

Many countries still have large areas of forest outside the PFE. These are sometimes set aside deliberately for later planned conversion or reservation for other uses – as agricultural land, for example; this allows for the in-migration of people and an increase in agricultural production. By acting as a safety valve, these measures can also protect the PFE from deforestation and degradation. Sometimes, however, land-use plans – if formulated – are not followed and forest is parcelled up and converted to other uses in an ad hoc fashion, with potential repercussions for the PFE. Problems of forest security often occur where land has been reserved for forestry production in circumstances under which an alternative use would appear to be more profitable or otherwise more desirable. Land-use planning that leads to the clear identification of appropriate land-uses and caters adequately to changing demographic patterns can reduce this risk.

The area of natural production PFE in ITTO producer member countries is estimated to be 353 million hectares (29% of the total area of tropical closed forest estimated by FAO 2001 to be 1.20 billion hectares – see tables 2a, 3a and 4a). Of this, an estimated 96.3 million hectares (27% of the total natural production PFE) are covered by management plans, 10.5 million hectares (3.0%) are certified by a recognized independent certification organization, and at least 25.2 million hectares (7.1%) are managed sustainably. The area of protection PFE in ITTO producer member countries is estimated to be 461 million hectares (38% of the total tropical closed forest area estimated by FAO 2001), of which an estimated 17.8 million hectares (3.9%) are covered by management plans and at least 11.2 million hectares (2.4%) are being managed sustainably. A much larger but unestimated area of the forest estate is not under immediate threat from anthropogenic destructive agents, being remote from large human settlements and projected roads.

Thus, the proportion of the tropical production PFE managed sustainably has grown substantially since 1988, from less than 1 million hectares to more than 25 million hectares, and to more than 36 million hectares if the area of protection PFE so managed is included. Despite this significant

improvement, the overall proportion of the PFE known to be sustainably managed remains very low, at less than 5% of the total.

Wood from natural production forests is supplemented in many countries by planted forests, some of them covered by management plans and some certified. In ITTO producer countries, planted forests now cover 825,000 hectares in Africa (488,000 hectares with management plans, none certified), 38.3 million hectares in Asia and the Pacific (11.5 million hectares with management plans, 184,000 hectares certified) and 5.60 million hectares in Latin America and the Caribbean (2.37 million hectares with management plans, 1.59 million certified). In many cases, data for plantation areas are from FAO (2001) and are therefore at least five years old. The area of the plantation estate in ITTO producer countries has no doubt grown substantially since then.

Illegal logging and the illegal movement of timber have become pressing issues in many countries, exacerbated by local warfare and by drug smuggling and other criminal activities. These have not only made forest management in the field a hazardous business and prejudiced the security of PFEs in many places, but they have undermined legitimate markets for timber and reduced the profitability of legitimate producers. Box 7 gives a brief overview of the challenges to SFM posed by these problems; this topic is also addressed where relevant in the regional summaries and country profiles.

Overview of Africa

Forest resources

There are an estimated 209 million hectares of closed tropical forests in ITTO African producer member countries, including wet evergreen, moist semi-deciduous, moist deciduous, freshwater swamp and mangrove forests. These forests provide important local environmental benefits, in particular soil and water conservation, and make an important contribution to African and global biodiversity. They play a key role in rural livelihoods. Forest production is significant in financial terms – the average

Box 7 Illegal logging and forest law enforcement

Illegal logging is a critical obstacle to SFM in both the production and protection forest estates of many ITTO producer member countries. Illegal logging in Indonesia, for example, has been reported by some sources to exceed legal production. Indonesia was the first country to enact a Presidential Instruction (No 4/2005) on the eradication of illegal logging in forest areas within its borders. In the Philippines, the control of illegal activities remains a major challenge and is considered a critical obstacle to SFM. The government there has taken a number of forest law enforcement measures, such as the confiscation of illegally harvested timber. In India, a legislative assembly has demanded a new law to seize the proceeds from all illegal logging activities. Côte d'Ivoire requires specific approval for all new logging of community teak plantations to prevent uncontrolled and illegal logging. Honduras carries out forest control in conjunction with other government agencies, including the public prosecutor's office and the national police. Cambodia has issued a new forest policy with a commitment to tackle illegal forest activities. A recent report by the NGO Forest Trends (2006) alleges that the majority of logging in PNG between 2000 and 2005 was illegal because although officially licensed it didn't fully comply with national laws and regulations. Thailand has banned logging in natural forests, but illegal logging still remains a problem.

Efforts to combat illegal logging and (particularly) illegal trade through bilateral agreements are emerging as well. For instance, the governments of Indonesia and Malaysia decided in December 2004 to carry out government-to-government timber trade where only logs received through government-designated ports would be considered legal. China, the European Union and Japan have also agreed to only buy Indonesian timber from legitimate sources. The pace of implementation of such agreements has been variable.

Multilateral initiatives

Illegal logging was first addressed at the multilateral level by the G8 Foreign Minister's Action Programme on Forests in 1998. In 2001, a Forest Law Enforcement and Governance (FLEG) initiative was launched in East Asia; this resulted in the Bali Ministerial Declaration, in which both producer and consumer countries agreed to take actions to suppress illegal logging. In response to this call, a regional FLEG taskforce was created. The primary role of the taskforce is to draft an action plan to meet the commitments made within the Bali Declaration.

The Forest Law Enforcement, Governance and Trade (FLEGT) Action Plan of the European Union calls for compliance with national laws covering a range of practices associated with logging and timber trade. The 2002 World Summit on Sustainable Development (WSSD) also asserted the importance of taking immediate action on domestic forest law enforcement and illegal international trade in forest products. The Asia Forest Partnership was launched at the WSSD to promote SFM in Asia, giving the control of illegal logging top priority among five urgent issues, including good governance and forest law enforcement. The Sixth Ordinary Meeting of the Conference of the Parties to the Convention on Biological Diversity called for effective forest laws at the national level and recognition of the need to develop C&I which take into account the existing work and processes towards SFM.

Since 2001, ITTO has carried out several activities to assist its members in combating illegal logging and improving forest law enforcement. One important step was a decision (6(XXXI)) by the ITTC to encourage countries to submit projects that address forest law enforcement, unsustainable timber harvesting and illegal trade in tropical timber, and to urge its member countries to cooperate with each other to protect the tropical forest estate from illegal activities.

Box 7 Illegal logging and forest law enforcement (cont'd)

Several countries have submitted projects to take advantage of this decision. Three other ITTC decisions address forest law enforcement and the control of illegal logging. ITTO has also financed case studies on illegal logging and illegal trade in timber and timber products in Peru, Honduras, Brazil, Ecuador and Malaysia. Another major initiative has been cooperation between ITTO and the Convention on International Trade on Endangered Species of Wild Fauna and Flora (CITES) to ensure that trade in mahogany and ramin (both listed in CITES Appendix II) is legal and sustainable. ITTO reinforced its commitment to assist its members in forest law enforcement when related initiatives totalling almost US\$5 million were approved under the Organization's 2006–2007 work program.

annual value of primary timber exports from ITTO producer countries in the region approached US\$1.6 billion between 1999 and 2003 (ITTO 2005b) – but it also supports an estimated 200 million people who use a wide range of forest products to help sustain their livelihoods. With the exception of Gabon, ITTO producer members in Africa are low-income countries with slow growth and much rural poverty; DRC, Liberia and Togo are classified by the UN as least-developed countries (UNCTAD 2004). Only a third of the population in the region lives in towns and cities, but urban expansion is creating growing markets for forest products.

ITTO producer member countries in Africa occupy two broad biogeographical zones. The first is the Congo Basin in the central part of Africa, comprising Cameroon, CAR, DRC, Congo and Gabon. The second lies in equatorial West Africa and comprises Côte d'Ivoire, Ghana, Liberia, Nigeria and Togo.

The extent of natural tropical closed forests in the Congo Basin member countries is estimated to be about 195 million hectares. It contains the largest remaining contiguous expanse of tropical forest in Africa and the second largest in the world after the Amazon Basin. The Congo Basin is characterized by low population density (less than 20 people per km²). However, cities such as Kinshasa (DRC), Brazzaville (Congo), and Yaoundé and Douala (both in Cameroon) are growing rapidly and creating a high demand for timber, fuelwood and NWFPs, including wild meat. Deforestation is relatively low compared to other tropical regions, but there is concern about forest degradation through the over-harvesting of valuable timber species (high-

grading) and over-hunting. Timber production plays a major role in the economies of all five countries, with total 2003 exports of primary wood products worth US\$995 million.

The five ITTO member countries of equatorial West Africa contain about 13.7 million hectares of natural tropical closed forest, although a large part of this is secondary or heavily degraded; Côte d'Ivoire, Ghana, Nigeria and Togo also have large areas of savanna. Forests contribute to the livelihoods of more than 100 million people. There has been long-term, extensive deforestation in all countries, caused recently by, among other things, agricultural expansion, fire and the harvesting of fuelwood and charcoal. The main timber-producing forests have been largely logged over; West Africa was once an important supplier of tropical hardwoods to international markets, but its importance in this regard has diminished considerably in recent decades, with 2003 exports of primary wood products worth US\$592 million.

Another way to group the countries of the region is according to their endowment and use of forest resources. In Ghana, Côte d'Ivoire, Togo and Nigeria, natural forests have been heavily logged and largely converted to agriculture. There are still large areas of relatively undisturbed forest in the two Congos, Gabon and the southern parts of CAR and Cameroon – the population is sparse, access to the forest difficult and ports remote. Liberia and, increasingly, Cameroon are intermediate: forest conversion accelerated over the last decade and population pressure is increasing. But there are important differences between countries.

Armed conflicts and their aftermath are causing significant social and economic disruption in some ITTO producer member countries in the region, most notably CAR, Côte d'Ivoire, DRC and Liberia; such conflicts make SFM very difficult. Forests may be unsafe to manage; they provide refuge for armed factions, for example, and landmines may have been deployed.

PFE

Of the estimated 209 million hectares of closed natural forest in the region, an estimated 70.5 million hectares are assigned as natural production PFE and 39.3 million hectares as protection PFE. Adding the estimated 825,000 hectares of planted forest gives a total PFE of 111 million hectares (Table 2a).

Institutional arrangements in Africa

Forest tenure

In the Congo Basin, there is a general tendency to bring production forests under full state control while opening up other forest areas to communities and local forest users. In Cameroon, most forest land belongs to the state. About 345,000 hectares are 'communal forests' and are owned privately by communities. This area is increasing, in particular in the agroforestry zone outside the PFE. Generally, people living in forest areas fully retain their traditional user rights in their communal areas. In CAR, most forest is owned by the state. The forest domain as a whole comprises stated-owned forests; community forests, mainly found in the savanna; and private forests – a limited area of reforestation on private land. In DRC, the state is the sole owner of the land. According to the 2002 forest law, consultation with the local population is required before forest is classified: the local community or municipality retains customary usage rights over the forests. The state can also allocate forests to local communities as community forests. In Congo, the 2000 forest law defines two types of forest ownership in state forest and private forest; most is state-owned, but communal and community forest is registered as the private domain of the relevant group. In Gabon, the 2001 forest

law divides forests into two distinct categories. One includes the production PFE managed by private concessionaires and protected forests managed directly by the state. The other is composed of state-owned rural forest – land and forest for which usufruct rights are limited to local communities. Rural communities and forest dwellers are free to exercise their customary rights in these forests, provided that they respect all conditions imposed by the forestry administration. Production PFE is owned and administered exclusively by the state.

In West Africa, forests are often held by the state, but there is wide encroachment into forest reserves and protection forest. In Ghana, forests are owned by the tribal chiefs but, in the early 1970s, all rights for the management and development of natural resources, including those of commercial trees, were vested in the President (as a 'trust'). In Côte d'Ivoire, there are two main categories of natural-forest ownership: public forests owned by the state divided into the *domaine forestier permanent*, which includes reserved forests and protected areas, and the *domain rural*, or rural zone; and community forests, which are based on traditional customary rights. In Liberia, all forest resources belong to the government except for communal and privately owned forests; the latter comprises a very small area of planted forests. Communal land is designated for the exclusive use of local communities for purposes other than logging. In Nigeria, most forests are in principle owned by the people, but the management and control of forest reserves, which cover around three-quarters of the forest area, are vested in the state governments. Moreover, dual ownership of natural forests by local and state governments still exists in some of the 17 northern states. Local governments are responsible for communal forest areas, state governments for forest reserves, game reserves and sanctuaries, and the federal government for national parks. In Togo, most remaining closed forest is in forest reserves owned by the state. In all forest reserves, local communities have user rights according to the colonial forest law of 1938, although a lack of clarity of the legal situation reportedly contributes to forest loss within the reserves.

Forest policy and legislation

Nearly all African producer member countries have revised or adapted their forest laws and policies since the UN Conference on Environment and Development (UNCED) in 1992 and in the light of the environmental conventions and ITTO policies and guidelines; Côte d'Ivoire, the main exception, is currently in the process of doing so. Nevertheless, the principle of state-owned production forests leased out in concessions and the parallel system of extraction permits for forest products remain unchanged. In nearly all countries, the institutions responsible for forestry have changed, at least in name and sometimes also in the nature of their responsibilities. Forestry is now often part of a ministry dealing with environment and forests (eg in Cameroon, CAR, Côte d'Ivoire, DRC, Congo, Gabon, Nigeria and Togo). Ghana has a Ministry of Lands and Forests and has incorporated environmental issues within it.

In their recent forest legislation, most countries have committed themselves more deeply to policies of sustained yield. Nearly all countries have applied C&I to describe and measure their efforts towards SFM: both the ITTO C&I and the African Timber Organization (ATO)/ITTO *Principles, Criteria and Indicators for the Sustainable Management of African Tropical Forests (PCI)* have been promoted widely. However, a lack of resources, political instability, poor government support and weak enforcement have often hampered the application of forest policies and legislation. The education of foresters and research into the practice of sustainable forestry are often neglected.

Cameroon, Congo, Gabon and Ghana have recently made enormous efforts to improve their forest governance; they also permit independent monitoring and the tracking of log transport and export. The long-term effects of these measures remain to be seen.

The involvement of domestic civil society in forest management is generally low, except in Cameroon and Ghana. In Cameroon, there is intensive dialogue between the forest administration and local NGOs; in Ghana, NGOs play an important role in growing trees outside forest reserves. Local NGOs generally

lack the funds and capacity to promote SFM effectively. International NGOs are present in all countries but tend – with some exceptions – to be more interested in biodiversity conservation than the sustainable management of forests for timber production.

Status of management

Natural production forests

Forest management for the production of industrial timber is economically important in the countries of the Congo Basin. In 2003, the five ITTO member countries in the Congo Basin accounted for the bulk of internationally traded tropical timber from ITTO African member countries (2.9 million m³ of logs, 1 million m³ of sawnwood and 300,000 m³ of panels – around two-thirds of the total African trade – ITTO 2005b). The production of industrial timber is a smaller part of total forest production in Africa than in other tropical regions: industrial roundwood made up less than 10% of total roundwood (including fuelwood) production in ITTO's African member countries in 2003 (Table 5).

In the West African countries, all or nearly all the closed tropical forests have already been logged at least once. In the Congo Basin, in contrast, the easily accessible forests have been cut over but there are still large areas of primary forest. It may not be economically feasible to apply SFM consistently in many remote forest areas. Congo and landlocked CAR have especially difficult tasks in developing economically viable timber export industries; their transport costs are very high compared to other countries in Africa.

Table 3b summarizes the management status of production PFE in ITTO producer member countries in Africa. Of the estimated 70.4 million hectares of natural-forest production PFE, an estimated 44.0 million hectares have been allocated to production, either through large-scale concession arrangements or smaller-scale licences and permits for long- or short-term use.

Generally, long-term and large-scale privately owned forest concessions dominate timber production in the Congo Basin. Most of the active companies are foreign-owned.

When *No Timber without Trees* was written in 1989, hardly any tropical timber was supplied from managed natural forest in Africa. Timber came instead from forests logged without a management plan or that were being converted to other uses in either a planned or unplanned manner. Since then, considerable progress has been made towards systems of SFM, although the total area remains small and the experience dispersed. Certification, which has been an important influence in some countries in Asia and the Pacific and Latin America and the Caribbean, has received significant attention in Africa only in the last few years. On the other hand, forest management plans are now required in concessions in Cameroon, CAR, DRC, Congo, Côte d'Ivoire and Gabon, and the entire production PFE in Ghana, which does not have a concession system, is covered by management plans, as is just under a third of the Nigerian production PFE. In total, about 10.0 million hectares of Africa's production PFE are covered by management plans, an extraordinary advance on the situation in 1988. This area should continue to increase as concession-holders come into line with new requirements. Nevertheless, the extent to which such management plans are fully implemented appears to be low at present.

Cameroon has made significant efforts to regulate its concession system, with the government authority recently rejecting 17 management plans prepared by concessionaires. Some 1.76 million hectares of concessions there now have approved management plans or are well advanced in preparing them, and at least 500,000 hectares are under SFM. CAR has rationalized its approach to concessions, introducing a single permit type under which concessionaires must prepare a management plan within three years of being awarded a concession. About 186,000 hectares are considered to be under SFM. In Congo, the 2000 forest law requires FMUs to have management plans and concessionaires are now in the process of developing them. One large company with concessions covering about 1.3 million hectares has already developed and started to implement a comprehensive management plan and is undergoing certification. Forest management in DRC has been much disrupted by war, and

there is little forest under rigorous forest management in its vast forest estate; a similar situation applies in Liberia. In Côte d'Ivoire, the government agency in charge of forests, SODEFOR, prepares and implements management plans in forest reserves, but timber harvesting in those reserves has declined. In total, about 1.11 million hectares of forest reserves are under management plans. The new forest policy also requires that concession-holders in the rural domain present management plans, although few have done so to date. In Gabon, more than 2 million hectares of production PFE are under management plans and the estimate of sustainably managed forest there (1.48 million hectares) is probably conservative. Ghana has many favourable conditions for achieving SFM, notably impressive human resources and a long history of forest management, and some forest reserves are well managed. Others, however, have been over-harvested, and management of forests outside reserves is often poor or lacking. Nigeria has a long history of forest management and the formal goal of its forest policy is to achieve self-sufficiency in all aspects of forest production; however, once a significant exporter, the country is now a net importer of primary forest products and the management of its remaining, relatively small area of natural production PFE is problematic. Togo has a tiny area of natural production PFE, of which approximately 5,500 hectares are managed sustainably.

In the past, two factors seem to have been decisive in determining the character and intensity of timber harvesting in the closed forests of Africa: the distance of the forest from a suitable seaport for export and the ability of local markets to absorb the less valuable products (Poore et al. 1989). Thus, the forests of Côte d'Ivoire and Ghana, where ports are near and domestic markets are strong, have been harvested much more intensively than other forests in the region. In some countries, very selective harvesting in remote forest areas was, in the past, combined with fuller forest utilization in more accessible regions. In Congo, forests have been logged less intensively in the northeastern frontier than in Mayombe and Chaillu, as have the closed forests in Cameroon's east compared to

those in the western coastal area, and, in Gabon, forests in the centre and east compared with those of the coastal zone. This is changing. The eastern forests in Cameroon, the northeastern forests in Congo and the central and eastern forests in Gabon have been opened up over the last decade. Nevertheless, in many places SFM remains an economically marginal activity, and its financial viability in CAR, Congo and DRC – in which most forest is a thousand kilometres or more from seaports – is tenuous at current market prices for timber.

Despite the long history of silviculture in some parts of tropical Africa, recent attempts at intensive silviculture have been confined to pilot projects financed by ITTO, other international organizations or the private sector. These have not yet been expanded to an operational level, except perhaps in Gabon's okoumé forests, where there is abundant natural regeneration and simple silvicultural systems appear to work.

The number of timber species harvested in production forests has grown in recent years. This is especially the case near seaports or major local markets, where prime species have been largely logged out. Other species have become more popular, and, in countries such as Cameroon and Côte d'Ivoire, some have been banned from export in log form. Nevertheless, a handful of species still makes up the bulk of production: in CAR, loggers harvest 15–18 timber species, and five species make up 90% of production; in northern Congo, 18–20 species are harvested, but five species account for nearly 80% of production. The diversity of species and the low level of commercial interest in many of them are often major hindrances to the financial viability of SFM.

Planted forests

The total area of planted forests (825,000 hectares) is small compared to that in Latin America and the Caribbean and especially in Asia and the Pacific. More than half the plantation estate is covered by management plans. Countries vary in the quality of their plantations; unsurprisingly, those countries with diminished natural forest resources have made the most progress in developing their estates. Ghana, for example, is in the process of establishing a

significant area of *Tectona grandis* (teak) plantations; teak is also important in Nigeria and Togo. Côte d'Ivoire's teak plantations are a major contributor to timber exports.

Local hardwoods, including samba, okoumé, frake, limba and other light hardwoods, have been widely tested in experimental plots over the last 30 years or so and are increasingly being used in plantations in the region, particularly in Congo, Côte d'Ivoire, Ghana and Togo, to increase the share of native species in forest plantations. Large rubber plantations, neglected for the last 20 years, are now being used in timber production, notably in Ghana, following the successful examples provided by countries such as Malaysia and Thailand.

Protection forests

DRC has by far the largest area of protection PFE (an estimated 27.0 million hectares) of the ITTO producer member countries in Africa. Next follow Cameroon, Congo and Gabon, with much lower areas in the remaining countries. Table 3c summarizes the management of the protection PFE in the region; Map 1 shows the distribution of protected areas in IUCN categories I–VI against a background of forest cover. Information on the status of management in the protection PFE is scarce, and even data on the extent of forests in protected areas are often confusing or contradictory. This can be seen in the large discrepancy between the estimate of protection PFE made on the basis of country reports, C&I workshops and other information (39.3 million hectares), and that given by UNEP-WCMC (2004) (20.6 million hectares). Considerable areas of lowland evergreen rainforest are attributed to IUCN categories I–IV in Cameroon, CAR, Congo and DRC. An estimated 1.22 million hectares have management plans, and 1.73 million hectares (including about 600,000 hectares in the Minkebe National Park and Forest Reserve, for which an ITTO-financed management plan is in the final stages of preparation) are being managed sustainably. Given the small amount of reliable data on which the estimate of protection forest under SFM has been made, it has a wide margin of error. Nevertheless, very large areas of forest not covered by management plans or otherwise under management

are under little or no threat from deforestation or other significant human-induced disturbance due to their remoteness from major human settlements and the difficulty of access to them. This is particularly the case in countries such as DRC, Congo and Gabon.