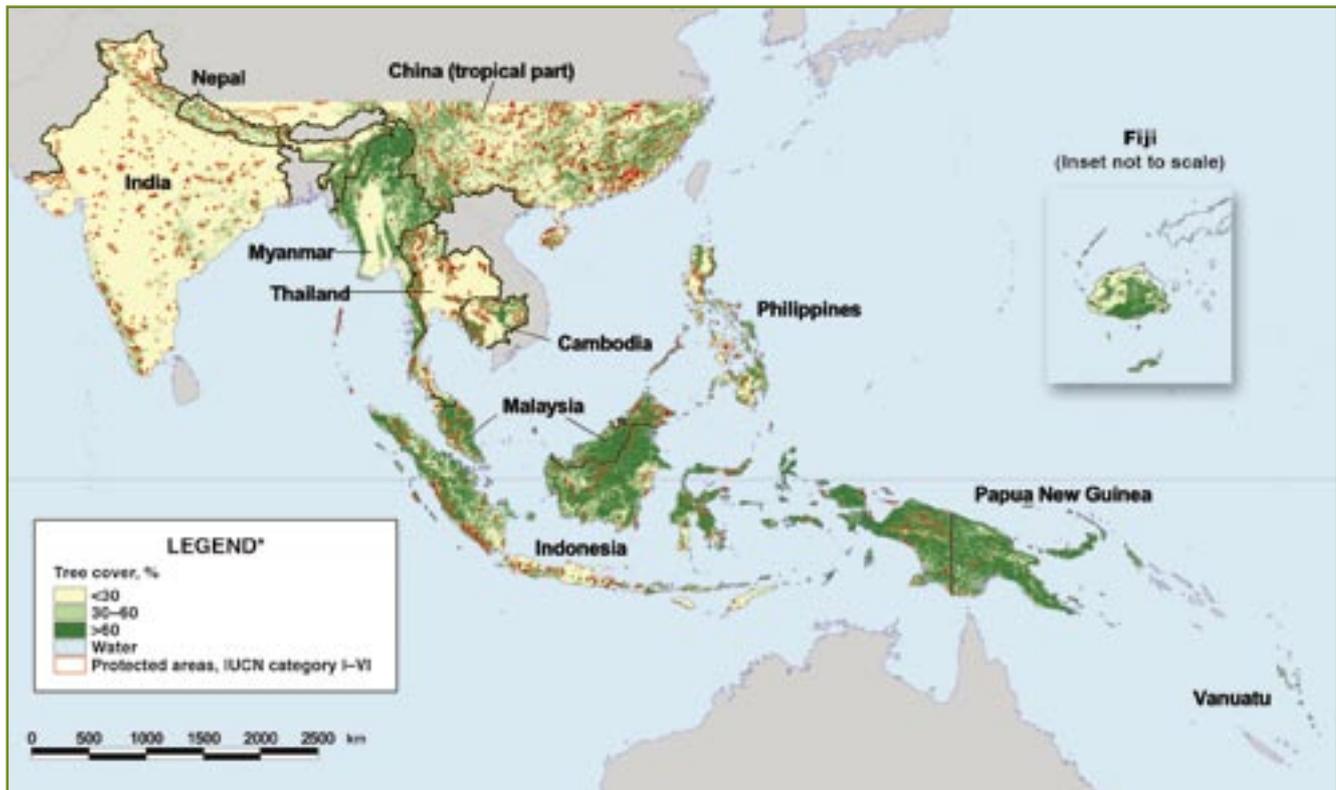


# ASIA & THE PACIFIC



\*Same legend applies to country maps, but protected areas are not shown

## CAMBODIA



Deforestation is expanding rapidly in Cambodia. Nevertheless, the country has a large forest resource with the potential to sustain a robust timber industry and contribute enormously to national development. But the recent history of Cambodian forestry has been turbulent, and the timber sector is in disarray.

The concession system has been suspended, yet unauthorized timber production apparently continues. The implementation of recent reforms, and increased law enforcement, are urgently required.

### KEY POINTS

- Cambodia's significant reserves of high-value production forests present an important economic resource, the sustainable use of which would be of considerable benefit to the country.
- Cambodia has an estimated 8.10 million hectares of PFE, comprising 3.46 million hectares of natural production forest, 4.62 million hectares of protection forest and 17,000 hectares of industrial timber plantations. However, data on Cambodian forests are often inconsistent and unreliable.
- No part of the production PFE is considered to be under sustainable management; insufficient information was available to estimate the area of protection PFE so managed.

- A significant but unestimated area of forest has been degraded by shifting cultivation, encroachment, the development of agro-industries, illegal logging, over-harvesting and forest fire, as well as by the use of chemicals during war.
- The Forestry Administration was created in 2003, replacing the Department of Forestry and Wildlife; it has responsibility for managing the forest estate, although there may be some overlap in roles with the Ministry of Environment for forests in national parks and related reserves.
- Forest-sector reforms have been developed but are yet to be implemented effectively; the enforcement of existing policies, laws and regulations is weak.
- The management of forest concessions has been poor; the government cancelled some licences and, in 2002, suspended all remaining forest concessions until they fully complied with requirements. One apparent effect of this ban has been to stimulate a significant illegal timber industry.

## FIJI



Timber is Fiji's third-largest export commodity and the sector still has considerable growth potential. However, land-use conflicts arising from the pattern of ownership have contributed to the degradation of the forest resource, particularly in natural forest, and have often been viewed as a major constraint to SFM.

Other constraints include a lack of convincing evidence for the financial potential of the natural resource (and therefore the continued conversion of forests to various types of non-forest use), an inability to control the standards of logging in natural forests, and inadequate product supply and market research. Fiji's substantial mahogany plantation estate, if well managed and marketed, will be a significant driver of development.

### KEY POINTS

- Because of the special conditions of land ownership there is no formal PFE, but some forests have equivalent status; an estimated 354,000 hectares may be regarded as a nominal PFE.
  - None of the natural production forest (none of which is considered part of the PFE) is considered to be sustainably managed.
  - Generally, the standard of logging is low. At least 55,000 hectares of PFE are estimated to be managed sustainably.
- Fiji has 55,000 hectares of plantation of the high-value species *Swietenia macrophylla* (mahogany) and there are plans to continue to expand this estate. Harvesting began in 2003; how the mahogany resource is managed and marketed will have a large bearing on the future success of the Fijian timber industry.
  - Fiji also has a significant softwood plantation resource, which currently supplies about two-thirds of industrial timber.
  - With some additions, Fiji continues to use its forest policy developed in 1950 as the basis of forestry, but implementation is guided by the priority now given to forest development based on exports. A review of the policy was completed recently.
  - Apart from the conservation and expansion of forest cover, the forest policy focuses mainly on the efficient processing and manufacture of value-added products and training in forest industries.
  - Fiji is a net exporter of wood products, including pine chips, sawnwood and wood-based panels. There is a small export trade of high-value finished products. The expansion of the export of these could make a significant contribution to the economy, particularly when mahogany timber is put on the international market.
  - The forest area designated as 'protected' within IUCN categories I-IV is 3,000 hectares, although an area of 241,000 hectares has been broadly described as protection forest.

## INDIA



In India, state forest departments are custodians of the public forest resource and act as the forest authorities. Timber production is shifting away from natural forests, stimulating the development of community-based approaches. All forest states have set up forest development corporations,

which are responsible for production within the public forest estate. Increasingly, some responsibilities for and benefits from the forests are being shared with local communities. For example, joint forest management, which usually involves an agreement between the forest department and a village to jointly protect and manage forest land, has become widespread. Moreover, farmers are becoming more involved in tree-growing, the private sector is participating more in forest management, and partnerships between forest-product manufacturing companies and local farmers are developing. However, several components of SFM are still missing, including an accurate inventory of resources, the classification of land by capability and function, efficient utilization and sustained investment.

### KEY POINTS

- The estimated 39.1 million hectares of India's natural-forest PFE comprises 13.5 million hectares of production forest and 25.6 million hectares of protection forest. Not all of this PFE is tropical.
- There are also 32.6 million hectares of planted forest in the PFE.
  - While there was a net positive change in the area of forest during the 1990s, natural forest continues to be lost or degraded.
  - In production forests, India follows a system of preparation and periodic revision of working plans.
  - Information on the extent and management of forests is fragmentary at best, and often unreliable.
  - Nevertheless, it is estimated that at least 4.80 million hectares of natural-forest production PFE (tropical and non-tropical) are being managed sustainably; insufficient information was available to estimate the area of protection PFE so managed.
  - The condition of several of the protected areas is poor because of fire, grazing and inadequate management.
  - Forest management is becoming increasingly decentralized and community-based approaches are becoming more common.
  - A national afforestation program was initiated in 2000 and operates at the level of forest divisions within states through forest development agencies and village forest committees.
  - India's wood-based industries face a serious scarcity of raw materials and, increasingly, they depend on non-forest and external sources. The country has become a major importer of tropical timber, particularly logs.

# INDONESIA



Indonesia's forest resource base is still vast, but it faces many threats that put its long-term sustainability in jeopardy. These include illegal logging; forest fires; deforestation through land encroachment; wasteful logging and processing; structural deficiencies and inefficiencies in forest industries; the indebtedness

of forestry enterprises; unsettled land claims; inefficiencies in public forest administration, in particular in the process of decentralization; an inadequate base of human resources; inadequate monitoring and evaluation; and a lack of effective governance. On the other hand, significant progress has been made in the establishment of certification systems and information on the management of concessions is becoming increasingly available.

## KEY POINTS

- The estimated 68.5 million hectares of Indonesia's natural-forest PFE comprises 46.0 million hectares of production forest and 22.5 million hectares of protection forest. There are also about 2.50 million hectares of productive timber plantations.
- The security and integrity of the PFE are affected by several factors, of which forest fire and encroachment are among the most important.

- Illegal logging in the PFE (both production and protection) is widely held to be a major problem.
- The Ministry of Forestry is undertaking a review of concessions and their compliance with the Indonesian C&I. This process has shed light on the status of management in the production PFE.
- It is estimated that at least 2.94 million hectares of natural-forest production PFE and 1.36 million hectares of protection PFE are being managed sustainably.
- Some 12% of the land area of Indonesia has been designated as protected areas. However, information on the management of a large part of the protection PFE is scarce.
- Forestry is undergoing a process of decentralization that has proven difficult partly because of a lack of capacity at the decentralized levels of administration and partly because of disharmony in the policies of central and local governments.
- C&I for SFM have been developed for the country and a certification regime designed. About 275,000 hectares have so far been certified.
- The prescriptions for the management of production forests are conceptually sound but implementation has been weak. Over-capacity and structural imbalances in the wood-processing sector have exacerbated the situation.

# MALAYSIA



Malaysia's forests are generally well managed, although there are differences between Peninsular Malaysia, which has the strongest approach, and Sabah and Sarawak; however, all regional forestry administrations are committed to achieving SFM. The forest sector plays an important role in

the Malaysian economy and is a significant employer. Already a major producer of value-added, wood-based products in the world market, this part of the sector is likely to continue to grow. A large part of its furniture manufacturing is based on rubberwood, which is grown in plantations, while much of the harvest from natural forests is still exported as plywood, sawnwood and logs. Well-organized and resourced forestry administrations at both federal and state levels have the capacity to ensure that concessionaires adhere to prescribed practices and to oversee the long-term management of the resource.

## KEY POINTS

- Malaysia's PFE comprises 11.2 million hectares of natural production forest, 183,000 hectares of plantations and 3.21 million hectares of protection forest.
- At least 4.79 million hectares of natural-forest production PFE are estimated to be under SFM; the estimated area of protection PFE so managed is 3.21 million hectares.

- Deforestation within the PFE is insignificant, but there is degradation in some forest areas.
- Malaysia is a federation and forestry is under the jurisdiction of the states. Thus, the implementation of the national forest policy requires a cooperative approach by the state and federal authorities, which is done primarily through the National Forestry Council.
- At the federal level, the division of responsibilities between the Ministry of Natural Resources and Environment and the Ministry of Plantation Industries and Commodities poses a coordination challenge.
- Managing relations between indigenous communities and concession companies needs further attention.
- All timber harvesting and related management operations are carried out by contractors operating on the basis of either a long-term logging agreement (concession) or a short-term licence.
- In Sabah, FMUs of 100,000 hectares each have been established and 100-year forest management agreements offered to forestry companies.
- Certification of forest management is well advanced in Peninsular Malaysia and is expected to increase in Sabah and Sarawak.
- There is a well-established protected-area system in place covering 16.3% of the total land area. Nevertheless, there is a need to establish better coordination between the federal government and the states in wildlife management and environmental conservation.

# MYANMAR



Myanmar once boasted an exemplary system of forest management, particularly in its large area of teak forests, but in recent decades there has been significant deforestation and forest degradation. Timber production almost doubled in the ten years to 2003, and the Forest Department lacks sufficient

resources to fully implement the silvicultural system or enforce regulations, particularly in remote border areas. Community forestry also faces a number of challenges, such as the lack of decentralization in forestry administration. Nevertheless, about half the country is still forested and SFM remains within reach, given the surmounting of political, administrative and economic obstacles.

## KEY POINTS

- Myanmar has an estimated 13.0 million hectares of natural tropical forest in its PFE, of which 9.70 million are designated for production and 3.30 million for protection. Myanmar also has about 710,000 hectares of planted forests, 35% of which are teak.
- Many of Myanmar's forests are becoming degraded, exacerbated by a lack of law enforcement, particularly in remote regions.
- At least 290,000 hectares of semi-natural teak forest in the production PFE are being managed sustainably,

but insufficient information was available to assess the management of the bulk of the production PFE. Nor could an estimate be made of the extent to which the protection PFE is so managed.

- A well-tested silvicultural system exists for Myanmar's teak forests, but the extent to which it is being implemented is unclear.
- The Ministry of Forestry has primary responsibility for implementing the national forest policy, which was instituted in 1995.
- Some of the most significant obstacles in the way of implementing SFM are institutional. These include chronic budget shortages affecting the Forest Department, very limited private-sector involvement, insufficient well-trained personnel, and a lack of effective participatory processes.
- Total production of industrial roundwood was an estimated 4.24 million m<sup>3</sup> in 2003.
- Myanmar has established protected areas and prepared plans for expanding the protected area system and for improving biodiversity conservation, but no information was available on implementation.

# PAPUA NEW GUINEA



Two-thirds of PNG is under forest cover and the official timber harvest is well below the estimated national sustainable timber yield. On average, each citizen has rights over about 6.4 hectares of forest. However, the majority of people still live in extreme poverty. The challenges are substantial if SFM is to be achieved.

Key among them would appear to be: reducing the social and cultural disruption of logging; increasing the benefits to local development of forest management; and increasing the allocation of resources to the monitoring of logging activities and the implementation of forest policies at the national level.

## KEY POINTS

- Customary land ownership is guaranteed by the PNG constitution and is the key factor influencing the use of the forests; 97% of the land is held as communal or clan commons.
- The determination of a PFE is difficult in PNG given its land-tenure system. Nevertheless, ITTO estimates that the country has about 10.5 million hectares of forest that might be considered permanent; these include 8.7 million hectares of forest over which timber rights have been acquired (production PFE), 1.7 million hectares allocated for protection and about 80,000 hectares of timber plantations.

- At least 1.5 million hectares of natural-forest production PFE are estimated to be managed sustainably. No estimate could be made of the extent to which the protection PFE is so managed.
- The PNG Forest Authority was established in 1991 by the Forestry Act as a statutory corporation with regulatory and administrative responsibility for the management of the country's forests.
- A 'landowner company' concept was developed as part of the 1979 national forest policy in order to increase national participation in forestry. However, this has not been wholly successful.
- PNG is a major exporter of tropical logs, shipping out an estimated 2.02 million m<sup>3</sup> in 2003 to China, Japan and other mostly Asian destinations.
- The government collects revenues from a log export tax and a reforestation levy, while resource owners receive a royalty on timber harvested (10 kina per m<sup>3</sup>) and other levies and premiums.
- Customary landowners participate in the processes by which the Forest Authority purchases timber rights but are not much involved in the subsequent management and development of the resources.

# PHILIPPINES



The Philippines has lost a substantial part of its natural forest, and timber production has declined dramatically over the last three decades. Many of the problems associated with the large-scale destruction of the forest resource can be linked to a combination of land and concession tenure issues, and the lack

of ability or will to enforce the conditions of the concessions. Moreover, many of the rural poor did not have land tenure and often settled illegally on forest land. Considerable efforts have recently been put into the development of community forestry, but the success of this approach in restoring the country's degraded landscapes, particularly on steep slopes, and in increasing rural incomes, remains to be proven.

## KEY POINTS

- An area of 15.9 million hectares has been defined legally as forest land (land with greater than 18% slope), but the estimated natural-forest PFE under actual forest cover is only about 6.24 million hectares, comprising 4.70 million hectares of production forest and 1.54 million hectares of protection forest. There are also an estimated 274,000 hectares of plantation.
- At least 76,000 hectares of natural-forest production PFE are estimated to be sustainably managed. No estimate

could be made of the extent to which the protection PFE is so managed.

- While commercial-scale concessions (using what are called 'timber licence agreements' – TLAs) have been the main mechanism for allocating logging rights in the past, forest management is now being conducted largely under community-based approaches; TLAs will be completely phased out by 2006.
- The contribution of the industrial forest sector to the national economy has declined dramatically in recent years and stood at only 0.05% of GDP in 2002.
- On the other hand, an estimated 18–20 million people are dependent on forest lands (not necessarily forested) for subsistence uses and traditional and customary lifestyles.
- The Department of Environment and Natural Resources is the government agency responsible for forest management and protected areas; a degree of administrative decentralization has been pursued in recent years.
- The Philippines is a net importer of timber.
- The Philippines has a large number of endangered species. In its protected-area network of 6.85 million hectares, the estimated extent of forests is 1.54 million hectares.

# THAILAND



Forestry in Thailand is constrained by several factors. Coincident with Thailand's rapid economic growth in the 1980s and 1990s, its forest resources became severely depleted. Logging in natural forests has been banned, but the forests remain under pressure from encroachment, illegal

logging, fire and other agents. The Royal Forest Department, the government agency responsible for forests, has a long history of forest management and remains reasonably well resourced. Plantations, especially of rubberwood, and imports are now supplying the country's thriving downstream-processing timber industry. The huge importance of tourism to the Thai economy provides an excellent incentive for strong measures to improve forest protection.

## KEY POINTS

- The PFE is estimated to be 10.1 million hectares, of which 1.87 million is production PFE (all plantations) and 8.26 million protection PFE.
- An estimated 50% of the reported PFE in 1991 has been converted to agriculture, settlements and other uses.
- A logging ban has been in place in natural forests since 1989, after disastrous flash floods; however, it has not been sufficient to stop forest loss and degradation.

- Illegal tree-cutting in natural forests remains a problem.
- At least 522,000 hectares of protection PFE are being managed sustainably, but generally little information is available on the status of management in forested protected areas.
- Forests are owned by the state. There is an ongoing debate in Thailand about the rights of traditional and local communities to use and manage forests, including in protected areas.
- A draft Community Forestry bill has been under development and debate in Thailand for more than a decade.
- Timber production in Thailand has shifted from natural forests to planted forests, particularly teak and rubberwood, and non-forest sources of wood, supplemented by imports.

# VANUATU



No formal PFE has been created in Vanuatu because all forests are under customary ownership. The role of the national government in forest management is in policy development, planning, protection, silvicultural principles and guidelines, and the supervision of logging companies. However,

to date it has not been possible to implement a forestry regime that operates on the basis of long-term forest management plans.

## KEY POINTS

- All lands, including forests, are customarily owned.
- There is, therefore, no formal PFE. Theoretically, a future PFE could amount to 127,000 hectares, of which 117,000 would be natural-forest production PFE and 8,340 protection PFE; there are about 2,100 hectares of plantations.
- Production forests are not covered by long-term management plans and therefore cannot be considered sustainably managed. No estimate could be made of the area of protection PFE under SFM.
- The current annual harvest of about 30,000 m<sup>3</sup> is well below the estimated sustainable yield (68,000 m<sup>3</sup>) from the 117,000 hectares of natural forest deemed suitable for production forestry.

- The national forest policy contains an indicative program of action in all aspects of the management of Vanuatu's forests which, if fully implemented, would lead to a significant improvement in forest management.
- The Department of Forestry under the Ministry of Agriculture, Forestry and Fisheries has responsibility for administering and managing the forest. The personnel, funds and facilities available to it are inadequate to carry out these functions.
- The four FMUs (corresponding to the four main islands) are not covered by long-term management plans, although coupes are usually covered by harvesting plans based on the Code of Logging Practice.
- The protected-area system of Vanuatu is very small; about 3% of the mid-to-high forest and 0.7% of the low forest are represented in protected areas.



J. Blaser/IITD