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ITTO Tropical Forest UPDATE

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Liberia's great thirst

RECOVERING from two recent civil wars, Liberia is in tatters. One of the world's poorest countries, its people live an average of less than 50 years. Its unemployment rate of 85% is reportedly the highest in the world. Even in Monrovia, the capital, basic services such as electricity, clean drinking water and health care are scarce or non-existent; people have a daily struggle to survive. If ever a country needed development (preferably of the sustainable variety), Liberia is it.

Sustainable development doesn't just fall from the sky. It takes good governance, goodwill and good planning and quite often requires substantial financial investment. According to a recent ITTO diagnostic mission (page 3), Liberian forestry is lacking all these ingredients, except perhaps some goodwill. Industrial capacity has been virtually wiped out, the system for the allocation of concessions is not transparent, and planning is hindered by a dearth of forest inventory data, lost or destroyed records, low capacity in the Forest Development Authority (FDA), and a general lack of political and social stability. Adding to the sector's woes, in 2003 the United Nations imposed an embargo on the export of timber from Liberia and hasn't lifted it yet. Community forestry

Contents

Regular features

Editorial Alastair Sarre
Design Justine Underwood
Database Manami Ohshima
Proofing Hana Rubin

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International Tropical Timber Organization
International Organizations Center – 5th Floor
Pacifico-Yokohama, 1–1–1 Minato Mirai, Nishi-ku
Yokohama 220–0012 Japan
t 81–45–223 1110
f 81–45–223 1111
tfu@itto.or.jp
www.itto.or.jp

Cover image A man tries to drink the rain during a presidential election rally in Monrovia, Liberia, in October 2005.
Photo: Chris Hondros/Getty Images

... Editorial continued

and traditional resource use and access rights exist only as concepts, and traditional governance in rural areas was corrupted and dismembered through the years of war and neglect.

Yet forests could still play a big role in the country's recovery. In 2002—before the embargo—the timber industry accounted for an estimated 25% of GDP and 65% of foreign exchange earnings and generated up to US$20 million in government revenues. Perhaps half the country is forested, including 3.4 million hectares of dense forest that is rich in biodiversity.

There appears to be no shortage of helping hands from outside, either, with governments, NGOs and international organisations joining together in an informal arrangement called the Liberia Forest Initiative in an effort to boost conservation and management efforts there. But according to the ITTO mission it will take many millions of dollars over a sustained period to rebuild the Liberian forest sector to the point where it can play a positive role in the country's emergence from strife.

One of the problems is that capacity takes years to build, and participatory processes are inevitably slow and cumbersome, yet Liberia needs the economic activity now. The UN sanctions must be lifted before the (export) industry can restart; however, in his most recent report to the UN Security Council on this matter (June 2005) the UN Secretary General Koffi Annan found that the government "has not been able to establish full authority and control over the timber-producing areas nor to take all the steps necessary in order to ensure that Government revenues from the Liberian timber industry are not used to fuel conflict … but are used rather for legitimate purposes for the benefit of the Liberian people".

This is a Catch-22: income is needed to increase the capacity of the FDA and other actors to enforce the law, but such income is not possible until law-enforcement capacity is increased.

ITTO is one of the willing hands in Liberia. Its mission made a host of recommendations on how the Organization might best contribute. As a first step (to make it easier to take bigger steps thereafter), a workshop is planned to introduce the revised ITTO criteria and indicators for the sustainable management of tropical forests (C&I, see page 11) to stakeholders. ITTO is convening a series of such workshops across the tropics designed to institutionalise the use of C&I in tropical forest management, and it has financed several projects (two of which are described in this edition—see pages 12 and 15) with the same aim. C&I are tools that help identify trends in the forest sector, determine the effects of forest management interventions over time, and facilitate decision-making in national forest policy processes. If they are used in all forest management units and by all governments within an international grouping (such as ITTO) they can form a common basis for reporting on the status of forest management.

ITTO is using its C&I for just this purpose: a major report on the status of forest management in the tropics, based on member-government C&I reports and other sources, will be the subject of a forthcoming special edition of the *TFU*. More than 15 years ago an ITTO survey found almost no production forest in the tropics under sustainable management; the present survey will find a substantial increase.

Unfortunately, Liberia is not a contributor to this increase. A country still suffering the repercussions of war has other things to attend to, and sustainable forest management is a long way off. But there is still hope: if the international community is willing to spend the time and money needed to rebuild the Liberian forest sector, perhaps by the time a third assessment is carried out the sector will at last be helping to slake Liberia's thirst for sustainable development.

Alastair Sarre

Timber and the rebuilding of Liberia

Liberia's forest sector could play a crucial role in the country's post-war reconstruction. But it needs help

Left-over: this armoured vehicle rusts in a field in Liberia's capital, Monrovia, a reminder of the country's recent civil war. *Photo: N. Sizer*

LIBERIA'S 14-year civil war has taken a heavy toll. Although hostilities ended in 2003, schools, health centres and other services remain in a severe state of neglect. An estimated 150 000 people were killed in the conflict, and many hundreds of thousands of internally displaced people continue to live in camps where there is access to food and services. Across the country, all communities have been disrupted and dislocated in some way by the war.

Not least affected is forestry. In July 2003, the United Nations (UN) Security Council imposed strict sanctions on Liberia, prohibiting it from trading in wood (and diamonds) in an attempt to cut off revenue that was allegedly being used in the purchase of weapons and thereby to weaken the regime of Liberia's then president Charles Taylor. Since then the legal domestic logging industry has suspended all operations and there has been no significant export of wood.

In April 2005 ITTO sent a diagnostic mission* to Liberia with the aim of: identifying the most important factors constraining sustainable forest management (SFM) in the country; assembling those constraints in order of importance; and recommending actions to remove the constraints.

The mission team conducted interviews and meetings with various stakeholders, including the national Forest Development Authority (FDA), local government, bilateral and multilateral donors—particularly those involved in the Liberia Forest Initiative (LFI; *see box)*—forest concessionaires and wood processors, local and international non-governmental organisations (NGOs), district officers and the field representative of the UN Mission in Liberia (UNMIL). It also collected and analysed existing reports, documents and statistics, particularly those generated recently by the international community.

Liberia's plight

Liberia has a population of around three million people, comprising 16 major ethnic groups as well as a small minority of Americo-Liberians who dominate politics. Infant mortality is estimated at almost 130 deaths per 1000 live births, and average life expectancy is only 48 years. Literacy is very low at around 15% and probably much lower in many rural areas. Current gross domestic product (GDP) per capita is only US$169, making Liberia one of the poorest countries in the world.

State of the forest sector

The total land area of Liberia is 9.6 million hectares, more than half of which has some sort of forest cover *(Figure 1)*. Closed and open dense forests cover 2.4 million and 1.0 million hectares respectively, while secondary and degraded forests cover about 2.2 million hectares.

It is impossible to assess the sustainable annual allowable cut (AAC) of Liberia's forests, since no forest inventory has been conducted in the last 40 years. Records of logged-

**The diagnostic team comprised Mr Pierre Méthot (Canada; team leader), Mr Samuel Appiah (Ghana), Dr Nigel Sizer (UK/USA), Mr Robert Simpson (USA; part-time), and Dr Francis Sio (Liberia). In addition the Liberian FDA made available the services of the following people: Mr Moses D Wogbeh, Sr, Manager—Community Forests; Mr Thomas Romeao Quiah, Sr, Deputy Managing Director—Commercial Forestry, Mr Cletus N. Togba, Special Assistant to Managing Director for Forest Conservation, and Mr Amos T. Suah, Coordinator—Planning, Research and Statistics. Many other FDA staff contributed to the diagnostic mission, and Dr Jean-Claude Nguinguiri, the ITTO regional officer based in Gabon, significantly contributed to initial planning and organisation as well as to mission logistics. This article is adapted from the executive summary of the mission's report.*

Liberia Forest Initiative

A number of organisations with interests in forests are working in Liberia under the umbrella of the Liberia Forest Initiative, which aims to help reform Liberia's forest sector and promote the sustainable use of natural resources and biodiversity conservation. Partners in the Initiative include the US Government (acting through the USDA Forest Service International Program), the World Bank, the European Commission, Conservation international, the Environmental Law Institute, IUCN—the World Conservation Union, and several Liberian NGOs.

over areas and volumes extracted over the last 20 years are sketchy, incomplete and unreliable; many were destroyed during the war.

At the time of the imposition of the sanctions, 42 forest concessions covered a total of 5.95 million hectares *(Figure 2)*. The system of awarding timber concessions in Liberia lacks transparency; it is currently being reviewed under the leadership of the LFI.

... mismanagement during the Taylor regime, the looting and destruction of offices (and records) during the war, and a current lack of revenue, combined with a staff severely demoralised by the late payment of meagre salaries and also the personal trauma of war, mean that the FDA is barely able to function.

Although the FDA has awarded a number of legal pit-sawing permits recently—because most of the sawmills in the country have been shut down—many truckloads of illegal pit-sawn wood are still entering Monrovia (the country's capital) each day. Only limited legal wood is available for local consumption.

Conservation value

In 1999 the West African Conservation Priority-setting Exercise funded by the Global Environment Facility identified the Upper Guinean Ecosystem, for which Liberia is home to the most intact remaining examples, as the top conservation priority in West Africa. These forests contain at least 2900 species of flowering plants, 240 timber species, 150 mammals, 620 birds, and 125 reptiles and amphibians. Some well-known species whose conservation may depend on Liberia's forests include the western chimpanzee, the red colobus monkey, the diana monkey, the pygmy hippopotamus and the forest elephant.

Liberia's two existing protected areas *(Figure 1)* cover less than 2% of the land area. These are the Sapo National Park in the southeast (162 000 hectares, established in 1983), and the Nimba Nature Reserve in the north (14 000 hectares, established in 2003). Sapo National Park has recently been invaded by thousands of armed illegal hunters and miners; UNMIL is now assisting these people, many of whom are former combatants, to leave the park and return to their homes. Several new protected areas have been proposed.

Threats to forests

Major threats to the integrity of the forests include illegal and legal (but unsustainable) commercial hunting, conversion to small-scale agriculture (especially dry rice cultivation), and illegal alluvial mining for gold and diamonds, which causes great damage to rivers and streams. In the future, forests could also be threatened by an expansion of legal mining and road infrastructure, and possibly by conversion to industrial tree crops or oil-palm plantations, as well as by poorly managed commercial logging if the forest products' industry is not well regulated.

The institutional framework

The FDA has overarching responsibility and authority for all forest-sector activities covered under the National Forestry Law of 2000 and has substantial operational, management and financial autonomy. With a total staff of 500, the FDA has three departments: 1) Forest Conservation, responsible for protected areas, wildlife management and community forestry; 2) Commercial Forestry, responsible for all aspects related to forest management, logging, forest utilisation and reforestation; and 3) Administration and Finance.

A board of directors sets FDA policies and normally oversees its operations and finance. However, mismanagement during the Taylor regime, the looting and destruction of offices (and records) during the war, and a current lack of revenue, combined with a staff severely demoralised by the late payment of meagre salaries and also the personal trauma of war, mean that the FDA is barely able to function. The current salary of a forest ranger is US$15 per month and the FDA's budget is now possibly as low as 1% its pre-war level.

The state of extractive activities

Commercial logging was a major component of the economy prior to the collapse of the Taylor regime in 2003; in 2002 it accounted for a quarter of GDP and 65% of foreign-exchange earnings. The sector generated up to US$20 million per year in government revenues and around US$100 million in exports, and directly employed about 7000 people.

At the moment, however, Liberia earns no export revenue from its timber sector; the UN sanctions against the timber trade will remain in place until three conditions have been met to the satisfaction of independent, international inspectors: 1) revenues generated from logging are administered correctly and not diverted to illegal uses; 2) the national government is in control of the forests; and 3) no militias are used by logging companies. Informal interviews

Greenery

Figure 1: Forest cover in Liberia showing the location of the Nimba Nature Reserve and the Sapo National Park

Source: Liberia Forest Re-Assessment Project—Conservation International and Flora and Fauna International (April 2004)

by the mission suggest that none of these conditions have yet been met.

Before the war, timber was processed in 27 sawmills and three plywood mills. The war destroyed 20 of these; the remaining nine sawmills and one plywood mill are dormant. The estimated installed capacity of these mills is about 95 000 m^3 of logs per year.

Constraints to sustainable forest management

The most important thing for Liberia right now is stability and the restoration of law and order and good governance; achieving SFM will only be possible when sensible rules and regulations are enforced and adhered to. Paradoxically, though, the resurrection of the timber industry is badly needed to provide employment and foreign exchange, both of which are essential if the country is to rebuild and move towards sustainable development. It is therefore essential that appropriate mechanisms, processes and tools are put in place now to ensure the sustainable and fair use of forest resources as the timber industry resumes its operations.

However, forest policy and even recent post-war reform efforts have over-emphasised the commercial timber sector and given little attention to resource tenure and issues of high relevance to the poor, such as wild meat and fuelwood production (about 98% of the country's energy needs are met by fuelwood and charcoal). There is little understanding or awareness of these aspects. Nor does the FDA have guidelines, manuals of procedure or codes of best practice to guide its forestry activities, or adequate levels of professionals trained in SFM. There is no clear national strategy or plan for the forest sector, no forest development plan, and no forest policy paper. Moreover, there is no overall national land-use plan and the existing timber concession allocation system lacks transparency, probably doesn't capture the true value of the forest resources, and doesn't benefit forest-dependent communities.

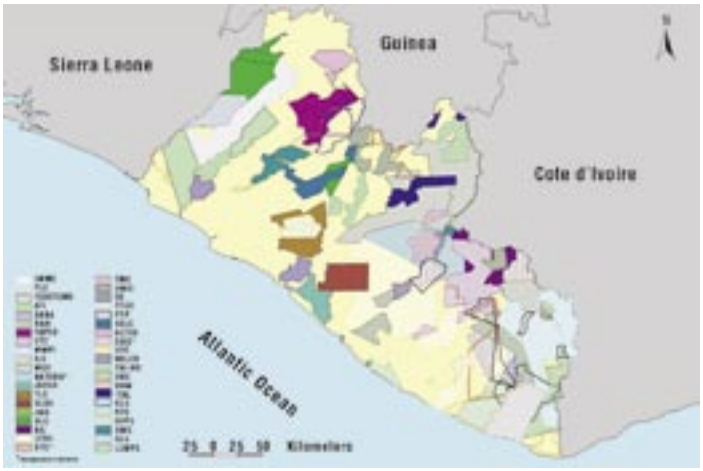
Proposed priorities for possible ITTO actions

The mission believes that ITTO actions should tackle the most urgent areas that are not being addressed sufficiently by other international agencies and NGOs and should complement and support existing activities, projects and programs. ITTO actions should therefore focus on the following four main areas:

- improving knowledge about the resource and its utilisation;
- capacity-building;
- pilot preparation of an SFM plan; and
- supporting the genuine participation of local communities in the management and use of forest resources.

On hold

Figure 2: Forest concessions in Liberia



Source: Technical Secretariat of the Forest Concession Review, Liberia Forest Initiative (April 2005)

Actions to advance the cause of SFM in these four areas should include (but not be limited to):

- conduct a study of pit-sawing in Liberia, both legal and illegal, and formulate a project proposal for the integration of this with other activities designed to move the country towards SFM, and more specifically as a component of community forestry;
- prepare a series of forest guidelines covering such aspects as forest inventory, AAC, mapping, etc. Guidelines from nearby countries such as Ghana or Cameroon could probably be easily and cheaply adapted to the Liberian context by local consultants;
- conduct a series of field projects to improve knowledge about Liberia's forest resources, such as re-establishing permanent sample plots, conducting tree studies (to establish volume equations), conducting a national forest inventory, and calculating the AAC;
- prepare national guidelines for the preparation, implementation and monitoring of SFM plans;
- design and implement an outreach program to promote and explain SFM to all stakeholders;
- prepare and implement a detailed training plan, identifying specific programs, curricula, beneficiaries, venues, costs, etc, consisting of a series of short in-country training activities as well as scholarships and short courses abroad;

... the resurrection of the timber industry is badly needed to provide employment and foreign exchange, both of which are essential if the country is to rebuild and move towards sustainable development.

- reinforce the capacity of the College of Agriculture and Forestry at the University of Liberia;
- design and implement a pilot project for the preparation of an SFM plan for an existing forest concession in Liberia in collaboration with a progressive forest concessionaire, the FDA and an NGO and with the

Essential products: 98% of Liberia's energy needs are met by fuelwood and charcoal.
Photo: N. Sizer

assistance of either a specialised consulting firm or an international NGO; and

- implement community-based forest management. This area should be a very high priority for ITTO engagement in Liberia. This would include:

... millions of dollars in international development assistance will undoubtedly be needed over the next few years if anything approaching sustainable management is to be achieved.

  - a multi-stakeholder dialogue in selected rural areas to gain input from communities on their priorities for institutional arrangements within the communities to promote local forest management and other aspects
  - legal reform and detailed legal regulations to facilitate community-based forest management, with multi-stakeholder input. This would include clarification of tenurial factors
  - support for the establishment of pilot community-based forest management programs in different parts of Liberia
  - the mapping of forestland ownership across Liberia and documentation of claims to forestland and
  - the design and implementation of a sustainable wild-meat production project. This theme should be fully integrated into broader community-based forest management programs and activities and properly linked with biodiversity conservation, notably within production forests.

Immediate next steps

The case of Liberia is unique. Implementation of all the actions required to address the very numerous constraints to SFM presents incredible challenges. So many actions are required and so many variables and unknowns exist that it is impossible to elaborate a precise plan of action for the forest sector at present. Even the list given above might seem daunting given the general lack of capacity. However, some immediate actions could be undertaken by the Government of Liberia that would help mobilise the support available through ITTO.

For example, the Government of Liberia should request support from ITTO to set up an inter-agency and multi-stakeholder coordination committee that would be responsible for following up on the diagnostic report, harmonising the interventions of donors, coordinating communications with ITTO and between the other donors, and preparing and submitting requests and proposals to ITTO.

The government should formally request ITTO assistance for the preparation of proposals, particularly under ITTO PROJECT PD73/89 (M,F,I): 'Assistance for project identification and formulation'. With ITTO assistance it should also convene a national workshop on the ITTO criteria and indicators to initiate a process of training and awareness among forestry professionals and other stakeholders about the principles of SFM.

International commitment needed

Rebuilding the physical, production, institutional and human infrastructure of the forestry sector to a level supportive of SFM will require large investments from both the private sector and the Government of Liberia that will be difficult to attract without significant support from the international community. Without a comprehensive audit of the entire sector it is impossible to assess how much will be required, but millions of dollars in international development assistance will undoubtedly be needed over the next few years if anything approaching sustainable management is to be achieved.

Reference

Bayol, N. & Chevalier, J-F. 2004. *Current state of the forest cover in Liberia: Forest information critical to decision making*. Final report to the World Bank. World Bank, Washington, DC, USA.

On the threshold of something special

Four recently evaluated ITTO projects show that creative approaches to conservation on international borders can benefit local people, biodiversity and cooperation between countries—but long-term commitment is needed

by
Marc J. Dourojeanni

President
ProNaturaleza
Peru

Photo: G. Wetterberg

BIODIVERSITY conservation, community participation and development, international peace and cooperation: each of the goals implicit in these terms, taken separately, is very difficult to achieve, and combining them might therefore be expected to magnify the difficulty. But in border regions, striving for all three goals at once might actually be the best way to realise any single one of them.

This is the challenge that several countries, with ITTO assistance, have decided to undertake. Since 2000, four ITTO projects in Ecuador, Peru, Indonesia and Thailand *(Table 1)* have made starts in participatory biodiversity conservation in border regions. Despite many obstacles, relatively little funding and short execution periods, each has achieved impressive results, providing hope and inspiration for future biodiversity conservation efforts.

This article summarises the overall results of an ex-post evaluation of the four projects, the first phases of which recently came to an end. The evaluation was conducted in early 2005 by a team comprising Gary Wetterberg (USA), Maria Tereza Jorge Padua (Brazil), Carlos Roberto Bueno (Brazil) and the current author (team leader; Peru/France).

Similarities and differences

The four projects had some important similarities and differences. All four were located in international frontiers with very high biodiversity value, and they were all executed by non-governmental organisations (NGOs) with governmental support. In three of the four project areas the cooperation of the very poor, mostly indigenous local communities is essential for achieving biodiversity conservation. In Ecuador and Peru the projects aimed to establish protected areas, while in Indonesia and Thailand the protected areas already existed.

A significant difference between the Ecuador/Peru projects and the two in Asia was that the Ecuador/Peru projects

Project summaries

Table 1: Four ITTO transboundary conservation projects

PROJECT NUMBER	PROJECT TITLE	IMPLEMENTING AGENCY	ITTO FUNDS *(US$)*	ITTO DONOR COUNTRIES	TOTAL BUDGET *(including in-kind contributions; US$)*
PD 2/00 Rev.2 (F)*	Bi-national conservation and peace in the Condor Range region, Ecuador-Peru: Phase I (Ecuadorian component)	Natura Foundation	701 701	Japan, USA	926 160
PD 3/00 Rev.2 (F)*	Bi-national conservation and peace in the Condor Range region, Ecuador-Peru: Phase I (Peruvian component)	Conservation International—Peru	701 502	Japan, Switzerland, USA, Korea	852 160
PD 38/00 Rev. 1 (F)	Management of Kayan Mentarang National Park to promote transboundary conservation along the border between Indonesia and Malaysian states of Sabah and Sarawak – Phase I	WWF Indonesia	853 398	Japan, Switzerland, USA	1 040 676
PD 16/97 Rev.3 (F)	Integrated buffer zone development for sustainable management of tropical forest resources in Thailand	Thailand Environment Institute	601 333	Netherlands, Japan, Australia	695 240
TOTAL			**2 857 934**		**3 514 236**

**See* TFU *14/4 for a summary of the outcomes of these two projects*

Residents: Dayaks in Indonesia's Kayan Mentarang National Park. *Photo: G. Wetterberg*

were implemented in tandem in protected areas that adjoined across an international boundary. Indonesia's Kayan Mentarang project, on the other hand, did not have such a sister project in Malaysia—although the Pulong Tau National Park in Sarawak has recently been extended so as to be contiguous with Kayan Mentarang and an ITTO project there is starting up. Thailand's Kaeng Krachan National Park, although abutting the border with Myanmar, does not connect with any protected area there.

It may be impossible in many places to conserve tropical forest biodiversity without the willing collaboration of local people, but it is also evident from accumulated experience that community participation in biodiversity conservation is not easy. Most communities value and want to protect biodiversity, but not at the expense of their own survival and development.

The projects varied in the size of the communities with which they dealt. In Ecuador the project encompassed over 88 000 people, including 8000 Shuar Indians; in Peru, the project's sphere of influence included some 22 000 Aguaruna and Huambisa Indians. Kayan Mentarang, a very large park (1.36 million hectares), is occupied by 16 000 Dayaks, while few people live in Kaeng Krachan National Park (which is also a much smaller 291 500 hectares in size). Moreover, Kayan Mentarang has had very little management presence in the past, while Kaeng Krachan is well-equipped and heavily visited. Therefore, the Kayan Mentarang project set about establishing a set of management practices for the use of the Park's resources in ways compatible with biodiversity conservation, while in Kaeng Krachan much of the work with communities focused on the Park's buffer zone.

Conservation and development

It may be impossible in many places to conserve tropical forest biodiversity without the willing collaboration of local people, but it is also evident from accumulated experience that community participation in biodiversity conservation is not easy. Most communities value and want to protect biodiversity, but not at the expense of their own survival and development. The main achievement of the projects in Ecuador, Indonesia and Peru has been to offer alternative approaches in which development does not lead to degradation, nor conservation hinder development.

Under the influence of the ITTO project the Dayak people living inside the Kayan Mentarang National Park now show a willingness to adapt their development activities so that they are more in line with the park's management objectives. They also discussed and agreed on a re-delimitation of the park's boundaries that may reduce conflicts over resources while maintaining the size and integrity of the park.

The Thai project achieved good results in the buffer zone of the Kaeng Krachan National Park by harmonising agricultural production techniques with biodiversity requirements and restoring degraded forests in an effort

Borderland: the international boundary between Thailand and the Union of Myanmar follows the distant ridges at the edge of the Kaeng Krachan National Park. *Photo: G. Wetterberg*

Great hope: biodiversity conservation and international peace—ITTO transboundary goals—will be in the hands of youngsters such as this visitor to Thailand's Kaeng Krachan National Park. *Photo: G. Wetterberg*

to provide refuges for wildlife outside the park. The main conflict between the park and the farmers in the area is created by frequent incursions of wild elephants into semi-industrial pineapple plantations; additional funds have since been acquired to find ways of dealing with this problem.

Biodiversity conservation in the Condor

Despite a long history of deception and broken government promises, the indigenous people of the Condor range in Ecuador and Peru agreed to set aside relatively large portions of their traditional territories to establish protected areas and buffer zones. *Table 2* shows the new protected areas that indigenous people agreed could be established on their land and incorporated in national protected-area networks; this is one of the main conservation outcomes of the two projects and is almost unprecedented in recent times, since indigenous people are generally strongly opposed to the establishment of new protected areas. The project has also been instrumental in the highly participatory preparation of management plans for the new and proposed protected areas and also of several regional development plans with the involvement of a wide range of stakeholders, including public authorities and both indigenous and non-indigenous local people.

Nevertheless, the results of the Peru/Ecuador projects are not yet sufficient to guarantee biodiversity conservation in the Condor range. The three new Ecuadorian protected areas are too small to ensure adequate protection of the wildlife, and in any case they have not been deemed totally protected: even mining may be allowed within them. The Peruvian proposal for a new national park, despite its larger size and the fact that it will be 'totally protected', will only cover a few of the several ecosystems of the Condor due to its shape, which is long and narrow along the border with Ecuador and consists in large part of precipitous cliffs. In other words, the bulk of biodiversity conservation efforts in the area will depend much less on the formal protected areas that are being established and much more on how the indigenous land is managed, including in the buffer zones and conservation areas, which are very large in size; the buffer zone on the Peruvian side, for example, will consist of the entire indigenous territory organised in some 19 titled indigenous communities. The proposed communal-reserve category there will allow hunting and other uses of natural resources.

That is why it is important that future actions are oriented towards providing indigenous people with viable economic alternatives that support sustainable development. These

Parks and buffers

Table 2: Main biodiversity conservation achievements in the El Condor projects in Ecuador and Peru

ECUADOR			
ACHIEVEMENT	**SIZE** *(hectares)*	**STATUS**	**COMMENTS**
El Zarza Wildlife Refuge	3643	Established	
El Quimi Biological Reserve	9266	Established	
El Condor Protection Forest	17 846	Established	
Conservation areas inside a Shuar protected territory	122 000	Proposed	Depending on new legislation
PERU			
Ichigkat Muja National Park	152 874	Proposed	The decree is being processed
Ichigkat Muja buffer zone	451 247	Proposed	The decree is being processed
Community reserve	100 000	To be proposed	Studies under execution
Conservation areas inside indigenous communities		To be implemented	

Sustainable? Many Indigenous people, such as the community leaders attending a project meeting (left) and the woman spinning yarn, have made significant investments of time and energy in the transboundary conservation initiative in the Condor and play a crucial role in the realisation of project goals. Project continuity is essential for sustaining their engagement. *Photo: G. Wetterberg*

Value-adding: scientists at the Lalut Berai Experimental Station in Kayan Mentarang National Park innoculate a tree with an incense-producing fungus, one of the income-generating alternatives pursued by the project there. *Photo: G. Wetterberg*

might include restoring already-degraded lands and forest resources, developing appropriate sustainable agriculture, adopting semi-intensive wildlife management, reforesting with valuable species, and managing natural forest resources for timber production (all activities undertaken within the scope of the Kaeng Krachan project). Making sustainable development work for the many families involved will require a sustained effort over the next decade or more.

Peace and cooperation

The authorities of both Ecuador and Peru, as well as Indonesia and Malaysia, have made serious efforts to coordinate work across boundaries and to develop a series of actions of common interest. Progress was especially noteworthy in scientific terms: for example, a joint Indonesian-Malaysian scientific expedition was organised to the Kayan Mentarang National Park, and for the Condor projects there was an abundant and open sharing of information, including cartographic, between Ecuador and Peru. However, essentially due to logistic difficulties, the bilateral collaboration did not achieve field results regarding biodiversity conservation; progress was limited or nil in such areas as the harmonisation of management plans, joint fire information and control, coordinated or joint patrolling, and the exchange of information about illegal logging, mining and poaching. The Condor frontier is almost inaccessible, limiting exchanges between local staff, and coordination meetings are usually held in the nations' capitals.

The situation between Indonesia and Malaysia is similar, although the start-up of the project in Pulong Tau may help improve coordination. But, in general terms, the projects were successful in opening a dialogue between authorities of the countries and scientific results were above expectations. Perseverance by authorities on both sides of a transboundary conservation reserve may bring significant rewards, but undoubtedly it will take time and patience.

The risk of disillusion

The projects achieved both expected and unexpected results in a manner that was efficient and effective, especially considering the relatively small amount of money available, the short period of execution and, in the case of the Ecuadorian, Indonesian and Peruvian projects, the enormous difficulties imposed by geographic isolation. The NGOs responsible for project execution worked very well with local populations and were also able to maintain good coordination with government authorities. In each case, too, these NGOs were able to recruit significant additional funding for project execution. However, the sustainability of the initiated actions is not yet guaranteed because they greatly depend on governmental funding in addition to the possible financing of second phases of the projects through ITTO and/or other international donors. If funding is not available in a timely fashion there is a risk that these initial and successful efforts will be lost; this could create huge disillusion among those indigenous people who have invested their time and energy in and made significant commitments to the process, inevitably making future work much more difficult.

Non-transient transboundary

The four projects show that transboundary conservation is a viable concept with great potential as a tool for sustainable development and biodiversity conservation. It is proving to be an important way of engaging indigenous and other local people in conservation management and of creating avenues for sustainable development. But it takes time, in most cases undoubtedly more than a decade, for such initiatives to make substantial progress towards their three goals: biodiversity conservation, community participation and development, and international peace and cooperation.

This means that ongoing support from donors is essential. Such projects should be approved with longer periods of execution or a mechanism created to reduce gaps between phases. In addition, governmental support and participation is needed in greater measure, especially through staffing—including the training and appointment of local people as rangers or in other functions. High-level, long-term political support at both the national and international levels is therefore essential.

ITTO publishes a new edition of its criteria and indicators for sustainable forest management

EARLIER this year ITTO published a third edition of its criteria and indicators (C&I) for the sustainable management of tropical forests in its three official languages—English, French and Spanish*. The first edition was published in 1992 (as *Criteria for the sustainable management of natural tropical forests*) and the second (as *Criteria and indicators for the sustainable management of natural tropical forests*) in 1998.

ITTO is aware of the potential impacts of revisions to its C&I, which will have implications for any national sets based on them. The revised C&I therefore do not include wholesale or wide-ranging changes but attempt to reduce duplication, improve conciseness and enhance clarity.

The new edition incorporates the latest information on C&I and takes into account recent developments in forest policy. It follows a comprehensive review of the C&I undertaken by ITTO following expert meetings convened by ITTO, FAO and others in 2002 and 2004. These expert meetings recommended, among other things, that countries start reporting on their forest management using a streamlined set of indicators for which data were already available, and that a global set of common thematic areas of sustainable forest management (SFM) closely aligned with the existing seven criteria of ITTO should be adopted. The revised C&I take both recommendations into account.

Moreover, the new edition takes into account the experiences of the many ITTO producer member countries that are implementing national C&I based on the ITTO framework. In cooperation with its producer member countries, ITTO has also been convening a series of national-level workshops on the application of the C&I; stakeholder consultations in the first 14 of these that took place between mid-2002 and the end of 2004 informed the revision process and helped to simplify and streamline reporting requirements.

The main objective of the revision is to improve the effectiveness of the C&I as a tool for monitoring, assessment and reporting on forest management in ITTO producer member countries at both the national and forest management unit (FMU) levels. Compared with the 1998 edition the revised C&I are characterised by the following:

- the seven criteria defined in the 1992 and 1998 C&I have been maintained but the wording has been simplified and standardised, taking into account other international C&I processes. The introductory description of each criterion has also been revised and simplified;
- the number of indicators is now 57, compared with 56 in the 1998 C&I. Fourteen indicators have been relocated within other criteria or indicator groups in order to achieve a more logical sequence. Two indicators have been deleted and three ('forest condition'—2.6; 'log tracking'—4.7; and 'indigenous knowledge'—7.13) added. Most indicators have been simplified;
- specific changes have been made so that the revised C&I can be applied to forest management in both natural and planted forests. Therefore, the specific reference to natural forests in the 1992 and 1998 versions has been removed from the title;
- the most important change to the C&I in this new edition is the inclusion within the document (Chapter 3) of simplified reporting formats for indicators at the national and FMU levels. Previously these had been contained in separate documents, with the national-level reporting format listing 89 items to be considered by countries when preparing their national reports on forest management. In the revised C&I the reporting elements are mostly presented in the form of tables, with fewer descriptive elements and clearer instructions. The results of the national C&I workshops suggest that most of the information requested in Chapter 3 is available in most ITTO producer countries or can be made available with minimal additional effort;
- the applicability of each indicator at the national and FMU level is indicated in the document. Therefore, the C&I can also be used by concessionaires and other forest managers for internal monitoring at the FMU level;
- an annex containing key definitions has been added and other annexes updated.

The revised C&I offer a simpler and more comprehensive tool for ITTO member countries to monitor their forest resources and to report on progress towards SFM on a regular and ongoing basis. To support these efforts, ITTO is continuing its training program on the use of its C&I at the national level, as well as funding projects (such as those described in the following pages) designed to institutionalise the use of the C&I in tropical forest management.

To obtain a copy of the revised C&I contact: Mr Collins Ahadome, ITTO Information Officer, ahadome@itto.or.jp

*ITTO 2005. Revised ITTO criteria and indicators for the sustainable management of tropical forests including reporting format. *ITTO Policy Development Series No 15. ITTO, Yokohama, Japan.*

From paper to the forest

A six-year project designed to promote sustainable forest management in Africa through the use of criteria and indicators has taken some important first steps towards field implementation

by
Richard Eba'a Atyi[1]
and
Steven Johnson[2]

[1]Regional Coordinator
ITTO Project PD 124/01 Rev.2 (M)

richard_ebaa@yahoo.fr

[2]ITTO Secretariat
Yokohama, Japan

IN THOSE AFRICAN countries that still possess important forest resources, such as the countries of the Congo Basin, timber harvesting constitutes one of the most important economic activities. Forests in these countries, though, are often threatened by factors outside the forestry sector such as deforestation and encroachment and, within the permanent forest estates, by poor forest management practices.

Establishing the basis of sustainable forest management (SFM) in Africa is a long and difficult process. Substantial efforts have been made over the last decade at the national, regional and international levels and the beginnings of an SFM regime can now be seen.

One starting point has been the creation of a set of principles, criteria and indicators (PCI) for SFM. PCI are designed to improve the understanding of SFM in specific local conditions and provide performance standards and tools for the monitoring, control and enforcement of existing regulations. ITTO published its first set of criteria and indicators (C&I) for the sustainable management of natural tropical forests in 1992 and, since then, C&I have gained worldwide recognition as a tool for promoting SFM. ITTO has revised its C&I twice (in 1998 and 2004) to reflect progress made in tropical countries towards SFM and the experiences of many countries in implementing the C&I.

Before: trainees inspect an unlogged site during an auditing exercise in the Green Valley concession, Cameroon. *Photo: R. Eba'a*

Complementarity of ATO and ITTO

The 15 member countries of the African Timber Organization (ATO) contain almost all the natural tropical forest of Africa, with most of its largest members also being members of ITTO. In the 1990s ATO worked with several institutions to produce a set of PCI designed for conditions in the region. Thus, at the start of the present decade the African member countries of ATO and ITTO found themselves with two sets of C&I; it made sense to build on these to develop a unique and harmonised set applicable to African tropical forests. The net result was the *ATO/ITTO principles, criteria and indicators for the sustainable management of African natural forests* (ATO/ITTO PCI), published in 2003 and widely distributed.

Joint regional project

Collaboration between ATO and ITTO on the subject was further strengthened by the formulation of a regional project, ITTO PROJECT PD 124/01 REV.2 (M). This project, which was launched in August 2003, aims to promote the sustainable management of African forests through the application and implementation of the ATO/ITTO PCI with the support and participation of all stakeholder groups. The two specific objectives of the project are to:

- establish key elements of an adequate capacity to implement the ATO/ITTO PCI at the national level in the African member countries of ITTO. These include nationally applicable PCI, effective consultative mechanisms, awareness, knowledge and skills among decision-makers and stakeholders on SFM, and monitoring/auditing arrangements; and
- establish key elements of an adequate capacity for effective regional-level cooperation through ATO to support individual member countries to implement the ATO/ITTO PCI. These include common instruments to develop and implement PCI and verifiers for SFM

What are C&I?

C&I are tools that help identify trends in the forest sector, determine the effects of forest management interventions over time, and facilitate decision-making in national forest policy processes. The ultimate aim of these tools is to promote improved forest management practices and to further the development of a healthier and more productive forest estate (FAO 2000).

at the national and forest management unit (FMU) levels, effective consultative and dissemination mechanisms for sharing knowledge and coordinating efforts, and a pool of regionally trained trainers.

The project is designed to make use of and strengthen ATO as a regional institution capable of providing mechanisms for the sharing of experiences and facilitating the development of harmonised/coordinated approaches to implementing the ATO/ITTO PCI. It has ten planned outputs, five of which are expected to be achieved at the national level in participating countries and the other five at the regional level. The ten countries participating in the project are: Cameroon, Central African Republic (CAR), Côte d'Ivoire, Republic of Congo, Democratic Republic of Congo (DRC), Gabon, Ghana, Liberia, Nigeria and Togo. Expected outputs have been tailored for each country depending on the progress towards SFM made in the country prior to the launching of the project.

The project was planned for a total duration of six years divided into Phase I (three years), Phase II (one year) and Phase III (two years). Phase I was subdivided into two stages of 18 months each. The first stage of Phase I was completed in mid 2005.

Preliminary results

In individual participating countries

Establishment of an open, participatory and representative forum/consultative mechanism on SFM in participating countries for monitoring progress towards SFM and for consultation on policy issues: the project has helped to establish national forums for consultation on issues related to SFM in CAR, DRC and Togo. In each of these countries the first meeting of the forum has been held, in which participants decided on its terms of reference. In four other countries (Cameroon, Gabon, Ghana and Republic of Congo) such forums existed prior to the start of the project, but the project nonetheless contributed to their functioning, especially by allowing the participation of more representatives from outside the forestry administrations.

Development of national PCI through a broad-based participatory process within the framework of the ATO/ITTO PCI at national and FMU levels as well as other relevant forest-related initiatives: before the beginning of the project, three participating countries (Cameroon, Ghana and Gabon) had been developing their own national sets of PCI with the support of several organisations and donors including ITTO, the European Union, the Worldwide Fund for Nature and the Center for International Forestry Research. Each of these countries had also established a national working group (NWG) on SFM and certification, but none had finalised its national set. The project has enabled each of the three countries to finalise national PCI within the framework of the regional ATO/ITTO PCI. In two other countries (Republic of Congo and Côte d'Ivoire) the project supported the development of national PCI through newly established NWGs, which include representatives of all stakeholder groups involved in forest management (about 20 members in each country). Both countries have developed advanced national PCI drafts ready for field-testing.

The improvement of information through national-level periodic reporting on progress towards SFM in each of the participating countries: during the first stage of the project, three countries (Cameroon, Gabon and Ghana) drafted their first national-level periodic reports based on Principle 1 of the ATO/ITTO PCI and in compatibility with the ITTO C&I reporting format at the national level. The final drafts of the reports will be widely distributed before the end of 2005.

After: trainees measure the diameter of a tree in a logging coupe during a training exercise in the Green Valley concession, Cameroon. *Photo: R. Eba'a*

At the regional level

Draft harmonised ATO/ITTO PCI formally presented to the Ministerial Conference of the ATO: in October 2002—during the ATO Ministerial Conference held in Kinshasa, DRC—the ATO/ITTO PCI were presented to the ministers in charge of forestry of the member countries, who officially endorsed the document and committed their respective countries to apply it.

Establishment of a regional-level consultative forum for the promotion of SFM: one of the most important obstacles to progress towards SFM in Africa is the low level of cooperation and exchange of experiences between countries on issues faced by the forestry sector. The project is helping to address the problem by supporting the establishment of a regional consultative forum to exchange strategic information related to SFM. The project has organised a regional workshop in Brazzaville, Republic of Congo, with the participation of government agencies, NGOs, regional development agencies/projects and civil society. Participants proposed measures to ensure the continuation of the consultative process between forest-management actors at the regional level.

Development and testing of an auditing framework for African forests including guidelines and checklists for the ATO/ITTO PCI: an auditing manual for the ATO/ITTO PCI was developed during Stage 1 of Phase I. This manual facilitates understanding of the requirements of the PCI, guides their implementation in practice and provides tools to verify how forest

Certifiable? A log is dragged from the forest at the Green Valley concession, Cameroon. *Photo: R. Eba'a*

management conforms to them. The auditing manual will be used in all project activities related to capacity-building.

Stakeholder participation and preliminary impacts of the project

During the first 18 months of its implementation, the project has attracted a great deal of interest from stakeholders in the African region. This interest is shown not only through the participation of stakeholders' representatives in various workshops and meetings organised within the framework of the project at the regional and the national levels but also by the first steps taken to apply the ATO/ITTO PCI in the field. All the intended beneficiaries, including forest concession managers, government forestry administrators, forest communities, local NGOs, development agencies/projects and regional organisations, have been actively involved in project activities and some have taken initiatives to apply or facilitate application of the ATO/ITTO PCI.

In Gabon, for example, the national initiative on forest certification, Pan-African Forest Certification Gabon (PAFC-Gabon), has based its technical standards on the ATO/ITTO PCI adapted to the specific characteristics of forest management in Gabon; PAFC-Gabon is now endorsed by the Program for the Endorsement of Forest Certification initiatives (PEFC). In the countries of Central Africa (Gabon, Cameroon, CAR, Congo and DRC) the Central Africa Regional Programme of WWF (WWF-CARPO) has been using the ATO/ITTO PCI to evaluate the progress of its partners in the forest industry towards SFM. Moreover, WWF-CARPO has agreed to a partnership with ATO to promote the ATO/ITTO PCI and has contributed to the financing of some project activities in Congo, CAR and DRC. Also in Gabon, the French Agency for Development (AFD) is using the ATO/ITTO PCI to evaluate the progress being made towards SFM by forest concessionaires that have received its financial support. Finally, IUCN—The World Conservation Union, in collaboration with the forest industry and other NGOs, has developed an initiative for the independent monitoring of forest concessions in Central Africa which is partially based on the ATO/ITTO PCI.

Lessons learned from Stage 1

The first stage of this ambitious project has been implemented successfully, but improvements can certainly be made to ensure that later stages have even more impact. For example:

- in Africa the ATO/ITTO PCI have been harmonised with the ITTO C&I and the two sets are therefore compatible. Since the development of the ATO/ITTO PCI, however, the ITTO C&I have been revised (see page 11), and some agencies wonder if these revised C&I should now be adopted in Africa. To avoid confusion ITTO should continue to encourage its member countries in Africa to use the ATO/ITTO PCI and other donors to support this. In the meantime the project will take steps to update the ATO/ITTO PCI to ensure they reflect improvements in the revised ITTO C&I;
- the project should seek involvement in all existing regional initiatives related to SFM and biodiversity conservation. This is particularly important for countries within the Congo Basin, which are attracting significant interest from the international community and where political leaders have shown a high level of commitment to both SFM and biodiversity conservation. The project can provide a tool for communication and evaluation;
- all participating countries should establish NWGs and adapt the regional PCI to their own national forest-management environment. The NWGs already established and/or supported by the project appear to form one of the best approaches for promoting the application of PCI in the field; and
- communication between ATO headquarters (in Libreville, Gabon) and participating countries is essential. It is therefore important that the project improves its communications technology.

Future activities

During the next 18 months the focus of the project will be on capacity-building through the training of forest-management auditing specialists; the first step will be the training of a minimum of 60 trainers who will later be involved in training activities in each of the participating countries. Among other things the project will also investigate a regional set of PCI for forest plantations before moving on to phases II and III, in which training in SFM will be undertaken on a scale not previously attempted in Central and West Africa.

References

ATO/ITTO 2003. *ATO/ITTO principles, criteria and indicators for the sustainable management of African natural tropical forests*. ITTO Policy Development Series No 14. ITTO, Yokohama, Japan.

FAO 2000. *Criteria and indicators for sustainable forest management*. Report of the FAO expert consultation organised in collaboration with UNEP, ITTO, CIFOR and IUFRO. FAO, Rome, Italy.

ITTO 2005. *Revised ITTO criteria and indicators for the sustainable management of tropical forests including reporting format*. ITTO Policy Development Series No 15. ITTO, Yokohama, Japan.

Copies of the ATO/ITTO PCI are available on request from ATO through the first-named author.

Brazil develops national C&I

The development of criteria and indicators has advanced the cause of certification in the country

by
Marcelo Schmid[1]
and
Steven Johnson[2]

[1]ABIMCI
schmid@abimci.com.br

[2]ITTO Secretariat

SINCE the mid 1990s ITTO has funded over 20 projects throughout the tropics to foster the adoption and implementation of criteria and indicators (C&I) for sustainable tropical forest management. In 2002, one of these projects (PD 140/02 REV. 2 (M)) commenced in Brazil to develop a set of C&I applicable to forest management units in the country's natural tropical forests. These C&I were intended to complement a set for plantation forests being used by the national forest certification body CERFLOR to certify timber from Brazil's plantations as sustainably managed. The project was implemented by the Brazilian Association of Solid Wood Manufacturers (ABIMCI) with the support of various government agencies.

The resulting Brazilian C&I for natural tropical forest management were developed using the ITTO *Criteria and indicators for the sustainable management of natural tropical forests* as a framework. Their development took into account the opinion of a large number of forest-management-related professionals and institutions, primarily through four C&I discussion workshops held in 2004–05 in the main Brazilian Amazon states of Pará, Mato Grosso, Acre and Amazonas. The workshops were attended by a total of over 200 people, including all main target beneficiaries, such as forest owners, the tropical timber industry, and federal and state government institutions *(see Figure 1)*.

The dissemination of the national standard will continue given the interest of several companies in the CERFLOR certification scheme and the wide dissemination of the manual for the application of the national standard. It is expected that CERFLOR will certify its first natural forest area in 2006.

In addition to the discussion process the C&I were subjected to two stages of field tests: a preliminary stage carried out during the period in which the C&I were being discussed, and a final stage after the consultative process was complete.

After the completion of the four workshops and the field tests the C&I were made available for public consultation for a period of 40 days. The C&I development process took place under the rules of ABNT (the Brazilian organisation for technical standards) and with the input of the National Institute of Metrology, Standardization and Industrial Quality (INMETRO); when finalised they were adopted as the national standard ABNT NBR 15789, thereby completing the set of CERFLOR standards which comprise the National Program of Forest Certification.

Introducing C&I: foresters receive field-training on the C&I manual. *Photo M.Schmid*

Benefits for CERFLOR

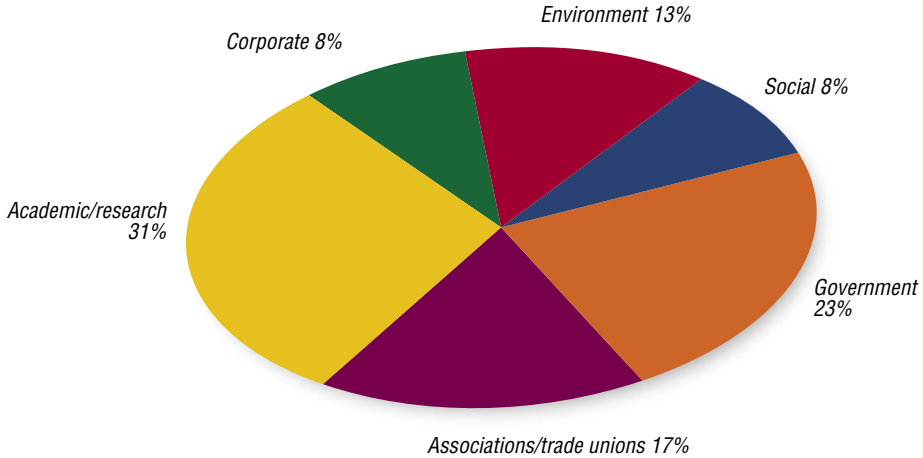
The project supported the participation of a large number of stakeholders in the development of the C&I; this also assisted the development and acceptance of CERFLOR. Without the support given by ITTO the national standard for natural forest management would remain unfinished, slowing the development of the CERFLOR program and its international recognition. Now CERFLOR is a complete system to improve forest practices, complementing national efforts for the sustainable management of natural and planted forests. The National Forest Management Standard has been widely disseminated within the Brazilian forest sector and some companies are starting to prepare their operations aiming to attain forest certification in accordance with the CERFLOR standard.

Tools for uptake

The project also developed tools to further facilitate the uptake of the C&I. The first of these was a manual for their application. A draft version was created based on the ITTO *Manual for the application of criteria and indicators* (ITTO Policy Development Series nos 9 and 10), ITTO's C&I reporting formats and the Brazilian national standard for plantations. This draft was studied and revised by

Representative

Figure 1: Participation of professionals by sector in the C&I discussion process



a working group composed of forest management experts, resulting in a preliminary version of the manual. This in turn was sent for review and inputs by an international consultant, Dr Markku Simula, and submitted to two field tests in different forest management areas to assess its applicability in the forest.

The results of the field tests and the findings and recommendations of Dr Simula were presented at a workshop attended by key invitees. Based on the discussions and recommendations of the workshop, a final version of the manual was prepared in Portuguese. This was translated into English and Spanish, edited and printed and is now being disseminated to relevant forest organisations and professionals.

With the success of this project in Brazil and the establishment of a new national standard based on the C&I available in Portuguese, Spanish and English, it is hoped that other countries in the region will be able to benefit from the project outputs in the development of their own forest management standards.

The final version of the C&I manual was used in four training courses conducted in three Amazon regions to prepare forest auditors for the assessment of natural forest management. These courses proved popular, with 119 professionals receiving training in the application of the C&I manual in field conditions and in auditing forest management units in accordance with the CERFLOR standards.

The dissemination of the national standard will continue given the interest of several companies in the CERFLOR certification scheme and the wide dissemination of the manual for the application of the national standard. It is expected that CERFLOR will certify its first natural forest in 2006.

Grant for partnership

Under its initiative to foster private-sector/civil-society partnerships, ITTO recently awarded a grant of US$45 000 to support a partnership between ABIMCI and a private company, Indústria de Madeiras Manoa Ltda, located in the state of Rondônia in the western Amazon. Using this grant, technical assistance will be provided to forest managers to enable them to implement sustainable forest management (SFM) in forests owned by Indústria de Madeiras Manoa, with the ultimate aim of obtaining certification for the forests.

The partnership will make use of and help validate the tools and documents developed under ITTO PROJECT PD 140/02.

Lessons learned

The private sector in Brazil faces many difficulties in implementing SFM, including problems related to the bureaucracy of governmental organisations, the misinterpretation of laws, land-use conflicts, and NGO pressure. Nevertheless, advances are being made. The following lessons learned in implementing ITTO PROJECT PD 140/02 should be considered in any future ITTO actions in the country:

- the characteristics of the national forest sector need to be taken into account, particularly the slow evolution of mechanisms governing the development and use of natural resources, disputes over land occupation (invasions, document adulteration, new settlements, etc), and the lack of capacity within governmental organisations responsible for control and regulation;
- the choice of an experienced project team, with knowledge of all the technical, administrative and political aspects related to the management of tropical forests; and
- the need to establish partnerships involving key private companies seriously concerned with technical and economic aspects of forest management.

ITTO has had substantial success in promoting the implementation of C&I in many countries. With the success of this project in Brazil and the establishment of a new national standard based on the C&I available in Portuguese, Spanish and English, it is hoped that other countries in the region will be able to benefit from the project outputs in the development of their own forest management standards. This project will thereby help to promote synergies between governments, the private sector and other organisations promoting C&I and SFM in Latin America and the Caribbean.

Copies of the Brazilian C&I and accompanying national standard are available on request from ABIMCI through the first-named author.

Forest dwellers find urban life stressful

A new study suggests that the move from forest to town has its downside for Indonesia's Punan

by Greg Clough

CIFOR

Bogor, Indonesia

A RECENT STUDY of the Punan people in the ITTO-supported Malinau Research Forest [ITTO PROJECT PD 39/00 REV.3 (F)] in Indonesia's East Kalimantan suggests that forest-based lifestyles can be much healthier than those on offer in nearby towns.

The study, by scientists from the Center for International Forestry Research (CIFOR) and the French Institute for Research and Development (IRD), compared two Punan communities of the same origin, language and culture—one still living in the deep forest, the other living in the mining and timber town of Malinau.

The majority of Punan now live in such urban centres. Of the few thousand who still live in forested landscapes, most are small-scale farmers whose forays into the forest for herbal medicines, vegetables and wild boar and deer are more seasonal than daily.

But even this modified traditional forest way of life is often healthier than a 'modern' lifestyle. The study found that forest Punan eat more nutritiously, suffer fewer weight-related problems and are generally in better condition than the Punan living in Malinau, who eat more processed foods and suffer more weight-related health problems.

"Once in town, many Punan find life stressful," says CIFOR-IRD's Dr Edmond Dounias. "In the forest, processed foods and sugar weren't on the menu, they were fit from their active lifestyle, and measles and other 'urban' diseases were virtually unknown. When they move into town they are often marginalised and treated unfairly. It's not surprising that alcohol and drug problems are emerging. Sexually transmitted diseases are also increasing. Making matters worse is the loss of their culture of mutual aid that would support them and even help with medical costs."

Dayak man in traditional headdress. *Photo: Herwasono Soedjito*

"In the forest, processed foods and sugar weren't on the menu, they were fit from their active lifestyle, and measles and other 'urban' diseases were virtually unknown. When they move into town they are often marginalised and treated unfairly. It's not surprising that alcohol and drug problems are emerging."

Dounias says the study has generated considerable government interest and believes it will help officials make better planning decisions.

"Authorities often feel that improving the lives of remote tribes means moving them into the modern world. Our research shows officials that by helping urban Punan to keep some of their traditional lifestyle, they will be better off and so will the town," Dounias says.

Moreover, he says, governments, aid agencies and NGOs now have evidence "that taking schools and dispensaries to the people in the forest, and not vice-versa, may have better development outcomes".

For more information contact: Greg Clough, CIFOR Communications Specialist, g.clough@cgiar.org

ITTO's new projects

The projects summarised here were financed at the 38th session of the International Tropical Timber Council in June 2005

Building capacity to develop and implement afforestation and reforestation projects under the Clean Development Mechanism (AR-CDM) of the Kyoto Protocol in the tropical forestry sector (PD 359/05 Rev.1 (F))

Budget ITTO: $942 166
Total **$942 166**
Implementing agency ITTO Secretariat
Funding sources Unearmarked funds of the Special Account

There has been strong interest in afforestation and reforestation (AR) projects under the Clean Development Mechanism (CDM) of the Kyoto Protocol since this treaty took effect on 16 February 2005. This project will promote AR-CDM project activities through public-private partnerships, linking host developing countries with industrialised investor countries.

Multispectral three-dimensional aerial digital imagery for monitoring forest management and conservation in the Republic of Congo (PD 360/05 Rev.1 (F))

Budget ITTO: $701 549 (87% funded)
Government of Rep. of Congo: $411 346
Winrock International: $154 500
Total **$1 267 395**
Implementing agencies Winrock International in collaboration with Centre National d'inventaires et d'aménagement des Ressources Forestières et Fauniques and the Wildlife Conservation Society
Funding sources Japan, USA, Norway, France

This project, which awaits a small amount of funding, will develop a transparent forest monitoring system for the sustainable management of Congolese forests at the national and forest management unit levels. Outputs will include: high-resolution aerial digital imagery over southwestern Congo forests and concessions; digital images for tactical planning in forest management planning; a comparison of planned and actual harvest rates and forest charges valuation; a methodology for use by stakeholders in biodiversity monitoring and habitat assessment; the use of digital 3D imagery to monitor legal logging volumes, detect illegal logging and provide a transparent basis for revenue assessment; and training in all aspects of image capture, processing and interpretation.

Rehabiliation of degraded forest using indigenous species through collaboration with local communities in West Kalimantan (Indonesia; PPD 103/04 Rev. 2 (F))

Budget ITTO: $52 769
Government of Indonesia: $16 183
Total **$68 952**
Implementing agencies Kapuas Watershed Management Agency in collaboration with Forestry Faculty, Tanjungpura University of West Kalimantan, Indonesia
Funding sources Netherlands, USA, Japan

This pre-project will a) collect and analyse the information necessary to evaluate the underlying causes of forest degradation in West Kalimantan; and b) define an overall strategy based on the *ITTO Guidelines for the restoration, management and rehabilitation of degraded and secondary tropical forests* for a community-based pilot project for the ecological rehabilitation and socioeconomic management of degraded forests in West Kalimantan.

Formulating a proposal on demonstration of sustainable management for mangroves in China (PPD 114/05 Rev.1 (F))

Budget ITTO: $74 088
Government of China $17 000
Total **$91 088**
Implementing agency Nature Reserve Research Centre of the State Forestry Administration, Government of the People's Republic of China
Funding source Japan

This pre-project will promote the sustainable development of mangrove resources. Specifically it will: 1) select integrated management models suitable for increasing income and improving living standards of farmers so as to promote socioeconomic and environmental development and protect mangrove resources; and 2) formulate a project proposal for the full development of integrated models of sustainable mangrove forest management in China.

Creating and sustaining a market for environmental services from China's tropical forests (PD 295/04 Rev.2 (M))

Budget ITTO: $149 958
Government of China: $116 205
Total **$266 163**
Implementing agency Chinese Academy of Forestry
Funding sources Japan, Switzerland, Republic of Korea, Norway

This project will propose an optimal marketing model for environmental services of tropical and other forests in China and start the marketing process of China's forest environmental services. Specifically it will produce: 1) a background report on the marketing of environmental tropical forest services in China; 2) a website presenting up-to-date information on the project and relevant topics; 3) the first (experimental) agency of market trading of forest environmental services in China; and 4) two real examples of environmental services' trade.

Promotion of Guatemalan certified timber and timber products trade (PD 338/05 Rev.1 (M,I))

Budget ITTO: $230 468
INAB: $59 630
ACOFOP: $46 000
Total **$336 098**
Implementing agency Instituto Nacional de Bosques (INAB)
Funding sources Japan, Norway

Guatemala has made great strides towards sustainable forest management in recent years. To strengthen and complement this process, a marketing strategy is needed to encourage the use of lesser-known timber species and timber products. This project will help in this by, among other things, strengthening local capacity to create and maintain support mechanisms for marketing, communities and industries.

Timbers of tropical Africa part 1: group 7(1) within the PROTA program (Ghana; PD 264/04 Rev.3 (M,I))

Budget ITTO: $577 886
PROTA: $626 703
Govt. of Netherlands: $403 710
Total **$1 608 299**
Implementing agency Plant Resources of Tropical Africa (PROTA)
Funding sources Japan, USA, Finland

As part of a program to document the 7000 useful plants of tropical Africa arranged into 16 commodity groups, PROTA will make a synthesis of all existing but dispersed knowledge on the estimated 900 timbers of tropical Africa ('commodity group 7') in two parts. The first part will deal with the 350 'timbers of tropical Africa' from the more important timber-producing taxonomic families.

Utilization of small-diameter logs from sustainable source for biocomposite products (Indonesia; PD 40/00 Rev.4 (I))

Budget ITTO: $600 000
Government of Indonesia: $265 163
Total **$865 163**
Implementing agency Faculty of Forestry, Bogor Agricultural University
Funding sources Common Fund for Commodities

This 36-month project will collect and make available comprehensive information on the structure and composition of small-diameter logs (SDL), which genetically and environmentally never exceed 50 cm in diameter but may account for as much as 56% of forest structure, and their potential use in biocomposite products. The research will be carried out on a plot of 300 hectares of lowland tropical rainforest to be established at PT Alas Kusuma Forest Concession Holder, West Kalimantan. The research will focus on the physical, mechanical and chemical properties of SDL, with sample collection and wood identification.

Promoting access to forest-sector activities by Gabonese nationals through the development of the SME forest partnership (Gabon; PD 347/05 Rev.2 (I))

Budget ITTO: $313 200
Government of Gabon: $71 000
Total **$384 200**

Implementing agency Direction Generale des Eaux et Forêts
Funding sources Japan, USA, Norway, France

This project will promote the participation of Gabonese nationals in the sustainable management of forest concessions and the further processing of timber at the domestic level. It will identify and initiate a mechanism to promote and finance forest logging and timber-processing activities by Gabonese-owned small- and medium-sized forest industries. At project completion, conditions will have been created to promote the emergence of national operators fully involved in the sustainable management of forests and industrial timber-processing.

Guatemalan forest industry development (PPD 112/05 Rev.2 (I))

Budget ITTO: $52 920
Government of Guatemala: $11 000
Total **63 920**
Implementing agency INAB
Funding sources USA

This pre-project will formulate a project proposal for the development of forest industrialisation centres according to zoning priorities, production lines and financial needs for implementation, and review the national legal and financial framework that would provide the necessary supporting mechanisms for the development of such centres.

Building a framework and strategy for sustainable forest management in Trinidad and Tobago (PD 234/03 Rev.3 (F))

Budget ITTO: $ 233 820
Government of Trinidad and Tobago: $414 345
Total **$648 165**
Implementing agency Ministry of Public Utilities and Environment, Trinidad and Tobago
Funding sources Japan

This project aims to optimise the contribution of the forest resources of Trinidad and Tobago to national economic development through consensus-based sustainable forest management, as recommended by an ITTO diagnostic mission in 2002. Specifically, the project will focus on the revision of the current forestry sector framework and strategy with a view to enhancing human resource skills and the knowledge base in order to provide adequate national expertise for a multiple-use, multi-stakeholder-managed forest resource base.

Ex-situ and in-situ conservation of teak (*Tectona grandis*) to support sustainable forest management (Myanmar; PD 270/04 Rev.2 (F))

Budget ITTO: $474 941
Government of Myanmar: Kyat 9 270 800
Total **$474 941 + Kyat 9 270 800**
Implementing agency Forest Department of Myanmar
Funding sources Japan, Republic of Korea

This project will help improve the quality of plantation teak through the initiation of a tree improvement program. Its specific objectives are to: 1) establish seed production areas and seed orchards for the production of high-quality seed; and 2) strengthen the tissue culture laboratory and produce high-quality clonal plantlets through tissue culture and shoot-cutting from hedge gardens.

Rehabilitation of degraded forest land involving local communities in West Java (Indonesia; PD 271/04 Rev.3 (F))

Budget ITTO: $493 236
Forest Service of Ciamis District, Government of Indonesia $77 000
Total **$570 236**
Implementing agencies Forestry Service of Ciamis District (Dinas Kehutanan Kabupaten Ciamis), in collaboration with the Forestry Research and Development Agency (FORDA) and the Directorate-General of Rehabilitation and Social Forestry, Ministry of Forestry (MOF)
Funding sources Japan, Norway

This project will promote sustainable forest management on degraded forest lands through the involvement of local communities in rehabilitation activities to generate social, economic and ecological benefits. Its specific objectives are to: 1) rehabilitate degraded forest lands through participation of local communities following the ITTO *Guidelines for the restoration, rehabilitation and management of degraded and secondary tropical forests*; and 2) strengthen the local institutional capacity to rehabilitate degraded forest lands.

Development of Lanjak Entimau Wildlife Sanctuary as a totally protected area, Phase IV (Final Phase) (Malaysia; PD 288/04 Rev.2 (F))

Budget ITTO: $512 028
Government of Malaysia $405 204
Total **$917 232**
Implementing agency Forest Department of Sarawak
Funding sources Japan, Switzerland, USA

This project constitutes the fourth phase of an ITTO project that commenced in 1993. Its specific objectives are to: 1) strengthen sustainable management capacity of the Lanjak Entimau Wildlife Sanctuary and Batang Anai National Park at the government and local community levels; and 2) enhance conservation and research, including through the strengthening of the transboundary initiative with Indonesia.

Biodiversity management and conservation in forest concessions adjacent to a totally protected area (Nouabale-Ndoki National Park) in northern Congo (Phase II) (PD 310/04 Rev.2 (F))

Budget ITTO: $742 241
Government of Rep. of Congo: $168 450
WCS: $684 032
CIB: $726 600
Total **$2 321 323**
Implementing agency Wildlife Conservation Society
Funding sources Japan, Switzerland, USA

This is the second phase of an ITTO project that commenced in 2000. It will concentrate on the adaptive implementation and monitoring of the wildlife, socioeconomic and reduced-impact-logging components of the forest concession management plan. It will extend wildlife conservation and integrated management to cover 21 000 km² of the Ndoki-Likouala landscape in the Republic of Congo.

Modular system of forest management in the Brazilian Amazon (PD 319/04 Rev.2 (F))

Budget ITTO: $277 560
IMAZON: $128 200
Total **$405 760**
Implementing agency Instituto do Homem e Meio Ambiente da Amazônia (Amazon Institute of People and Environment—IMAZON)
Funding sources USA, Netherlands, Japan

The 'modular management system in the Brazilian Amazon region' is part of an IMAZON program for supporting the adoption of forest management in the region and is embedded in a wider initiative in partnership with Friends of the Earth to expand the supply of legally obtained timber in the Amazon region. The overall objective of this project is to increase the area under sustainable forest management in the Brazilian Amazon region through the adoption of the modular system of implementation and verification by 20 small- and medium-sized timber companies.

An international workshop on the Clean Development Mechanism—opportunities and challenges for the forest industry sector in sub-Saharan tropical Africa (Ghana; PD 337/05 Rev.2 (F))

Budget ITTO: $299 160
Ghana Forestry Commission: $10 000
African Development Bank: $40 000
Total **$349 160**
Implementing agency Ghana Forestry Commission
Funding sources Switzerland, Common Fund for Commodities, USA, Finland

This project will promote African participation in the CDM by convening an international workshop designed to improve the understanding of CDM mechanisms and identify opportunities, constraints and challenges for African timber-producing countries. The workshop will particularly involve key stakeholders in the CDM, international institutions involved in forestry activities in Africa, energy companies, the private sector, government policymakers and NGOs, and scientific institutions in Ghana.

Producers

Africa
Cameroon
Central African Republic
Congo
Côte d'Ivoire
Democratic Republic of the Congo
Gabon
Ghana
Liberia
Nigeria
Togo

Asia & Pacific
Cambodia
Fiji
India
Indonesia
Malaysia
Myanmar
Papua New Guinea
Philippines
Thailand
Vanuatu

Latin America
Bolivia
Brazil
Colombia
Ecuador
Guatemala
Guyana
Honduras
Mexico
Panama
Peru
Suriname
Trinidad and Tobago
Venezuela

Consumers

Australia
Canada
China
Egypt
European Union
- Austria
- Belgium/Luxembourg
- Denmark
- Finland
- France
- Germany
- Greece
- Ireland
- Italy
- Netherlands
- Portugal
- Spain
- Sweden
- United Kingdom

Japan
Nepal
New Zealand
Norway
Republic of Korea
Switzerland
United States of America

Made in Italy, grown in the tropics?

The high-value Italian furniture industry uses only a modest amount of timber from the tropics. Producers have some work to do to increase their share

by A. Baudin[1], M. Flinkman and H-O. Nordvall

[1]Professor, Forest Product Market Analysis

School of Technology and Design

Växjö University

Sweden

ITALY'S WOODWORKING industry is well-known as a considerable importer of wood raw materials but even more so as a supplier of highly value-added wooden products—furniture—to the world market.

Today the Italian wood products' industry is facing a new era of competition from developing countries, particularly China. What implications might this have for tropical timber exports? In July 2004 the International Tropical Timber Council's Committee on Economic Information and Market Intelligence commissioned a review of the Italian timber market with the aim of shedding light on the current conditions and future prospects for trade in tropical timber products to Italy. The study was finalised in April 2005 and reported to the Committee at its session in Brazzaville in June; this article summarises its findings.

Main characteristics of the Italian economy

The Italian economy has performed below par in recent years in comparison with other European countries; for example, gross domestic product (GDP) grew only 0.3% in 2003 and 1.2% in 2004, significantly lower than growth in average Euro-area GDP in the same years (1% and 2.3% respectively). One contributing internal factor is Italy's ageing population; it has one of the highest old-age dependency ratios among OECD (Organization for Economic Cooperation and Development) countries. One of the consequences of an ageing population is decreasing government income; this in turn weakens pension values and the purchasing power of consumers, with a substantial risk of ongoing weak economic development.

Public spending—in particular in the construction sector—has boosted demand in recent years, but analysts expect the effect of this to level off in a few years. In general, GDP projections for coming years suggest that the Italian economy will grow at a modest 2% annual increase in GDP.

Wood trade

Table 1: Italian exports, imports and net trade of wood and wood products including wooden furniture in 2003 (€'000)

	EXPORTS	IMPORTS	NET TRADE
Industrial roundwood	4666	417 650	-412 984
Sawnwood	94 747	1 639 882	-1 545 135
Veneer	102 627	246 685	-144 058
Plywood	127 385	221 001	-93 616
Builders' joinery	195 361	237 814	-42 453
Flooring	46 835	166 781	-119 946
Mouldings	189 419	12 057	177 362
Millwork	270 505	340 417	-69 912
TOTAL – Wood & wood products	**1 031 545**	**3 282 287**	**-2 250 742**
Wooden furniture	5 675 258	528 952	5 146 306

Source: Istituto Nazionale di Statistica, Italy

Domestic wood supply

Italy's forests cover some 29% of the total land area, which amounts to 8.7 million hectares. Annual harvesting is about 8 million m^3, of which almost 70% is fuelwood.

The institutional setting and bodies responsible for the enforcement and support of forest policies are undergoing a reorganisation. This is necessary partly because of the creation and/or revision of a range of global, European Union (EU)-wide and national agreements and conventions applicable to Italian forestry, and partly because of changing public perceptions about natural resource management and the need to improve management practices. Due largely to increasing demand for multiple uses of forests, the output of timber for industrial processing from domestic forests is expected to decrease in Italy in the long run, and demand for imported timber is therefore likely to increase.

Italian timber market

If furniture is excluded, Italy is a net timber importer, with imports outweighing exports by €2.3 billion in 2003. But the ledger is strongly positive if furniture is included: indeed, Italy is the world's leading net exporter of value-added wood products, exporting wooden furniture worth €5.7 billion in 2003 *(Table 1)*.

The Italian timber market comprises five 'action arenas':

- intermediary provision of goods and services from importers, agents, wholesalers, retailers and other suppliers of products;
- provision of wood resources, in which forestry activities take place to provide outputs in the form of saw and veneer logs;
- primary processing, in which the raw material is processed into intermediate and/or end-use products such as sawnwood, veneer and plywood;
- secondary processing of the intermediate and/or semi-finished goods to produce finished items for end-uses such as builders' joinery, flooring, mouldings, millwork, furniture and wooden parts for furniture; and
- deployment of the above-named products, mainly for construction and furnishing.

The wood market and actors form a demand-supply chain for forest products. From a methodological viewpoint the identified chains, depicted in their widest form as a network, also serve as a convenient entry for the analysis of the Italian wood market. As part of this study the following were analysed: (i) structural aspects of the supply-demand chain with respect to forestry, the woodworking industry, etc; and (ii) the institutional setting, particularly related to legislative and regulatory provisions, acts and laws that have an impact on the functioning of the chain.

Conditions

Wood products' markets are highly dependent on international trade issues and agreements. The World Trade

Organization platform for trade liberalisation is particularly important, and environmental considerations articulated in multilateral agreements for environmental protection are playing an increasing role.

In addition to duties, imports are subject to various non-tariff measures (NTMs). Ongoing work initiated by the EU on forest law enforcement governance and trade (FLEGT) is a new approach—in line with the NTM-measures—to combat the problem of illegal logging in supply countries (and, thereby, the trade of illegally harvested timber to the EU). The FLEGT process has some similarities with the certification systems of the Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification schemes (PEFC). However, certification of the forestry part of the supply chain through the FSC and PEFC is a complicated procedure because it canvasses the environmental and social impacts of forest operations. In contrast, the FLEGT approach is focused almost entirely on wood procurement and trade.

In line with the NTMs, the certification of industrial processes and products using, for example, the International Standards Organization (ISO) system, is an established and increasingly common procedure in the EU today. The rising demand for ISO certificates is starting to affect imports from tropical countries.

Italian traders

Italian manufacturers of wood products typically purchase the major share of their raw materials from abroad through exporters/importers/agents and/or directly from producers. Depending on the strategic focus of the firm, materials include tropical and temperate hardwoods and softwoods in varying amounts through a network of different channels. The Italian wood-supply network is very fragmented at the moment because large European retail chains have not (yet) entered the Italian wood market, and few general patterns can be discerned.

Primary and further processing

The enterprises undertaking the primary and secondary processing of wood raw material constitute approximately 15% of the 543 000 manufacturing firms in Italy, but they employed only about 8% of the 4.9 million employees in manufacturing in 2001. This suggests that the average number of employees per firm is unusually small—around five persons per firm.

The wood-processing sector developed dramatically after World War II, stimulated first by demand in Western Europe for reconstruction and later by the liberalisation of trade within the emerging EU. It is typically organised in clusters, such as in the Brianza area, the Chair Triangle, and the Friuli-Venezia area. This clustering has developed as 'mother units' tended towards vertical specialisation (meaning that they set up subsidiaries to produce some of the inputs used in the production of their products), or as similar companies became established to take advantage of the development of skills, infrastructure and supporting services in the area.

Tropical wood products' trade

The share of tropical species in the Italian timber trade is relatively low—approximately 10–15% by value for exports and imports of industrial roundwood and sawnwood, and for veneer exports, and around 25% for veneer imports and for exports and imports of plywood *(Table 2)*. Tropical species comprise only a few percent of exports and imports of secondary processed products.

Tropical share

Table 2: Tropical share of primary and secondary wood products' exports and imports, 2003

	EXPORTS		IMPORTS	
	Non-tropical *(%)*	Tropical *(%)*	Non-tropical *(%)*	Tropical *(%)*
Industrial roundwood	89.3	10.7	84.4	15.6
Sawnwood	86.9	13.1	88.7	11.3
Veneer	85.4	14.6	73.6	26.4
Plywood	76.0	24.0	74.4	25.6
Builders' joinery	95.6	4.4	99.4	0.6
Mouldings	94.1	5.9	95.8	4.2
Millwork	98.3	1.7	99.4	0.6
TOTAL	**92.0**	**8.0**	**88.5**	**11.5**

Source: Istituto Nazionale di Statistica, Italy

Africa is the main origin of Italy's tropical timber imports, although recently its share has declined slightly, to 65% in 2003. Asia and Central and South America have been gaining market share and, combined, provided about 25% of tropical timber imports in 2003. Non-tropical wood imports originate largely (82%) in Europe. Imports are tending to decline from EU countries and to increase from central and eastern Europe.

Almost three-quarters of Italian exports of all wood products are directed at EU and other European countries. The EU's share was slightly more than 50% in 2003, with a decreasing tendency for non-tropical. Almost 60% of Italy's tropical wood exports were to the EU.

Trade regulations such as import duties and other trade barriers are relatively limited in Italy; those that do exist are directed mainly at wood-based panels such as veneers and especially plywood products. However, the development of a legislative framework for the procurement of wood and wood products—particularly in respect to the legality of such products and their tracking—is in progress in light of the FLEGT process and will have an increasing impact on trade.

Future prospects

Despite its relatively weak economic prospects, Italy will continue to play a substantial part in the international trade of tropical wood products. Italy's timber-trade-related policies are changing (as they are elsewhere in the EU), and trading partners will need to adapt.

The tropical timber industry faces some challenges if it is to retain and expand its share of the Italian timber trade. For example, it must establish delivery systems that secure the sustainability of wood supply and meet increasing requirements for the verification of legality, sustainable forest management and other standards. It should also look to supply semi-processed products. The actors involved should, therefore, among other things:

- move progressively towards the production and trade of value-added products,
- maintain and increase involvement in FLEGT and related legislative processes so as to influence them and also to track them and adapt accordingly; and
- create stronger networks of producers, traders and customers in order to enhance competitiveness.

Increasing public awareness about Colombia's threatened magnolia species is a key to their survival

by
Cesar Velasquez-Rua
and
Marcela Serna-Gonzalez

Botanical Gardens of Medellin
Colombia

THE MAGNOLIACEAE family is a group of woody trees and shrubs found in several parts of the world, including temperate and tropical areas of Southeast and East Asia, North America, the Antilles and Central and South America. These trees are of great biological interest and a key to understanding the evolution of flowering plants because they are one of the oldest groups of plants known to mankind; they also have considerable ornamental and pharmaceutical potential.

Colombia's 31 native species of magnolia are seriously threatened and have therefore been selected as the pilot family of plants for the implementation of the National Plant Conservation Strategy. Perhaps the greatest difficulty in developing conservation projects for these species is the lack of public awareness, information and knowledge. Unfortunately these magnificent tree species are known only to a small group of individuals and there is a general lack of knowledge about the high degree of endangerment they face.

In an attempt to redress this we recently published a handbook on the 14 Magnoliaceae species recorded in Antioquia, one of the country's administrative regions *(see below)*. The handbook, which was published with the support of an ITTO fellowship, CORANTIOQUIA (a regional government corporation responsible for the management of renewable resources) and the Medellin Botanical Gardens Foundation, contains the following information: scientific and common names, description, distribution and habitat, phenology, reproduction, conservation status, and risk category in accordance with IUCN criteria.

General characteristics of Colombia's magnolias

Colombia previously recognised two Magnoliaceae genera, *Dugandiodendron* and *Talauma*, with the distinguishing difference between them being the absence of stipular scars in the petioles of the *Dugandiodendron* species and the presence of petioles with stipular scars in the *Talauma* species. However, the species of these two genera are so similar that recent worldwide studies suggest that they should be grouped within the *Magnolia* genus, which is the largest genus in the family.

Morphology

Colombian magnolia species have three sepals, six or more petals, and many free spiral stamens. The gynoecium has a few or several carpels. The fruits are aggregate or, in other words, come from a single flower with many carpels; they are dry and open up along a central axis or receptacle sometimes known as *molinillo* ('whisk' in English), and they have one or two seeds in each carpel, with a cover that is generally oily and red in colour. The illustrations *next page* highlight the morphological characteristics most useful in the identification of species.

Phytochemical studies

Antioxidant compounds such as magnolol and honokiol with potential for pharmaceutical or nutritional use have been found in the Magnoliaceae family, as have other chemical structures with anti-malarial, anti-platelet, anti-inflammatory and cytotoxic properties. Studies of the antioxidants of Colombian Magnoliaceae are currently being carried out at the National University, Medellin campus.

Distribution

Colombia's magnolia species are distributed throughout moist and very moist forests from sea-level up to 2800 metres in the region of the Andes, the Choco biogeographic region and the Amazon. They are found in 14 departments: 14 species have been reported in Antioquia (including two species only recently discovered), seven in Boyaca, five in Santander, Risaralda and the Cauca Valley, three species in the Choco, Cundinamarca and Nariño regions, two in North Santander, Huila and Quindio, and one in Amazonas, Arauca and Caldas.

Antioquia

The Department of Antioquia is situated in northwestern Colombia between the biogeographical regions of the Andes and Choco and covers an area of approximately 62 000 km². The topography of the region is characterised by mountains and inter-Andean valleys that are part of the central and western ranges in the northern Andean region, and water flows from these mountains into the watershed areas of the Magdalena, Cauca and Atrato rivers. Most of the native Magnoliaceae in Antioquia are found in cloud forests, with only three species found at altitudes of under 1000 metres.

Conservation

The main threats to magnolias in Colombia are the high rates of destruction and fragmentation of native forests and the unsustainable harvesting of some timber species. The timber from these species is highly valued in some regions and has been used for many years by settlers and sawmills in the furniture-manufacturing industry, while in other cases it has been used as roundwood (rods, poles, props) and sawnwood (boards, quartered logs).

A study of genetic structure and variability carried out on some species in Antioquia has revealed that the populations have a high genetic variability. In other words, they are adapted to possible stressors such as pests and climate change, among others. However, the genetic flow among these populations is quite limited, probably due to the isolation of individual populations caused by forest fragmentation. The populations in the south of the department—in the municipalities of Andes and Jardin—have higher genetic diversity indexes than those of the populations found in larger forest areas. It is therefore recommended that conservation efforts be directed at the conservation of these sites and at promoting the interchange of seedlings between populations so as to maintain a genetic flow among them.

The aim of the handbook is to extend the knowledge base of these endangered tree species and to help consolidate the National Plant Conservation Strategy. For information on how to obtain a copy of the handbook contact Cesar Velasquez-Rua at ca_rua@hotmail.com

ITTO fellowships offered

ITTO offers fellowships through the Freezailah Fellowship Fund to promote human resource development and to strengthen professional expertise in member countries in tropical forestry and related disciplines. The goal is to promote the sustainable management of tropical forests, the efficient use and processing of tropical timber, and better economic information about the international trade in tropical timber.

Eligible activities include:

- participation in short-term training courses, training internships, study tours, lecture/demonstration tours and international/regional conferences;
- technical document preparation, publication and dissemination, such as manuals and mongraphs; and
- post-graduate studies.

Priority areas: eligible activities aim to develop human resources and professional expertise in one or more of the following areas:

- improving transparency of the international tropical timber market;
- promoting tropical timber from sustainably managed sources;
- supporting activities to secure tropical timber resources;
- promoting sustainable management of tropical forest resources;
- promoting increased and further processing of tropical timber from sustainable sources; and
- improving industry's efficiency in the processing and utilisation of tropical timber from sustainable sources.

In any of the above, the following are relevant:

- enhancing public relations, awareness and education;
- sharing information, knowledge and technology; and
- research and development.

Selection criteria: Fellowship applications will be assessed against the following selection criteria (in no priority order):

- consistency of the proposed activity with the Program's objective and priority areas;
- qualifications of the applicant to undertake the proposed fellowship activity;
- the potential of the skills and knowledge acquired or advanced under the fellowship activity to lead to wider applications and benefits nationally and internationally; and
- reasonable ness of costs in relation to the proposed fellowship activity.

The maximum amount for a fellowship grant is US$10 000. Only nationals of ITTO member countries are eligible to apply. The next deadline for applications is **29 March 2006** for activities that will begin no sooner than 1 August 2006. Applications will be appraised in May 2006.

Further details and application forms (in English, French or Spanish) are available from Dr Chisato Aoki, Fellowship Program, ITTO; Fax 81–45–223 1111; fellowship@itto.or.jp (see page 2 for ITTO's postal address) or go to www.itto.or.jp

On the conference circuit

Forest reform needed in the Philippines

Philippine Forestry Development Forum

2–3 June 2005
Mandaluyong City, the Philippines

This gathering was organised by the Philippine Wood Producers' Association together with the Department of Environment and Natural Resources (DENR), the Asian Development Bank, the University of the Philippines at Los Baños College of Forestry and Natural Resources, and the Society of Filipino Foresters, Inc. It comprised a broad cross-section of people from the private sector, national and local government, the scientific and academic communities, and non-government organisations and special-interest groups. The 360 participants came from as far as Kalinga and Apayao in the north, and Davao, Zamboanga and Cotabato in the south. Foreign dignitaries, legislators, and executives of the World Bank and local government banks also made it to the summit.

The forum's theme, 'sustainable forest management: a holistic path to national development', set the tone for an objective and scientifically based discussion of issues affecting the forestry sector. It also emphasised the importance of the sector in national development.

"Sustainable forest management continues to be a key program in the country's journey to protect its precious natural resources," said Michael T. Defensor, Secretary of DENR.

"While helping alleviate poverty and generate employment in far-flung rural areas, it is also a new way of looking at how business may participate in commercial forestry without compromising the environment."

"Forestry remains a vital component in our blueprint for national development, … playing a significant role in our road to economic recovery," said DENR Executive Secretary Eduardo Ermita during the opening plenary.

Interesting and educational scientific, research and best practices papers dominated the two-day conference. Dr Manoel Sobral Filho, ITTO's Executive Director, presented a paper on the role of the timber trade in sustainable forest management, and FAO's Patrick Durst discussed the impacts and effectiveness of logging bans in natural forests in Asia Pacific.

Professor Rex Victor Cruz of the University of the Philippines College of Forestry and Natural Resources presented studies conducted in the Tignoan and Agos watersheds in northern Quezon and Dingalan watershed in Aurora to explain the occurrence of floods and landslides in those provinces. Dr Priscila Dolom, Director of the Forestry Development Center, analysed the economic contribution of the wood industry to sustainable development.

Former DENR Undersecretary Ricardo Umali, CEO of Sustainable Ecosystems International Corporation and president of the Society of Filipino Foresters, presented a paper on the forest-management experiences of the Surigao Development Corporation (SUDECOR), a current holder of a timber licence agreement.

Former Forest Management Bureau director Romeo Acosta updated participants on the latest assessment of Philippine forest resources, while Science and Technology Undersecretary Florentine Tosoro talked about what he called the "urgent need for a road map to forest management and renewal".

Participants at the forum made a number of resolutions, including on the need for comprehensive forestry laws, the categorisation of forest lands into specific production and protection areas, the delineation of forest boundaries and their complete demarcation on the ground, and "the adoption and enforcement of measures to resolve the logging ban issues". The resolutions were to be presented to the President of the Republic of the Philippines, Gloria Macapagal-Arroyo, and other high-level politicians.

The importance of permanent sample plots

International Workshop on Promoting Permanent Sample Plots in Asia and the Pacific Region: The Role of Field Data to Support Silvicultural System and Carbon Sequestration Study in Natural Managed Forests in Asia and The Pacific Region toward Sustainable Forest Management

3–5 August 2005
Bogor, Indonesia

Permanent sample plots (PSPs) play an important role in the monitoring of forest dynamics and long-term growth and yield, and in providing data for the evaluation of ecological models. For silvicultural purposes, PSPs supply data on diameter and volume increment as well as stand structure dynamics. These data are very useful for calculating annual allowable cut (AAC) in a forest management unit. In addition, there has been increasing demand for data and information collected from PSPs for accounting purposes in carbon-sequestration projects; the use of long-term measurements provided by PSPs would increase the profile and credibility of such projects.

These issues were widely discussed at this workshop, which was co-funded by ITTO PROJECT PD 39/00 REV.3 (F) and two CIFOR programs ('forests and livelihoods' and 'environmental services and sustainable use').

The workshop brought together about 60 participants from Malaysia, Papua New Guinea, Lao PDR, Japan, Indonesia, France and the Netherlands, including experts from universities, research institutions, NGOs, international projects, private companies, foresters and governmental agencies. Fifteen presentations were delivered.

At the opening ceremony the Indonesian Minister of Forestry, His Excellency M.S. Kaban, stressed that the government's 'soft-landing' policy issued in 2002 was aimed at saving the remaining natural forests by reducing the national AAC. When it came to implementation, however, the policy could not be implemented as it was really intended, partly because of the scarcity of growth data needed to determine the correct AAC. in the absence of these critical data, the policy was implemented in a modified fashion. Ideally, the AAC of each single management unit would be calculated and used in deriving the national AAC.

Also speaking at the opening, CIFOR's Director of Environmental Services and Sustainable Use of Forests, Dr Markku Kanninen, said that other aspects related to PSPs will become more important in the future, including measures to indicate forest health, for instance, and those related to the services provided by forests, such as the provision of water and carbon storage. One of the reasons for convening the workshop was to strengthen collaboration between institutions already working with PSPs with the aim of building a network in Southeast Asia and beyond.

For more information contact: Petrus Gunarso and Hari Priyadi, Center for International Forestry Research (CIFOR), PO BOX 6596 JKPWB, Jakarta 10065, Indonesia; Tel 62–251–622 622; Fax 62–251–622 100; h.priyadi@cgiar.org and p.gunarso@cgiar.org

The buzz on plywood

ITTO/FAO International Conference on Tropical Plywood

26–28 September 2005
Beijing, China

This conference, which was followed by field visits to industrial sites in Bejing and Hangzhou, was attended by close to 200 participants—the vast majority business people—from 31 countries around the world. It proved a great opportunity to make new business contacts and to get updated on the latest trends in tropical plywood production and trade worldwide, with a particular focus on the emerging role of China and why it is competing so effectively. Key presentations were made and panel discussions held on global issues affecting the tropical plywood sector, including production and trade data, emerging trade barriers (including non-tariff trade barriers—NTTBs), technology developments, the raw-material outlook, and the challenging corporate responsibilities of plywood manufacturing.

Conference participants agreed to a series of recommendations that were made in the conference's final statement. It urged ITTO, in collaboration with its member countries, tropical plywood producer and trade associations and relevant national and international agencies, to:

- prepare and help implement national strategies to strengthen the development of tropical plywood industries by, for example, reviewing sustainable sources of wood supply, including from natural forests, plantations and imports from other tropical timber producers, and analysing the private sector's investment opportunities for improving tropical plywood manufacturing and trade;
- enhance the capacities of tropical plywood-producing countries in:
  - implementing sustainable forest management in natural tropical forests and developing appropriate policies/incentives for plantation development
  - developing and providing relevant incentives for increasing product quality and for producing more added-value products
  - knowledge of and compliance with market requirements, such as quality standards, NTTBs, procurement policies and other market access impediment mechanisms
  - promoting the use, image and sustainable trade of tropical plywood;
- assist tropical plywood producer and traders' associations to strengthen their ability to service their members by:
  - improved information-sharing and training on appropriate processing technologies and market information and intelligence
  - helping tropical producers' associations to increase their lobbying capacity and strategies to advance sustainable forest industry development
  - promoting initiatives, such as the development of appropriate codes of conduct, to help tropical plywood producer and trading companies to participate actively on the international stage in meeting their environmental and social corporate responsibilities;
- promote tropical plywood produced from sustainable sources in the international markets, through, among other things:
  - the review of procurement policies and the facilitation of mutual recognition and market access considering discussions under the Doha Agenda of the World Trade Organization
  - in collaboration with other agencies and tropical plywood trade associations, assisting and facilitating discussions and initiatives between tropical plywood producers and consumers to address price volatility, price insurance options and to remediate the lack of market transparency. One option would be to evaluate and reactivate, as appropriate, the listing of tropical plywood on the Shanghai Futures Exchange
  - supporting producer countries to combat illegal logging and its related trade
  - supporting the harmonisation of grading standards of tropical plywood among the markets;
- enhance exchange of information at national, regional and global levels on tropical plywood production and trade between producers, traders and consumers by, among other things:
  - strengthening ITTO's Market Information Service
  - convening at regular intervals (every four years) an international conference on tropical plywood
  - convening expert meetings on specific technical issues
  - conducting in-depth market studies on tropical plywood in major consumer markets
  - conducting comparative studies on the production costs and technologies of tropical and non-tropical plywood in the major producer countries
  - undertaking projects, supporting national seminars and training sessions, and developing relevant publications in ITTO's technical series, etc;
- analyse and promote appropriate financing systems and ways of increasing (private-sector) conditional investment in tropical forests and tropical plywood production;
- in collaboration with the World Customs Organization and relevant trade associations, review the Harmonized System Chapter 44.12 with the aim of revising the listing of tropical species and better defining tropical plywood so as to improve trade statistics;
- in collaboration with relevant agencies (including FAO) and countries, support and improve ongoing forest resource assessment and forest management assessments, especially to qualify and quantify the available timber supply for industrial uses and future trends; and
- make the materials presented at the conference and its proceedings (including translations of a summary of the conference and its recommendations in Chinese, Spanish and French) widely available.

Proceedings of the conference are under preparation and will be published soon. In the meantime, the conference program, presentations and the summary and conclusions are available at www.itto.or.jp. For more information or to receive a copy of the proceedings contact: Paul Vantomme, Assistant Director Forest Industries, ITTO Secretariat, vantomme@itto.or.jp or fi@itto.or.jp; fax 81–45–223 1111

Recent editions

Edited by Alastair Sarre

Bhat, K.M., Nair, K., Bhat, K.V., Muralidharan, E. & Sharma, J. 2005.* Quality timber products of teak from sustainable forest management. *Kerala Forest Research India and ITTO, Kerala, India and Yokohama, Japan. ISBN 81 85041 63 6.

Available from: *Kerala Forest Research Institute, Peechi 680 653, Kerala, India; www.kfri.org*

This solid volume contains the edited papers of speakers at an international conference on teak management, wood quality and marketing held in Peechi, Kerala, in December 2003. It includes overviews of teak management in India, Thailand, Indonesia, Myanmar, Ghana and other countries, discussions on the wood quality of (particularly) plantation-grown teak, genetic improvement, pests and diseases, growth and wood formation, and the economics of teak plantations, among others. It contains a report of the conference on which it is based, including the Kerala Call for Action, a statement issued by conference participants that lays out 13 points participants say should be followed to promote the sustainable development of the plantation teak industry.

Waggener, T. 2004.* Log supply capacity. *Technical report of ITTO project PD 85/01 Rev.2 (I): Strategies for the development of sustainable wood-based industries in Indonesia. Indonesian Ministry of Forestry and ITTO, Bogor, Indonesia and Yokohama, Japan.

Available from: *ITTO Information Officer, ahadome@itto.or.jp (see page 2 for full contact details)*

This report analyses the sustainable raw material balance of Indonesia's wood-based sector in the context of the sustainable future structure of the forest industry. It finds that a clear shift in the Indonesian log-supply paradigm is needed, in which timber extraction moves from (largely logged-over) natural primary forests towards plantations and intensively managed secondary forests; according to the report, most remaining unlogged, economically accessible primary forests will have been harvested within 15–20 years. The report recommends that Indonesia adopt a strategy of decentralised, long-term private management, in which government would lease out secondary forests and other lands to private forest companies for intensive timber production. Existing national timber concessions would be phased out and production forest administration would be placed under the authority of provincial and local government units. Lease-holders would be granted full responsibility over forest management and bid procedures would ensure adoption of the most economic and technically feasible management and silvicultural systems. Management and harvest plans would be required, and compliance with forest practice standards and environmental policies would be monitored by the appropriate government authority.

Xiufang, S., Katsigris, E. & White, A. 2005.* Meeting China's demand for forest products: an overview of import trends, ports of entry, and supply countries, with emphasis on the Asia-Pacific region. *Forest Trends, Washington, DC, USA.

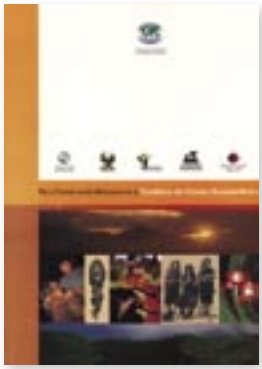
Katsigris, E., Bull, G. White, A. et al. 2005.* The China forest products trade: overview of Asia-Pacific supplying countries, impacts, and implications. *Forest Trends, Washington, DC, USA.

Available from: *Forest Trends, 1050 Potomac St, NW, Washington, DC 20007, USA; www.forest-trends.org*

This pair of short studies (published simultaneously in Chinese and English) are part of a larger program funded by the UK Department for International Development aimed at developing a clearer picture of the status of and trends in China's timber trade. The latter study concludes that China's timber imports from the Asia-Pacific region are "clearly having a dramatic impact on the forests, economies, and peoples of supplying countries" and that China "may wish to formulate policies to minimize negative ecological and livelihood impacts in these countries" and, presumably, to maximise the trade's contribution to sustainable development there.

Alcalde, M. & Kingman, S. 2005.* Paz y conservación binacional en la Cordillera del Cóndor, Ecuador-Peru. *ITTO, Fundación Natura and Conservation International – Peru, Yokohama, Japan, Quito, Ecuador, Lima, Peru. ISBN 9978 44 209 X.

Available from: *ITTO Information Officer; ahadome@itto.or.jp*



This book is an output of two ITTO projects implemented by Fundación Natura and Conservation International in collaboration with the governments of Ecuador and Peru (see page 7 this edition). Beautifully illustrated, it presents a wealth of information about the natural and cultural features of the Condor Mountain Range and sets out the zoning and management plans for the region's transboundary conservation area, which was established in 1999 as part of a peace agreement between Ecuador and Peru. An English version is in production.

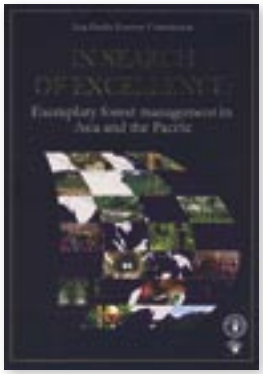
Wollenberg, E., Anderson, J. & López, C. 2005.* Though all things differ: pluralism as a basis for cooperation in forests. *CIFOR, Bogor, Indonesia. ISBN 979 3361 71 9.

Available from: *CIFOR, Jl. CIFOR, Situ Gede, Sindang Barang, Bogor Barat 16680, Indonesia; cifor@cgiar.org; www.cifor.cgiar.org*

Pluralism is a political belief that acknowledges individuals' rights to pursue their interests but requires society to resolve differences where they infringe upon each other. This book shows how pluralism helps people to value social differences and provides clear principles and rules about how to coordinate those differences. *(From the publisher's notes.)*

Durst, P., Brown, C., Tacio, H. & Ishikawa, M. 2005.* In search of excellence: exemplary forest management in Asia and the Pacific. *FAO and Regional Community Forestry Training Center for Asia and the Pacific, Bangkok, Thailand.

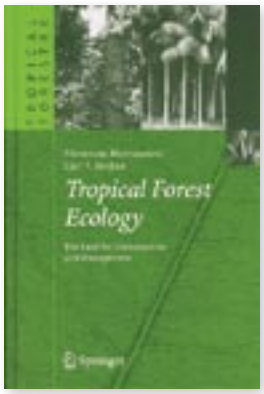
Available from: *P. Durst, Senior Forestry Officer, FAO Regional Office for Asia and the Pacific, 39 Phra Atit Road, Bangkok 10200, Thailand; Patrick.Durst@fao.org*



This nicely produced book contains 28 narratives of "instances of exemplary forest management" from around Asia and the Pacific, including 13 from ITTO producer member countries (Cambodia 1, Fiji 1, India 3, Indonesia 2, Malaysia 1, Philippines 4 and Vanuatu 1). In an overview chapter, Brown, Durst and Enters note several core elements that seem essential to success: well-defined property rights and resource security; attention to the livelihoods of forest-dependent people; and development of appropriate institutional or management structures. They also suggest that "underlying—or perhaps overlaying—all these elements is the development of social and community consensus on how a forest should be managed".

Montagnini, F. & Jordan, C. 2005.* Tropical forest ecology: the basis for conservation and management. *Springer, Berlin, Germany. ISBN 3 540 23797 6.

Available from: *springeronline.com. €129.95 (hardcover)*



The purpose of this book is to bring together evidence that bears on the question of the uniqueness of tropical ecosystems, and to examine what this evidence means for the management of tropical forests in a way that does not diminish the ecosystem's ability to maintain its structure and function. The authors conclude that certain tropical forests are especially fragile and must therefore "be managed with special care" if they are to maintain their productivity in the long term.

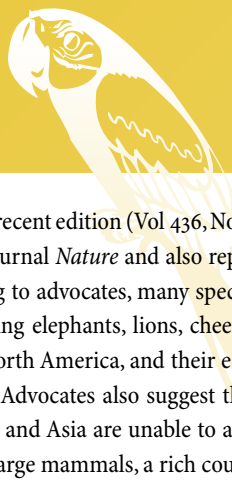
ITTO and International Trade Center 2005.* International wooden furniture markets: a review. *ITTO, Yokohama, Japan and ITC, Geneva, Switzerland. ISBN 92 9137 284 6.

Available from: *ITC, Palais des Nations, 1211 Geneva 10, Switzerland; Tel 41–22–730 0111; Fax 41–22–733 4439; itcreg@intracen.org; www.intracen.org*

This book contains the results of a study commissioned by ITTO and undertaken by the International Trade Centre. It provides a wealth of information on the world's leading furniture markets, including the US, Japan, Germany, the UK, France, Canada and China, as well as others. It also outlines a strategy for developing the wooden-furniture sector in tropical countries and predicts a shift in global furniture-making towards the southern hemisphere, where a 'green wall of wood' is maturing in the plantations of the tropics.

Adapted from the foreword.

Topical and tropical



Edited by Alastair Sarre

Partnership on 'clean development and climate' announced

The governments of Australia, China, India, Japan, the Republic of Korea and the United States released a joint vision statement for a new "Asia-Pacific partnership on clean development and climate" last July. According to the statement, the partnership will "collaborate to promote and create an enabling environment for the development, diffusion, deployment and transfer of existing and emerging cost-effective, cleaner technologies and practices, through concrete and substantial cooperation so as to achieve practical results". Areas for collaboration could include forestry, among other things. All the countries listed in the vision statement are parties to the UN Framework Convention on Climate Change (UNFCCC), but two—Australia and the United States—have not ratified the Kyoto Protocol, the main intergovernmental mechanism designed to limited emissions of greenhouse gases, which are blamed for global warming.

The vision statement does not provide specific objectives or give details of how the partnership would function or be financed. It would, however, "be consistent with and contribute to [partners'] efforts under the UNFCCC and will complement, but not replace, the Kyoto Protocol". The partners pledged to "develop a non-binding compact in which the elements of this shared vision, as well as the ways and means to implement it, will be further defined", but no timetable has yet been provided.

American Serengeti?

A group of conservation biologists are proposing the creation of large game reserves in the Great Plains of North America for endangered African and Asian wildlife. The reserves would be 250 000 hectares or more in size and would operate on the assumption that the introduced wildlife would eventually reach an ecological equilibrium and would become more-or-less self-sustaining, with little input required from outside. The proposal, dubbed Pleistocene rewilding, was made in a recent edition (Vol 436, No 7053) of the prestigious science journal *Nature* and also reported in *The Economist*. According to advocates, many species from Asia and Africa—including elephants, lions, cheetahs and camels—once roamed North America, and their ecological niches are still available. Advocates also suggest that since many countries in Africa and Asia are unable to afford the cost of conserving their large mammals, a rich country like the United States should do the job for them. Opponents of the idea, though, worry about the effects on existing wildlife in the US and would rather see conservation resources devoted to conserving species in their current habitats.

Rubber coverage

An ITTO project (PD 46/99 REV.3 (I)) has investigated the feasibility of the industrial utilisation of timber from rubberwood plantations in Colombia. According to the study, which was conducted by Centro para la Investigación en Sistemas Sostenibles de Producción Agropecuaria (CIPAV), an NGO, and Econometría, a research institution, just over 10 000 hectares of rubber trees have been established in Colombia since 1943 and just under 7000 hectares still exist, scattered across 17 departments; the department of Caquetá contains more than half. The immediate potential wood yield was estimated to be about 6600 m^3/ year; this will grow to about 100 000 m^3 per year by the year 2019 and will remain at that rate for about 20 years. The project formulated a proposal to develop a pilot project for the industrial utilisation of rubberwood at a site near Florencia, the capital of Caquetá, and predicted its financial viability. A report of the study can be obtained at www.cipav.org.co.

DRC gorillas survive war, poaching

An estimated 5 500–28 000 lowland gorillas (also known as Grauer's gorillas) still survive in the Democratic Republic of Congo (DRC), according to the conservation group Dian Fossey Gorilla Fund International (DFGFI). This is good news for the gorillas, since it was feared that their number might have declined dramatically in the face of DRC's recent civil wars and reportedly widespread poaching. According to DFGFI's Patrick Mehlman, recent surveys undertaken by DFGFI and its Congolese partners have revealed: 1) "the presence of two large local populations of Grauer's gorillas that other scientists believed to be quite small and dwindling before the civil wars; and 2) the continuing presence of gorillas in the Itombwe Mountains where they existed before the civil wars".

More information is available at www.gorillafund.org

Fellowship reports available

The following fellowship reports may be obtained directly from the ITTO fellows listed below:

Modelo preliminar para la planificación del aprovechamiento en plantaciones forestales. ***Contact:*** *Mr Ramón José Chiari Lopez, Apartado 9859, Zona 9, San Francisco, Panamá, Republic of Panama, rjchiari@hotmail.com, rjchiari@ula.ve*

Rôle conservateur de la diversité biologique des forêts riveraines de la zone forestière subhumide tu Togo. ***Contact:*** *Mr. Kossi Adjossou, Département de Botanique et d'Ecologie Végétale, Facultédes Sciences, Universitéde Lomé, BP 1515, Lomé, Togo ; marcadjossou@yahoo.fr*

Volume functions for common timber species of Nigeria's tropical rain forests. ***Contact:*** *Dr Shadrach O. Akindele, Department of Forestry and Wood Technology, Federal University of Technology, PMB 704, Akure, Ondo State, Nigeria; femi_akindele2@yahoo.com*

Institutional capacity assessment of community forest user's group for marketing of forest products: a case study from inner Terai of Nepal. ***Contact:*** *Mr Boj Raj Khanal, bhojrajkhanal@yahoo.com*

International course on gender mainstreaming: from programmatic to organizational transformation

14–25 November 2005

Cost: US$2250

Y.C. James Yen Center, IIRR, Silang, Cavite, the Philippines

Language: English

Decades of development experience have led to a strong consensus that to achieve sustainable, people-centred development, progress towards equality in the roles of women and men is essential. Studies show that investments in the education of women are translated to food security, better health and welfare of the family. Thus, allowing gender inequality to pervade societies intensifies poverty among women more than men and perpetuates poverty in these societies.

This course is designed for senior and mid-level development managers, leaders and professionals who have the ability to influence their organisations. Participants should have at least three years of direct experience in development work and at least two years of work experience in the organisation they represent.

The course reviews previous and current experiences in mainstreaming gender within participants' organisations, programs and projects, introduces various innovative tools for gender mainstreaming, and focuses on the use of a gender audit tool to deepen the understanding of participants of mainstreaming efforts within their organisations. The gender audit focuses on the dimensions of political will, technical capacity, accountability and organisational culture.

Direct interaction with community people will allow participants to reflect on select tools for mainstreaming gender in projects. Practical exercises will prepare them for the planned change process to mainstream gender equality in their respective organisations.

At the end of two weeks participants will have:

1) described the context of their respective gender programs and articulated lessons from their gender mainstreaming efforts;
2) identified important elements towards gender responsiveness within organisations;
3) familiarised themselves with participatory gender analysis tools for program/project development and management and gender audit tools for organisations;
4) facilitated a gender audit process;
5) developed a framework for monitoring and evaluating gender mainstreaming; and
6) identified lessons from the course that can be applied in their organisations.

Contact: *Gender Mainstreaming Course Coordinator, Education and Training Program, International Institute of Rural Reconstruction, YC James Yen Center, Silang, Cavite 4118, the Philippines; Tel 63–46–414 2417; Fax 63–46–414 2420; education&training@iirr.org; www.iirr.org*

GIS and remote sensing for natural resource management

9 January 2006–31 March 2006

ITC, Enschede, the Netherlands

Cost: €2500

Language: English

This 12-week course is designed for natural resource managers who already have a good working knowledge of basic geographic information systems (GIS) and remote sensing and who seek to develop specialist knowledge and skills in particular fields of application.

On completion of the course, participants can take up roles as natural resource geo-information specialists working at the interface of natural resource management (NRM), natural resource data acquisition and analysis, and geo-information technology.

During the first two weeks of the course, participants review their experience in NRM and examine the importance of GIS and remote sensing in NRM. Participants then join the three specialisation modules of ITC's regular NRM degree program for a period of nine weeks. Depending on their background and requirements, participants can follow the Forestry for Sustainable Development specialisation out of six other fields of specialisation. In the final week, participants come together to report on their work, share experiences and compile back-to-office reports.

Contact: *ITC, Bureau MPS, PO Box 6, 7500 AA Enschede, the Netherlands; www.itc.nl; education@itc.nl*

Managing & learning for impact: course on participatory planning, monitoring & evaluation (PPM&E)

6–24 February 2006

Wageningen, the Netherlands

Cost: €3100

Language: English

Participants in this course will leave with:

1) new insights into the principles of participatory and learning-orientated planning, monitoring and evaluation, current trends in planning and monitoring and evaluation (M&E) theory and practice and the requirements of funding bodies, and creating a learning culture in teams and organisations;
2) strengthened competence to facilitate participatory planning and M&E processes, to design M&E systems that support adaptive and flexible project and program management, and to provide support in assessing impact of the project/program/organisation; and
3) clear ideas for improving planning and M&E in their organisations and further strengthening their own competence to facilitate participatory planning and M&E.

The course is designed for middle- or senior-level managers in business, government or non-government rural development organisations who want to make planning more effective and inspiring and M&E more relevant and useful in their organisations. It is particularly appropriate for staff with distinct planning, M&E or management responsibilities. The course is also relevant to consultants and facilitators providing planning and M&E services.

Contact: *International Agricultural Centre, PO Box 88, 6700 AB Wageningen, the Netherlands; Tel 31–317–495 495; Fax 31–317–495 395; training.iac@wur.nl; www.iac.wur.nl*

By featuring these courses ITTO doesn't necessarily endorse them. Potential applicants are advised to obtain further information about the courses of interest and the institutions offering them.

Meetings

17–28 October 2005. **7th Conference of the Parties to the UN Convention to Combat Desertification**. Nairobi, Kenya. ***Contact:*** *UNCCD Secretariat, PO Box 260129, Haus Carstanjen, D-53153 Bonn, Germany; Tel 49–228–815 2800; Fax 49–228–815 2898; secretariat@unccd.int; www.unccd.int*

24–27 October 2005. **3rd International Precision Forestry Symposium**. IUFRO 3.00.00. Seattle, USA. ***Contact:*** *Peter Schiess; Tel 1–206–5431583; Fax 1–206–6853091; schiess@u.washington.edu;* ***or*** *Megan O'Shea; Tel 1–206–543 3073; Fax 1–206–685 3091; moshea@u.washington.edu*

30 October–2 November 2005. **China Wood Markets: Export & Import Conference, Exhibit & Industry/Mill Tour**. Dongguan, China. ***Contact:*** *R.E. Taylor & Associates, #501 543 Granville St, Vancouver BC, Canada V6C 1X8; Tel 1–604–801 5996; Fax 1–604–801 5997; retaylor@woodmarkets.com; www.woodmarkets.com*

7–12 November 2005. 39th Session of the International Tropical Timber Council and the Associated Sessions of the Committees. Yokohama, Japan. ***Contact: Information Officer (Mr Collins Ahadome); Tel 81–45–223 1110; Fax 81–45–223 1111; itto@itto.or.jp; www.itto.or.jp***

13–15 November 2005. **5th Meeting for the Promotion of the Asia Forest Partnership**. Yokohama, Japan. ***Contact:*** *AFP5 Secretariat; Fax 81–3-3593 9565); afp_japan@nm.maff.go.jp; www.asiaforests.org/files/_ref/events/afp5/index.htm*

15–17 November 2005. **8th Round-Table Conference on Dipterocarps**. Ho Chi Minh City, Vietnam. ***Contact:*** *Dr Nguyen Hoang Nghia APAFRI Secretariat, FSIV c/o FRIM. Kepong, 52109 Kuala Lumpur, Malaysia; Tel 6-03-6272 2516; Fax 6-03-6277 3249; nhnghia@netnam.vn* ***or*** *secretariat@apafri.org*

15–18 November 2005. **3rd Latin American Forestry Congress (Tercer Congreso Forestal Latinoamericano—CONFLAT III)**. Bogotá, Colombia. ***Contact:*** *Colombian Association of Forest Engineers (Asociación Colombiana de Ingenieros Forestales—ACIF), Calle 14, No 7-33 Of. 403, Bogotá, DC, Colombia; Tel 571–281 82 15; Fax 571–281 4912; acif@acif.com.co; www.acif.com.co*

20–25 November 2005. **8th Meeting of the Conference of the Parties to the Convention on Migratory Species.** Nairobi, Kenya. ***Contact:*** *UNEP / CMS Secretariat, United Nations Premises, Martin-Luther-King-Str. 8, D-53175 Bonn, Germany; Tel 49–228–815 2401; Fax 49–228–815 2449; secretariat@cms.int; www.cms.int*

22–25 November 2005. **Europe and North Asia Forest Law Enforcement and Governance Ministerial Meeting**. St Petersburg, Russian Federation. ***Contact:*** *Nalin Kishor; Tel 1–202–473 8672; Fax 1–202–522 1142; nkishor@worldbank.org*

23–25 November 2005. **Asia-Europe Environment Forum Conference**. Jakarta, Indonesia. ***Contact:*** *Asia-Europe Environment Forum Secretariat; Tel 65–6874 9707; Fax 65–6872 1207; env@asef.org; http://asef.on2web.com/subSite/env/default.asp*

23–25 November 2005. **5th Iberoamerican Forest and Environmental Law Congress**. Mexico. IUFRO 6.13.01. ***Contact:*** *Fernando Montes de Oca Dominguez; Tel 52–33–3615 0473; fernandomontesdeoca@imdefac.com.mx*

25–27 November 2005. **Expo Forestal: Mexico Siglo XXI: Bosques y Selvas para Siempre**. Morelia, Mexico. ***Contact:*** *CONAFOR, Avenida Progreso No 5 Edificio de Incendios Forestales PB, Colonia del Carmen Coyoacán, CP 04100 México, DF, México; Tel 52–55–5659 9502; Fax 52–55–5659 9503; jmandeur@conafor.gob.mx; www.conafor.com.mx*

November 28–1 December 2005. International Conference on Plantation Eucalyptus: Challenge in Product Development. Zhan Jiang, Guandong, China. Sponsored by ITTO. ***Contact: Dr Yin Yafang, PO Box 18, Chinese Academy of Forestry, Wan Shou Shan, Beijing 100091, China; Tel 86–10–6288 9468; 86–10–6288 8843; Fax 86–10–6288 8843; china_eucalyptus@forestry.ac.cn; www.criwi.cn/ITTO/conference.htm***

28 November–2 December 2005. **11th Meeting of the UN Convention on Biological Diversity Subsidiary Body on Scientific, Technical and Technological Advice**. Montreal, Canada. ***Contact:*** *Secretariat of the Convention on Biological Diversity, 413 St-Jacques Street, 8th floor, Office 800, Montreal, Quebec, H2Y 1N9, Canada; Tel 1–514–288 2220; Fax 1–514–288 6588; secretariat@biodiv.org; www.biodiv.org*

28 November–9 December 2005. **11th Session of the Conference of the Parties to the UN Framework Convention on Climate Change, and 1st Meeting of the Parties to the Kyoto Protocol.** Montreal, Canada. ***Contact:*** *UNFCCC Secretariat, PO Box 260124, D-53153 Bonn, Germany; Tel 49–228– 815 1000; Fax 49–228–815 1999; secretariat@unfccc.int; www.unfccc.int*

6–7 December 2005. **2nd International Symposium of the Cameroon Ethnobotany Network: Plants to Cure Humans and the Environment**. Yaounde, Cameroon. ***Contact:*** *CEN Secretariat; cenrce@yahoo.fr* ***or*** *lzapfack@uycdc.uninet.cm*

16–20 January 2006. UN Conference on the Renegotiation of the International Tropical Timber Agreement, 1994, 4th Part. Geneva, Switzerland. ***Contact: UNCTAD Secretariat, Intergovernmental Affairs and Outreach Service; Tel 41–22–917 5809; Fax 41–22–917 0056; correspondence@unctad.org; www.unctad.org/Templates/Meeting.asp?intItemID=3323&lang=1***

13–24 February 2006. **6th UN Forum on Forests (UNFF-6)**. New York, USA. ***Contact:*** *Elisabeth Barsk-Rundquist, UNFF Secretariat; Tel 1–212–963 3262; Fax 1–917–367 3186; barsk-rundquist@un.org; www.un.org/esa/forests*

1–2 March 2006. **Forest Leadership Conference: the Sustainability Challenge.** Toronto, Canada. ***Contact:*** *Jean-Pierre Kiekens, Chair, ForestLeadership Conference; Tel 1–514–274 4344; Fax 1–514–277 6663; conference@forestleadership.com; www.forestleadership.com*

22–29 March 2006. **4th International Tree Squirrel Colloquium and 1st International Flying Squirrel Colloquium. Including Conservation Priorities Workshop: Tree and Flying Squirrels in the Developing World**. Periyar Tiger Reserve, India. ***Contact:*** *R. Nandini, National Institute of Advanced Studies, Indian Institute of Science Campus, Bangalore 560 012 India; Tel 91–94431 42296; nandinirajamani@yahoo.co.in; www.squirrelcolloquia.co.in; www.iisc.ernet.in/nias/itsc.htm*

20–31 March 2006. **8th Meeting of the Conference of the Parties to the Convention on Biological Diversity**. Brazil. ***Contact:*** *Secretariat of the Convention on Biological Diversity, 413 St-Jacques Street, 8th floor, Office 800, Montreal, Quebec, Canada, H2Y 1N9; Tel 1–514–288 2220; Fax 1–514–288 6588; secretariat@biodiv.org; www.biodiv.org*

26–30 September 2006. **X Congreso Latinoamericano de Estudiantes de Ciencias Forestales (10th Latin American Students Congress of Forest Science)**.University of Pinar del Rio, Cuba. ***Contact:*** *Ing. Suriel Cruz Torres, Marti Final #270, Pinar del Rio, Cuba; suriel@af.upr.edu.cu; Tel 53–82–77 9661; Fax 53–82–77 9353*

7–10 November 2006. **2nd Congreso para la Prevención y Combate de Incendios Forestales y Pastizales en el MERCOSUR**. Malargüe, Argentina. ***Contact:*** *Diligencia Viajes SA, Av Pte Roque Sáenz Peña 616, piso 8, Of 812, CP 1036, Ciudad Autónoma de Buenos Aires, Argentina; Tel 54–11–4342 9331/2057; Fax 54–11–4342 9546; viajesd@infovia.com.ar*

26–29 September 2006. **Patterns and Processes in Forest Landscapes: Consequences of Human Management**. University of Bari, Italy. ***Contact:*** *Prof Giovanni Sanesi, Dip Scienze delle Produzioni Vegetali, Faculty of Agricultural Science, Program in Forestry and Environmental Science, University of Bari, Via Amendola 165/A, Bari, Italy 70126; Tel 39–80–544 3023; Fax 39–80–544 2976; www.greenlab.uniba.it/events/iufro2006*

binding framework, and delegations were equally far apart on their views concerning a strengthened IAF based on a non-legally-binding arrangement. Many developed countries held strongly to their position on global goals with time-bound quantitative targets, monitoring, assessment and reporting, and other relevant proposals that would bring more focus, substance and credibility to the IAF. Conversely, most of them were opposed to time-bound quantitative targets for financial resources which, together with other aspects of means of implementation, were priorities for most developing countries. Hence, an impasse was reached.

High-level segment

The uneasy mood surrounding the negotiations had its effects on the high-level ministerial segment. As ministers and high-ranking delegates delivered their statements on the key agenda items in plenary and participated in two roundtables, negotiations on both of the Chairman's drafts continued within a single contact group, which took over the work of the two working groups. Acknowledging that little progress was achieved on the Chairman's draft elements of a ministerial declaration, a small group was formed on the second day of the high-level segment to specifically negotiate the declaration.

Finally, a draft ministerial declaration was delivered orally to the plenary by the Coordinator and Head of the UNFF Secretariat, Pekka Patosaari, but was not adopted. Instead the Forum adopted a subsequent proposal made by the Chairman to replace the draft declaration with a Chairman's summary of the high-level segment. Ministers and high-ranking officials then began to depart amidst a sense that their presence had not been fully utilised, particularly in securing a breakthrough in the negotiations. At UNCED in 1992, ministers in charge of forests met all night long and successfully removed all brackets to the *Forest Principles*, thus paving the way for their adoption.

With the ministerial declaration lost, the negotiations of the revised Chairman's draft decision continued on a pessimistic note. At 8 pm on the second-last day the Chairman presented a new draft. The text was fully bracketed, meaning that nothing within it had been fully agreed. However, it did contain provisional agreement (*ad referendum*) on the following:

- goal 1 on reversing the loss of forest cover worldwide;
- goal 2 on enhancing forest-based economic, social and environmental benefits and the contribution of forests to the achievement of internationally agreed development goals;
- goal 3 on increasing significantly the area of protected forests and the area of sustainably managed forests and increasing the proportion of forest products from sustainably managed forests;
- goal 4 on reversing the decline in ODA for sustainable forest management and mobilising significantly increased new and additional financial resources;
- countries making all efforts to contribute to the above goals through voluntary national measures, policies, actions or specific goals; and
- encouraging countries to periodically submit national reports to the UNFF on a voluntary basis beginning in 2007 on progress in the achievement of the above global goals.

On the final day it was decided to suspend the negotiations and to convene a sixth session of the UNFF in February next year.

Outcome of the session

The outcome of the fifth session of the UNFF clearly fell short of expectations; there was no agreed decision on the review process, and no ministerial declaration. Most members expressed disappointment over an outcome which, ironically, they were principally responsible for.

Certainly, forest-related issues are extremely complex and contentious and have defied earlier attempts at international agreement. It is no coincidence that the UN *Forest Principles*, the first global consensus on forests, are non-legally binding and, even so, their adoption at UNCED required a last-ditch effort by a strong-willed chairman and extended ministerial negotiations. For the same reason the post-UNCED process has dragged on at a snail's pace for more than a decade, with very little to show.

The magnitude of the task surrounding the review process at the UNFF's fifth session was, therefore, well known. Yet it was packaged in an ambitious agenda and had to compete with other items and events for time and attention. Preparations and documentation for the session, while elaborate, did not facilitate the review process sufficiently. Political will was amply expressed in statements and interventions made at the session, but not commensurably demonstrated during the actual negotiations. Ministers came to deliver statements highlighting achievements and reiterating commitment, and left without providing the leadership needed to overcome the deadlock in negotiations. Major groups were upset with a revision of the format for the high-level segment; some came out with seething criticisms of the UNFF and IAF, and a few signalled their intention to abandon the process. Last but not least, the ambience and efficiency of the session were affected by constraints in interpretation, translation and other logistical arrangements, including the lack of a room conducive to tough and protracted negotiations.

Picking up the pieces

The outcome of the fifth session and its implications are a cause for concern. Forests are perceived to be in a state of crisis, but solving this crisis is a task that seems increasingly to be sidelined in the international discourse. In the absence of a comprehensive international arrangement, be it legally or non-legally binding, the issue of forests continues to be nibbled away at by existing international instruments in ways that may be inconsistent with the holistic approach agreed to at UNCED.

With only a few months until the sixth session, the onus is squarely on the Forum's bureau to map out and implement a strategy that will salvage the review process and bring it to a conclusive end. There is clear merit in a focused agenda, with preparations geared towards the effective facilitation of the review and the negotiations to be carried out. The outcome of the fifth session doesn't give much to go on, but some momentum might be built around the goals agreed *ad referendum* and some of the ideas on a strengthened IAF.

In the midst of threats by some to abandon the UNFF, members have opted to give it another try. Some are praying for a miracle to happen. The essence of international cooperation is a willingness to compromise; the solution to the deadlock may be found somewhere between the call for strict global goals with time-bound quantitative targets, and the cry for new and additional financial resources and predictable funding. Determination, perseverance and the political will to compromise are the prerequisites for a credible and satisfactory outcome to the review of the IAF.

Out on a limb

Delegates meeting at the United Nations fail to agree on the future of the international arrangement on forests

by Amha bin Buang

Assistant Director

Economic Information and Market Intelligence

ITTO Secretariat

THE EAGERLY ANTICIPATED fifth session of the United Nations Forum on Forests (UNFF) was held at UN headquarters in New York on 16–27 May 2005. Established in 2000 as a subsidiary body of the Economic and Social Council of the United Nations, the Forum—together with its secretariat and the Collaborative Partnership on Forests—constitute the international arrangement on forests (IAF), the main objectives of which are to promote the management, conservation and sustainable development of all types of forests and to strengthen political commitment to this end.

While the session was the Forum's fifth regular annual meeting, with a full agenda drawn from its multi-year program of work (2001–2005), all eyes were on the consideration of three related agenda items:

- review of progress and consideration of future action;
- review of the effectiveness of the IAF; and
- the consideration of, with a view to recommending, the parameters of a mandate for developing a legal framework on all types of forests (ie a convention on forests).

The consideration of these three key and contentious agenda items would have a direct bearing on the future of the ongoing process on forests. This has already passed through a number of phases, from the UN Conference on Environment and Development (UNCED) held in Rio de Janeiro in 1992 to the UN Commission on Sustainable Development, the Intergovernmental Panel on Forests, the Intergovernmental Forum on Forests and—currently—the UNFF, at a tortuously slow pace. It had also rekindled the acrimonious debate on a convention on forests, which began long before UNCED but is yet to be resolved.

The three key issues were packaged with other items of the agenda in an elaborate and hectic schedule comprising plenary and working-group sessions, a panel discussion and a host of side-events. A high-level ministerial segment and policy dialogue was also held over two days in the session's second week.

The review process

At the end of the session's third day, delegates were provided with the first drafts of the two principal outputs envisaged by the session's elected officials (collectively known as the Bureau): a ministerial declaration (to be agreed by ministers at their high-level segment), and a decision on a strengthened IAF. These drafts were a result of a game effort by the Chairman, Manuel Rodriguez Bacerra (Colombia), and others in the Bureau to integrate and synthesise the wide range of competing views and proposals advanced by the delegations. The Chairman's draft text of a decision on a strengthened IAF contained global goals with the following time-bound quantitative targets: doubling the area of forests under sustainable management; reducing by half the people in extreme poverty among those dependent on forests for their livelihood; and reducing by half the global rate of deforestation and forest degradation by 2015. How would these be achieved? The draft decision called for (among other things): the creation of a global forest fund, and reversal of the declining trend in official development assistance (ODA) allocated to forest-related activities. The Chairman's draft ministerial declaration contained highlights of the draft decision to strengthen the IAF and a message concerning the contributions of forests to the implementation of the internationally agreed development goals, including those contained in the Millennium Declaration.

Negotiations on the Chairman's texts

Progress within the two working groups convened to negotiate these texts was painfully slow and, ultimately, minimal. It was delayed by a request for more consultation time made by the Group of 77 and China. Indeed, the lack of consensus within this group and the time it spent in coordination meetings resulted in many of its members subsequently negotiating on the basis of their own national and regional positions. Cohesion among developed countries on the key aspects of the draft decision and declaration was also lacking.

Against this background there was no consensus on the issue of a legally

Continued on page 31