

- Improving biodiversity conservation and securing national ecological safety;
- Restoring key ecosystems;
- Promoting SFM and switching from forest expansion to focus on forest quality;
- Clarification of forest land tenure and securing farmers' rights in relation to forest and forest land management;
- Promoting balanced forestry industry development; and
- Strengthening international cooperation.

To support forest rehabilitation and watershed management, two major national programmes are being implemented: the Natural Forest Protection Programme and the Sloping Land Conversion Programme. A number of other afforestation and greening programmes aimed at desertification control, wildlife conservation and development of shelterbelts and plantations are also being implemented (see Box 2.3). In relation, forest cover in China increased at 1.6 percent per year between 2000 and 2010 to 21.9 percent cover while forest designated primarily for protection increased at 6.3 percent per year (FAO 2010).

Box 2.3. Programmes promoting China's plantation expansion

The Government of China has initiated six major forestry programmes to contribute to the development of sustainable forest resource management, in line with the national forestry strategy. The programmes commonly referred to as the Six Major Forestry Programmes, which extends across most of China's counties, cities and regions, include:

- (i) The Natural Forest Protection Programme (through logging bans and afforestation with incentives to forest enterprises);
- (ii) Conversion of Cropland for Forests and Grassland Programme (also known as the Grain for Green Programme) converts cropland on steep slopes by providing farmers with grain and cash subsidies;
- (iii) Sandification Control Programme for areas in the vicinity of Beijing;
- (iv) Key Shelterbelts Programme (three in north shelter forests, and others in the Yangtze River basin);
- (v) Wildlife Conservation and Nature Reserve Development Programme; and
- (vi) Fast Growing and High Yielding Forests Base Construction Programme.

The objectives and approaches differ among the programmes; however, common to all has been the application of afforestation technologies and accompanying incentives. By 2005, the programmes had generated over 58 million hectares of afforested land (including naturally regenerated forests).

Source: FAO (2010c).

In June 2003, the State Council promulgated a Decision on Accelerating the Development of Forestry, including provisions in relation to forestry production, forestry reform and safeguarding forestry development. The Decision clearly outlined the intention to change the orientation of forestry from timber production to ecological restoration. The political environment for forest policy- and legislation-making, and implementation has since been much more receptive, scientific and democratic (SFA 2009).

Forest policies have also been directed towards forest land tenure reform, the second round of which began in 2003; promotion of plantation establishment between 2000 and 2005 to provide an industrial base; and forest industry development since 2007. The Eleventh Five Year Plan (2006-2010) also promoted forest industry development together with ecological conservation. Thus, forest policy in China seeks to balance production with environmental values and socio-economic advancement and to date the effectiveness of implementation has been high (Chen 2008).

2.1.3. India

The Indian Forest Policy of 1952 recognized the protective role of forests and enunciated a national target of 33 percent forest cover (MoEF 2008). Conservation became prominent in 1972 with promulgation of the Wildlife (Protection) Act while forest conservation was supported more directly through enactment of the Forest (Conservation) Act 1980 (amended in 1988, 2003). With the launch of the National Forest Policy in 1988, a dramatic shift in forest management approach from regulatory to participatory transpired. Ecological security became the primary policy objective and livelihood needs of forest-dependent communities were also a key focus. The policy advocates sustainable management with maintenance of environmental stability, restoration of ecological balance and soil and water conservation as the prime objectives of forest management. Under the policy, subsidized supply of raw materials to forest-based industries also ceased (Matta 2008).

Since the National Forestry Policy, programmes in India have been predominantly directed towards increasing forest cover. The National Forestry Action Programme of 1999 has the central aim of raising forest cover to 25 percent by 2007 and 33 percent by 2012 (Pande and Pandey 2004). Five programmes aim to: (i) protect existing forest resources; (ii) improve forest productivity; (iii) reduce total demand; (iv) strengthen the policy and institutional frameworks; and (v) expand forest area. In keeping with these objectives, the National Afforestation Programme was launched in 2002 as part of the Tenth Five-Year Plan. The programme is an amalgamation of all afforestation schemes under the Ministry of Environment and Forests. Joint Forest Management (JFM) is integrated within all planned projects and a participatory approach is emphasized. Forest cover in 2010 stood at 23 percent with an increase of 0.5 percent *per annum* over the past decade (FAO 2010). Indian forests have, however, been under severe pressure to meet growing demands for land, fodder and forest products from ever-growing human and livestock populations (MoEF 2008).

Another milestone has been the 2006 enactment of legislation for assigning forests occupation rights to indigenous peoples along with responsibility for conservation of biological resources and maintenance of the ecological balance. It is estimated that about 20 percent of the government-controlled and managed forest land will come under the occupational titles recognized under this law. Currently, plans are being made to include wood production and commercial forestry to a greater extent in forestry policy and to encourage tree planting and private sector investment in rehabilitating degraded forest areas.

2.1.4. Indonesia

Indonesia's forestry policy in the 1990s aimed to reduce unplanned forest conversion while promoting sustained yield management, land rehabilitation, plantation development, forest protection and conservation, and community participation (FAO 1993). A new forestry law in 1999 introduced principles of good governance while promoting social objectives by recognizing forest land tenure and user rights and allowing individuals and cooperatives involvement in forest-based business (Wardojo and Masripatin 2002). The focus of the Ministry of Forestry (MoF) programmes and activities over the

past decade are shown in Table 2.3. New directions towards conservation and rehabilitation of forest resources as well as community development are evident after 2004.

Table 2.3. Strategic priorities of the Ministry of Forestry, Indonesia, for 2001-2009

2001-2004	2004-2009
<ul style="list-style-type: none"> ▪ Illegal logging ▪ Timber-based industry restructuring ▪ Forest fires ▪ Timber plantation development ▪ Decentralization in forest management 	<ul style="list-style-type: none"> ▪ Combating illegal logging and associated trade ▪ Forestry sector revitalization, in particular forestry industries ▪ Conservation and rehabilitation of forest resources ▪ Community economic development in and around forest areas ▪ Stabilization of forest area

Source: Wadojo and Masripatin (2002); MoF (2006b).

Illegal logging and trade have become increasingly important issues in Indonesian forestry. Following the Bali Ministerial Declaration on Forest Law Enforcement and Governance of 2001, many countries, including China, the European Union, Japan and the United Kingdom, developed bilateral agreements with Indonesia to address forest crime and associated illegal trade (CFPS 2009). In 2005, related efforts included presidential instructions aimed at eradicating illegal logging and associated activities. Criteria and indicators for sustainable management of natural production forests were made compulsory by the MoF following ministerial decrees in 2002 (Wadojo and Masripatin 2002). At present, Indonesia is negotiating a Voluntary Partnership Agreement (VPA) with the European Union. Decree No. P.38 issued by the MoF in 2009 concerning standards for SFM and timber legality denotes recent progress towards this objective.

Gerakan National Rehabilitasi Hutan (GERHAN) is a national forest and land rehabilitation movement established in 2003 with government funding. The government has set a target to rehabilitate 5 million hectares – 60 percent within forest areas, and 40 percent outside forest areas (Iskandarsyah and Wicaksono 2008). Decrees were issued in 2007 to encourage investment in natural forest management, both for production and restoration, and in forest plantation development. Other decrees have been passed to promote production and export of forest products and to create local jobs (Iskandarsyah and Wicaksono 2008). The amendment of the US Lacey Act in 2008 is stimulating compliance with the 2009 SVLK – Indonesian Timber Legality Standard – as large and medium timber concessionaires position themselves to maintain links with international markets in the United States of America and the European Union. In order to accelerate forestry sector revitalization, the government has also planned the development of 5.4 million hectares of Industrial Community Forest Plantations (Hutan Tanaman Rakyat/HTR) in degraded production forest areas between 2007 and 2016 (CFPS 2009).

The development vision for the forestry sector in Indonesia is for forestry to be a “pillar for sustainable development by 2025”. To this end, six ‘forestry development missions’ have been established (MoF 2006a) to:

1. Create a strong institutional framework for forestry development;
2. Increase the value and sustainable productivity of forest resources;
3. Develop forestry products and services that are environmentally friendly, competitive and that have a high added value;
4. Develop an enabling forestry investment climate;
5. Increase the level of exports of forestry products and services; and
6. Improve social welfare and raise society’s active role in supporting responsible and equitable forest management.

In January 2010, the MoF approved new strategic priorities for 2010-2014. The eight priorities are:

1. Forest area zoning and forest unit establishment;
2. Forest rehabilitation and watershed carrying capacity improvement;
3. Forest area and forest fire control;

4. Biodiversity conservation;
5. Revitalization of forest use and forest industry;
6. Empowerment of local communities around the forests;
7. Mitigation and adaptation to climate change; and
8. Strengthening forestry institutions.

The recent announcement of a two-year moratorium on new concessions to clear natural forests and peatlands under a US\$1 billion deal signed with Norway¹ will clearly have pivotal effects on the forestry sector although details of how related initiatives will be implemented are not available yet. Likewise, various REDD initiatives (FCPF, UN-REDD, Forest Investment Program) are likely to have considerable impacts on forestry sector policy.

2.1.5. Lao PDR

In the early 1990s, Lao forest policy prioritized protection and conservation of forests, improvement of logging practices, forest industry efficiency and forest rehabilitation. Particular attention was given to protection against shifting cultivation and indiscriminate cutting of forests by rural people (FAO 1993). The Forestry Strategy 2020 (FS2020) is the key document that articulates current Lao Government policy for forests and forestry (Hodgdon 2008). This policy, endorsed in 2005, guides the development of the forestry sector in line with other national strategies and plans, most significantly the National Growth and Poverty Eradication Strategy. The FS2020 represents a considerable step forward in guiding the Lao forestry sector towards multiple objectives with poverty reduction at the forefront (MAF 2004). Targets include:

- improving the quality of forest resources by natural regeneration and tree planting for protection and livelihood support;
- providing a sustainable flow of forest products for domestic consumption and household income generation;
- preserving species and habitats; and
- conserving environmental values in relation to soil, water and climate.

Particular areas of focus include: land-use planning, village-based natural resource management, sustainable harvesting; rationalization of the wood-processing industry; tree planting; law enforcement and participation to prevent unauthorized activities; and protection of watersheds. Achieving and maintaining 70 percent forest cover has been a long-term goal that remains high on the FS2020 agenda (see Box 2.4). The FS2020 clearly directs forestry development towards local development, and community involvement, although implementation of people-centred forestry remains largely unfulfilled (Hodgdon 2008).

The Forestry Law has been amended (see Section 3.1) and reiterates central management of forest resources stating that “The State shall not grant any individual or organization lease or concession of natural forest to undertake logging and harvesting of NTFP.” In line with the Forestry Law revision, the Department of Forestry (DoF) will have new divisions of protection forests and production forests, while provincial agriculture and forestry offices will have planning and forestry inspection sections (Tong 2008).

¹ “Indonesia puts moratorium on new forest clearing”
<http://www.reuters.com/article/idUSTRE64Q0V220100527>

Box 2.4. Forest cover in Lao PDR

The Ministry of Agriculture and Forestry (MAF) has adopted a 5-year Agriculture and Forestry Development Plan 2006-2010, which includes the target of increasing forest cover from 9 million hectares (42 percent) to 12 million hectares (53 percent) by 2010 (Tong 2008). The definition used for "forest", however, has considerable effect on the attainment of the target and whether any real change occurs on the ground.

In 2000, Lao PDR submitted a forest cover figure of 54% to the FAO Global Forest Resources Assessment (FRA) while in FRA 2005 forest cover for 2005 had seemingly jumped to 69.9 percent and a backdated figure of 71.6 percent was presented for 2000. Forest cover estimated by the Lao Forest Inventory and Planning Division (FIPD) in 2004 and quoted in the Lao PDR Forestry Strategy 2020 (FS2020) was 41.5 percent. As a national forest cover target for 2020 has been set at 70 percent, the differences in the two sets of figures are of considerable importance.

The disparity results from the change in the definition of forests used: FRA 2005 figures for Lao PDR used 10 rather than 20 percent canopy cover, 5 rather than 10 meter minimum height and bamboo, unstocked forest and shifting cultivation areas that will be restocked were included. Currently, the FS2020 forest cover target is based on the FIPD 2004 baseline but there is discussion of revision to coincide with the FAO definition. Indeed, a figure of 70 percent forest cover is already being quoted by the MAF.[†] Additionally, the recent inclusion of rubber as a forest species under the FAO definition will further increase forest cover in Lao PDR given the decision that rubber is to be used to reach the 70 percent forest cover target (Mekong Maps 2009).

[†]"Minister explains logging regulations" Vientiane Times, 11 July 2008.

2.1.6. Malaysia

In Malaysia, forestry is under the jurisdiction of the state governments – Peninsular Malaysia, Sabah and Sarawak. The cornerstone of the National Forestry Policy 1978 (Revised 1992) is the establishment of permanent reserved forest, which provides the foundation for achievement of SFM. The policy includes provision for forest regeneration and rehabilitation, efficient harvesting and forest industry development, biodiversity conservation, private sector investment in forest plantation establishment and promotion of community participation (Chiew 2009). Amendments in 1992 reflected global concern over biodiversity loss and the role of local communities while reducing focus on production and recognizing forestry's multiple roles. Encouragement of private sector involvement in plantation establishment was also new and reflected early resource concerns (FAO 1993).

Sabah and Sarawak have their own forestry policies. The goal of Sabah's 1954 Forestry Policy is to achieve sustainable management of forest resources. Strategies adopted in 2005 closely follow the national forest policy but with greater emphasis on production and trade, less focus on biodiversity and no provision for community participation (Sabah Forestry Department 2009). Sarawak's 1954 forest policy emphasizes production and revenue generation within the limits of sustainability and does not include social or environmental aims (Sarawak Forestry Department 2009).

Federal-level changes in institutional structure have separated forest conservation and production functions. Responsibility for forestry and timber resided with the Ministry of Primary Industries until 2004 when the Ministry of Natural Resources and Environment and the Ministry of Plantation Industries and Commodities were formed (ITTO 2006). In 2004, the Sarawak Forest Department devolved powers to the Sarawak Forestry Corporation (SFC), a private company owned by the government and responsible for the management of forest resources and timber administration. The Forest Department's role is limited to policy development and regulation (Chan 2008).

2.1.7. Myanmar

For most of the last century a system of sustainable forest production, the Myanmar Selection System (MSS), was in use and environmental impacts were limited. The 1894 Indian Forest Policy, which

focused mainly on sustainable timber production, provided guidance until the Myanmar Forest Policy Act of 1995 which has six priority areas (Tun 2009):

1. Protection of soil, water, wildlife, biodiversity and environment;
2. Sustainability of forest resources use;
3. Basic needs of the people for fuel, shelter, food and recreation;
4. Efficient use, in a socially and environmentally friendly manner, of the full economic potential of forest resources;
5. Participation of people in the conservation and use of forests; and
6. Public awareness of the vital role of forests in the well-being and socio-economic development of the nation.

The National Forest Master Plan (NFMP) was developed in 2001 for the period up to 2030. It covers nature conservation, sustainable harvesting of teak, forest protection, environmental conservation and export of value-added wood and non-wood forest products. Also included are protection and extension of forests, forest regeneration and rehabilitation, watershed management, law enforcement, and promotion of fuelwood substitutes (Tun 2009). The National Code of Practice for Forest Harvesting (1998) also guides forest management and the Community Forestry Instruction, issued in 1995, has provided a foundation for about 600 community forests (Thaung 2008).

Recently, an increasing number of military personnel have been appointed to Forest Department posts. There has also been increasing centralization despite a statement in forest policy to encourage public participation (Thaung 2008). There is, however, evidence of the emergence of pluralistic institutional arrangements. For example, the Forest Products Joint Venture Corporation was established in 1993 to expand manufacturing and distribution of forest products (Thaung 2008).

2.1.8. Nepal

Nepal has witnessed and undergone substantial shifts in forest management approaches since the beginning of the twentieth century – from strict protection to a more participatory regime (Khatri 2008). Hobley (1996) broadly categorizes three main periods regarding the development of forestry in the country: Privatization (1768-1951), Nationalization (1951-1987) and Populism (1987 onwards). For several decades, forestry policy in Nepal has maintained a strong balance between production, protection, conservation, social benefits – employment, income and poverty alleviation, and, in particular, devolution to communities and the private sector.

Forestry sector development in Nepal is guided by the 1989 Master Plan for the Forestry Sector and successive national five-year plans (MFSC 2009). Prior to the 1989 Master Plan, the 1976 National Forestry Plan was formulated to address deforestation and focused on industrial development, domestic and subsistence needs and also recognized people's participation in forest management. The Master Plan's objectives are to meet basic forest product needs and to protect, conserve and derive economic benefits from forest resources. Provision for forest users' committees is also made. Among the programmes designed to support policy implementation, the community and private forestry programme has been central (MFSC 2009). The Forest Act of 1993 and Forest Regulations of 1995 were enacted to facilitate implementation of the Master Plan.

The National Conservation Strategy of 1988 emphasized biodiversity, ecological and sustainability issues and activities in forestry including agroforestry and leasehold forestry. The subsequent Nepal Environmental Policy and Action Plan turned focus towards degradation of soil and natural resources with continuation of community and private forestry themes. The Revised Forestry Sector Policy 2000 acknowledged environmental and agricultural policies related to forestry and provided continuance for the Master Plan, but with explicit options for management of degraded and open forest of the Terai, Inner Terai and Siwalik regions. By March 2009, 1.25 million hectares of Nepal's forest area (more than 25 percent) had been handed over to 14 439 forest user groups (FUGs) that represent more than

1.6 million households (Bharat K. Pokharel, personal communication). The Leasehold Forestry Policy of 2002 made provision for handing over national forests to the private sector.

Five-year plans since 1980 have focused on a balance of production, halting forest degradation and expanding social benefits with a strong emphasis on devolution to the local level and the private sector. More recently the trend has shifted towards conservation, protection and poverty alleviation although these are not new themes. The recent Interim Constitution of Nepal 2007, states that “The state shall give priority to the protection of the environment and to the prevention of its further damage due to physical development activities by increasing the awareness of the general public about environmental cleanliness, and the state shall also make arrangements for the special protection of rare wildlife, the forests and the vegetation” (GoN 2007). The constitution also makes provision for community involvement in forestry activities.

2.1.9. Papua New Guinea

A National Forest Policy had been in place in Papua New Guinea since 1990 and the Forestry Act since 1991 (Hurahura 2008). The policy promoted forest conservation in particular, but was not supported by the Forestry Act and no forests have been set aside for conservation since then. Prior to this the Forestry Ordinance (1936-1937) made provision for purchase of land and timber rights by the government and for granting of licences over acquired resources and subsequent collection of related royalties from forestry activities. A number of policies pursuant to the National Forest Policy have been drafted but not yet sanctioned by the government, e.g.: (i) Downstream Processing Policy; (ii) Reforestation Policy; and (iii) the Eco-forestry Policy. In line with the National Forest Policy, the Forestry Act 1991 (as amended) is supported by the 1998 Forestry Regulations. In recognition of the importance of climate change the Forest Minister has issued directives for the formulation of a carbon trade policy specific to the forestry sector.

The lack of a national land-use plan was identified as one of the reasons for poor management in areas designated for commercial forestry. In the absence of a national land-use plan the forestry sector has been held responsible for poor land management practices conducted by other sectors (Hurahura 2008). The 2005-2010 Medium-Term Development Plan aimed to promote commercial logging based on the principles of sustainable development and conserving natural forest resources. However, the latter goal has been redundant in the face of rigorous pursuit of the first.

2.1.10. Philippines

In 1992, the Department of Environment and Natural Resources (DENR) issued an administrative order transferring harvesting in natural forest from old-growth forest to secondary forest (FMB 2009). This effectively banned logging in old-growth forest, and areas above 1 000 metres or with slopes of 50 percent or more. In the same year, Congress passed the National Integrated Protected Area System (or NIPAS) law which provides for the establishment of an integrated protected areas system.

An executive order issued in 1995 established community-based forest management (CBFM) as the national strategy to ensure sustainable development of the nation’s forests. Communities were granted tenure over the forest lands for an initial 25 years and renewable for another 25 years and are obligated to prepare and implement a management and development plan. The Strategic Action Plan (SAP) 1997-2020 of the DENR details strategies for implementing the CBFM programme (FMB 2009). The 1997 Indigenous People Rights Act (IPRA) and the NIPAS law, although not policies as such, have had a significant influence on forestry. The IPRA recognized the primary right of indigenous peoples to their ancestral lands, while the NIPAS law establishes protected areas and upholds the rights of affected communities to participate in protected area management (Castillo 2008).

A key reason for slow progress in Philippine forestry is the failure over almost 20 years to pass the Sustainable Forest Management Bill (FMB 2009). Passage was stalled due to disagreement over whether to allow commercial logging in the remaining natural forests (Quintos-Natividad *et al.* 2003) (see Box 2.5). As a result, the 1990 Master Plan for Forestry Development was not implemented, although it is still used as a guide. The Revised Master Plan for Forestry Development for 2003-2015

may suffer the same fate as it has neither funding nor DENR affirmation (FMB 2003; Castillo 2008). Similarly, an executive order promoting SFM issued in 2004 was not put into practice as implementing rules and regulations were never completed (Castillo 2008). The SFM Bill has recently been revived and contains provisions giving the state, through the DENR, full control and management of forest lands including granting of tenure rights, licences and approval of management plans. Provisions for collaboration with local government units, communities, private entities and other government agencies in forest management are also included (Castillo 2008).

Box 2.5 Passage of the Sustainable Forest Management Bill in the Philippines

Problems besetting the forestry sector in the Philippines need comprehensive solutions. Forestry policy-makers have realized this since 1992 when they formulated and worked on the passage of a new forestry law during the Ninth National Congress of the Philippines. This move was meant to provide support for implementation of the Master Plan for Forestry Development that was prepared in 1990. Unfortunately, the passage for a new forestry law reached an impasse over whether to allow commercial logging in the remaining natural forests. Ten years later this issue was still under deliberation. Thus, the sector continues to be governed by an outdated law (decreed in 1975) that pertains to forest management under large-scale harvesting.

Source: Quintos-Natividad *et al.* (2003).

Despite the failure of the SFM bill to be passed, many policy measures have been launched in the Philippines with greater measures of success in relation to assisted natural regeneration, enterprise development and plantation development.¹

2.1.11. Thailand

Thailand's first comprehensive National Forest Policy was passed in 1985 (RFD/DNP 2009). The policy is based around the principles of SFM and emphasizes environmental protection. Agricultural intensification and provincial land-use planning are supported to prevent forest conversion, as are measures to control shifting agriculture, forest fires and forest clearance by ethnic minorities. Harmonized public and private sector management of forests is stressed as is reforestation for industrial wood production and protection. The 40 percent national forest cover target was originally divided into 15 percent for protection and conservation and 25 percent for production. After catastrophic flooding in Southern Thailand in 1988, however, a logging ban was imposed and the ratio of conservation to production was reversed (Ongprasert 2008).

In 1991, the Royal Forest Department (RFD) began developing a Community Forestry Bill to allow involvement of local communities in managing forests in and around national reserves. The bill made little progress despite being redrafted several times. Conflict has arisen between 'the people's movement' which underscores communal rights and the 'dark green movement' which objects to community forest establishment in protected areas (Ongprasert 2008). A decision was eventually made that allowed community forestry where communities could prove that they had settled before 1993 and could demonstrate that they protect their forests. The bill was approved in November 2007 and is awaiting royal approval before enactment.

Thailand's forest-related policy, legislation and institutional frameworks distinguish protection and production forests. In 2002, the RFD was divided into three departments: the RFD (responsible for forests outside protected areas); the National Park, Wildlife and Plant Conservation Department; and the Department of Marine and Coastal Resources. Decentralization and public participation in policy, planning, and management of natural resources in Thailand are still rather limited. After the *coup d'etat* in 2006, however, a new constitution was drafted containing provisions for the promotion of public participation in environmental conservation and sustainable natural resources use (Ongprasert 2008).

¹ Department of Environment and Natural Resources (<http://www.denr.gov.ph/section-policies/>)

2.1.12. Viet Nam

Since nationwide introduction of free market principles in 1986, and particularly during the last decade, substantial changes have taken place in the forestry sector, including the re-organization of state forest enterprises and changes in forest ownership and growth in wood products exports. Forests have been classified into three types – special-use (conservation), protection and production forests. State-forest enterprises are being dissolved or re-arranged into companies and Forest Management Boards. Legislation has been introduced during the past decade to allocate land to households and individuals for sustainable forest production, conservation of flora and fauna and forest protection (Coi 2008). Several major forestry programmes have been implemented including the Five Million Hectare Reforestation Programme, which has contributed greatly to national forest restoration since 1998. However, forest degradation remains a serious problem and is widespread throughout the country. Between 1999 and 2005, the natural forest area classified as rich declined by 10.2 percent; the area of medium-rich forests declined by 13.4 percent during the same period. The commercial value of natural forests has also considerably declined and most rich forests are located in remote areas that are difficult to access.

Forestry has moved towards greater participation, improved forest protection, increased plantation establishment and increased timber processing both for domestic demand and export. Protection of existing natural forest, greening areas of bare land, planting of production forest and sustainable use of forest resources is expected to increase the importance of forestry as an economic sector while contributing to income generation, livelihood improvement and poverty reduction (FSIV 2009). Four major trends are underway in the forestry sector (FSIV 2009):

1. From forest exploitation to plantation development, protection, enrichment and maintenance of forest through forest reclassification, limits to exploitation, closure of natural forest and expansion of plantation forests.
2. From extensive production and monoculture forestry to intensive and diversified forestry including agroforestry and collective trading of forest products.
3. From public forestry to people's forestry through restructuring of state forest enterprises and the promotion of private forestry.
4. From state control to empowerment of local bodies with government withdrawal from forestry-related production and trade.

In 2007, the government approved the Viet Nam Forestry Development Strategy 2006-2020. The strategy comprises five programmes (MARD 2007):

1. Sustainable Forest Management and Development Programme;
2. Programme on Forest Protection, Biodiversity Conservation and Environmental Service Development;
3. Forest Product Processing and Trade Programme;
4. Programme on Research, Education, Training and Forestry Extension; and
5. Programme on Renovating Forest Sector Institutions, Policy, Planning and Monitoring.

Viet Nam, although retaining only small areas of natural forests, has also become a leader in developing REDD readiness and significant revenues could be secured if international agreement and associated funding are realized. The fact that only one forestry-related Clean Development Mechanism (CDM) project exists in Viet Nam despite national focus on afforestation and reforestation does, however, suggest that expectations should remain conservative for the time being.

2.2. Policy effectiveness

Although forest policies in the region generally pursue SFM, they cannot be judged only by objectives or statements of intent (Byron 2006). According to Byron (2006) when assessing a particular forest policy the following three questions should be considered: (i) Is it delivering its stated aims? (ii) Is it doing so at reasonable cost to society? and (iii) Who benefits and who loses from this policy? There is

also a need for policy analysis to go beyond questions of effectiveness, efficiency and equity to appropriateness in relation to emerging social, economic and environmental needs and priorities. In this analysis, several aspects are discussed, including: progress towards forest cover targets, change in forest area by designation, expansion of certification and implementation of devolution and contribution of forests and forestry to the well-being of local people.

Most countries in the region have set forest cover targets as shown in Table 2.4. The target set by Lao PDR is particularly high in comparison with the actual forest area and current trends are heading in the opposite direction. A similar situation, although with a smaller gap between desired and actual forest cover, prevails in Cambodia and Myanmar. The aim of increasing forest cover in Indonesia is not being met and in Nepal, forest cover is some way below the targeted figure but according to available data no progress is being made in increasing forest cover. In India, the Philippines, Thailand and Viet Nam, progress is being made towards targets, while China and Malaysia have attained their forest cover targets. In summary, five countries are failing to meet overall quantitative goals, four are moving towards policy realization and two have arrived at targets.

Table 2.4. Forest cover targets, actual forest cover and forest cover trends in Asia-Pacific countries

Country	Forest cover 2010 (%)	Annual change 2005-2010 (%)	Forest cover target
Cambodia	57.2	-1.2	Maintain 60% through 2015 ¹
China	22.2	1.4	20% by 2010 and 26% by 2050 ²
India	23.0	0.2	33% of total land area and 66% in hills ³
Indonesia	52.1	-0.7	"Sufficient area that is proportionally distributed [...] and an increase in forested areas and expansion of planted forest" ⁴
Lao PDR	68.2 (41.6) [†]	-0.5	70% by 2020 ⁵
Malaysia	62.3	-0.4	Each state should maintain 47% of land area as forest reserve, with the long-term goal of 50% ⁶
Myanmar	48.3	-0.9	50% (35% closed forest, 15% open forest) ⁷
Nepal	29	0.0	Maintain 40% forest cover
Papua New Guinea	63.4	-0.5	-
Philippines	25.7	0.7	27% ⁸
Thailand	37.1	0.1	40% (25% conservation forests, 15% economic forests); not less than 33% (18% conservation area) ⁹
Viet Nam ¹⁰	42.4	1.1	47% by 2020 (15.6 million ha)

¹ Forestry Administration (2009); ² SFA (2009); ³ MoEF (2009); ⁴ MoF (2006a); ⁵ Tong (2008); ⁶ <http://projects.wri.org/sd-pams-database/malaysia/national-forestry-policy>; ⁷ Tun (2009); ⁸ FMB (2003) (deforestation – 4 000 ha/yr, reforestation – 40 000 ha/yr, rehabilitation of degraded areas – 10 000 ha/yr); ⁹ RFD/DNP (2009) (40% figure is from 1985 National Forest Policy, 33% figure is from 10th National Socio-economic Development Plan); ¹⁰ MARD (2007).

[†] The figure of 68.2% is given in the 2010 FAO Forest Resources Assessment, which uses a minimum crown cover limit of 10%. The figure of 41.6% is used in the Lao Forestry Strategy 2020 and is based on a minimum crown cover of 20% and is the relevant figure in relation to the 2020 target (Box 2.4).

Source: Forest cover and forest cover change figures from 2010 Forest Resources Assessment (FAO 2010) – national targets may be based on different forest cover definitions to those used by FAO.

Figure 2.1 shows overall changes in Asia-Pacific forest area by designation between 2000 and 2010. In the region as a whole, forest area increased by 1.4 million hectares per year while the area of primary forest fell annually by 725 000 hectares. Most of the increase in forest cover is confined to China, India and Viet Nam, while nearly all remaining countries have experienced loss of forest area. Notably, the area designated for production fell dramatically by 2.9 million hectares per year while forest area designated for conservation or protection increased by almost 4.5 million hectares per year and planted forests expanded by just less than 3 million hectares per year. Although primary forest is

still being lost at a high rate, the overall picture is of a nascent forest transition developing in the region.

According to ITTO, in the Asia-Pacific region, an estimated 14.4 million hectares of the natural permanent forest estate (PFE) designated for production is estimated to be sustainably managed and 5.15 million hectares of the PFE designated for protection (ITTO 2006).¹ Thus, a total of 19.5 million hectares (11.6 percent) of the overall natural PFE (168 million hectares) are considered to be under SFM. This means that close to 90 percent of the natural PFE in the region is not managed sustainably. Since ITTO’s assessment took place in 2006, interest in certification has increased and a number of companies have been, or are in the process of being certified.

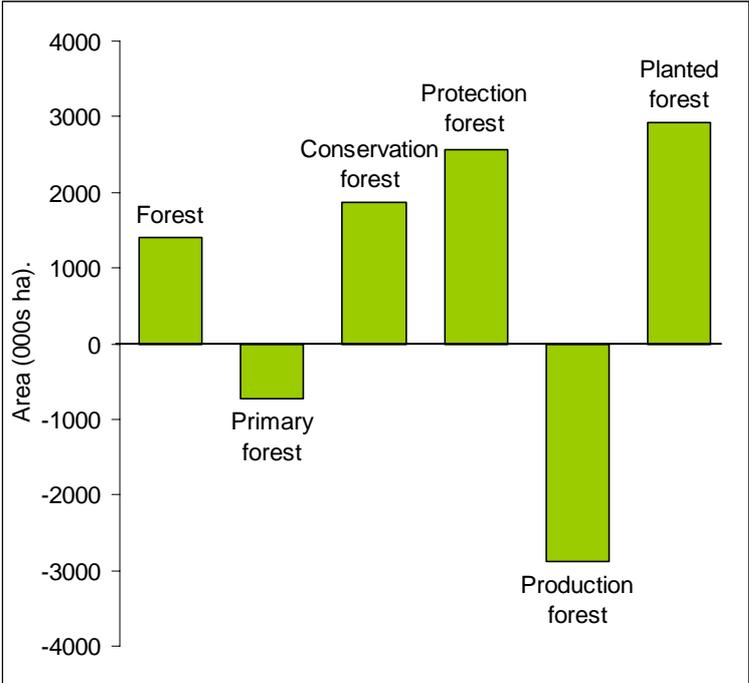


Figure 2.1. Annual change in Asia-Pacific forest area by designation 2000-2010

Note: due to data unavailability, annual changes in primary forest for Australia and New Zealand are for 2005-2010 only and areas of conservation, protection and production forest for Japan are assumed to have stayed constant between 2000 and 2010.

Source: FAO (2010e).

2.2.1. Forest management certification

Forest management certification, although not fully identical to SFM, provides a ready and standardized means of assessing progress in forest management. The Forest Stewardship Council’s (FSC) certification scheme is of prominence in the Asia-Pacific region and although the Programme for the Endorsement of Forest Certification (PEFC) is represented in Australia and Malaysia there are no other PEFC certified forests in the region.²

Several other national certification schemes are in operation in countries covered in this paper – the Lembaga Ecolabelling Indonesia (LEI) and Malaysian Timber Certification Scheme (MTCS) in particular. National certification systems have also been developed in China and the Philippines. The LEI scheme is not directly comparable with internationally recognized systems as environmental and social requirements are generally less stringent, although over 1 million hectares of forest area have been certified by the LEI (Inskandarsyah and Wicaksono 2008). The LEI scheme, however, agreed to

¹ This includes only ITTO producer countries: Cambodia, Fiji, India, Indonesia, Malaysia, Myanmar, Papua New Guinea, Philippines, Thailand and Vanuatu.

² Statistical figures on PEFC certification (updated on 31/05/2010): <http://register.pefc.cz/statistics.asp>

work with the FSC in May 2010 to advance collaboration of forest certification in Indonesia.¹ The MTCS covers 4.8 million hectares of forest and has recently been approved by the PEFC, indicating a major boost for forest management in Malaysia (ITTO 2009a). The FSC also has a foothold in Malaysia with key industry players seeking FSC certification in Sabah, Sarawak and Peninsular Malaysia regions. By June 2010, five areas with over 200 000 hectares had been certified by the FSC. In general, however, national certification schemes have not won the confidence of international markets and it is feared that prohibitive cost and time requirements associated with internationally recognized schemes may undermine progress towards SFM in developing countries.

FSC certification has grown rapidly in the Asia-Pacific region over the last decade (Figure 2.2). A total of 5.62 million hectares were certified by mid-2010 – 0.8 percent of the total forest area and 4.2 percent of the total global area under certification. In Asia, the area of FSC-certified forests amounts to just 4.0 million hectares or 3 percent of the global total. China leads with 1 377 751 hectares of FSC-certified area followed by Indonesia with 1 105 449 hectares and Japan with 962 272 hectares. Several other countries included in this report also have significant FSC-certified areas: Malaysia (203 842 hectares), Lao PDR (81 618 hectares), Viet Nam (9 782 hectares), Thailand (7 643 hectares) and Papua New Guinea (2 705 hectares).²

Analysis of FSC data as of November 2008 showed that in the Asia-Pacific region, certified areas are relatively evenly distributed between natural forest (28 percent), semi-natural and mixed plantation and natural forest (34 percent) and plantation forest (37 percent). Tenure-wise, 77 percent of the certified area is on private lands, 18 percent on public land and 5 percent in community forests. Around 82 percent of the certified area is distributed between six countries – Australia (12 percent), China (26 percent), Indonesia (21 percent), Japan (6 percent), Malaysia (5 percent) and New Zealand (23 percent).

In addition to FSC certification, the 1 million hectares certified under the LEI scheme are distributed as follows: 84 percent in natural forest, 15 percent in plantation forest and 0.5 percent in community forests. Another 4.8 million hectares are certified by the Malaysian Timber Certification Council (MTCC); 96 percent is under state forest department control and 3 percent is privately owned. Although only 10 000 hectares of forest are currently certified by the FSC in Viet Nam, the national forestry strategy has announced plans to extend certification to at least 30 percent of production forest areas by 2020 (about 1.5 million hectares; MARD [2007]).

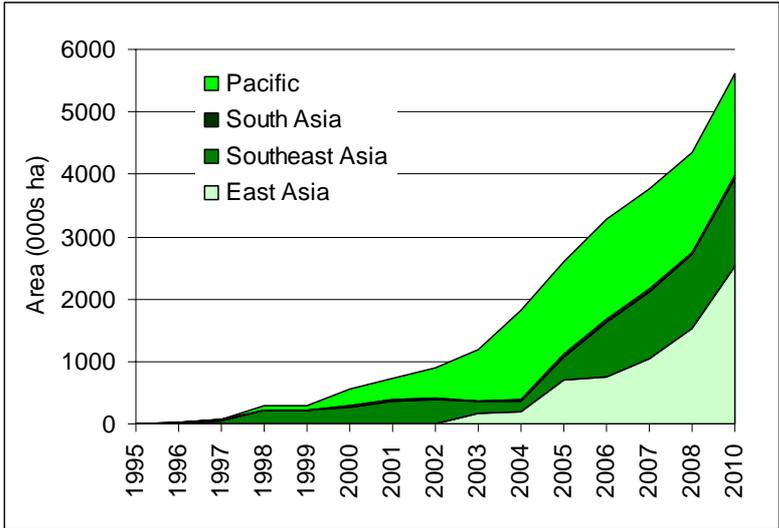


Figure 2.2. FSC-certified forest area in the Asia-Pacific region 1995-2010

Source: FSC data received December 2008 and FSC web site (see footnote).

¹ “FSC and LEI announce collaboration to advance responsible forest management in Indonesia” [http://www.fsc.org/news.html?&no_cache=1&tx_ttnews\[tt_news\]=588&cHash=6b9f508c24](http://www.fsc.org/news.html?&no_cache=1&tx_ttnews[tt_news]=588&cHash=6b9f508c24)

² Global FSC certificates: type and distribution June 2010 (<http://www.fsc.org/facts-figures.html>)

2.2.2. Forest harvesting practices

With respect to quality of logging, implementation of codes of harvesting practice, which includes reduced impact logging (RIL)-related measures, is very limited in all but a few countries and corresponding standards of logging and roading are low. Generally there is very little supervision of harvesting due to low capacity within forest companies and forest authorities (Wilkinson 2009; FAO 2006). Capacity and extent of implementation are higher in China and Malaysia, but are still very weak in Cambodia, Indonesia, Lao PDR, Myanmar, Papua New Guinea and Viet Nam. Weak implementation results from interplay of often conflicting political and economic interests that prioritize liquidation of natural forests over sustainable use (Enters 2007). In Papua New Guinea, for example, governance problems have confronted the forestry sector since independence despite reforms during the 1990s. Reviews of logging operations in 2003 and 2004 presented a gloomy picture of non-compliance within the forest industry and the conclusion that timber production was not sustainable either economically or environmentally (Hurahura 2008).

2.2.3. Who benefits from policy changes?

With respect to devolution to local levels and livelihood benefits, Nepal, India and the Philippines have made significant progress through Joint Forest Management (JFM) and Community-Based Forest Management (CBFM). Other countries that are pursuing community forestry include Cambodia, Indonesia and Viet Nam. Communities in those countries gain subsistence benefits from forests and also generate income to some extent. India is one of the few examples where decentralization has taken place on a large scale. According to MoEF (2009) forest areas co-managed by governments and community groups in India cover 22.02 million hectares and involve 170 000 villages. The scheme has also helped in regenerating degraded land. In the Philippines, by 2004 the CBFM programme covered more than 5.7 million hectares of forest land, benefiting more than half a million households (Acosta *et al.* 2004). In Viet Nam, forest areas under community management have expanded from a very low level in 1990 to 3.5 million hectares in 2007; an area equal to 27 percent of the national forest estate (Nguyen *et al.* 2008b).

In Viet Nam, forest land allocation has, however, often failed to provide benefits for the poorest of the poor and elite capture has been identified as a central problem. Additionally, land allocated to communities is often degraded and great effort is needed to generate financial benefits (Nguyen *et al.* 2008c). As such, the forest land allocation programme has been seen as the use of local communities as cheap labour to rehabilitate land. The impact of forest land allocation on poverty is still unclear and although some success stories exist they are limited in number (Nguyen *et al.* 2008a). In general, private and community rights contribute more to livelihood improvement and, to a lesser extent, poverty alleviation, than organizational ownership. In areas of critical environmental importance, state management appears to be more suitable than other tenure arrangements while in less critical protection and production forests, local management may be better suited to generating income and achieving SFM (Nguyen *et al.* 2008b).

Positive impacts have been seen in Nepal where more than 20 000 local community-based institutions (including buffer zone CFUGs) manage about 25 percent of the country's forest area. Forest governance has been reformed and forest condition has been improved. In the middle hills, community forests have met with success and denuded landscapes have been re-greened. Similarly, the government has ventured into collaborative forest management in the Terai and inner Terai (Khatri 2008). High population growth rates, unmanaged settlement, encroachment, grazing and forest fires are, however, causing depletion of forest resources and one-third of watersheds in the country remain in a marginal or worse condition (MFSC 2009). National forest cover, which stood at 25.4 percent in 2010, also fell at 0.7 percent per year between 2000 and 2010 (FAO 2010e).

In Indonesia, decentralization of forest management has resulted in some local economic benefits but women and migrants have been marginalized and logging companies have taken a large share of benefits (Yasmi and Kusumanto 2003; Yasmi *et al.* 2006; Yasmi *et al.* 2007). In Cambodia, community forestry was initially begun in degraded forests in densely populated areas and there remains uncertainty over the security of tenure in many cases (Rotha 2008). As such, implementation

of community forestry remains challenging and its contribution to poverty reduction remains unclear (Blomley *et al.* 2010; Enters *et al.* 2009a).

Progress on decentralization and devolution has been slow over the past decade and old challenges remain (Fisher 2008). It has become clear that devolving responsibilities alone is not enough and that genuine transfer of power is crucial to ensure that devolution is successful in meeting resource-related and social goals (Yasmi *et al.*, 2005; Yasmi 2007; Enters *et al.* 2009a; Enters *et al.* 2009b). As Gilmour *et al.* (2005) have stated, “Responsibility without sufficient authority will not enable communities to manage forests effectively”.

Local forest rights have been strengthened in many cases, but regulations often prove a burden such that benefits from tenure reform are not forthcoming (Pulhin *et al.* 2010). Additionally, policy and rule changes can create constraints for forest users and local forest managers while regulations and institutions are frequently poorly harmonized with changing economic conditions brought about by rural transformations. Complex forest management models, forest management fees and bureaucratic harvesting approval procedures may also impose significant costs on forest users and reduce interest in forest management (Enters *et al.* 2009b).

2.3. Why have policies been ineffective?

Asia-Pacific forest cover trends have been reversing as a result of reforestation in China, India and Viet Nam, while sustainable management covers only a relatively small proportion of forests and Southeast Asia and the Pacific have continued to experience forest loss. Policy implementation and effectiveness have thus been mixed and while the values of forest-related benefits are increasing in some respects, the environmental values of forests – carbon-, biodiversity- and water-related – are still being lost as primary forests are cleared and remaining natural forests are degraded. Participation in forest management is still far from satisfactory and social values have only become prevalent in a few countries.

Within countries, SFM has remained the main thrust in forestry policy, although actions have often fallen short of explicitly stated objectives. In many cases, the thrust behind proliferation of policy has come from outside rather than having developed domestically. As a result, direct incentives to implement management and tenure reforms have been lacking and foresight has often been unable to prevail in the face of other short-term opportunities and exigencies. Problems also exist due to the frequently reactive rather than proactive nature of forestry policy formulation. As a result, sources of problems are often not adequately identified and analysed. They therefore remain untackled (Broadhead 2004).

Various factors explain poor policy effectiveness. Examples from the country reports include:

- Governments tend to favour immediate economic development interests over environmental conservation. For example, in order to meet growing demands for electricity, dams were constructed in the southwest of China, a region that is rich in forest biodiversity. The mining industry has continued to grow in the same region (Chen 2008).
- Papua New Guinea has many acts, laws and policies in place, but their implementation is problematic due to administrative and governance constraints (Hurahura 2008).
- The national policy-making process and decision-making culture in Malaysia has traditionally been top-down, thus marginalizing any significant involvement of non-state actors, be they from the private sector or civil society organizations. Moreover, public awareness of environmental issues was insignificant until the early 1990s. Finally, poor institutional coordinating mechanisms relegate technical matters to closed loops (Tong 2008).
- Lack of political will and support (particularly at the state level and below), a strong focus on short-term economic gains, the absence of appropriate incentive mechanisms and institutional slackness and low technical capacities, are some of the reasons for ineffective and slow implementation of forest policies in India (Matta 2008).

- Enforcement of forest policies is not seen as a funding priority in the Philippines. The DENR has limited field personnel with one forest guard for every 4 000 hectares of forest land. Similarly, only two to three personnel supervise tens of thousands of hectares of protected areas (Castillo 2008).
- Although there is some progress in Myanmar in terms of meeting targets in the development of protected areas, forest plantations and community forests, the lack of ongoing monitoring means most actions are implemented on an *ad hoc* basis and a systematic review of forestry policy is necessary (Thaung 2008).
- Impacts of other sectors on forestry, in India for example (see Box 2.6).

Box 2.6. Impacts of other sectors on forest policy implementation in India

The forestry sector is impacted upon by policies in other sectors including agriculture, tribal welfare, rural development, *panchayati raj* and tourism. Forestry is also affected by revenue and customs, the judiciary and the police through mandates to collect taxes and levies, prevent forest offences and prosecute offenders. Current emphasis on agricultural intensification may complement forestry sector objectives through implementation of agroforestry and farm forestry. At the same time, education has received an increased budget allocation and with more emphasis on school enrolment and better education, demand for paper should rise. The recent boom in infrastructure and housing will also require substantial inputs of wood. According to the housing policy for the 11th Five Year Plan (2007-2012), 26 million housing units are to be constructed and with the addition of a backlog of over 22 million housing units, demand for some 50 million m³ of timber is expected.

Source: Matta (2008).

Forest policy is frequently poorly implemented because of field-level issues including high demand for forest land and forest resources, limited sources of alternative employment and low human resources capacity. Poor governance and low demand for alternative outcomes, i.e., greater production of environmental services, has also played a part and the impacts of other sectors on forestry are as prevalent as ever (see Box 2.7).

Box 2.7. In Indonesia forestry is defeated by mining

Currently, there are 13 mining companies that operate in protected forests. This special treatment is legitimized by a 2004 government regulation, despite the companies' operations being in violation of a forestry regulation that completely bans all mining activities in protected forests. Protected forests are meant to be free of all commercial exploitation and exploration activities. However, the government insists that the 13 companies are permitted to continue operations because they began extraction before the regulation was introduced. However, the passing of a new decree, announced on 29 February 2008 by Energy and Mineral Resources Minister Purnomo Yusgiantoro, will likely cause the country's forests to bleed to death. A new presidential decree might soon be introduced allowing other mining companies to apply for similar treatment in return for cash. The move shows poor interministerial coordination and a lack of the goodwill needed to protect the country's forests. The decree also questions the sense in implementing the National Rehabilitation Movement (GERHAN) project, which was launched in 2003 to restore 5 million hectares of forest by 2009.

Source: Jakarta Post (11 March 2008).

Many of the problems associated with forestry may be seen as symptoms of the state of forestry development and where one or more of the following conditions prevails, it is possible that reversals in trends of forest exploitation will be seen:

- Forest scarcity (or scarcity of related goods and services) has been acutely perceived, either locally or nationally (where governance is weak it is possible that even if this condition is satisfied, movement towards stabilization of forest cover will not be seen);
- Pressure has been removed from forest resources as a result of the availability of alternative sources of employment and income; or

- Pressure has been removed from forest resources as a result of widespread agricultural intensification.

The effectiveness of policy and institutions define to a large extent the point at which it is economically and politically feasible to turn away from exploitative forest management and towards long-term goals.

Although there are favourable conditions for successful policy implementation to take hold, one of the most challenging tasks is to find better ways to ensure effective implementation of forest policies. For the Asia-Pacific region, Gilmour *et al.* (2005) suggest the following considerations:

- avoid over-regulation;
- security of access, and use and management rights – although not necessarily ownership – are crucial;
- minimize transaction costs;
- build the capacity of stakeholders to implement policies;
- ensure benefits;
- ensure consistencies between policies and legal instruments;
- support accountability;
- provide enough funding and staffing;
- implement adaptive management; and
- build supportive legislation and institutions.

These recommendations could easily also be listed as components of good governance. In many countries governance remains weak, however, and it is unclear at what point impetus to improve forest management will strengthen or the extent to which a turnaround in forest management will be active and abrupt as opposed to passive and gradual. Section 5 provides an overview of the status and trends in governance in the region and provides a clearer picture of what can be expected in the years to 2020.

3. Status and key trends in forest legislation

Legislation can have many purposes: to regulate, to authorize, to provide funds, to sanction, to grant, to declare or to restrict. Countries in the Asia-Pacific region have passed various laws to guide forestry. As a policy instrument, legislation provides legal support for policy implementation. The fundamental task of forest legislation is to provide a basis and long-term framework for forest management, conservation and development; and to assist in achieving the basic goals for forests and forest management and governance. Rights and responsibilities, prohibitions, monitoring, conflict resolution, rewards and fines may also be included.

While legislation is one instrument to achieve policy objectives, there are many other instruments that are influencing forests and forestry, such as: certification and labelling, education, awareness raising, capacity building and technical support. Financial mechanisms (e.g. taxes, incentives and subsidies), direct public investment, regulatory instruments (e.g., monitoring, standards and auditing), demonstration projects, guidelines, codes of practice, and research and technology development may also be used to support policy implementation.

3.1. Forest legislation: old and outdated?

A main concern regarding legislation is whether it remains relevant under rapidly changing circumstances. As depicted in the previous section, the region is now placing more emphasis on ecosystem protection and rehabilitation, community participation and devolution, while also beginning to address climate change issues through forests and forestry. Is legislation sufficiently up to date to respond to the new demands?

The direction and focus of key forest legislation varies among the countries that form the focus of this paper:

- **The Cambodia Forestry Law 2002** replaces the first forestry law of 1961 which focused primarily on timber exploitation and made no acknowledgement of the rights of local communities (Rotha 2008). The new law provides a legal foundation for government agencies in forest administration and enforcement, classifying forest land, establishing a permanent forest estate, defining forest harvesting rights and obligations of stakeholders and on collection of forest revenues. The law also makes provision for private and community forestry, conservation and protection of forests and wildlife, and assigning penalties for forestry crimes.
- **The Forest Law of the People's Republic of China 1984** (revised 1998). The revised forest legislation focuses on increased public financing, enhanced authority of forest agencies, harmonized rehabilitation, development, protection and utilization of forests and wildlife, with the ultimate objective of achieving sustainable forestry development (Chen 2008). Legislation is still focused on state control but greater opportunity is provided for diverse stakeholders to participate in decision-making. Collective ownership is recognized; farmers can acquire forest land-use (management) rights and ownership for up to 70 years and have associated trading and inheritance rights.
- **The Indian Forest Act 1927** focuses on control of timber and other forest produce in transit and fines and penalties related to forest offences (Matta 2008). Diversion of forest land for non-forestry purposes by state governments led to the enactment of the Forest (Conservation) Act in 1980 (FCA), which requires central government permission for reclassification of any forest land. The Panchayat Raj Acts (1992 and 1996) confer certain rights over forests to local bodies and while there is a trend towards stakeholder participation, specific changes in the legislation are yet to emerge. Overall, the forest legislation has changed little since 1927 and focuses on state control of public forests. A revision is required to emphasize conservation of forest lands and to provide comprehensive support for the implementation of the 1998 Forest Policy.
- **The Indonesia Forestry Act 1999** replaced the Basic Forestry Law of 1967 and introduced principles of good governance such as transparency, justice, synergy in forest management and people's participation (Iskandarsyah and Wicaksono 2008). The law also makes provision for community rights in relation to forest utilization, management, allocation and protection (CFPS 2009).
- **The Forestry Law of Lao PDR 2007** rationalizes forest management types and reiterates central management of forest resources, but has been amended to include the following priorities (FAO 2010b):
 - Prevention and control of forest fires and restriction of shifting cultivation and illegal logging;
 - Forest regeneration and forest plantation;
 - Regulation of the allowable extent of natural forest conversion and forest land use; and
 - Provision for a Department of Forest Inspection.
- **The Malaysia National Forest Act 1984** (amended 1993) focuses on ensuring sustainable forest resource management and conservation (Tong 2008). The Act provides for forest planning, management and development, as well as for safeguarding and protecting forest resources from encroachment and illegal harvesting (Chiew 2009). The Act was amended in 1993 to reflect concern over uncontrolled logging such that: (i) illegal logging became the joint liability of licence holders and contractors; (ii) penalties for illegal logging were increased; and (iii) the police and armed forces were empowered to undertake surveillance of forestry activities.

- **The Myanmar Forest Act 1992** is focused on state control and policing and does not recognize tribal or communal ownership of forest lands, but provides private and communal tenure of various durations. A Community Forestry Instruction was issued in 1995; since then there has been a gradual trend towards greater participation.
- **The Nepal Forest Act 1993** was formulated to support implementation of the 1989 Master Plan for the Forestry Sector and facilitate more adaptive and forward looking policy designed to meet the needs and aspirations of forest users and sustainably manage forest resources. The legislation makes provision for wider participation of local beneficiaries and for sharing of benefits among stakeholders (Khatri 2008). The previous Forest Act 1961 supported state ownership and management of all forests following nationalization in 1957.
- **The Papua New Guinea Forest Act 1991** gives the state a monopoly on the right to enter a forest management agreement with landowners and completed a comprehensive framework to combat corruption and promote sustainable forestry development in response to a call for increased state control and planning. The Act did not, however, support necessary increases in forest protection for conservation and cultural values (Hurahura 2008). Previously, the Forestry (Private Dealings) Act 1971 allowed customary owners the right to sell timber to outsiders, subject to the approval of the Forest Minister, but the system was abused as landowners were often not in a position to negotiate with large logging companies.
- **The Revised Forestry Code of the Philippines 1975** governs forest management and outlines priorities including multiple use of forest land; land classification and survey; establishment of wood-processing plants; and the protection, development and rehabilitation of forest lands (Quintos-Natividad *et al.* 2003). Forestry in general, and inclusion of local people in forest management in particular, has also been affected by the 1997 Indigenous People's Rights Act, the 1992 National Integrated Protected Areas System Act and the 1992 local government code (Castillo 2008).
- **The Thailand 1941 Forest Act** (amended 1948, 1982) originally contained provisions mainly related to extraction and transportation of forest resources while amendments progressively reflect the growing necessity for forest conservation (Ongprasert 2008). Importantly, the 1997 constitution recognizes the rights and roles of people to participate in national policy formulation regarding resources, environmental development and conservation (RFD/DNP 2009). The Community Forestry Bill, approved in 2007, clarifies the legal rights of communities, but does not provide full resource-use rights to forest-dependent people.
- **The Viet Nam Forest Protection and Development Law** of 2004 provides for reform of state enterprises, reclassification of forests, allocation of forest land to households and other organizations, and forest protection and reforestation/afforestation (Lekhac 2008). In 1999, Decree No. 163/1999/ND-CP provided guidance for the allocation and leasing of forest land to organizations, households and individuals for forest management purposes. Numerous projects have explored modalities suitable for community forest management, but until the Land Law was passed in 2003 and the Forest Protection and Development Law in 2004, there was no legal basis for these approaches. Currently, households or individuals are allocated areas of forest land of up to 30 hectares for a maximum of 50 years (FSIV 2008).

With rapid socio-economic changes and the evolving demands on forests and forestry, the extent to which legislation addresses contemporary priorities is in question. In nine of the 12 countries focused on here, forest legislation has been newly enacted or revised in the past two decades (Table 2.1). Three countries – Cambodia, Lao PDR and Viet Nam – have revised their legislation in the past decade. In India, the Philippines and Thailand, however, the forest legislation is over 20 years old. This has impaired capabilities to implement forest conservation, involve local communities and indigenous

peoples in forest management and progress towards SFM in general. Legislation in these countries is unlikely to be sufficient in addressing new societal demands. This statement echoes that of Brown and Durst (2003 p51):

Some of these [forest-related policies, laws and programmes] are outdated, and even more significantly, execution, control and monitoring are frequently deficient, reducing the effectiveness of legislative and planning efforts.

In most countries, legislation has switched over the decades from a focus on extraction and industrial/economic development to a focus on conservation and multiple use. According to Iskandarsyah and Wicaksono (2008), Indonesia has made efforts to adjust its forest legislation to reflect changes in social, political, environmental and economic conditions. New legislation was passed by Parliament in 1999 to replace the previous 1967 legislation. The earlier law focused on forest exploitation through the concession system where the central government maintained close control of all activities. The new law focuses on decentralization and encourages local stakeholder participation in forest management.

State control of forest resources still plays a major role in forest legislation, particularly in promoting forest resource use and economic development; forest conservation and protection have become a focus in many forest laws in recent years. This has been particularly the case in China, India, Thailand and Viet Nam. Similarly, with diminishing forest cover and forest degradation confronting many countries, forest law enforcement and governance have also assumed a more significant role in forest legislation – in Cambodia, Indonesia, Lao PDR and Malaysia in particular.

Forest legislation is not the only legislation that has an impact on forests and forestry. Overlapping jurisdictions have often been a cause for poor forest management – the mining case in Indonesia, presented earlier is a good example (see Box 2.7). Even without conflict, a proliferation of legislation affecting forests and forestry increases the complexity of forestry sector activities and may result in poor implementation of forest policy. In China, at least ten items of legislation next to the Forest Law relate to forests and forestry. Understanding amongst stakeholders – particularly those in rural areas – of this legal quagmire is poor (Chen 2008; see Box 3.1).

Box 3.1. Legislation related to forestry in China

The plethora of relevant legislation makes understanding forestry-related rights and prohibitions a complicated matter in China:

1. The Constitution of P.R.C. (1982, 1988, 1993, 1999)
2. Environmental Protection Law of P.R.C. (1979, 1989)
3. Law of the People's Republic of China on the Protection of Wildlife (1998)
4. Seeding Law of the People's Republic of China (2000)
5. Law of the People's Republic of China on Sand Prevention and Control (2002)
6. Law of the People's Republic of China on land management (1986, revised 1988, 1998 and 2004)
7. Agriculture Law of the People's Republic of China (1993)
8. Law of the People's Republic of China on Land Contract of Rural Areas (2002)
9. Law of the People's Republic of China on farmer professional cooperative (2007)
10. Law of People's Republic of China on Property Right (2007)
11. Criminal Code (1982, 1988, 1993)

Source: Chen (2008).

In Nepal, there are around 23 laws contradicting the forest law due to lack of appropriate mechanisms to resolve potential conflicts and overlaps during the formulation process (Khatri 2008). Likewise, various acts influence Thailand's forest management (e.g., National Park Acts, Decentralization Act, National Forest Reserve Act, Reforestation Act; Ongprasert [2008]). In the Philippines, forestry is heavily affected by external legislation pertaining to indigenous peoples, mining and biofuels in particular (Castillo 2008). This means that forestry is not solely controlled by forestry departments or the forestry sector. Instead, changes are frequently driven by factors and agents beyond the forestry

sector. The enormous interest in the expansion of agrofuel and rubber plantations illustrates the case. It is thus not surprising to have observed the prolonged tug of war between forestry and other sectors that has taken place over the decades.

In spite of the degree of variation in the specific areas of interest of national forest legislation, SFM may be achieved through a number of different routes. In Nepal, for example, allocation of forest use rights to local forest user groups has improved forest law enforcement and governance as well as forest rehabilitation and conservation (Khatri 2008). In Papua New Guinea, however, legislation aimed at improving the sustainability of forest management by relieving excessive responsibility from customary landowners failed to lead to improved conservation of forest resources (Hurahura 2008). Such contrasts highlight the need for a detailed assessment of allocation of rights and responsibilities among stakeholders and the necessity for support to be provided or facilitated in implementing new legislation – particularly at the local level. They also highlight the importance of clear and strong forest tenure and rights in determining the fate of forest resources, the benefits they produce and who actually benefits, which is reviewed in the next section.

3.2. Who owns the forests?

An important element in legislation is how it defines the distribution of forest ownership. Who ‘formally’ owns the forests determines – from a legal perspective – who ultimately determines the management of the forest. In all Asian countries, governments own most – if not all – natural forests. In the Pacific, forest ownership is usually vested with customary owners. In Papua New Guinea, for example, communities own 95 percent of the forests (Hurahura 2008). In some countries, collective and private or individual ownership of forest lands is guaranteed by legislation. Although practice on the ground does not necessarily follow the legislation, legal ownership provides the right to make decisions and exclude others. Conflicts over forest ownership continue to occur because various groups view current ownership structures as unjust. Overlapping customary ownership – that is often not formally recognized by governments – and state control remains a common problem.

Table 3.1 shows the wide variation in forms of control over forest resources in the 12 focal countries. In many cases, transfer of forest rights to local communities has been minimal due to authoritarian governments, reluctance to relinquish valuable forest resources or the inability, perceived or otherwise, of local people to manage forest resources.

Table 3.1. Focus of control over forest resources in forest legislation

COUNTRY	STATE CONTROL	STATE CONTROL/ EARLY LOCAL EMPOWERMENT	LOCAL EMPOWERMENT
Cambodia		X	
China		X	
India		X	
Indonesia		X	
Lao PDR	X		
Malaysia	X		
Myanmar	X		
Nepal			X
Philippines			X
Papua New Guinea			X
Thailand		X	
Viet Nam		X	

Source: Unpublished country reports.

Tenure reforms and community or individual/household involvement in forest management and governance are among the major shifts seen in recent decades. Various schemes have been employed, e.g., forest land allocation, JFM, co-management, and collective and community/social forestry. China and Viet Nam are in the process of allocating forest lands to local communities and households (Chen 2008; Lekhac 2008). In China, tenure reform is underway and farmers can now have forest land-use

rights for up to 70 years. Four rights – ownership, management, treatment and income – can also be given over collective forest (Chen 2008). In Viet Nam, communities are recognized as legal entities eligible to participate in forest land allocation (FLA) based on the 2003 Land Law. In Lao PDR, the new Forestry Law reiterated central management of forest resources, stating that “The State shall not grant any individual or organization lease or concession of natural forest to undertake logging and harvesting of NTFP” (Hodgdon 2008).

The following are examples of land ownership in seven countries across the region:

- **Cambodia:** Forest and economic land concession rights are given over forest land that includes villages, thus removing responsibility for forest management from local communities. As a result, forests tend to be treated as open access resources (Rotha 2008). Developments over the last three years, however, indicate the increased interest of the Forestry Administration in community forestry.
- **China:** About 42 percent of the forest land, mostly natural forest, is owned by the government and managed by state forest enterprises and farms. Collectively-owned forest land accounts for 58 percent (Chen 2008). With respect to forest, 42 percent is owned by the state, 38 percent is under collective ownership and 20 percent is under private ownership (Chen 2008).
- **India:** Half of India’s 89 million tribal people live in forest fringes. The Scheduled Tribes and Other Forest Dwellers (Recognition of Forest Rights) Act 2006 recognizes the rights of occupation and management of forest by tribes and other forest dwellers. Some 20 percent of the government-controlled and managed forest land falls under the titles recognized under this Act. While some states are going ahead with the implementation of this Act, there is also some resistance from conservation groups because they foresee depletion of forests and wildlife (Matta 2008).
- **Lao PDR:** The Constitution and Forestry Law clearly affirm the state as the sole landowner and ultimate decision-maker over resource use. Similarly, although PSFM mandates community rights for production forests, more fundamental legislation does not recognize community ownership (or even use rights)¹ (Hodgdon 2008).
- **Malaysia:** Almost all forests are government owned, although variations exist between states. In Peninsular Malaysia, *orang asli*² are not lawful owners of the lands, but their land interests have triggered conflicts related to commercial logging and forest preservation. In Sabah, land matters are controlled by the state, which approves and registers claims to landownership. Sarawak experiences higher levels of conflict involving indigenous peoples and customary land rights. Problems arise from disregard for customary land and resource rights of forest-dependent people and have sometimes resulted in logging road blockades and law suits (Tong 2008).
- **Myanmar:** The current forest legislation does not recognize tribal or communal ownership of forest lands but provides private and communal tenure with various durations. Forest legislation is encouraging wider participation of local people. For example, the current Forest Policy (1995) and Forest Act (1992) have clear statements on involvement of the private sector and communities in implementing SFM (Thaung 2008). The Community Forestry Instructions, however, limit the rights of local people while prescribing arduous responsibilities, which some communities will not be able to fulfil.
- **Viet Nam:** Under the 2004 Forest Protection and Development Law, the rights of communities and households are legally recognized. However, under the same law, communities are not recognized as legal entities under the Civil Code (2005; Nguyen *et al.* 2008c). Consequently, they are not able to enjoy full ownership rights (Lekhac 2008).

¹ There are, however, ‘village production forests’ (VPFs), which are different from production forest areas. VPFS are forests within traditional boundaries that are allocated for village use of non-wood forest products and non-commercial timber extraction for local use.

² ‘Natural people’ in Malay, refers to the indigenous peoples of Peninsular Malaysia.

Despite the dominance of the state in the ownership of forests in the region, some emerging initiatives provide broader access to forest resources. Countries are working out their own strategies to involve local people and other players when it comes to land use, land management and control. There are indications that strong state control of forests, where local communities and indigenous peoples have no say in forest governance and management, may gradually decrease. In this process, there is a key need to recognize the roles of multiple actors including communities, industry and governments with each having to engage to facilitate development of meaningful and lasting solutions.

4. Status and key trends in institutional arrangements

Institutions are defined here in a general sense and the term is used interchangeably with 'organization'. An organization is defined as a group of people that work together to achieve certain common goals. Therefore, forestry institutions are defined as any type of collective body (e.g. government, non-governmental body or association, or private sector organization) that has an interest in and influence on forests and forestry activities.

In Asia, forestry has traditionally been dominated by state institutions which have held both regulatory and implementing roles while overseeing forest harvesting and development activities. With changes in the resource base, technology, awareness and political pressures, government forestry agencies have moved towards devolution of management activities to the private sector and local user groups or government units. In some countries, separation of institutions has taken place to allow more specific focus on productive and protective functions of forests. Some government forestry agencies are combined with agriculture ministries; others stand alone or are amalgamated under the same roof with environmental ministries.

As government agencies are trying to alter their roles, civil society organizations have taken a more prominent role, especially in relation to environmental and social issues. Similarly, in a number of countries, the role of the private sector has expanded with increased dependence on plantation-grown resources and value addition in the wood-processing industries. Although there is a general lag in institutional development behind policy needs, some government agencies are moving slowly towards a more facilitative role. By creating a framework and process through which private and civil society actors can achieve desired goals, separation of roles is generally associated with greater efficiency and reduced conflict of interest in meeting society's needs.

The changes in forestry that are currently taking place pose a critical challenge to traditional forestry institutions. Increasing demands for forest conservation and rehabilitation, devolution of decision-making power and forest production, on top of which are arriving new demands (e.g., climate change mitigation and adaptation), require changes in the role of government forestry institutions. The challenges that face forestry and the difficulty in implementing complex forest policy through regulatory approaches suggest that much greater inclusion of forestry stakeholders at different levels is necessary. Seppälä *et al.* (2009 p13) note the following:

Traditional forms of forest governance that focus on hierarchical, top-down policy formulation and implementation by the nation state and the use of regulatory policy instruments are insufficiently flexible to meet the challenges posed by climate change.

Domination of forestry by government agencies is no longer considered appropriate or efficient and the roles of government are gradually being redefined. The roles of other stakeholders such as civil society organizations, research and education institutions and the private sector are being assessed with constraints being slowly removed. In general, forestry institutions require more pluralistic structures and processes to better reflect societal demands and realize the multiple threads and objectives of SFM. In many cases, re-invention and adaptation are necessary to avoid a fall into irrelevance (see Box 4.1).

Box 4.1. Forestry institutions in the Asia-Pacific region are changing

Certainly the institutional scene of the Asia-Pacific forest sector is undergoing profound change in response to a host of drivers, both fundamental and proximal. No longer is it the exclusive domain of government forest departments, as a host of new players are emerging and taking over many of the traditional functions that were fulfilled by government forestry agencies until recently. Such changes are particularly disconcerting to forestry departments that have long histories and whose built-in mechanisms for adaptation are weak. Re-invent and adapt, or fade into irrelevance is becoming the norm in a rapidly changing competitive environment. Certainly the chances of many forestry departments as they are now, to fade into irrelevance are high, as more agile institutions emerge to meet the new challenges. Avoiding decline requires that public sector forestry agencies become learning organizations, are fully able to understand ongoing changes and are able to make necessary adjustments on a continual basis. What is important is the ability to distinguish between superfluous and fundamental changes, and to fine-tune different elements accordingly.

Source: Nair (2008).

There are many forestry-related institutional structures within the government. Various units are operating to address timber extraction and forest management, land-use planning, research and extension, forest protection and conservation. Forestry has close interactions with many different sectors through various impacts and synergies. Because forestry is associated with production of a range of positive externalities, environmental values in particular, the sector is undervalued and may become a 'silent victim' placed in direct competition with sectors that produce immediate, tangible and marketable products. In China, Indonesia, Myanmar and Papua New Guinea, forests and forestry are under the jurisdiction of a distinct ministry of forestry or similar agency. In all these countries, forestry plays or has played, an important role in national development.

In other countries, forestry has been combined with associated sectors that interact with forestry in different ways. In Cambodia, Lao PDR and Viet Nam, forestry is linked with agriculture and other functions (e.g., fisheries). In India, the Ministry of Environment and Forests (MoEF) is in charge of forestry, while in Thailand and Malaysia forestry is similarly contained within the respective ministries of natural resources and environment. In the Philippines, forestry falls under the DENR which, as the primary agency responsible for environment and natural resources, has ministry-like functions. Reflecting the importance of forests in erosion control in Nepal, forestry falls under the Ministry of Forests and Soil Conservation.

It is not possible to say whether linking forestry with agriculture or with environment and natural resources has a distinct effect on forest management – or if an individual forestry ministry provides better services. It is, however, clear that the ability to change as demands change is important both for the agencies concerned and for the populations they serve (Durst *et al.* 2008).

The size of government forestry institutions is also diverse. In China, the total number of staff in public forest institutions is around 720 000 (3.5 per thousand hectares of forest), while in Thailand only 2 329 are employed (0.1 per thousand hectares of forest; FAO 2010e). In Papua New Guinea, there are only 337 public forestry staff covering 28.7 million hectares of forest (0.01 persons per thousand hectares of forest). Of the 12 focal countries, Cambodia and Indonesia also have relatively low staffing levels while public forestry agencies in Myanmar, India and Nepal are all large employers per unit forest area.¹

Within the state agencies, various groups have different roles and responsibilities at various levels (i.e., national, provincial or district) for different tasks (e.g., planning, harvesting, planting, research and training). Very often, there is overlap between roles due to changes in legislation and policy that agencies have struggled to adapt to. Table 4.1 shows agencies involved in forestry in Lao PDR and their respective roles. The spread of functions over a range of institutions has meant that considerable efforts are required to harmonize activities to implement SFM. For example, timber royalties, which

¹ No data available for Lao PDR or Viet Nam.

are set by the Ministry of Commerce and Tourism, have, in the past, been poorly coordinated with timber prices such that loggers have been encouraged to benefit through arbitration and price signals have been lost (World Bank 2001).

Table 4.1. Forestry institutions and their roles in Lao PDR

Institution	Role
Prime Minister's Office (PMO)	Enactment of rules through Prime Minister Decrees and Orders; final decision on timber harvest quotas and forestry business operations
Ministry of Agriculture and Forestry (MAF)	Responsible for overall management of the forest estate, including all forest use types
National Agriculture and Forestry Extension Service (NAFES)	A department within the MAF, supports the work of provincial and district offices through training and technical assistance
National Agriculture and Forestry Research Institute (NAFRI)	Under MAF, equivalent to a department; in charge of scientific and applied research in the forestry sector in support of Lao Government policies
National Land Management Authority (NLMA)	Under the PMO, oversees land-use planning, land allocation and has nominal supervision over land concession agreements and management
Department of Forestry (DOF)	Under MAF, responsible for implementing forestry regulations
Forest Inventory and Planning Division (FIPD)	Part of DOF, responsible for technical preparation of production forest management plans
Provincial and District Agriculture and Forestry Extension Services (PAFES and DAFES)	Line agencies of NAFES responsible for implementing forestry laws in the provinces and districts; effectively under MAF/DOF supervision
Science, Technology and Environment Agency (STEA)	Responsible for monitoring and evaluation, scientific research, awareness raising, focused on biodiversity conservation
The Ministry of Commerce and Tourism	Sets minimum timber royalties and its provincial offices are also involved in negotiating contract prices with buyers on the basis of the minimum royalties
Ministry of Trade	Issues export permits
Customs	Regulates cross-border trade in timber and non-wood forest products and collects customs duties for imports and exports
Armed forces	De facto jurisdiction over operations in areas under their control

Source: Hodgdon (2008).

The following three summaries outline some of the varying roles of state agencies in forests and forestry while Box 4.2 examines the lingering role of the military in forestry in some countries.

- India:** The MoEF sets the overall forest policy, strategy and legislation agendas. It also guides state governments on forestry issues of national importance besides funding a number of forestry and wildlife conservation programmes. There are a number of specialized institutions directly functioning under the MoEF. In general, central control over forests is still rigid despite moves towards decentralization encouraged by the 1988 Forest Policy. Formation of JFM committees has, however, introduced additional institutional arrangements linking local, central and state-level agencies. Many JFM resolutions do not, however, include the social contract that JFM entails. This and other institutional failings have led to the intervention of the Supreme Court in forestry matters and around 2 000 interlocutory applications have been disposed under India's 'Forest Bench'. These interventions have, however, only met with limited success and some view

the Supreme Court's role as micro-management and a step back to centralization of forest management (FAO 2010).

- **China:** The State Forestry Administration (SFA) administers and manages forest lands at the national level while provincial-, city-, county- and township-level agencies are responsible for implementing decisions and policies made by the SFA (Chen 2008). In 1998, the former Ministry of Forestry was transformed into the State Forestry Administration. The SFA is guided by three governmental functions: macro-control, social administration and public service. The role of some divisions also switched from administrative to service provision. The restructuring and lowering of status had some negative consequences in relation to enforcement of forestry-related laws and implementation of forest policies. However, since the re-organization, forestry has enjoyed its most productive years ever in China.
- **Thailand:** The Royal Forest Department (RFD) was divided into three departments in 2002: the RFD, the National Park, Wildlife and Plant Conservation Department (DNP) and the Department of Marine and Coastal Resources (DMC). All the departments are under the Ministry of Natural Resources and Environment (MNRE). The RFD is responsible for forests outside protected areas that are the DNP's responsibility. The DMC performs resource management of coastal flora and fauna, including mangrove forests, through conservation and rehabilitation. A major issue has been overlap of jurisdictions between departments and offices under the MNRE and elsewhere in the government.

Box 4.2. Militarization and slow institutional reform

While institutional change towards pluralistic arrangements is welcomed, change remains slow in some countries (e.g., Myanmar and Lao PDR). In both countries, the military still plays a prominent role in forestry.

Thaung (2008) wrote:

Since 1962, Myanmar has been ruled by various forms of military government. Transfer of military personnel to civilian institutions is not uncommon but until recently only a few military personnel were appointed to forestry institutions and especially to the Forest Department. Under the State Peace and Development Council (SPDC), the Ministry of Forestry has accepted many military personnel even at the operational levels where strong knowledge, skills and experience of forestry are necessary. Young military personnel without knowledge of forestry have taken positions in forestry institutions and have effectively blocked promotions for professional foresters. This has created internal conflict and angst among forestry professionals and has jeopardised the quality of their work. The current positions of heads of forestry institutions, apart from the Forest Department, the Planning and Statistics Department, and the Institute of Forestry, are all taken by military personnel.

Furthermore, in the case of Lao PDR Hodgdon (2008) stated:

Another key institution in the forestry sector is the military. Though not formally charged with implementation of forest policies, the military exercises de facto jurisdiction over areas under its control, which include border zones and certain sites deemed high security areas. For many years, three military companies controlled most of the logging in Lao PDR: the Mountainous Region Development Company (Bolisat Phatthana Khet Phoudoi – BPKP), which operates in the central provinces of the country; the Development of Agriculture and Forestry Industry Company (DAFI) in the southern provinces; and the Agriculture and Forestry Development Company (AFD) in the north. These three companies are involved in a wide range of business activities, including mining, tourism and construction.

4.1. New demands and new role of forestry institutions

There is currently a great need for forestry institutions to embrace social and environmental objectives and develop appropriate capacity as resource trends and changes in international focus dictate re-alignment of forestry sectors. Greater coordination across sectors is also necessary to help maintain a balance between development and conservation. As stated by Durst *et al.* (2008 p6):

To be successful and remain relevant, institutions need to ensure flexibility, strategic management capabilities, strong “sensory” capacities and an institutional culture that responds to change.

The increased call for decentralization and devolution has altered the role of state institutions, although in many cases only to a limited extent. A notable change is the increased role of local (provincial and district) governments in forestry. As indicated by Iskandarsyah and Wicaksono (2008), the strong hold of the central government in Jakarta started to loosen in Indonesia in the late 1990s due to decentralization and fiscal balancing laws. In the forestry sector, district governments began to play an expanded role in forest management, e.g., forest boundary marking, issuing of small concession permits, monitoring of forest resources, establishment of plantation and planning at the regional level. One of the more radical changes was that local governments were permitted to collect taxes and impose levies on timber operations, which was not possible under the previous regime. In recent years, however, the central government has tried to re-centralize forestry and with the increased discussion in relation to REDD, key stakeholders are worried that the central government may try to move authority back to Jakarta.

In the Philippines, Congress approved the Indigenous People Rights Act in 1997, which requires the creation of a national commission for indigenous peoples (Castillo 2008). The Act also creates space for indigenous communities and local governments in forest management (see Box 4.3). In Thailand, the Tambol (district) Act of 1994 and the Decentralization Act of 1998 strengthen the role of local governments in forest conservation. In China, after the institutional reform of the State Council, the former Ministry of Forestry was restructured as the SFA in 1998 (Chen 2008). Various new divisions such as certification and bioenergy, have been established to redirect forestry toward ecosystem restoration and SFM. New divisions have also been created at provincial and city levels.

With recent movement toward decentralization in Cambodia, the role of local councils and governments is being more seriously considered in supporting CBNRM/SFM and monitoring forest management (Rotha 2008). Decentralization of natural resource management has, however, been timid. Especially in forestry, local councils are sidelined and government as well as donors appear to put greater emphasis on transferring natural resource management rights and responsibilities directly to communities, rather than to local councils. However, statutory descriptions of powers and responsibilities have proven a poor guide to how things actually work. Commune councils are already involved in natural resource management, often without support or sanction of the central government, and sometimes – even quite often – illegally. In many places, however, councils have taken the initiative, and this process seems irreversible (Rotha 2008).

Box 4.3. Increased roles of local governments in the Philippines

Local government units and other stakeholders are increasingly warming to their roles and responsibilities in the shared management of forest lands as evidenced by investments, although modest, in the management of forest lands. They have started to recognize the economic and socio-cultural values of forests, and the environmental services they provide. Civil society and private organizations have become directly involved in forest management, through agreements with the DENR and local government units. They manage specific areas within forest lands as part of their corporate social responsibility or voluntarily offer assistance towards reforestation, livelihood development, and capacity building. The recognition of the multiple functions of tropical forests such as climate change mitigation and biodiversity conservation are also attracting private, non-government and international organizations to invest in protection and development of natural forests. Government-owned or controlled corporations are investing in environmental services and high value crop production in forest lands.

Source: Castillo (2008).

The role of non-government institutions (e.g., non-government organizations and private sector entities) has increased in the past decade, although their role is often still minor compared to that of the government. In Nepal, community forestry is implemented by forest user groups who were behind the formation of the Federation of Community Forestry Users Nepal (FECOFUN). According to FECOFUN, more than 14 500 forest user groups are currently affiliated and membership continues to grow. FECOFUN has become an effective mechanism for dialogue between policy-makers and forest users. It also acts as a learning centre to assist user groups in engaging in forest management.¹ It is estimated that user groups are now managing 25 percent of Nepal's forest area (Khatri 2008).

In Indonesia and the Philippines, non-government organizations play various roles in facilitating dialogue between governments, the private sector and civil society. In India, the Forest Policy of 1988 envisages a stronger role for NGOs to serve as an 'interface' between state forest departments and civil society in the revival, restoration and development of degraded forests (Matta 2008).

Other voluntary and market-driven institutions also play roles in forestry. The Malaysian Timber Certification Council (MTCC), for example, developed the Malaysian Timber Certification Scheme (MTCS) based initially on ITTO criteria and indicators (ITTO 1998). The scheme began in 2001 and aims to provide independent assessments of forest management practices and meet demand for certified timber products.² Currently, the MTCC is collaborating with the European Union in combating illegal logging through the Forest Law Enforcement Governance and Trade-Voluntary Partnership Agreement (FLEGT-VPA). In Indonesia, the Indonesian Ecolabelling Institute (LEI) has developed criteria and indicators for SFM to assess the performance of commercial as well as community-based forest management.

Up to this point, we can conclude that there have been significant shifts and reforms in forestry institutions throughout the region as new themes have emerged in forest management and efforts to achieve SFM have evolved. State institutions in many countries have started to decentralize, although outcomes vary across the region. There is also an indication that non-state institutions such as non-government organizations have gained prominence in the past decade. This development indicates a greater degree of pluralism in the institutional framework surrounding forestry. Today, state agencies are not the only institutions influencing forests and forestry. Climate change mitigation mechanisms such as REDD will also require more pluralistic institutional arrangements if they are to deliver substantial reductions in forest loss and degradation. Rapid responses to emerging threats and opportunities and the ability to redesign and re-align objectives confer distinct advantages, although decisions must be well informed – both technically and politically – for long-term benefits to be realized. In the words of Cassells (2001):

To remain relevant ... forestry institutions must evolve into or be replaced by new organization norms that are characterised by open, learning institutions that are based on participation, collaboration and mutual learning through adaptive management and action research.

5. Status and key trends in governance and illegal logging

A recurring question that emerges in the discussion on illegal logging is what constitutes 'illegality' and according to whom and what standard? Illegal, according to one standard, may be considered legal by another (Rosander 2008). Legality differs from country to country and it remains unclear who has the right to define or impose legality.

Callister (1992) and ITTO (2001) consider illegal logging as the harvesting of logs in contravention of laws and regulations designed to prevent the overexploitation of forest resources and to promote SFM. Similarly, Casson and Obidzinski (2002) argue that illegal logging includes activities such as logging in protected areas, the logging of protected species, logging outside concession boundaries,

¹ FECOFUN emerged from the idea that forest users from all parts of the country should be linked to strengthen their role in policy-making. Since its inception in July 1995, FECOFUN has grown into a social movement with some 8 million members – all of whom are forest users. (see: <http://www.fecofun.org/>).

² Malaysian Timber Certification Council: <http://www.mtcc.com.my/index.asp>

extraction of more than the allowable harvest, removal of oversized or undersized trees, and harvesting in areas where extraction is prohibited such as catchment areas, steep slopes, and river banks. Phuc and Sikor (2008) use three interrelated frameworks to analyse illegal logging in Viet Nam: lack of compliance with forest regulations (i.e., practices which constitute criminal acts), political economy (i.e., inappropriateness and complexity of regulations) and the emergence of public and private concerns over illegal logging. In this report, illegal logging is seen as a failure of governance. It is a reflection of the inability to enforce laws and regulations, and the ineffective development of forest management and accountability systems.

According to Bodegom *et al.* (2008) good governance refers to the normative concept which emphasizes the importance of the benefit for society at large as the ultimate goal of the process of governing. Good governance should encompass the following aspects:

- participation;
- legitimacy;
- rule of law;
- transparency;
- accountability;
- clarity of rights and responsibilities; and
- efficiency.

Improvements in forest policies, legislation and institutions will only occur in the context of commitments and demands for improved forest governance. Otherwise, they will remain difficult to achieve.

5.1. Progress with governance

Historically, governments, the private sector, the military, communities and civil society organizations have played different roles in Asia-Pacific countries and continue to do so. In almost all countries, business-government coalitions, often with military support, have dominated forestry. Depletion of forest resources calls for social and economic justice; however, demands for forest protection from growing middle classes are hastening transfer of power to civil society organizations and to local communities.

East Asians who place greater emphasis on good management and standards of living than on democracy may act to slow democratic reform, particularly in view of the strong economic performance of some of the region's authoritarian governments (NIC 2008). Growing frustration at the workings of democracy in some countries and curtailment of prerequisites such as press freedom, suggest that 'state capitalism' may become a preferred development model. In relation, it is unclear whether governance in the region will improve with greater movement towards or away from democracy (Economist 2008). Gale (2006) suggests that business-government coalitions, which are dominant in the Asian model of development, may even work against implementation of sustainable development by allowing business interests to dominate, although emerging 'forest transitions' in China and Viet Nam challenge this position (Mather 2007).

Table 5.1 shows trends in three governance indicators related to illegal logging – control of corruption, rule of law and government effectiveness. In general, more developed countries score higher than developing countries, while emerging economies lie in between. Many countries with remaining large areas of forest (e.g., Cambodia, Indonesia, Myanmar, Lao PDR) have lower scores than those where resources have already been depleted and levels of economic development and consumption are higher. Countries where control of corruption is limited also often have high levels of illegal logging. For example, in Myanmar, 80 percent of the timber produced in the country has been estimated by some as being illegal and levels of corruption are correspondingly high (Phuc and Sikor 2008; Table 5.1). Likewise, Cambodia scores poorly in relation to corruption and it is suspected that most of the timber produced is also illegal (Smith 2002). Positive trends are evident in less than half of the

countries for corruption and rule of law, but just over half for government effectiveness. In particular, government effectiveness has improved considerably in China, Indonesia and Malaysia and control of corruption has made gains in Indonesia.

Table 5.1 Trends in governance indicators for Asia-Pacific countries¹

Subregion	Country	Governance Score (-2.5 to +2.5)								
		Control of corruption			Rule of law			Government effectiveness		
		1998	2008	Trend	1998	2008	Trend	1998	2008	Trend
East Asia	China	-0.4	-0.4	-	-0.4	-0.3	+	-0.3	0.2	+
Southeast Asia	Cambodia	-1.0	-1.1	-	-1.0	-1.1	-	-0.8	-0.8	+
	Indonesia	-1.1	-0.6	+	-0.8	-0.7	+	-0.8	-0.3	+
	Malaysia	0.5	0.1	-	0.5	0.5	+	0.6	1.1	+
	Myanmar	-1.4	-1.7	-	-1.3	-1.5	-	-1.2	-1.7	-
	Lao PDR	-0.7	-1.2	-	-0.9	-0.9	-	-0.6	-0.8	-
	Philippines	-0.4	-0.7	-	-0.2	-0.5	-	-0.2	0.0	+
	Viet Nam	-0.7	-0.8	-	-0.5	-0.4	+	-0.6	-0.3	+
	Thailand	0.0	-0.4	-	0.4	0.0	-	0.1	0.1	+
South Asia	India	-0.3	-0.4	-	0.2	0.1	-	-0.2	0.0	+
	Nepal	-0.4	-0.7	-	-0.1	-0.8	-	-0.5	-0.8	-
South Pacific	Papua New Guinea	-0.7	-1.1	-	-0.6	-0.9	-	-0.4	-0.8	-

Key:	>0.5	-0.5 to 0.5	<-0.5
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Definitions: *Control of corruption* – capturing perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as ‘capture’ of the state by elites and private interests.

Rule of law – capturing perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police and the courts, as well as the likelihood of crime and violence.

Government effectiveness – capturing perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.

5.2. Illegal logging and trade: how big is the problem?

In several Asia-Pacific countries the socio-economic contribution of forestry remains poorly realized and underestimated due to benefit capture by unaccountable interests. Lack of collection of royalties and taxes has also had the effect that markets for products from sustainably managed sources have been undercut while mounting social and environmental costs have been overlooked. In particular, uncontrolled logging has resulted in extensive environmental damage and resources supporting subsistence needs of rural populations have been removed, often without recompense.

How serious are illegal logging and trade in the region? While reliable figures are not available, there is general consensus among informed observers that the extent of the illegal timber trade is substantial (Mir and Fraser 2003; Rosander 2008). Schloenhardt (2008 p3) stated:

The true extent of this market is unknown due to the clandestine nature of the illicit trade and due to the difficulties of distinguishing between legally and illegally sourced materials. However, estimates about the magnitude of the illicit trade are alarming with some sources suggesting that up to 73 percent of timber exported from Indonesia and 35 percent of timber exported from Malaysia is sourced illegally.

¹ See: Kaufmann *et al.* (2009).

The impacts of illegal logging on forest ecosystems, the economy and society are serious. The World Bank estimates that governments around the world lose US\$15 billion a year as a result of illegal logging (Contreras *et al.* 2007). The Indonesian Government is predicted to lose US\$4 billion annually due to illegal logging (RRI 2008). Moreover, social conflicts, including violence, are often associated with illegal logging. According to Chen (2008), although the Chinese Government has made combating illegal logging a priority since 1980, illegal logging has continued. Violations of laws, particularly with respect to harvesting beyond the assigned quota, takes place throughout the country. In 2006 alone, the government seized almost 750 000 m³ of illegal logs.

5.3. Failure of governance – the underlying causes of illegal logging?

Poor governance and illegal logging are intimately related. In many countries, illegal logs can easily reach markets because loggers successfully bribe authorities. Where cases of illegal logging have been prosecuted, many illegal loggers have also been able to overcome ‘the bar’ because of corrupt court systems.¹ In almost all countries in the region, law enforcement is weak for a variety of reasons, including inadequate staffing and skills, and corruption is a serious issue as indicated in several of the country reports.

In **Cambodia**, strengthening implementation of forestry policy and improving forest law enforcement and governance have been priority issues since 1998 (Savet and Sokhun 2003). A number of obstacles confronting forestry, including corruption and clientelism have, however, remained despite efforts to implement technologically based solutions (Rotha 2009). Corruption is exacerbated by low civil servant salaries and the resulting need for staff, including those from the Forestry Administration, to find other sources of income to fulfil basic needs. Steps taken to control illegal logging after 1998 were largely unsuccessful and a logging moratorium was announced in 2001. This resulted in closure of mills, a reduction in illegal logging and also shifts in the focus of illegal logging from commercial to small-scale operators, from few players to many, and from export to domestic markets. Key factors determining the future success of efforts to strengthen forest law enforcement, governance and trade include the degree of responsibility allocated to the Forest Crime Monitoring Unit and the capacity provided to implement direct action (Rotha 2008). Alternative livelihoods for military groups and greater regulation of harvesting and environmental management are likely to reduce illegal logging, although current road network expansion is at the same time liable to expand opportunities for illegal activities. The recent removal of the director of the Forestry Administration for failing to successfully crack down on illegal logging indicates another step in Cambodian forestry, although the likely impacts are far from clear.²

For over a decade, the government in **Indonesia** has made efforts to control illegal logging and the associated timber trade (Iskandarsyah and Wicaksono 2008). In 2001, Indonesia made a clear political statement and commitment to combating illegal logging during the Bali ministerial meeting. In 2002, however, illegal roundwood consumed by the timber industry was estimated at 42.2 million m³. By 2005, this figure had, however, fallen to 20.3 million m³ (MoF 2007). Various announcements and international and bilateral agreements have been made concerning illegal logging and trade, including a Memorandum of Understanding between Malaysia and Indonesia (Broadhead 2004; ITTO 2003). In 2005, the President of Indonesia issued an instruction to eradicate illegal logging and downstream activities and announced a programme to combat corruption which included specific reference to combating illegal logging. The government has since strengthened control capacity and established a Special Forest Ranger Quick Respond Unit (Iskandarsyah and Wicaksono 2008). Harmonized legality standards to differentiate legal and illegal timber are also being developed and Indonesia is currently negotiating establishment of a VPA with the European Union.

Forest governance in **Lao PDR** is still at a relatively early stage of advancement and many problems exist with overlapping and conflicting legislation and directives, unclear jurisdictions, breaches of written law and a general lack of management or procedural norms (Hodgdon 2008). To control illegal

¹ See: http://www.illegal-logging.info/item_single.php?item=news&item_id=2421&approach_id=

² “Hun Sen fires forestry director” The Phnom Penh Post, April 7, 2010.

logging, beginning in May 2007 an effort was made to close over 2 000 wood-processing factories across the country. Although overcapacity in the wood-processing sector is a key driver of illegal logging, a large share of the illegally traded timber is roundwood and the effects of the mill closures are therefore likely to be minimal. A new Department of Forest Inspection provides an additional means of improving forest sector governance, although greater government resolve is required in relation to forestry sector governance before detailed inspection becomes a relevant activity.

In **Malaysia**, uncontrolled logging became a concern in the early 1990s. In response the National Forestry Act was amended in 1993 to make licence holders and contractors jointly liable for illegal logging. Penalties were increased and police and armed forces were empowered to undertake surveillance of forestry activities. Illegal logging incidents in Peninsular Malaysia subsequently dropped dramatically. Logging in forest areas claimed by indigenous peoples continues to create conflicts, however, particularly in Sarawak (Tong 2008). These claims are being addressed through the legal system but remain one of the obstacles to mutual recognition between the MTCC and FSC certification schemes. Three factors hinder further advances (Brown *et al.* 2004):

- the government is resistant to international calls for change, due to low levels of foreign debt and international aid;
- extra-government influence within Malaysia is weak; and
- the government considers that it has ‘got it right’ on ethnic redistribution.

Malaysia has committed itself to eliminating illegal logging and to combating the smuggling and trade in illegal timber. Policy and institutional structures regulating wood-based industries have, however, proved inadequate in the face of increased dependency on imported timber and some conflict of interest has resulted (Wells 2007).

Forest governance in **Myanmar** is affected by the prevailing political and socio-economic situation. Although the Myanmar Selection System (MSS) includes procedures to verify the legality of logs, it is doubtful whether it continues to be implemented or whether the annual allowable cut is adhered to (Thaung 2008). The Ministry of Forestry is attempting to address forest governance issues although no independent mechanism to verify timber legality has been established. Talks between China and Myanmar have also been held in relation to logging operations in border areas but concrete actions and greater involvement of regional military commanders and ethnic leaders are still required. A weak judicial system, law enforcement officer’s low pay and replacement of technical officers with military personnel in forestry agencies also pose problems and corruption is a major problem and pervades all levels of government (Thaung 2008). With the current lack of foreign assistance and low investment in forestry it is doubtful that the situation will improve in the near future unless reforms are implemented and enforced from within.

In **Nepal**, although the laws and regulations are in place, enforcement is weak. Sectoral reform is required to keep pace with the changing environment and aspiration of the people. Nepal’s policy and regulatory frameworks are progressive but a lack of capacity and resources to implement policy has meant that goals have not been met. The government institutions that are responsible for implementation of policies and law enforcement are severely constrained by the lack of financial resources. Moreover, the low morale due to excessive pressure from political leaders has affected law enforcement capacities. As a result, quite a number of good policies and plans are not well enforced or well implemented (Khatri 2008).

In **Papua New Guinea**, forest laws and regulations are relevant to environmental, social and economic development needs. Their enforcement is, however, not effective and a 2003/2004 review of logging operations concluded the following (Hurahura 2008):

- Logging has few long-term benefits for landowners, although they bear the environmental costs.
- At stated log prices, the logging industry is not profitable and companies are not replacing their field equipment. This is not sustainable and it is estimated the current logging capacity will cease to exist within 10-15 years.

- Many breaches of the logging standards go unreported and are not addressed adequately. Field officers have lost faith that their attempts to impose sanctions will be backed up by senior management, who take their cue from political leaders.
- The capacity of the Forest Authority has declined significantly with a “notable lack of strategic thinking and planning, and significant internal divisions”.
- The Department of Environment and Conservation is “ineffective in the forestry sector” and its ability to undertake effective monitoring and control has been “fatally damaged”.

In the **Philippines**, an Executive Order issued in 1987 states that possession of timber or forest products, without the legal documents constitutes illegal logging. In relation, the laws are considered sufficient but the resources to monitor, investigate, arrest and prosecute violators are limited (Castillo 2008). DENR’s capacity to conduct monitoring, investigation, arresting and prosecuting of forest law violators is limited and its budget has declined over the years. Currently there is an average of one forest guard for every 4 000 hectares, with a meagre P50.00-P100.00 (between US\$1.00-US\$2.00) travel allowance per month. Law enforcers are insufficiently trained in environmental law and although an incentive system for reporting and enforcement was supposed to be institutionalized, funding was never made available. The results are low prosecution and conviction rates while violators are often acquitted on technicalities (Castillo 2008). It is therefore necessary to strengthen forest law enforcement capability at all levels and several moves have been made, from establishing a Police Environmental Desk Officer in every police station to designating special prosecutors and courts to handle illegal logging cases. One of the more significant developments in recent years has been the establishment of an Environmental Ombudsman and an associated team of investigators and prosecutors in 2004 to receive and investigate complaints against public officials. In addition, future implementation of national Criteria and Indicators for Sustainable Forest Management should assist with attempts to improve forest governance.

In **Thailand**, illegal logging is still reported at considerable levels, and conflicts between authorities, villagers and civil society organizations and between conservation-oriented and people-oriented NGOs are widespread and often fierce. The 1989 logging ban and subsequent forest conservation efforts led to tense opposition between conservation-oriented and people-oriented groups. It is estimated that more than 1 million households residing in national parks, wildlife sanctuaries and national forest reserve lands are considered illegal by law. As such, the challenge of balancing forest conservation with other forest functions still remains at an early stage in Thailand (Ongprasert 2008).

5.4. Efforts to combat illegal logging and trade – new signs of hope

Various efforts have been made by the international community and countries in the region to address illegal logging and trade (Schloenhardt, 2008). International frameworks that were directly and indirectly developed to address the issue include: The Convention on International Trade in Endangered Species of Wild Fauna and Flora (commonly known as CITES), the Convention on Biological Diversity, the World Heritage Convention, the Convention to Combat Desertification, and the International Tropical Timber Agreement. At the regional level, numerous initiatives have been launched, including the Manila Declaration (ASEAN), the ASEP (ASEAN Environmental Programme), the APEC Environmental Vision Statement, the Apia Convention on Conservation of Nature in the South Pacific, and the South Pacific Regional Environment Programme (SPREP).

Strengthening law enforcement and curbing corruption continues to be on the agenda. In Peninsular Malaysia, Tong (2008) recounts a number of measures that have been instituted to curb illegal logging such as spot checks, helicopter surveillance and regular training programmes for forest officers. These are meant to equip officers with the necessary knowledge and skills in forest law enforcement to handle charged situations. They are also running public awareness campaigns to reach out to the general public. In Indonesia, the MoF has increased the number of forest guards and provided training to prevent illegal logging. Indonesia enacted the Anti-Money Laundering Act in 2002 and ratified the United Nations Convention against Corruption in 2006.

Both producer and consumer countries have implemented measures to mitigate illegal logging and trade, including bilateral trade agreements, private sector and civil society initiatives (Rosander 2008). In 2001, the East Asia Ministerial Conference on Forest Law Enforcement and Governance (FLEG) was held in Bali Indonesia.¹ The conference adopted the Bali Declaration through which the 20 participating countries committed themselves to intensifying national efforts and strengthening bilateral, regional and multilateral cooperation to address the problems of forest crime. A regional task force was established and a number of specific agreements were reached on promoting bilateral cooperation in this area. Indonesia, for example, has a Memorandum of Understanding to curb illegal logging with the following countries: China, Japan, the Republic of Korea, Norway, the United Kingdom and the United States of America. The Bali meeting also spawned other regional FLEG processes in Africa and Eastern Europe and Northern Asia and the international community has started to address illegal logging more seriously in recent years.

The amendment to the Lacey Act in 2008 in the United States of America now makes it illegal to import forest products into the United States of America that were secured in contravention of the laws of the originating country (Box 5.1). Various donors and developed countries are engaging in efforts to minimize illegal logging with countries in the region, e.g., the United States of America through USAID Regional Development Mission in Asia (RDM/A), the United Kingdom through DFID, Germany through GTZ, Finland through the Ministry of Foreign Affairs and Japan through the Asia Forest Partnership and other activities. Malaysia and Indonesia have been in negotiations with the European Commission on VPAs under the Commission's FLEGT Programme to restrict bilateral trade to timber products that are legally verified to mutual satisfaction. Similar efforts are continuing in Cambodia, Lao PDR, Thailand and Viet Nam with support from the European Union and implemented by the European Forest Institute. The Responsible Asia Forestry and Trade (RAFT) programme, managed by TNC with funding from USAID RDM/A, is working across Asia (and Papua New Guinea) in support of improved forest management. Among other activities, RAFT supports forest management units and timber processing centres and factories to carry out clear and transparent, third party audited certification of their operations to promote legal timber trade from the region.

Box 5.1 Changes to import restrictions in European Union and the United States

The European Commission (EC) is now considering new legislation designed to remove illegal wood from the supply chains of products destined for the European market. The proposal has been influenced by the Lacey Act Amendment passed in the United States in May 2008, but differs in some significant respects. The Lacey Act makes it an offence in the United States to trade in any wood product sourced in contravention of the laws of the originating country. It therefore strongly implies, but does not require, that timber trading companies in the United States implement management systems to minimize the risk of any illegal wood entering their supply chains.

In contrast, while not making it illegal to trade in wood products in contravention of the laws of another country, the EU's proposed legislation places an obligation on European operators to implement a 'due diligence system' to minimize the risk of illegal wood entering supply chains. Currently, draft amendments to the legislation are being reviewed by the European Parliament. The earliest that requirements are likely to be imposed on EU operators would be the second half of 2011.

Source: ITTO (2009b); ITTO (2010).

Numerous players have emerged providing assistance in linking responsible producers and consumers and verifying the legality of timber. The RAFT programme operates in Cambodia, China, Indonesia, Lao PDR, Malaysia, Papua New Guinea, Thailand and Viet Nam to improve forest management and timber trade practices in Asia while also contributing to reducing CO₂ emissions from deforestation and forest degradation. RAFT supports other players in the region including the Tropical Forest Foundation (TFF), the The Forest Trust (TFT), and WWF's Global Forest Trade Network (GFTN).

The TFF has over the last several years developed a Forest-Market Linking programme which provides solid assurances of legality to any buyer. In Indonesia, TFF has become actively involved in

¹ See <http://www.worldbank.org/flegnews>

assisting companies to establish Chain-of-Custody (CoC) systems in support of specific market requirements. TFF assists both forest concessions and forest industries to prepare for independent, third-party CoC and legality audits. TFF has also been closely involved in the development of an Indonesian legality standard and provides assistance to forest concessionaires to achieve legality certificates. Other players include Helvetas' CI World™ for Timber, which allows 'back-to-stump' traceability and provides users with reassurance of product origin. TFF is helping its members – retailers and suppliers of tropical wood products – source wood from legally verified and sustainable sources. The WWF GFTN is probably the largest network of natural and plantation timber management companies and wood-processing/manufacturing enterprises with discerning market retailers around the world.

The number of success stories of law enforcement and anti-corruption efforts is slowly increasing. For example, due to the improvements, Malaysia saw a dramatic drop in illegal logging cases from 810 in Peninsular Malaysia in 1991, to 21 cases in 2003 (Tong 2008). In China, illegal loggers now face serious penalties, including jail sentences (Box 5.2). FAO and ITTO (2005) indicate a number of successful efforts made by governments to address illegal logging in Cambodia, Indonesia and Malaysia. Forest industries in the region and beyond are also increasingly asking for legality certificates, a trend that is making it increasingly harder for illegal timber to enter some markets.

Box 5.2. China's richest man jailed for illegal logging

A Chinese businessman once listed as the richest in the country has been jailed for more than ten years for illegal logging, state media said Friday. Luo Zhongfu, 57, chairman of real estate company Fuhai Fuyingshi New Materials Technology Development Co, was found guilty of clearing a forest to make way for a resort development, the Beijing Youth Daily said. A court in Qingzhen City in the southwestern Province of Guizhou also fined him 50,000 Yuan (US\$7,300) for deforestation, illegal use of farmland and interfering with testimony.

Source: "China's former richest man gets jail for illegal logging: report"
(http://www.terradaily.com/reports/Chinas_former_richest_man_gets_jail_for_illegal_logging_report_999.html)

To ensure that efforts to combat illegal logging yield positive results governance needs to be strengthened. This may mean more efforts are needed to fight corruption and improve law enforcement. Active participation of stakeholders in combating illegal logging and trade is crucial. Markets favourable to legal timber will also provide growing incentives as the policy environment begins to take hold (e.g., the Lacey Act, Due Diligence). Various market incentives need to come together to make illegal timber less attractive. Because illegal logging is not an isolated problem in a particular country, well-coordinated and concerted efforts at regional and international levels are required.

6. The Outlook

Many factors will influence Asia-Pacific forestry in the next decade including population growth, demographic trends, agricultural expansion/intensification, economic growth, infrastructure development, structural changes in economies and climate change (FAO 2010a), as well as increases in agricultural commodity prices, which increase the opportunity costs of forestry. The economic viability of forest management will therefore play a leading role.

As the analysis in this paper shows, the role of forest policy itself is not straightforward. In almost all the countries reviewed, forest policy and legislation supporting SFM have been in place for many years but transitions towards SFM are only taking place in a few of the countries. Is there a lack of political will to address real issues confronting forestry? Is it poor economic viability and lack of investment? Are there social issues that hamper progress or is little importance attached to environmental services in light of other exigencies?

Five years ago, Durst (2005 p9) came to the following conclusion:

Most countries in the region have a relatively sound policy and legislative foundation from which to implement sustainable forest management. [...] In general, however, the major challenges are not with forest policies per se, but rather in terms of countries' capacities and commitment to implement them. Too often, policy recommendations are promulgated without adequate reference to requisite resources and capabilities for effective implementation.

One observation made by participants at the meeting in Khao Yai National Park that formed the foundation of this paper was that the 'Environmental Kuznets Curve', or turning point from forest exploitation to SFM, appears to be followed in most countries regardless of population pressure. The Kuznets Curve suggests that as income improves initially, the environment becomes increasingly degraded. At a certain level of development – when society has achieved a certain level of prosperity and income continues to grow – efforts are initiated to restore the environment and improve environmental quality. However, it is difficult to know at which point along the curve countries are at present and the importance of the role played by internal forestry sector factors (including policy and institutional strength) as opposed to external drivers of change. Creating a forestry transition may also have much to do with striking at the right moment, in the right places and with the right level of resources. Global and regional experience demonstrates that points of inflection in forestry trends often occur with the emergence of tangible economic, political or social pressures.

Where forests and forest products and services are abundantly available there may be little need to consider investing in forest conservation. Similarly, even where forest resources have been depleted, imports of forest products may fill gaps and lack of forest environmental services may not be acutely perceived. From another angle, where urban employment is unavailable and intensive agriculture, industry and services are underdeveloped, pressure on forests and forest land is likely to remain high. Under these circumstances, although SFM may make long-term economic, social and environmental sense, the impetus to continue in a *laissez faire* fashion will remain relatively unchallenged.

The stimuli for reforms precipitating forest transitions may develop domestically through, for example, growing pressure from environmental groups or through the influence of environmental shocks and/or claims for social and economic justice. A transition could also be promoted through international stimuli including technical and financial assistance to the forestry sector, as well as less formal means of knowledge and technology transfer. Similarly, international measures in relation to markets and trade of forest products and/or services could promote more rapid implementation of policies promoting SFM. More broadly, reversals in forest decline may result from reduced pressure on land, increasing economic development and structural shifts in the economy, wood scarcity and policy measures both within and outside forestry, and particularly in relation to agriculture (Mather 2007). Factors that are likely to have a major influence on forest policy content and implementation and the general course of forestry in the next decade include:

- economic growth rates;
- climate change-related efforts;
- environmental events;
- 'scarcity' of forests, forest products or forest services; and
- calls for social and economic justice.

The effect of economic growth rates on forestry is dependent on several mediating factors – forest policy amongst them (FAO 2010a). Where growth stimulates urban sectors and migration away from rural areas, pressure is likely to be removed from forests. Where, however, economic growth encourages increased demand for natural resources and land for commercial crops, pressure on forests will increase. The possibility that climate change-related efforts and REDD+ in particular will have a transformative effect on forests is widely spoken about. By providing a monetary incentive for forestry – for forest carbon credits in particular – it may finally be possible to provide direct benefits for

services produced by forests and in doing so, realize their full value. We are, however, still in the early stages of implementation and many hurdles remain (Box 6.1).

Given the considerable importance of natural disasters in influencing environmental and forestry policy in the past (e.g., in China, the Philippines and Thailand) it is probable that similar events in other countries will elicit comparable responses. Such events may be thought of as a national awakening to perceived scarcity of environmental services. In combination with growing levels of environmental awareness in the region, predictions that climate change will lead to more severe floods and droughts raise the possibility of political responses and greater efforts aimed at environmental protection. The point at which decisions are made depends on factors such as the political voice of marginalized populations, standards of governance, and the relative current and future costs of continuing environmental degradation. In this respect, responses are likely to be fastest in countries with better systems of governance.

Box 6.1. Implications of REDD on forest area changes

An important development that could impact rates of forest clearance is the inclusion of Reducing Emissions from Deforestation and Forest Degradation (REDD) in international climate change arrangements. Implementation of REDD will, however, require a number of challenges to be addressed:

- The main technical challenges are the determination of baseline emission levels and change monitoring. In several countries with high deforestation rates even basic inventory information is not available. Ramping up the capacity to make countries REDD-ready will take time.
- Most deforestation and degradation is taking place in countries with limited institutional capacity and poor governance. Bringing about necessary policy and institutional changes will take considerable time and resources. Improvement of governance – which is a fundamental requirement – will be a major challenge in countries where deforestation and degradation problems are severe.
- Longstanding issues related to tenure and allocation of benefits in return for efforts to reduce deforestation and degradation pose further challenges. Implementation mechanisms, which for many countries will entail unprecedented levels of administrative complexity, will have to be established for equitable operation of REDD.

These challenges will take considerable time to overcome and even if there is substantial international funding the likelihood of REDD making a significant impact on the ground by 2020 is rather limited.

Source: FAO (2010a).

In some countries, forest transitions at the local or national level may take place due to scarcity of forest products even where population densities are high, e.g., in Cebu in the Philippines. In contrast to transitions in China, Thailand and Viet Nam, the transition has resulted from increasing demand for forest products in densely populated areas rather than in response to high-level regulatory intervention to protect forests (Bensel 2008). Indeed, high population densities have stimulated investment in forest resources to increase forest cover.

It is highly likely that emphasis on the role of forests and forestry in climate change mitigation and adaptation will continue to receive considerable attention in the coming decade as a result of recent international commitment to REDD. This development presents an opportunity for countries with large forest areas and high rates of deforestation to reverse trends in clearance and benefit financially as a result. Levels of financing from developed countries and degree of commitment from developing countries will remain key issues as work progresses. There is, however, the chance that as forest resources are depleted and structural changes in economies take place, driving variables will begin to favour forest protection as has taken place in several countries in the region without the help of REDD. Although reversal of current trends may not be possible, some slowing in rates of deforestation are likely to be achieved.

7. Conclusions

In order to improve forest management, countries will need to arrive at a working understanding of the role of forestry in the national development framework and how this is manifested in terms of economic development, the provision of environmental sustainability and the provision of social benefits. Without broad agreement over forestry objectives and the implementation of supporting policies and legislation, the contribution of the forest sector to national development will remain suboptimal. To support forestry, policy measures need to promote economic growth involving clear and equitable allocation of rights and responsibilities; appropriate application of technology and environmental safeguards; removal of disincentives to invest in forestry; and greater stakeholder involvement. Most of all, however, forestry institutions need to become more flexible and responsive in capturing opportunities and striving to maximize the contribution of the sector to emerging needs.

The divergence between forest cover targets and actual trends in many countries demonstrates the need for broader stakeholder engagement and support. Similarly, while international actors have promoted forests and forestry as a means of sustaining livelihoods, generating income, reducing poverty, preserving cultural heritage and maintaining environmental and biodiversity values, the practices on the ground reflect a different scenario where countries have pursued policies of resource extraction, forest conversion and agricultural expansion.

To support forestry, policy measures should promote environmentally sustainable economic growth. This would involve clear and equitable allocation of rights and responsibilities, appropriate application of technology, removal of disincentives to invest in forestry, clear land tenure rights, attention to forest rehabilitation and others. Policy should also support provision of environmental services and the capacity to mitigate and adapt to disasters, including climate change. Policies that encourage conversion of forests should be strongly discouraged and efforts made to promote agricultural intensification while minimizing extensification and land grabbing.

In addition to economic imperatives and recommendations from strategic analysis, a third pillar – public opinion – should play a greater role in forestry development such that policies are appropriate, are broadly supported and can be more easily implemented. Presently, the question of how important forests are to people's livelihoods in comparison with, for example, agriculture, increased market access or alternative livelihood activities is rarely put to those directly affected. Similarly, at the national level and in urban areas, the importance of forests to the public is often largely unknown. Levels of awareness are similarly unknown and, as such, the full potential of public knowledge and support remains poorly tapped and the failure to garner greater participation in the policy processes inevitably weakens policy formulation, implementation and oversight. Furthermore, and partly as a result of a lack of public engagement, the policy process is often overshadowed by vested interests, international concerns and top down arguments.

Uncertainty and slow policy implementation suggest that the near-term future for sustainable management of natural forests in developing countries is far from assured, especially given current rates of natural forest clearance (Broadhead *et al.* 2009). One of the key drivers of change in forestry, the use of public office for private gain, is likely to remain a serious threat without implementation of mechanisms to encourage behavioural changes. Advances may depend more on the rate at which wider socio-economic development proceeds than the direct effectiveness of forestry-related efforts. A host of factors including increased wealth, increased institutional capacity, better governance and regulatory environments, more secure and stronger rights and concomitant reduction of pressure on forests for subsistence and financial requirements are likely to provide a more fertile environment for proliferation of SFM. As forestry is now included to a greater extent in international climate change mitigation arrangements, there is also much greater opportunity to support forests and forestry if effective methods of engagement with the sector and related sectors can be found.

To accelerate the pace at which SFM is adopted, a range of initiatives such as certification schemes, VPAs and forest law enforcement and governance efforts have been launched. These address the underlying causes of deforestation and degradation to some extent, but it is likely that much broader efforts – engaging a wide range of actors and sectors – will be necessary to effectively reverse trends and resist new pressures to convert forests, particularly in relation to industrial crop production. In this

regard, strengthening of political will to accelerate development and, especially, development and implementation of national forest programmes will be crucial in ensuring effective action.

There are also a number of initiatives that are, to a greater extent, within foresters' control. Amongst these are voluntary codes of practice, which seek to provide benchmark standards to guide forest managers. Codes of practice for forest harvesting have long been supported by FAO to address the technical quality of harvesting in natural forests – an area in which positive economic and environmental benefits can be generated. Codes have also been developed for fire management and planted forests. It is hoped that the economic and ecological logic of implementing these codes will act as the main incentive in encouraging their uptake and expanding the sphere in which SFM is practised. FAO and ITTO, and various regional and ecoregional processes, have also produced criteria and indicators for SFM that can similarly serve to convert policy intention into action.

Asia-Pacific forestry is changing rapidly and forestry institutions must make the development of flexibility and responsiveness a priority to maximize the contribution of the forestry sector to emerging needs. Forestry agencies must act opportunistically in seizing chances to implement improved management when prevailing conditions are supportive. They must also be open to innovative financing in the sector (such as through pension funds, university endowments and family trusts). Stakeholder participation will have to become a reality rather than a talking point if more complex policy encompassing multiple demands is to be implemented. Top-down mechanisms will be insufficiently flexible to optimize capture of benefits from forestry. Their persistence will mean the continuation of the problems that have plagued forests and forestry in the Asia-Pacific region for decades.

8. References

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